

The background is a blurred image of a library with bookshelves. Overlaid on this are various white, hand-drawn style icons related to mathematics and education, such as plus signs, question marks, a magnifying glass, a pencil, and various letters and numbers. In the foreground, an open book is placed on top of a stack of three closed books.

The Korda method for entrepreneurship education with secondary school students

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The overall presentation

- 1st part: the Korda Method for K12 students
 - Q&A
- 2nd part: Using the EntreComp framework to evaluate two entrepreneurship courses based on the Korda method
 - Q&A





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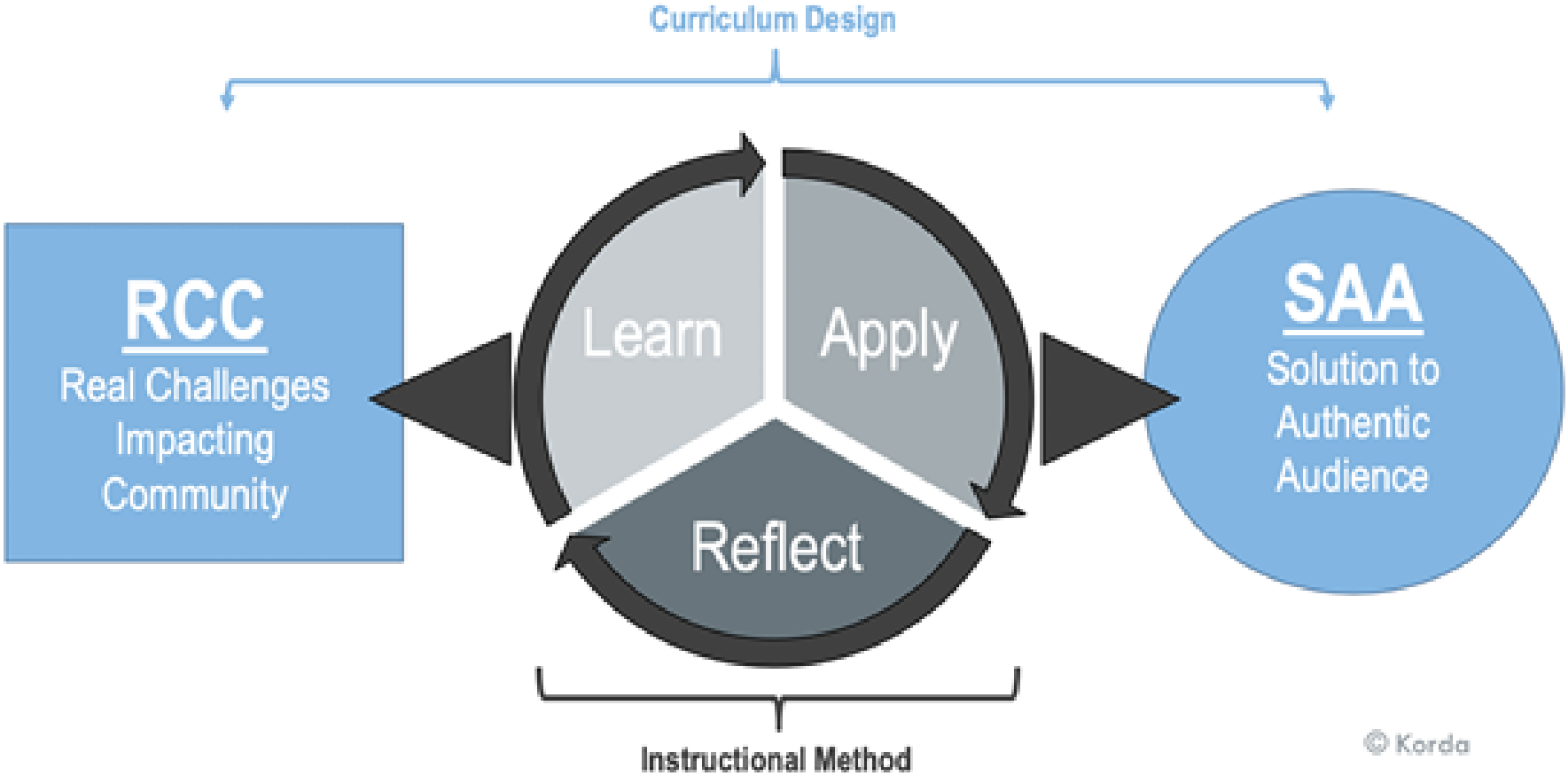
The Korda method



