EntreComp Food

Entrepreneurship **Com**petence
Agri**food** industry

Deliverable:

D5.1 – Pilot project results final report

Leading partner: **AGROPARISTECH**

Published: **January 2023**

Be curious and open Be determined Team up Develop ideas Use resources responsibly Accept diversity Be innovative Be resilient Imagine Listen actively Think strategically Make the most of your time Guide action Learn by doing Behave ethically Learn from mistakes Don´t give up Think sustainably Reflect Assess impact Get support

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1. General presentation of project and countries.

EntreComp project is focused on developing entrepreneurship competences during different levels of study (e.g. BSc, MSc, postgraduate, extracurricular). The idea is to empower students with knowledge and skills that allows them to make easier transition from academic to work environment and to give them the edge in the entrepreneurship. International work groups recognised seven main competences that need to be developed for successful entrepreneur in the agri-food area. Main competences in concern of EntreCompFood are as follow: creativity, vision, ethical and sustainable thinking, motivation and perseverance, mobilizing resources, working with others, and learning through experience.

Within EntreCompFood project the new training opportunities based on EntreComp framework were designed, tested and assesed to best stimulate innovation and entrepreneurship among students and young entrepreneurs in the agrifood sector. The approach was mainly tested with Teachers and trainers, students and young Entrepreneurs.

The objective of WP 5.1 is to report the methodology used to assess the development and measurement of the learning of entrepreneurial competencies, and the results obtained. In other words, this document presents what was proposed on WP4 Development of learning opportunities based on EntreComp learning outcomes.

The measurement of the General EntreCompFood learning pathway (deliverable D3.2) and the Strategic EntreCompFood learning opportunities action plan (deliverable D3.3) led to the contextualisation of WP4 and the development of this document (WP5.1 Pilot project results final report) where we assessed the methodology using tools reported on the latter. This report collects all the actions performed by the partners and collaborators and the results of such actions.

This work generated a Guide for institutions which want to start entrepreneurial teaching or activities. The deliverable WP 5.2 collects the best practices of what was learned during the application and observations of what really worked and what could be improved.

Ecotrophelia competition was a great event to see and measure the development of entrepreneurial competencies. EntreCompFood award was given to teams expressed the observation of these developed skills during the presentation of their food product and project. Thus, Ecotrophelia became the full expression of entrepreneurial competencies amongst students and a reference for the full expression of EntreCompFood competencies.

Globally, EntreComp Food positively develop entrepreneurial competencies on different stages within the participating institutions. Naturally, it developed a committee at University of Ljubljana and helped the teaching of entrepreneurship. Spotting weak links was important to rethink courses and develop new ones, in the case of AgroParisTech where it was essential for the creation of 'Maturing real entrepreneurial projects' course. It can and will help student to reach for the necessary entrepreneurial skills during their academic years, thus preparing and closing the actual gap between University and Industry. The EntreCompFood project has meant for Andalucia Emprende an internal improvement in the work dynamics. With the tools provided and developed during the duration of the project it was possible to change from an environment where the focus were the numbers, investments, and financing on business project to people and their entrepreneurial skills.

Context

The Grant Agreement of the ENTRECOMPFOOD project states that:

<u>T5.2 Results collection and assessment of the testing phase</u>
Teachers and trainers (from UL-BF, AgroParisTech, CCIS-CAFE and AE) will monitor the progress of the involved learners (students and young entrepreneurs) by collecting information about learning processes and concepts while learners are involved in the EntreCompFood project learning activities. By providing feedback based on this information, teachers/trainers would be able to address misconceptions and other learning problems appropriately, notably by adapting the content if required.

The monitoring method to be used will be based on a progress checklist. Progress checklists are usually used where projects require learners to meet specific requirements in sequence and on a schedule. A dedicated checklist to collect results and monitor the progress of learners will be drafted by AgroParisTech in M12. This checklist will contain the main learning milestones, due dates, and approval stages. The deliverable will be approved notably by UL-BF, CCIS-CAFE and AE, most directly involved by the present task.

The main stages of the learning progress to be monitored will be:
→ the initial assessment (to be carried out in T4.1);
→ after the 6 modules presentation (full course);
→ after the editions of the EntreCompFood special award.

UL-BF, CCIS-CAFE and AE will carry out the assessment of the testing phase towards their respective target user groups.

The pilot project results, collected after the identified monitoring phases will be comprised by AgroParisTech within a final report (D5.1) due in M34 to feed part of the Recommendations Guide on replicability and sustainability (D5.2).

