Digital technologies and digital Pedagogical approaches to enhance C_VET programs

MODULE 2

Welcome to module 2.

In this MODULE you will learn about Digital Pedagogy, and how to re-think the paradigm of didactic mediation in a educational context dominated by digital technology, while keeping the students at the center of the training action.

Digital technologies and digital Pedagogical approaches to enhance C_VET programs

"Education is not preparation for life; education is life itself."

—John Deway

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LEARNING OBJECTIVES

After completing this MODULE, you will be able to...

To effectively apply and exploit the potential of the Digital Pedagogy

To avoid risks and manage challenges of virtual learning environment

To create and organize adapted learning virtual pathway

U.1

What possibilities "Digital Pedagogy" offers?

Learning through technology or learning the technology?

During this years of crisis and uncertainty, the concept of "digital pedagogy" has become confusing and, sometimes, misleading. Digital technologies are now a constant presence in our everyday life. This tendency generated a sort of widespread concern that a country's economic and cultural progress may depend on the ability to "master" technology. In this paragraph we will briefly describe, the consequences of this new social and educational environment and the misunderstandings, which often result from it within educational contexts.

What's digital pedagogy?

Throwing a computer into a classroom doesn't make the learning effective: teachers need to understand how to use technology fruitfully, understand the learning theories behind the practice and know how to select the right technology for the learning outcomes they seek. Teachers need a digital pedagogy. In simple terms, a digital pedagogy is the study of how to teach using digital technologies.

For students what's most valuable is critical and independent thinking. Educators must make space for students to work and create **on their own**, assigning them the task to invent products that demonstrate "their own learning" as well as products demonstrating knowledge. This emphasis on critical and independent thinking connects digital pedagogy to the ideas of constructivism that:

1- Students learn best when actively engaged (not when passively receiving);

2- Learning is a social process;

3- The goal of teaching and learning is to provide students with a range of experiences that facilitate their connections and construction of knowledge.

2 different points of view on e-learning:

- Research on learning processes suggests that psychological dynamics do not change when technology is introduced. Mechanisms such as memory and cognitive development are articulated in the digital age in a way not unlike how they were articulated in "pre-digital" times. This is an aspect to be established a priori, unless one is willing to grant scientific credibility to the "theory" according to which digital technologies have altered the learning dynamics of individuals born in the nineties (the so-called "neomillenials" or "digital natives" - Bennett, Maton and Kervin, 2008).

- It is asserted that digital natives learn differently to past generations of students. They are held to be active experiential learners, proficient in multi-tasking, and dependent on communications technologies for accessing information and for interacting with others. There is growing appreciation that the old approach is ill-suited to the intellectual, social, motivational, and emotional needs of the new generation" (Tapscott, 1998, p.131). This was echoed by Prensky's (2001) claim that: "Our students have changed radically. Today's students are no longer the people our educational system was designed to teach".

The debate it's still open, but we know - because of the several lock downs we had to endure during Covid19 outspring - how mutch our possibility to work, study and engage in vocational training is striclty reliant with digital technology.

What sholud we ask ourselfes?

While some students ad workers all around the world, are going back to in-person learning, society is exploring what online teaching reality means for them:

- **What is the new pedagogy of online teaching at scale really like?**
- **What does engaged learning look like in this new environment?**
- **How can online learning produce outstanding learning experiences?**

What we began to discover is that there is no empirical evidence that says that classroom instruction benefits students (compared to alternatives) from a learning achievement perspective. Educators and teachers - working with different types of students - began to experiment with personal challenges, small group work, project-based learning and the recording of short videos. They began to explore pedagogy, and C_Vet training, based on the new "pandemic" reality.

Pros. of digital pedagogy applied to C_Vet learning:

NO PHISICAL BOUNDRIES

Students can "connect" form all around the globe

GOOD PRACTICES SHARING

It's easier to learn from other people and situation's experience

CO WORKING AND CO-LEARNING

A group environment can be extremely prductive and functional for C_Vet practice

MENTORING AND PEER EDUCATION

mixed method may improve learning performances

LONG LIFE LEARING

E-learning may help in integrating long life learning in formal education

OPEN SOURCES

By using open socurces material we can overcome economic and class differencies among students

U.2

What's the challenge of digital pedagogy?