1: the Korda Method for K12 students

- What is the Korda method ?
- Why the Korda method?
- How does it work?
- Video

The Korda Method – Problem based learning for entrepreneurship education



Why “Korda”?

- Doris Korda is a secondary math teacher that during the years has developed a methodology to nurture an entrepreneurship competence
- Her method is based on problem based learning = The students are given an authentic challenge by an entrepreneurs. They work in groups and at the end of the period they pitch their solution.
- The method is used in secondary education, but there are also examples in primary education and university.
- Now she started her business and she is teaching other teachers and school directors her method. <https://kordainstitute.org/>
- The training course can be done in presence (in Cleveland, OHIO), but can be also enjoyed with a MOOC, an online course that one can take at any time for 250\$.

A “cycle” (or biz) of Korda method

- The method is done by cycles (in Europe we would speak of modules) of 30-40 hours each lasting from 3 to 4 weeks. (Ideally one starts with simple challenges (more open ended). The first challenge could be how to increase local restaurant or take away sales. Then from BtC to BtB.
- Challenges can be financial, social or other. In a Grade 1 of a primary school, the challenge chosen concerned a local nursing home and “a program on how to keep the elderly happy during the Covid period”.
- One could use the method for interdisciplinary projects or for own subject (Korda used it for math education).
- It is an **innovative learning approach for both teachers and students** (it requires initial adaptation and patience from both, it is not teaching for the right answers).
 - The focus is on the process, not on the product;
 - The first time you try it is just a «pilot». You don't expect students to «reach for the stars».
 - From the second cycle better one can get better results. However, developed students' autonomy and engagement, better class climate , ...

Entrepreneurial related competences developed by learners



Sense of initiative in making decisions



Creativity to formulate evidence based solutions



Make internet searches to find information and back evidence based solutions



Reflect on experience and on group performance



Work in team under time pressure to develop a solution for a challenge



Present an idea in front of an authentic audience (an entrepreneur)

A cycle of
Korda
Method has
always:

1. The challenge launched by a “flesh and blood” (social) entrepreneur impacting the community
2. Students working in small groups to tackle the challenge
3. Periodic group coaching (from the teacher)
4. Written reflections (individual, in peer, or in group)
5. Final presentations in front of a «jury» (entrepreneur plus teacher(s), when possible colleagues, school director, citizens, the mayor, ...)

Other possible integrations...

- Circle news (o circle time) to improve class climate
- **Design Thinking** (wallet exercise, gift giving experience)
- How to make a compelling presentation/pitch
- How to work in teams
- How to make internet searches
- Jigsaw for cooperative learning (readings to be split in the group)
- Ideation activities (with Google Jam Boards, or brainstorming)
- How to make interviews or personas (of possible costumers)
- Business Model Canvas; SWOT analysis; business plan