2. Ecotrophelia Europe

Established in France in 2000, **ECOTROPHELIA** expanded to a European scale in 2008, ECOTROPHELIA Europe is organized by the European Technology Platform **"Food for Life"**, ANIA *(National Association of Food Industries)* and CCI Vaucluse. On the principle of a food innovation "Champions League" each European country organizes its own national competition to select the most innovative food project that will then be presented at **ECOTROPHELIA Europe**. Each country selection is coordinated by its national food federation. The teams are composed of 2 to 10 students from either public or private higher education European establishments, scientific or commercial.

ECOTROPHELIA has the ambition to promote entrepreneurship and competitiveness in the European food industry through the organization of national and European food innovation competitions the "Food Innovation Student Awards", and through the organization of a prospective space for the most innovative projects and start-ups in the heart of the biggest international trade fairs for the food sector to unveil the food of tomorrow.

ECOTROPHELIA is a great platform for innovation and inspiration for the food industry. It allows capitalizing on the limitless creativity and energy of our brightest and most enterprising students, supported by the best Universities and High Education Institutes.

ECOTROPHELIA is a **"real ideas"** incubator for the food industry, it is an age-group marker on the consumption trends of the millennial generation. It offers students full-scale learning and training, by confronting them with real situations, the rules, and laws of an uncompromising market in a state of perpetual evolution. It incites the development of a culture of curriculum innovation, by making changes to teaching methods, particularly through project-based learning, in direct contact with professionals in the sector.

Beyond the competitions, ECOTROPHELIA has become a network of training excellence in food innovation that mobilises higher education institutions and national federations of food industries in Europe. Thus, the ECOTROPHELIA network, a reference educational model supported by the European Union, plays an organisational role in promoting innovation and entrepreneurship among students.

Ecotrophelia key figures:

ECOTROPHELIA KEY FIGURES	
22 years of ECOTROPHELIA competition	22 participating countries
2800 students have participated	>1000 Food Innovation Products

Figure 1. Ecotrophelia key figures.

Historic dates of the competition:

2008 - First ECOTROPHELIA Europe session with 8 food federations *(Austria, Belgium, Denmark, France, Germany, Italy, Slovenia, and Spain)*

2011 - The European Commission recognized the exemplary nature of TROPHELIA and gave the go-ahead to the Chamber of Commerce and Industry of Vaucluse to implement a European project for the promotion of eco-innovation in the food industry sector: ECOTROFOOD. The competition TROPHELIA then became ECOTROPHELIA

2014 - ECOTROPHELIA inspired the creation of FOODLAB, a European Laboratory of food innovations to encourage entrepreneurship in higher education and promote student entrepreneurship, supported by the European Union in the context of the ERASMUS program.

2015 - ECOTROPHELIA Europe 2015 took place at the Universal Exhibition Milan 2015 whose theme was "Feeding the Planet, Energy for Life". Based on a Champion's League of food innovation, 16 European countries participate in ECOTROPHELIA Europe 2015 in the European Commission Pavilion.

2019 - ECOTROPHELIA promoted the development of a Strategic Partnership project in the scope of the ERASMUS+ program - FEEDtheMIND, which brings together 7 partners from 5 European countries to work on new pedagogical methods on knowledge and skills acquisition.