New instruments new need

It is known, entering a new context always request adjustments, digital pedagogy it's no different:

Main problem we can identify while aproaching this new method:

- Digital divide;

- Distance learning;

- Rethinkinhg didactic mediation;

Digital divide

Defining the "Digital Divide"

Interaction between human and computers has greatly increased as we embark on the twenty-first century. The ability to access computers and the internet has become greatly important to completely immerse oneself in the economic, political, and social aspects all over the world.

However, not everyone has access to this technology!

The idea of the "digital divide" refers to the growing gap between the underprivileged members of society, especially the poor, rural, elderly, and handicapped portion of the population who do not have access to computers or the internet; and the wealthy, middle-class, and young people living in urban and suburban areas who have access to it.

Factors Attributing to the Digital Divide

Although the number of persons with access to computers and the Internet continues to soar on a yearly basis, the digital divide also continues to grow at an alarming rate. The digital divide has been substantially reduced over the last decade in Europe, but the gap remains far from closed: according to the 2015 European Commission's Digital Agenda Scoreboard, two related targets have already been met (all EU households can access basic broadband and 75% of all Europeans are regular internet users). However, there is a danger that targets related to fast and ultra-fast speed broadband will be missed, especially in rural areas. Furthermore, important challenges on internet use remain, as about half of the less-educated and the elderly in the population do not use it regularly, and about 58 million EU citizens (aged 16-74 years old) have never used it at all. The digital divide also varies across Member States.

MAIN FACTORS

EDUCATION

Widening levels of education seem to magnify the digital divide; households with higher levels of education are increasingly more likely to use computers and the Internet

CLASS

Class also play a significant role in the widening gap. Due to lower income levels, poor neighborhoods lack the infrastructure available in affluent areas. Telecommunication facilities are more readily available for wealthier communities.

ETNICITY

Migrations are a widely experienced phenomenon in Europe. Discrimination can be exacerbated if there is incomplete access to and/or command of digital media. Although new technologies have the potential to create a more inclusive society and reduce inequities, they also have the power to amplify existing inequality or even create new forms of discrimination.

During the Pandemich

According to UNESCO, even in the world's most developed countries, during the first COVID-19 crisis, access to digital education was around 90 %, with 10 % of school pupils still being left behind. Fewer than 25 % of low-income countries have provided some form of remote learning. The Pandemich underlined severe discrepancies in learning across the EU, with 32% of pupils in some member states not having had any access to education for several months. They fear that this will decrease future income levels for a whole generation and negatively impact labour productivity and competitiveness for the European Union as a whole.

And what about C_Vet?

The pandemic has brought #CVET center stage, highlighting the need for individuals to re-evaluate their career prospects. Adult learning and continuing VET (C_VET), are defined as: any learning activities undertaken by adults (employed or not) with the intention of improving their knowledge or skills.

The COVID pandemic forced a critical re-think about the value and status of VET given the dire need for skilling, re-skilling and upskilling. In a recent McKinsey Global Survey, 87% of executives said there were either experiencing skill gaps in the workforce or they were expected them within a few years, yet while nearly all respondents cited closing potential skill gaps as a priority for their organizations, less than half of the respondents had a clear sense of how to address the problem (Agrawal et al., 2020). Covid-19 has only made this issue more urgent.

Distance learning

What's distance learning?

Distance learning, also called distance education, e-learning, and online learning, is a form of education in which the main elements include physical separation of teachers and students during instruction and the use of various technologies to facilitate student-teacher and student-student communication. Distance learning traditionally has focused on nontraditional students, such as full-time workers and nonresidents or individuals in remote regions who are unable to attend classroom lectures. However, distance learning has become an established part of the educational world, with trends pointing to ongoing growth. In U.S. higher education alone, more than 5.6 million university students were enrolled in at least one online course in the autumn of 2009, up from 1.6 million in 2002.

Pros and cons

- No space boundries;

- Flexible schedules and timing;

- The use of distance learning tools makes it possible to diversify the educational process, make it much more interesting and effective;

- Digital divide;

- Tecnologhy limitations;

- No phisical contact (difficoulties in reading the class's mood and energy):

- Lower level of attenction;

What's didactic mediation?