Thank-you for your attention



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USING THE ENTRECOMP FRAMEWORK TO EVALUATE TWO

ENTREPRENEURSHIP PROGRAMS BASED ON THE KORDA METHOD

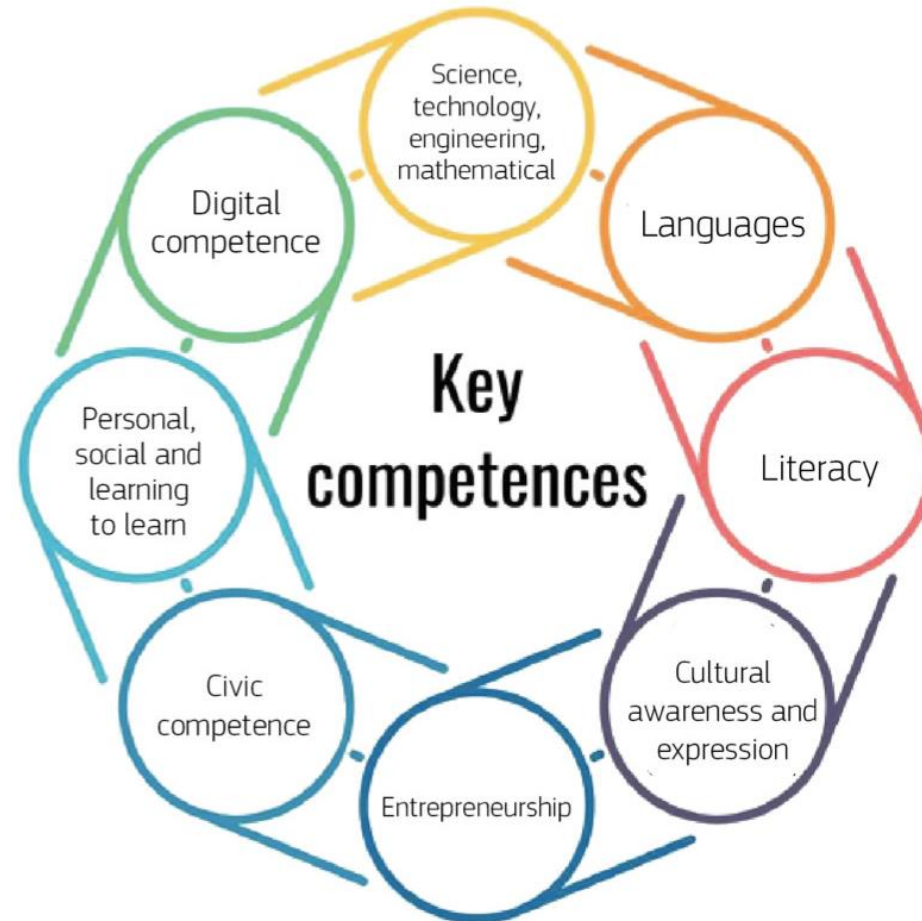
2: Using the EntreComp framework to evaluate two entrepreneurship courses based on the Korda method

- The EntreComp Framework
 - The two courses under scrutiny
 - The questionnaire
 - Results in the terms of descriptive statistics
 - Results from the qualitative analysis
 - Conclusions
-
- Link to the article in English Morselli Gorenc (2022)
 - <https://www.sciencedirect.com/science/article/pii/S1472811721001403>

The European Key competences for lifelong learning (European Commission, 2018)

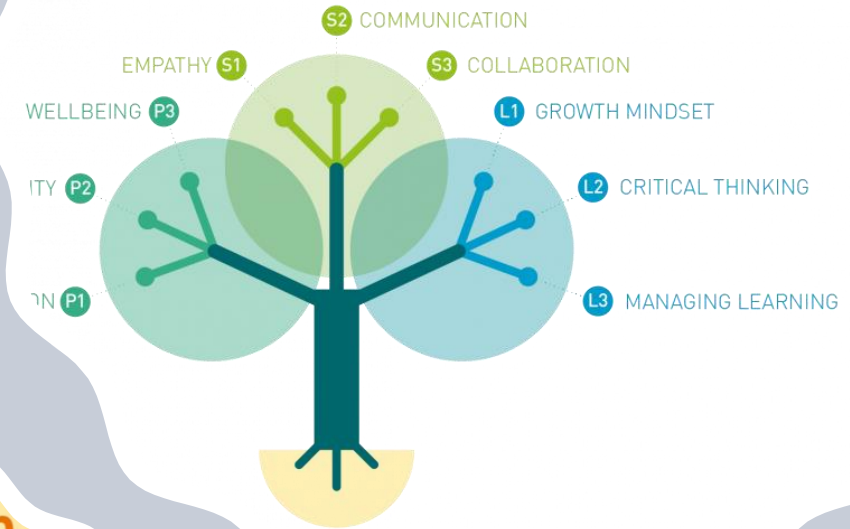
Competence is defined as a combination of knowledge, skills and attitudes appropriate to the context

Holistic definition (the subject is taken in consideration within a context and a problematic situation where to **mobilize** his/her competences).