An efficient learning methodology to promote the teaching entrepreneurial competencies is to promote project base learning. Students are presented with a current problematic to be solved, can be related to the SDG goals, and are guided to solve this problem by developing a product or service. Working with current problematics can incite students to work the ethical and sustainable thinking competence. Project based learning can develop the proposed EntreCompFood competencies such as, creativity, working with others, learning through experience, vision, and mobilizing resources.
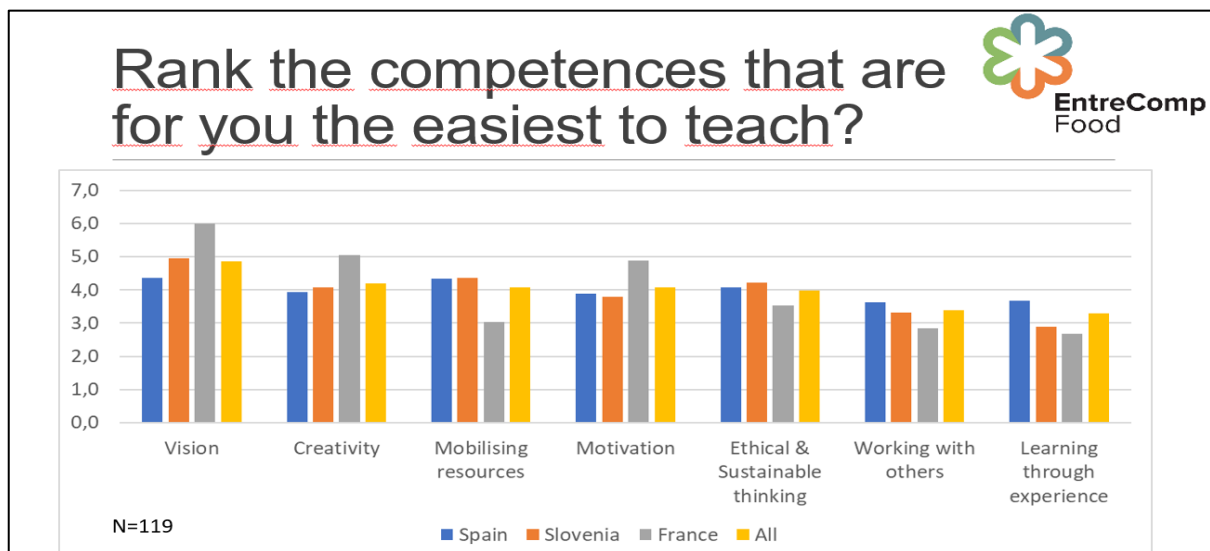
Figure 2. Representation of competencies teaching by Professors and institutes from participating countries.

This graph shows the ranking of competencies that are easier to teach according to Professors and institutions in participating countries. The ranking goes from zero (hard to teach) to 7 (easy to teach). It is observed that few of the competencies taught are harder for some countries than others. For example, France has a below average of teaching mobilising resources than Spain or Slovenia. "Learning through experience" and "Working with others" also are skills difficult to teach. This could be overcome by proposing projects that students are able to cope and develop together. In addition, may be suggested cultural and interpersonal courses to rise above this problem.

"Vision", "Creativity" and "Motivation" are subjects that are well taught in France and the other countries could have an improvement of such. It is believed that Spain has a low average due to when companies look for Andalucia Emprende they already have a well-developed idea.

Teaching EntreComp competencies had a great impact on the teaching body at institutions. Although AgroParisTech had a developed committee, the mentoring of entrepreneurial projects allows learning

for the teaching body in a sense that every project is different and has something to add on knowledge. Nonetheless, University of Ljubljana, by the necessity of teaching entrepreneurial competencies, naturally developed a committee where teaching experiences were exchanged and applied during classes.

The fact that it EntreComp competencies were taught during courses and classes had the impact to develop an organisation necessary to support the teaching of entrepreneurial competencies. This natural organization confirms that having a body to organize and promote teaching is one of the key pieces to further develop entrepreneurial ecosystem in the institution.

2.1. Ecotrophelia Europe EntreCompFood Award

Type of the activity:

formal learning and non-formal learning

Target group:

Students participating to the Ecotrophelia Europe competition

Developed competences

Creativity, Vision, Ethical & sustainable thinking, Motivation and perseverance, Mobilising resources, Working with others, Learning through experience

Structure of the activity

Online training, oral presentations

Impact and Effort:

The European EntreCompFood award has been developed for the 2022 Ecotrophelia Europe edition. In order to reach this result some efforts had to be done:

1/ develop an online training on entrepreneurship accessible to all Ecotrophelia Europe participants.

2/ change the competition rules to state the creation of this new award.

ARTICLE 4. TERMS & CONDITIONS FOR TAKING PART

4.1. Application

Each Participant should apply to the Organizing Committee through:
- a "Letter of Commitment", signed and dated by the Participant,
- the "Registration Form" filled in online in the following website: https://eu.ecotrophelia.org/;

The Organizing Committee will acknowledge receipt of both documents and will send an invoice referring to the **registration fee**. For the 2022 edition the fee is set at:
- 2 200€ (two thousand two hundred Euros) for non-EEIG members;
- 1 600€ (one thousand six hundred Euros) for EEIG members.
- The proof that one of the team members went through the Inspire 4 Ecotrophelia EIT course on entrepreneurship: https://eitfood.eduframe.nl/login/eduframe?redirect_to=https%3A%2F%2Feitfood.instructure.com%2Flogin%2Fcas

Picture: The Ecotrophelia Europe rules 2022 on Article 4 about entrepreneurship award .

3/ inform and train the jury on the new competencies to be evaluated during the competition.

4/ adapt the voting tool.