In 1967 Bruner recalled how "the essence of the educational process consists in providing tools and dialogical models that allow us to translate the experience into more efficient systems of notation and ordering" (Bruner, 1967: p. 42) and how this process is mediated from technologies as "the use of man's mental faculties depends on his ability to create and use 'tools' or 'tools' or 'technologies' that make him capable of carrying out and expanding his powers" (ibid., p . 54). From this derives the indication to proceed, in didactic mediation, from the enactive representation of reality, to the iconic, to the symbolic (Bruner, 1966: p. 45).

Who's responsable for didactic mediation?

Mediation "*is defined by statements, by means, by conditions and possibilities under which interaction takes place*" during the process of teaching-learning (Catapan, Mallmann e Roncarelli, 2005).

The potentiality of this mediation reflects the complexity of teaching strategies to be planned by the teacher and at the level of abstraction to be grasped by the students.

Teacher mediation, which can valorize the communicative potential of technological channels and languages along with the other forms of language used in teaching, is fundamental.

We need to integrate the concept of didactic mediation

BUT HOW?

Enanching digital pedagoghy, understanding and integrating new instruments and approaches to C_Vet's educational protocol.

Trainers need to know how to produce the best teaching material!

Checklist - Quality Criteria for digital C_Vet learning:

Complies with all image, content is displayed exactly matching the spoken text

Wherever possible, facts are shown and not just explained orally

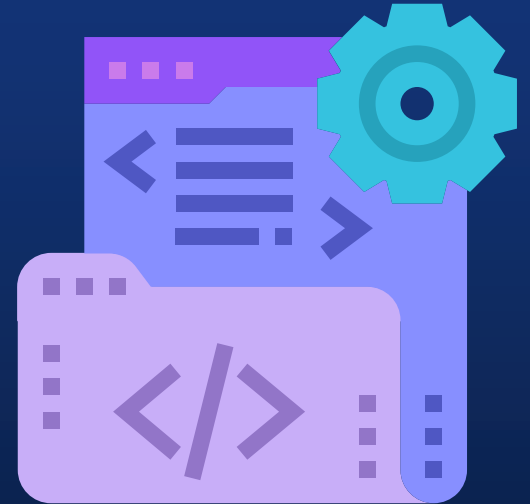Important passages are repeated as text in the form of key points

Whenever is possible the trainer has to pay attention to the students keeping direct eye contact with them

U.3

Experiencial level
in digital pedagogy

What's the experiential level?

Experiential training can also be described as "learning by doing" As is evident from these terms, action and "experiencing" by participants form the starting point of their learning. The "theoretical level" provided by the trainer in the form of lectures and presentations is kept to the minimum and done at the end rather than at the beginning of a session. The students or participants first participate in an action or a practical exercise. They, then, share their feelings or observations on what they did. Finally, they analyze and draw learning points and conclusions from the exercise for use later in real life.

And on-line?

Experiential learning online simulates direct experiences and focused reflections within real-world settings and contexts. With reference to Psychologist David Kolb's theory of experiential learning, the online application should take a holistic approach to encompass cognition, environmental factors and emotions to influence the learning process.

Experiential Learning Theory

Figure 1. The Experiential Learning Model
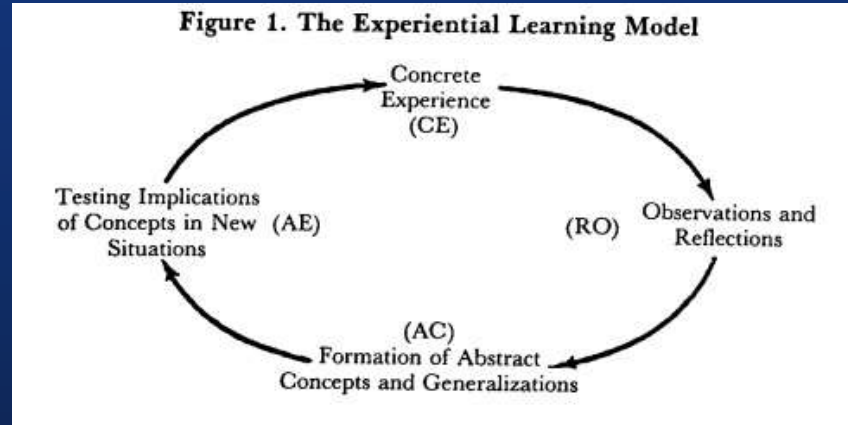
This theory, derived from the
social psychology of Bruner and Piaget, As formulated by Kolb (1976b), experiential learning theory depicts learning as a four-stage cycle. An effective learner needs four different abilities: **concrete experience skills**, **reflective observation skills**, **abstract conceptualization skills**, and **active experimentation skills**.