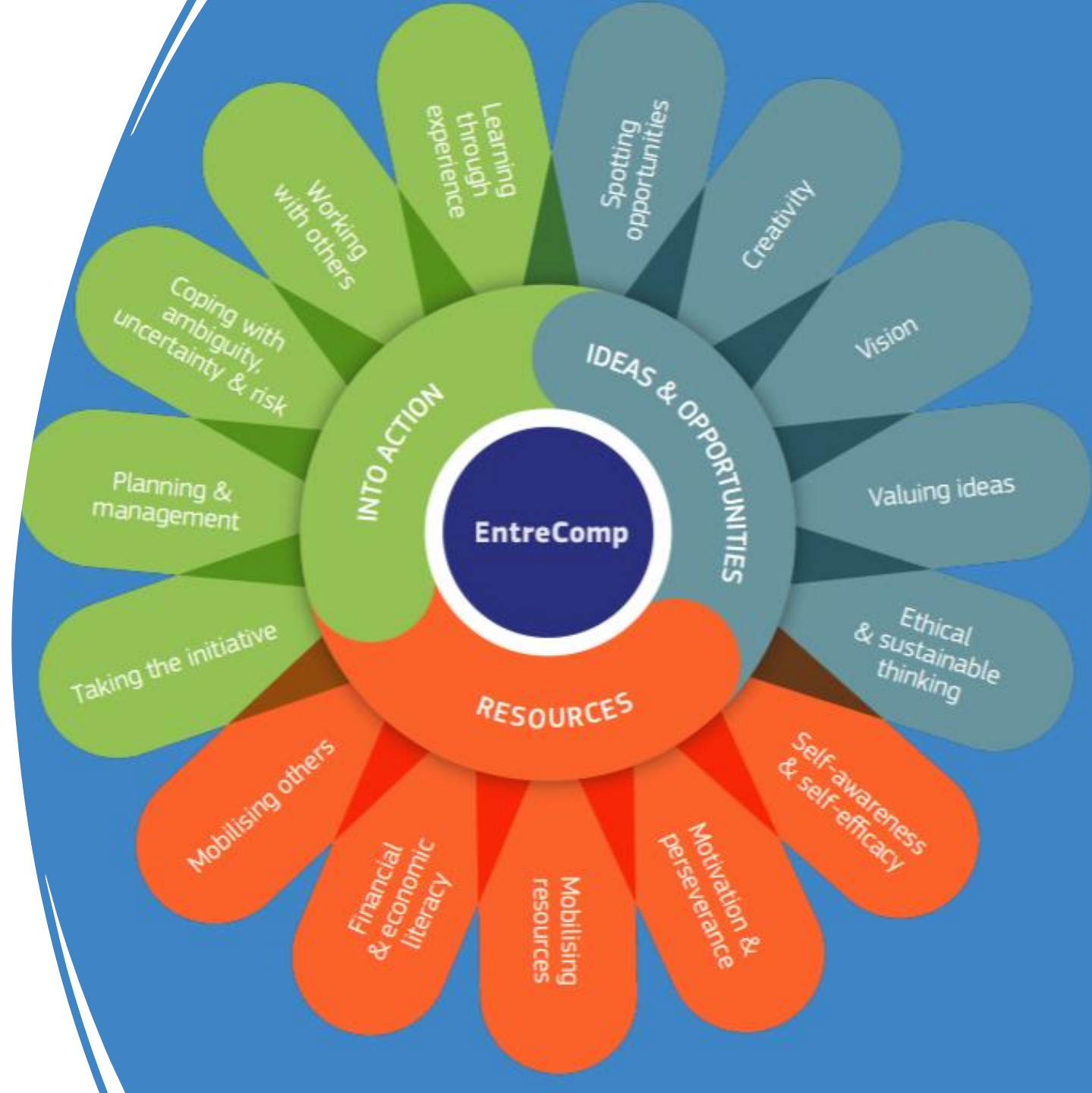
Other competence framework European Commission