The existence of this new award and the obligation for the participating students to go through this training bring all the teams to better analyse their competencies and to expose them. The impact on their willingness to act as entrepreneurs is important.

Learning objectives

The training tool has been developed with the support of EIT FOOD, a well-known European organization omitted to promote entrepreneurship in the food sector. It's an initiative supported by the European Union.

Its mission? To accelerate innovation to build a food system for the future that produces healthy and sustainable food for all. EIT food invests in projects, organisations and people who share these goals for a healthy and sustainable food system. They also equip entrepreneurs and professionals with the skills to transform the food system and train the next generation.

The learning objectives are:

- Self-assessment.

- Capacity to evaluate the potential of an idea.

- Tools to implement the idea.

- Tips to improve entrepreneurship capabilities.

Short description of the activity (duration, topic, number of participants)

The 15 teams involved in the European competition had to follow the training. The 52 students presenting their food product on the competition day have been evaluated by team on their entrepreneurship abilities. The jury had to decide which team will receive the EntreCompFood prize.

Activities, methods, tools used to support the development of the entrepreneurial competences

The online training tool Is accessible here: EITFood - Training tool

A pre-registration is needed.

The registered members to the training session received this email:

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Dear Students,

We are happy to have you as part of our programme and are certain that you will learn so many things that will be valuable to you. 🧡

Don't forget, you can check out the course outline HERE and get the ball rolling with mapping your strengths in entrepreneurial thinking HERE. This course is designed to equip you with everything you need to succeed in your entrepreneurial journey so don't let the momentum fade! Keep moving forward in your studies, and soon you will enjoy the fruits of your learning. 💪

If you haven't already done so, once you have completed your EntreComp profile, **don't forget** to post your reflections in the discussions forum HERE so you can share your insights with your fellow students.

Remember you can upload your **final submission** at any point **up until Friday 30th September**, when the course closes. Upon completing your final submission, you will earn your **EIT Food Certificate!**

Anytime you need help with your learning process, we are here for you. Just send us a message through Canvas and we will come back to you as soon as possible.

Good luck!

What was a success factor

The participation was mandatory for one member of the team out of fifteen teams participating. However more than fifty enrolled to the training and finished it, which is an indication on the quality of the training delivered as well high interest from students to learn those topics. EIT Food team was very committed to the project and has great experience in training tools. We got a professional tool since day 1.

What could be improved next time

The initiative will survive the end of the project and students will have more time to follow the training. The tool will be available for the national competitions too. So more students will benefit from it.

2.2. EIT Food Inspire 4 Ecotrophelia

Inspire 4 Ecotrophelia is a pilot programme that has been developed in conjunction with Ecotrophelia to enable participants to advance an innovative business proposition in preparation for the pitch events. In addition, the participants will develop valuable skills.

The programme focuses on entrepreneurship elements and follows a logic with approximately 12 hours of asynchronous content on Canvas, the EIT Food learning platform. At the end of the programme is an easy to complete short assignment, that allows the crystallization of the business proposal. Feedback is given and also the EIT Food Inspire for Ecotrophelia Certificate.

All of the content has been designed and developed by experts in entrepreneurship from leading universities including the University of Cambridge, Technion - Israel Institute of Technology and Aarhus University, as well as industry experts. Included in the programme are modules on: team building and sustaining momentum, sustainability and stakeholder value (eco-innovation), segmenting your market, negotiation (buying and selling), finance, IP, scaling a venture, PESTEL and SWOT analysis, and the marketing mix.

The course is self-guided and designed to be flexible to suit the participants' schedule. The content takes 12 hours in total to complete and can be worked through at different times. When the course is completed, it is necessary the submission of a short slide deck as the final mini-assessment.

The year of 2022, Ecotrophelia competition gathered a total of 172 international students divided in 15 groups. It was mandatory for at least one student of each group to complete the course so the certificate could be given and the participation of the Ecotrophelia competition granted. In total 58 students completed the course generating a 34% attendance in the course.

3. EntreCompFood prize for Ecotrophelia on national level

3.1. EntreCompFood prize for Ecotrophelia France competition 2022

The first EntreCompFood prize was give during the Ecotrophelia Competition 2022 which had place in Nancy, France. The jury, a total of 22 persons, corresponding of professors and business personalities evaluated the participant groups regarding four EntreComp competencies (motivation, group work, vision, and creativity). The prize was given to the team which had the biggest average within the chosen set of EntreComp competencies. The winner was "Sauces Papillon" a recent company which has developed a new conservation technique that is implemented on their process, so it keeps the product fresh after the production. The reason of obtaining the higher score can be explained by the already created company and the establishment of the manufacture from obtaining seasonal ingredients to the production of the sauces. The prize was handled after the presentation of the participants teams in the section "My product in 120 seconds" where students had to perform an easy explanation of their product for the audience.