Why should we use it?

The best method is the experiential method!

I's a fact that having direct experience of a given situation help us to develop usefull skills that we'll be using to manage it. Esperiencial training make learning easier, more effective and it lowers the risk of getting bored and exausted by the study and lecture praxis.

It also give us the possibilities to develop new strategies and new skills as we go along with the learning, because of our unique and personal way of aproaching any different subject.

Case study:

The author of this research taught an online course titled "Introduction to Cybermedia" for the four semesters of Fall 2009, Spring 2010, Fall 2010 and Spring 2011 in a large urban state school with a diverse student population. The subject of the class is digital media, which allowed the teacher to draw upon students everyday digital media experiences.

Course Description

The main goals of the online course are to: (1) explore the economic, social, and cultural implications of the Internet; (2) develop critical skills for obtaining and evaluating online information and resources; and (3) learn web publishing processes and tools such as HTML or Adobe Dreamweaver.

Approximately 23 students, mostly juniors and seniors, were enrolled each semester

Even though the basic structure of the class was similar in all four semesters, the syllabi were adjusted from semester to semester to meet students needs and to keep up with technological changes. After the Spring 2009 semester, a couple of students indicated on the course feedback forms that a face-to-face meeting would help them to learn web design and web publishing processes better. Following the suggestion, a once-a-semester face-to-face meeting for two hours was added to the syllabus. Students are required to attend this once-a-semester meeting, unless their distance from the campus makes it prohibitive for them to do so. The course requires that students use and learn the following technology and tools:

1) the learning management system, Blackboard;

2) the online classroom software, Wimba Classroom; and

3) either hypertext markup language (HTML) in combination with a file transferring (FTP) software, or Adobe Dreamweaver.

By allowing students **freedom** to choose the web design tools they use, the instructor encourages them to continue to develop and apply their web design skills even after class ends using either **free and open-source tools** or the common industry standard software. These software and tools change and upgrade constantly, which influences the course design and activities.

Example: when the instructor taught the class during the Spring of 2009, the video features of Wimba Classroom were not fully developed, and communication was primarily via textual chat features in virtual classes. Starting in the Fall 2009 semester, all video and audio features of the virtual classroom management software were used in virtual classes. Adobe Dreamweaver updated its software three times in two years from Adobe Creative Suite 3 to Creative Suite 5. Although the exact software requirements did evolve to remain relevant, the course mission was stable throughout the iterations.

Monitoring instruments: the questionnaire

Following Kolb (1984) and Dewey (1938), the assessment of the ee-learning course design in this case study focuses upon students direct media experiences and their reflection and analyses. In order to understand students digital media experiences, as well as to draw students' media experiences into virtual class discussions, the instructor surveyed students digital media experiences using interactive questionnaires that included both multiple-choice interactive questions and short answer questions.

STUDENTS MUST BE THE CENTER OF EDUCATIONAL EXPERIENCE!