- for languages (A basic, B intermediate, and C advanced)
- Green Comp (2022) Sustainability competence framework
- DigitComp 2.2. (2022) Digital Competence
- Life Comp Framework (2021) Personal Social and Learning to learn
- Financial Competence (2022) (with OECD)



The EntreComp Framework

- European Commission (2016)
- Consensus process
- It defines what an entrepreneurship competence is
- It is the benchmark
- Three main areas (Ideas & opportunities; Resources; Into action)
- Each area 5 competencies with abundance of descriptors and levels



The two courses (first cycle of Korda method)

Name course	Methods of group work	From Math to Entrepreneurship (elective)
Study course	University Bachelor for social educators	2 nd year high school
Language	English	English
Students	28	12
Length	30 hours	30 hours, half done in class, half in the field.
Challenge	Find an inclusive program , either a course, a camp, or workshops, for children or youth with and without learning disabilities that nurtures a learning to learn competence.	Design a stylish staircase railing for a construction company's HQ building , where the design would follow the Golden Ratio rules, the railing would satisfy safety standards, and the cost would not exceed a given budget.
Teams	8 groups of 4 members each	3 teams of 4 members each
Making of the groups	Randomly, distributing students according to their first language as much as possible.	Randomly, making sure the team members were not all from the same class.

Final online questionnaire (self-evaluation)

- 15 questions (Multiple choice + Open-ended) based on the EntreeComp framework.
- Multiple choice, with attitude scales. **How much did you learnt did competence?**
- Open answer, asking the students why so (reflection) with plenty of space

1) The course helped me to learn how to use my imagination and abilities **to identify opportunities** for creating value (for others).

Examples:

Identify and seize opportunities to create value by exploring the social, cultural and economic landscape (...exploring/observing your immediate environment)

Identify needs and challenges that need to be met (identify what needs and challenges people have)

Establish new connections and bring together scattered elements of the landscape to create opportunities to create value (view your immediate environment in a different light, which helps you identify before unimaginable opportunities and come up with innovative ways to create value)

- Not at all
- A little bit
- Moderately
- Considerably
- Very much

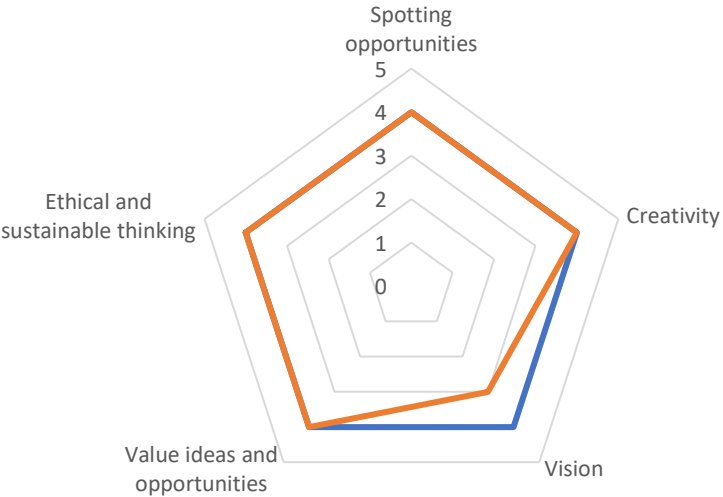
When (or how) did you learn this competence in the course (or in which activity)? Please comment:

ENTRECOMP the results in the three areas

Descriptive statistics. Radar charts representing the medians of the students **multiple choice questions**