This project was proposed by ANIA (Association Nationale des Industries Alimentaires), that has as a collective mission of "giving new value to food", to incite students to participate on Ecotrophelia competition and to give visibility for the EntreComp project to a broader audience. It also was interesting to see how the jury perceived the competencies through the group pitches.

3.1.1. Formation of a committee that followed Ecotrophelia team

The AgroParisTech Ecotrophelia team (France), were mentored by a group of three professor. Each one of them with a set of complementary competencies that helped the team to build a strong product. The AgroParisTech committee follow every year a group of students and this allows them to acquire knowledge throughout the years and experience in the entrepreneurial world.

3.1.2. Students' statements regarding EntreComp competencies (AgroParisTech)

After completing the EcoTrophelia competition (but before the announcement of final results), the AgroParisTech EntreCompFood team present in Nancy organized a debriefing time with the student's group that competed in the 2022 EcoTrophelia France competition. This debrief was organized as an informal discussion, with the objective to let the students express, both individually and collectively, how they thought this project had help them to develop Entrepreneurial competences. The AgroParistech EntreCompFood team (Hugo and Paul), organized the discussion around the 7 EntreCompFood competencies: for each of them, we asked the students how they felt the competition has helped them to progress. We questioned the group, ask everyone to complement the answer gave by the others, and try to ask them more details every time it was possible. At the end of the discussion, we also asked them to talk freely about other competencies that they might have been able to develop together.

- **Vision.**

During the Ecotrophelia competition, students have reported the importance of having an argued clear vision of when pitching their project. In the beginning, some aspects were put aside but soon

they realized that were necessary to build a clear vision of the objectives to be achieved and the importance of not dispersing.

The competition helped the students to experiment in the universe where they wanted to position the developed product.

- **Creativity.**

Creativity was developed when students were facing problems regarding their process. It was necessary to use creativity to solve the problems finding the suitable solution. Creativity also helped to be more critical and curious in determined parts of the project.

- **Resources mobilisation.**

Students have learned to look for answers or contacting people to help solve problems or receive instruction on how to solve them. They also identified when best to go for advice, which information to collect and which information to give to obtain the necessary advice. (Ex: a relevant interlocutor contacted in the beginning of the project cannot give useful information).

Having people with a diverse background of competencies is an asset to develop the project and to present it. Identifying skills and using them to get the most out of each situation.

Students also related the importance and need to have a budget to manage. They said it would help them develop further development of financial skills.

- **Working with others.**

Students reported that at the beginning was difficult the teamwork due to the different campuses that they were located. Although the communication was not flowing in the beginning, they managed to overcome this obstacle.

Another point brought from the students, was the different courses timetables that made harder the organisation of meeting and the project development.

- **Learning through experience.**

Students have understood the importance of applying knowledge from the start of product development phase (formulation and quality). The challenge presented by the project helped the students to learn by doing and to have hands on experience on the development of a product.

- **Motivation and perseverance.**

Students learned how to be confident regarding their work. Critics served for improvement and to confront reality. Students also learned how to constructively criticise.

- **Ethical and sustainable thinking.**

This aspect has been judged important from the beginning of the project, but as the project progress, students realise more the importance of a sustainable thinking and ethics. They have realised the this by observing, during their project, an increase of revenue for agricultural partners.

- **Competencies outside of EntreComp.**

Other aspects brought up by students outside of the previous discussed competencies were, having autonomy to take decisions, project management and how to anticipate problems. Look for solution by yourself when facing difficulties was something mentioned by them.

Communication improved during the project development, to clear things between team members and to clarify objectives and goals on project strategy. At the end students realised that is essential to have self-confidence and Ecotrophelia was a great way to enter start-up/entrepreneurial world.

3.1.3. Analysis of the development of entrepreneurial competencies during Ecotrophealia competition of the French team.

This section presents the results comprising the Ecotrophelia group from AgroParisTech students. The EntreCompFood competencies were measured at the beginning of Ecotrophelia competition, at the end and, each participant evaluates a colleague (peer reviewed).