U.4
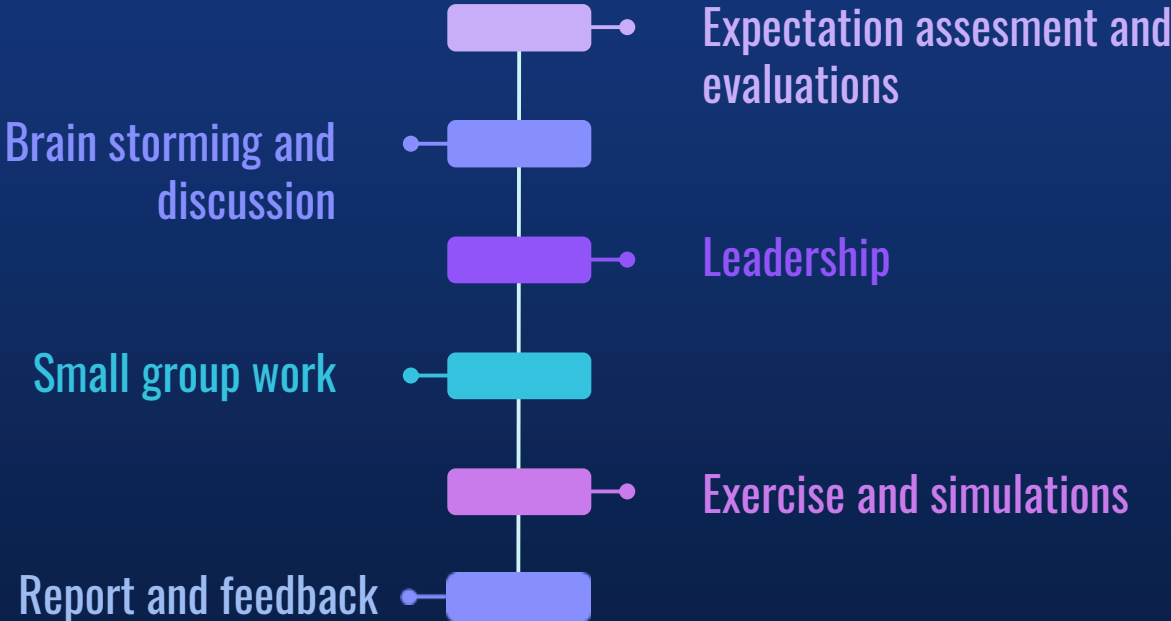
A "student centric" approach

We are now going to progress on illustrating different useful instrument that any educator can use to focus on centering his work on the students' needs:

Practical instruments:

- Expectation assesment and evaluations
- Brain storming and discussion
- Leadership
- Small group work
- Exercise and simulations
- Report and feedback

Espectation assesments and evaluation:

Opening an educational path is always a challenging moment. Teachers and educators need to adress both programmatic and students' needs.

Projecting a class means creating a vessel for what knowledge we'll be transmitting to our students but having a scheme is not enough.

To better help students on getting involved and truly committed to the learning an educator will need to give them the possibility to be vocal about their expectations and interests.

That's when a instruments like an **EVALUATION QUESTIONNAIRE** about expectation may come in handy!

Example:

Question n.1: **WHY DID YOU CHOOSE THIS COURSE?**

	1	2	3	4	5
Because of the proposed contents:					
To get a qualification:					
To improve my chances of employment:					
To improve my skills:					
To aim for a promotion on my current workplace:					
To expand my possibilities on another work field:					

Question n.2: **WHAT DID YOU EXPECT FROM THIS COURSE?**

	1	2	3	4	5
To learn new teoretical skills					
To get tecnical and practical skills					
To obtain a valuable qualification:					
To improuve my relational skills:					
To get management training:					
To earn a greatest sense of my worth and abilities:					

- and so on…

Brain storming and discussion:

After assessing anyone expectation and needs we can proceed by introducing our main theme and argomentation. BRAIN STORMING AND DISCUSSION are effective strategy, to keep up the attention level and to stimul the students' autonomous production of hypotesis and critical tinking.

Using digital instruments we can integrate suggestions and ideas from the class by using a black board were every one is free to add contibutions or, we could integrate our previously prepared material in a interactive way, offering to the stutents the chances to be active part in the production of study material.

Leadership assesment and small group:

Group work is always a good way to favor confrontation. The Psycho-social perspective define a goroup as:

AN INTERACTION BETWEEN INDIVIDUAL (PSYCHE) AND ENVIRONMENT (SOCIETY)

IF A GROUP IS A PLURALITY IN INTERACTION, A WORKING GROUP IS A PLURALITY IN INTEGRATION (TENDING PROGRESSIVELY TO INTEGRATION). COHESION IS GROWING IN THE GROUP, A SENSE OF OWNERSHIP, SHARING OF RULES, MUTUAL PLEASURE AND INTERDIPENDENCY.