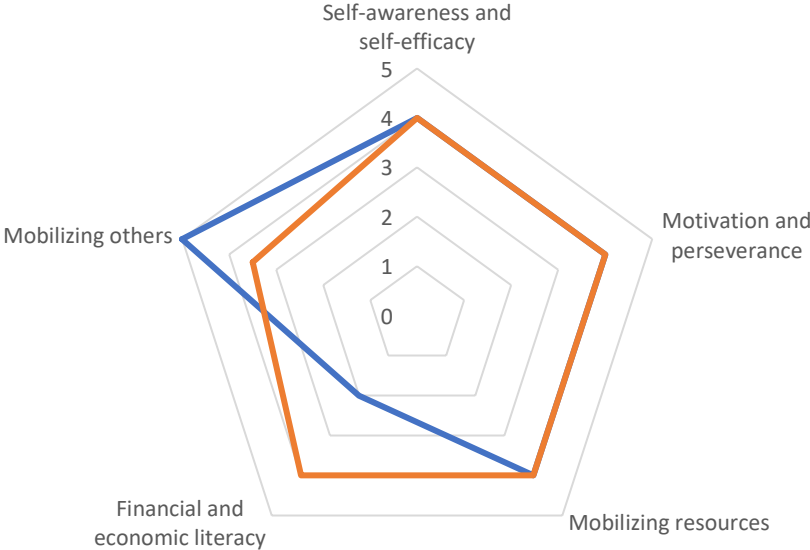
Ideas and opportunities

- Course "Methods of group work" (N=20)
- Course "From Math to Entrepreneurship" (N=12)



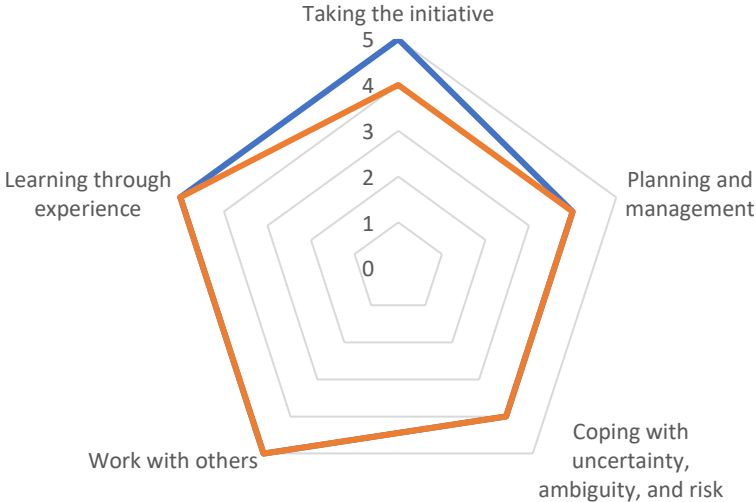
Resources

- Course "Methods of group work" (N=20)
- Course "From Math to Entrepreneurship" (N=12)



Into action

- Course "Methods of group work" (N=20)
- Course "From Math to Entrepreneurship" (N=12)



The analysis of the open ended questions

- Qualitative analysis
- Students' answer in a word file
- For each open ended question
- Multiple readings from both authors
- Finding of categories that best account for students answers
- First individually, then together to achieve shared categories

	Ideas and opportunities	Course “Methods of group work”	N	Course “From math to entrepreneurship”	N
1	Spotting opportunities	Design thinking experience (12, 60%) Through teamwork (6, 30%) Identify needs of others (3, 15%)	20	We had to come up with different ideas (7, 58%)	12
2	Creativity	Design thinking exercise (11, 55%) During the whole course (6, 30%) The fever pitch exercise (5, 25%) By developing our ideas (4, 20%)	20	Design thinking process (3, 25%) By developing our ideas (3, 25%)	12
3	Vision	Through project development (9,50%) During the whole course (5, 28%)	18	Through the project development (6, 50%)	12
4	Value ideas and opportunities	During teamwork by listening and discussing (7, 44%)	16	During the selection and evaluation of ideas (10, 83%)	12
5	Ethical and sustainable thinking	Thinking about our users, i.e. children with special needs (4, 40%)	10	When we had an idea that had to be suitable for the construction company (7, 58%)	12