EntreCompFood competencies

EntreCompFood competencies average
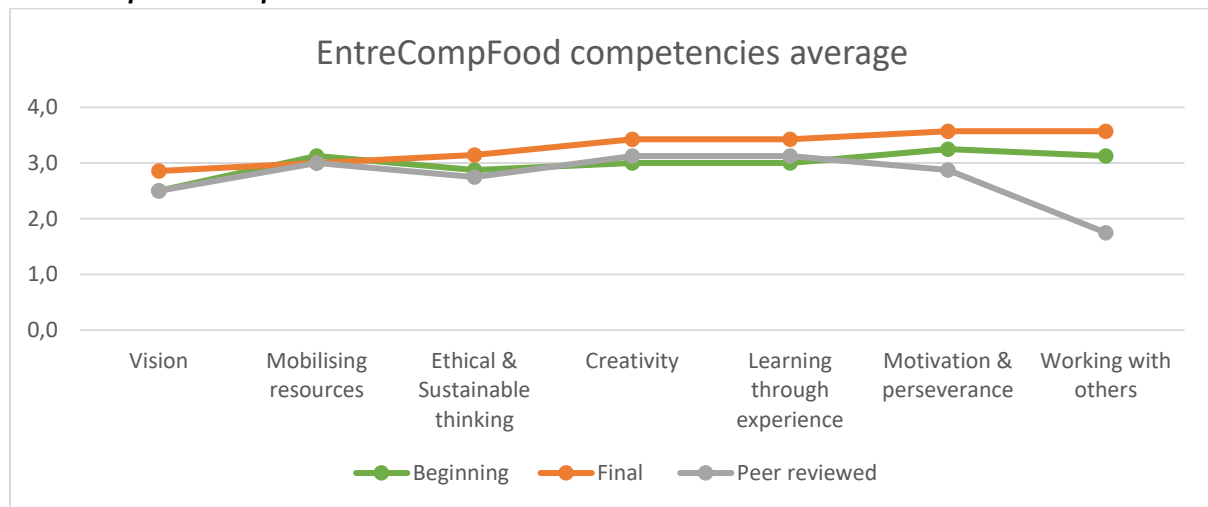
Figure 3. EntreCompFood competencies average in Ecotrophelia group.

Figure 23 shows the results of EntreCompFood competencies. The high general average can reflect the year of work that students spent developing their project, so it was expected elevated points. The peer review line can suggest communication problems and a reflect of the student's contexts, not being on the same campus or having a similar timetable making difficult to meet to discuss the project.

EntreComp & Pépite competencies
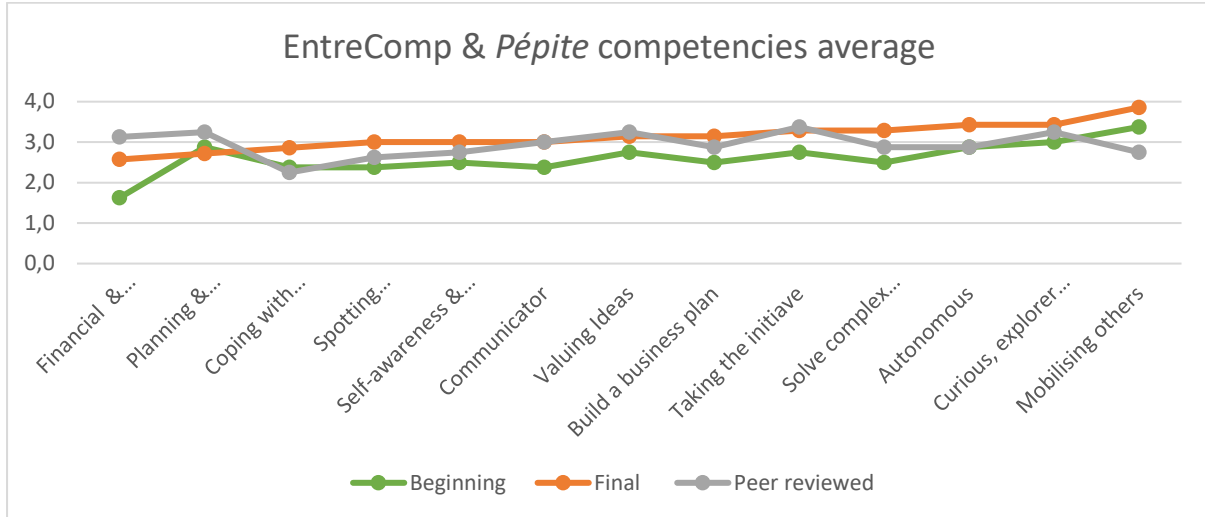
Figure 4. EntreComp & *Pépite* competencies.