MEMBERSHIP ≠ GROUPSHIP

INTERACTION IN A GROUP IS BASED ON THE PERCEPTION OF PRESENCE (MEMBERSHIP) WHILE INTERDEPENDENCE IS BASED ON THE PERCEPTION OF MUTUAL NEED (GROUPSHIP)

LEADERSHIP

IT'S A FUNCTION THAT BALANCES MEMBERSHIP AND GROUPSHIP, THAT GUARANTEES THE SATISFACTION OF INDIVIDUAL AND GROUP NEEDS. LEADERSHIP IS A FUNCTIONAL RESPONSE THAT INTEGRATES THE NEED OF THE PARTIES IN THE PERSPECTIVE OF TOTALITY. LEADERSHIP IS A: "BEING WITH" THAT DETERMINES THE PASSAGE FROM SIMPLE INTERACTION TO INTERDEPENDENCE AND INTEGRATION (to the desirable functional status of a group).

LEADERSHIP IS THE AWARENESS OF THE CONNECTION BETWEEN MEMBERSHIP AND GROUPSHIP: YOU UNDERSTAND HOW THE SATISFACTION OF THE GROUP'S NEEDS IS LINKED TO THE SATISFACTION OF INDIVIDUAL NEEDS AND VICE VERSA.

LEADERSHIP STYLE

1- Laissez-faire;

2- Democratic;

3- Authoritarian.

Lasseiz faire leader:

Laissez-faire is French for "let do." A *Laissez-faire* leader takes a laid back or hands-off approach. This style may be most effective in a highly skilled and motivated group, or in order to foster creativity and participation. However, if a group is in need of direction, then a laissez-faire style may result in frustration and inefficiency.

The democratic leader:

The Democratic style of leadership it's an in between modality that crosses *Laissez-faire* and Authoritarian styles. A Democratic leader will allow the decision-making power to be shared amongst group members and not only themselves. At the same time, a Democratic leader will facilitate discussions and lead the group in right direction.

The authoritarian leader:

An Authoritarian leader exert the maximum level of control over a group. It's a leadership style that may be effective when a group is disorganized and lost or there are significant time pressures. But total control can also lead to group tensions or resentment of the leader and group members are also not likely to stay committed to the project as they feel they have no part in the decision making process.

When the teacher is the leader:

Educators and teachers may act as group leader, they must be responsible for not only participation and involvement of the members/students in the group's work but also ensuring that the group's goal is attained, they must act like a motivator for the team, delivering success, and being a resource that group members can reach out to for help. They should have the ability of acting like mentors, reading the group mood, energy and level of cohesion. Teachers must be able to adapt their leadership style to different groups and situations.

Work group dinamic by G.P. Quaglino
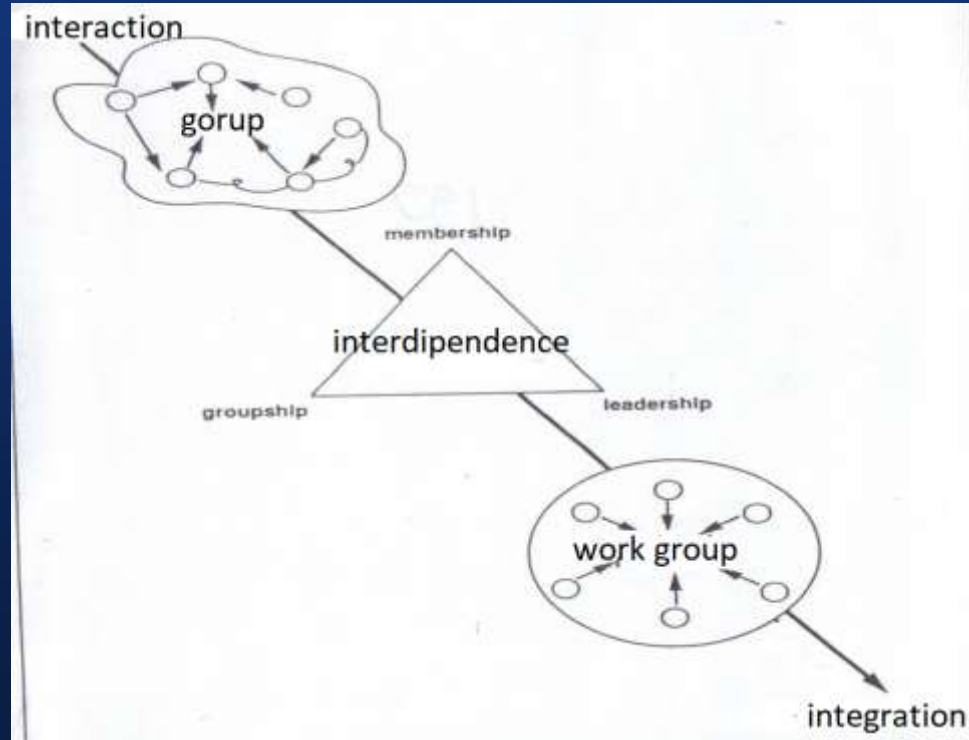
Exercise and simulations:

C_Vet training is mostly finalized in creating new competencies and practical skills. For example: we can talk about the correct modality to conduct an orientational interview, but experiencing it in a controlled, judjment free and supervised environment may really make the difference for a student who need's to built self awareness.