	Resources	Course “Methods of group work”	N	Course “From math to entrepreneurship”	N
6	Self-awareness and self-efficacy	Through teamwork (11, 69%) During the whole course (3, 19%) Through positive feedback from others (3, 19%)	16	I learned my strengths (4, 33%) By solving the problems we were facing (3, 25%) By overcoming my fears (3, 25%)	12
7	Motivation and perseverance	Concentrating on the challenge we had to tackle (10, 66%) By supporting each other in the team (9, 60%)	15	By dealing with problems and staying focused (10, 83%) Through teamwork (5, 42%)	12
8	Mobilizing Resources	Sharing tasks with team members (3, 25%) During searches (3, 25%)	12	By gathering materials and data (7, 58%) By having to stay within a certain budget (3, 25%)	12
9	Financial and economic literacy	Dealt with only marginally (9, 75%) The only resource was time, which was not enough (3, 25%)	12	By having to stay within a certain budget (6, 50%) Through workshops on the topic (5, 63%)	12
10	Mobilizing Others	By motivating each other in the team (8, 53%) It was difficult to motivate the other team members (4, 27%)	15	By motivating each other in the team (4, 33%) It was difficult to motivate the other team members (5, 42%)	12

Into action	Course “Methods of group work”	N	Course “From math to entrepreneurship”	N
Taking the initiative	The fever pitch (6, 43%) During the whole process (4, 29%) Through teamwork (4, 29%)	14	By trying out our ideas (5, 42%) Through teamwork (3, 25%)	12
Planning and management	We learned to manage time (3, 30%) We learned to manage team members and tasks (3) During the whole process (3)	10	We learned to manage time (6, 50%) We learned to manage team members and tasks (4, 33%)	12
Coping with uncertainty, ambiguity, and risk	We learnt to be flexible (4, 36%) There was no such thing (3, 27%) Yes, because we had to make decisions (3, 27%)	11	Yes, because we were not sure about our idea (4, 33%) Yes, because we had to make decisions (6, 50%)	12
Working with others	We learnt to work in a team and it was nice (5, 42%) It was difficult to teamwork (3, 33%)	12	We learned that working in a team was key to success (7, 58%) Through solving disagreements in the team (5, 42%)	12
Learning through experience	The course was pretty much based on experience (8, 89%)	9	The course was pretty much based on experience (8, 67%)	12

FEEDBACK ON THE COURSE		Course “Methods of group work”	N	Course “From math to entrepreneurship”	NN
1	What did you find stressful?	Group work (5, 29%) Having to deal innovatively with a challenge (5, 29%) Time management (3, 18%) At the beginning, instructions were unclear (3, 18%)	17	Time management (3, 25%)	12
2	What did you like?	The innovative didactics (8, 44%) Working in group (7, 39%) The support from the teacher (6, 33%) Practical approach of the course (5, 28%) That I learned a lot (4, 22%) To be creative (3, 17%)	18	Doing things our way (6, 50%) Practical approach of the course (3, 25%)	12
3	What did you not like?	I liked everything (6, 37%)	16	I liked everything (5, 42%) The course required much effort (4, 33%)	12
4	What do you think should be improved	Clear instructions at beginning (4, 23%) The final presentations (3, 18%) Form groups better (3, 18%)	17	Different challenge (3, 25%) Better time management (3, 25%)	12

Conclusions

- Suggested to lean on a Competence Framework to assess students' learning. EntreComp though misses competences such as: pitching or presenting an idea, or problem-solving.
- However, using only multiple choice answers is not enough to understand what they have really learnt. Since competence is situated into a context, it is appropriate to ask the students information about the context (where did you learn? How?) through a reflection
- In both groups the students learnt the most: working in groups, learn from experience



Thank-you for your attention