Figure 24 represents another set of competencies assessed. The point "Planning and management" represented a slightly lower final value than the initial one, this could be explained by the development of the project where students realised that a better planning was necessary to achieve the determined goals. "Financial literacy" is self-perceived as the weakest point, but when peer assessed it is peer-perceived as a strong point amongst colleagues.

Global participants average
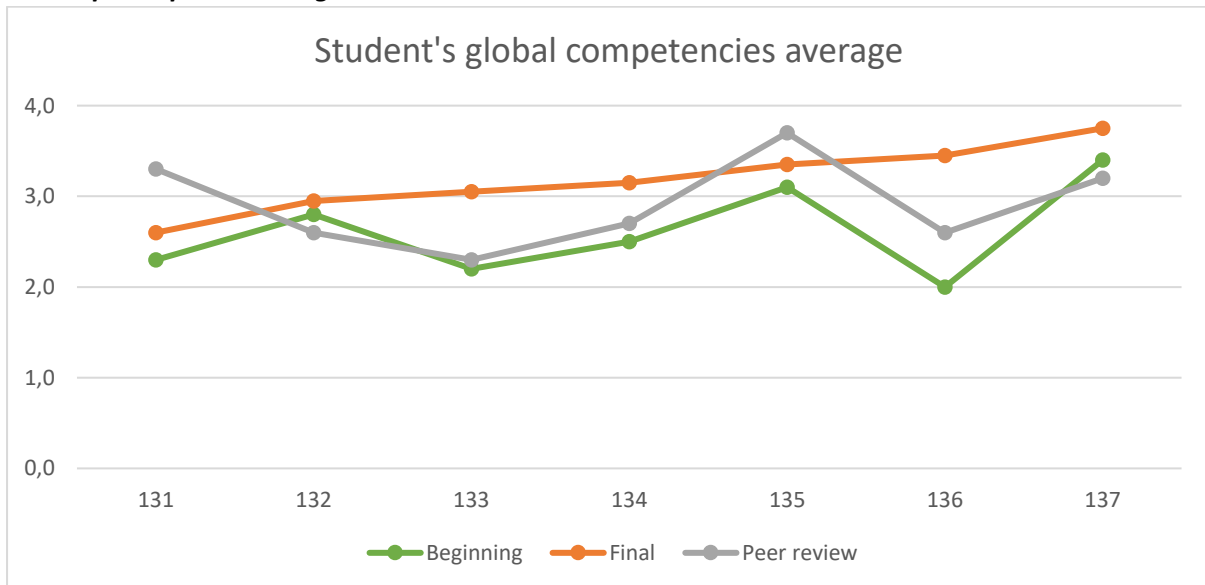
Figure 5. Students' global competencies average.

Figure 25 presents the global average of students that participated on Ecotrophelia championship. It can be observed that subjects (131 and 135) were seen by their peers as more than that self-evaluate themselves. The other subjects had a peer reviewed value equal or near their initial self-evaluation. This could be due to the different educational background whereas competencies could not be fully perceived, in addition, studying in different campuses could also be a barrier to the observation of entrepreneurial competencies.

3.2. EntreCompFood prize for Ecotrophelia competition Spain.

FIAB, the Spanish Food and Drink Federation, rewards the creativity of students in the food and beverage sector and the development of innovative products, promoting entrepreneurship and talent from the classroom. To participate, the students groups must develop a food and beverage product that presents innovations in any of its phases: formulation, packaging, concept, technical aspects, etc. These products must meet a series of requirements to be able to participate in Ecotrophelia Spain: they must comply with current legislation, be marketable, suitable for human consumption and distinguishable for their organoleptic and nutritional qualities. Furthermore, in line with the food and beverage industry's efforts to produce more efficiently and contribute to sustainable development through its activity, these products must incorporate environmental considerations throughout the production process.

"Ecotrophelia Spain Awards offers the opportunity every year to learn from the creative talent of young students and to promote the entrepreneurial skills of those who will be the future workers of the food and beverage industry", says Mauricio García de Quevedo, Director General of FIAB, who also stresses the importance of the values highlighted by this competition: "Innovation, sustainability and entrepreneurship are the hallmarks of the Spanish food and beverage industry".

The competition is aimed at students in Spain, in the final years of their university degree or other higher education courses. Teams wishing to take part in the competition must send a report detailing the characteristics of the product, including all the peculiarities of their innovative food or drink, as well as the target public and the different plans and strategies for communication, marketing, commercialisation, financing, etc. that they are going to use in its production. FIAB studies all the projects through a Technical Commission and pre-selects the finalist teams, which will participate in the final to compete for first, second and third place. Ecotrophelia Spain winners with FIAB support participate in Ecotrophelia Europe competition.