As edcuators we may propose fictional situations or case study to make the whole group or a more restricted section of it, experiencing difficoulties and strenght points of different approaces.

Let's practice!

In the following slide you'll find an exercises that will help

you to see if you have grasped the key concepts we just explain on the leadership style.

At the same time this will give us the opportunity to experiment on ourselfs the effectivness of exercise and simulations:

[EXERCISE] FIND THE LEADER- match the different leadership style with the group who would benefit the most from it:

1

AUTHORITARIAN
Strong, directive, restrictive

2

LAISSEZ-FAIRE
Open minded, friendly, following the flow

3

DEMOCRATIC
Able to listen, directive but soft, share the power

A

This is a well structured group, working twards a common objective. The teacher recognize a leadership figure among the students who's gaining the trust of the other and organizing the major part of the work.

B

This gorup is having trouble finding a common ground. At first there were many different lead figures fighting to prevail but now nobody is doing any work. Deadline are close.

C

This might easely be the perfect group. All the members already knows each others and had preavius experience on working togheter. Roles are well defined and the work is been compleated fast and easily.

Let's discuss it:

Report and Feedback:

Feedback it's a key instrument to impruve comunication and dialogue inside the group and between the group and the educator.

Feedback charateristic:

1. IT IS OFFERED TAKING INTO ACCOUNT WHO RECEIVES IT AND THE SITUATION IN WHICH IT IS LOCATED;

2. DESCRIBES OPERATIONAL EVENTS AND OPERATIONAL METHODS OF THE PRESENT WITHOUT JUDGING;

3. IS CONCENTRATED ON ASPECTS ON WHICH THE RECEIVER CAN ACTUALLY INTERVENE;

4. IT'S SPECIFIC AND REALISTIC;

5. RIGURADA SPECIFIC ACTIONS CLOSE IN TIME;

6. WHO RECEIVES IT UNDERSTANDING IT.

Some feedback example:

1: «I felt a very intense level of interest wile you were giving your report. I felt very involved in it»

2: «This kind of exercise is not suitable for me, I'll be more able to concentrate re-elaboarating the material by my self»

3: « I'm very tired right now. It might be useful for the class to take a breack?»

U.5

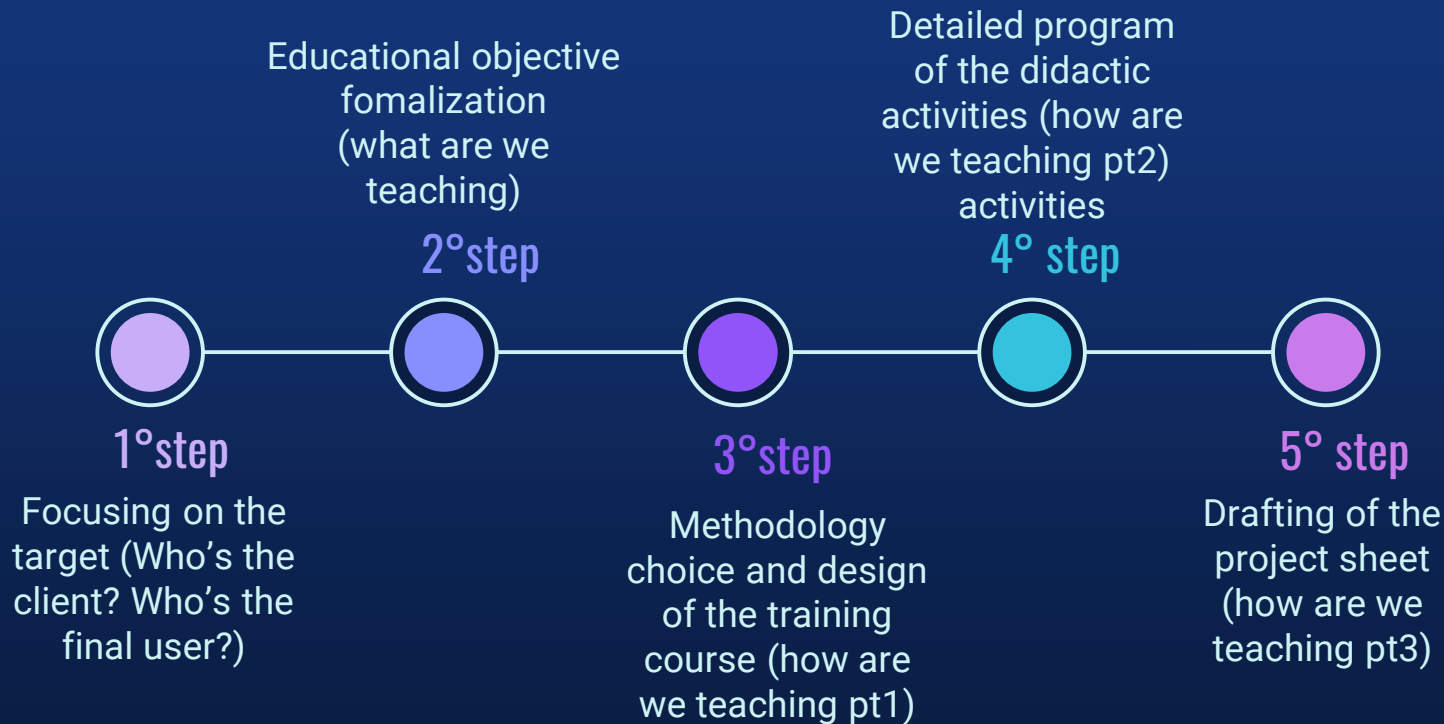Let's project!

Educational/training planning:

Training planning is a work process aimed at building learning paths for specific users, in relation to needs analyzed and interpreted through constant relationships between the parts of the system.

This process requires the trainer to have high relational skills aimed at understanding different points of view and interests expressed by the "client" system (client, referent, end user) and the creation of shared knowledge (sensemaking).

THE PROCESS

2°step

Educational objective
fomalization
(what are we
teaching)

Detailed program
of the didactic
activities (how are
we teaching pt2)
activities

4° step

1°step

Focusing on the
target (Who's the
client? Who's the
final user?)

3°step

Methodology
choice and design
of the training
course (how are
we teaching pt1)

5° step

Drafting of the
project sheet
(how are we
teaching pt3)

Exercise:

TARGET:
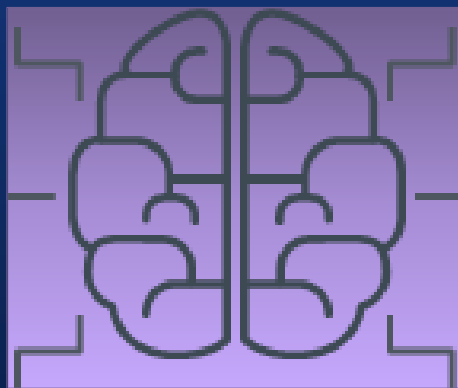An employment company ask you to deliver a formation to its workers

OBJECTIVE
"How to enhance the effectiveness of an on-line orentational interview"

METHODOLOGY
Define a methodology based on what we analixed during this lecture: <u>put students at the center!</u>

SCHEDULE
Edit a first draft of your class. Define order and timing and reason of every action

ACTIVITIES
Define witch activity you are going to propose

Feedback space (fell free to share)

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evbrz@yandex.ru Daria A. Alekseeva – Cand. Sci. (Philosophy), Director of the Center for Continuing Education, alexdaralex@gmail.com Ella D. Dryaeva – Cand. Sci. (Philosophy), dryaeva.ella@gmail.com Lomonosov Moscow State University, Faculty of Philosophy, Moscow, Russian Federation Address: 27/4 Lomonosovsky prosp., GSP-1, Moscow, 119234, Russian Federation. https://www.researchgate.net/publication/352193644_Digital_Pedagogy_Experience_of_Advanced_Training-

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THANKS