In addition, the Federation rewards since 2021 Ecotrophelia Spain edition the team that demonstrates the greatest entrepreneurial skills throughout the competition, through the Ecotrophelia **EntreCompFood Entrepreneurship Award.** To qualify for this entrepreneurship award, students have to exhibit throughout the competition the use of entrepreneurial skills (creativity, vision, resource mobilisation, ethical and sustainable thinking, motivation, learning from experience, etc.) and submit a report describing which competencies they have prioritised in the process of creating their innovative food and drink product. FIAB will launch Ecotrophelia Spain 2023 including for the third time EntreCompFood Award.

Ecotrophelia Spain is streamed live through Ecotrophelia Live Blog and FIAB social networks including videos of each project.

And all the information needed by students when they have an innovative idea, to create the product and to start their business to commercialise can be found in Ecotrophelia Spain web **www.ecotrophelia.es** , an **interactive infographic with all the information including EntreCompFood**.

Spanish jury participating in Ecotrophelia Spain is formed by 10 industry representatives as well as Agriculture Food and Fish Ministry representative, having all received information about students' competences to be observed for EntreCompFood Award through different trainings including B2B, mailing and last explanations before the competition starting.

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In addition, FIAB celebrates INGENIA STARTUPS context focussing next step of Ecotrophelia, all participants receive EntreCompFood skills information.

¿Y si tuvieras una idea innovadora?

Ecotrophelia es una competición a nivel nacional y europea de estudiantes agrupados en equipos multidisciplinares que tiene como objetivo la creación de nuevos productos alimenticios eco-innovadores.

Los proyectos presentados en Ecotrophelia ayudarán a vislumbrar cuáles serán las tendencias alimentarias en un futuro cada vez más próximo. Por eso desde FIAB animamos a todos los centros universitarios a participar para promover la innovación en el desarrollo de productos alimentarios.

Tienes una idea, pero...¿necesitas ayuda?

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O bien, NO dudes en ponerte en contacto con Concha Ávila (c.avila@fiab.es)

← **Ecotrophelia España**
1.065 Tweets

Siguiendo

🔁 **Ecotrophelia España** retwitteó

EAMNUPV @eamnupv · 5 abr.

🏆 Hoy el equipo Llaurant @petalinas ha recogido el Premio Emprendimiento EntreCompFood de Ecotrophelia España 2022, por haber sido el equipo que ha mostrado las mayores destrezas y mejores habilidades emprendedoras a lo largo del concurso. #EcotropheliaEspaña2022

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EntreComp
Food

t↑ **Ecotrophelia España retwitteó**

FIAB @esFIAB · 16 sept. 2021 ···

🔵 El Premio Emprendimiento Ecotrophelia @CompEntre 👉 Ahumadete @UniBarcelona

Premios Ecotrophelia España 2021

💬 1   t↑ 2   ♡ 5   ⬆

← **Ecotrophelia España**
  1.065 Tweets   Siguiendo

Recordamos que el equipo ganador representará a España en @Ecotrophelia Europa.

👉 Además, este año, como novedad se entregará el Premio Ecotrophelia Emprendimiento @CompEntre, para premiar el espíritu emprendedor. #Ecotrophelia @Ecotrophelia_ES

💬 2   t↑ 3   ♡ 9   ⬆

![EntreComp Food logo]
Entrepreneurship **Comp**etence **Agrifood** industry
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3.3. EntreCompFood prize for Ecotrophelia Slovenia competition

In Slovenia during the EntreCompFood project several activities were done to train the students on entrepreneurship as well as to reach to educators to encourage them to mentor Ecotrophelia teams.

3.3.1. Feedback workshop for Ecotrophelia students

Type of the activity: non formal learning

Target group: students working in teams

Developed competences: Creativity, Vision, Ethical & sustainable thinking, Motivation and perseverance, Mobilising resources, Working with others, Learning through experience

Structure of the activity: On-line workshop

Impact and Effort:

High impact/high effort.

Learning objectives

Learn how to give, receive, and ask for feedback, that helps you grow and improve.

Short description of the activity (duration, topic, number of participants)

Interactive on-line workshop was organised at the end of the teamwork. The participants got familiar with the entrepreneurial competences and how to give peers feedback based on the traffic light tool. The whole workshop was organised in a positive atmosphere, to focus on what was good and what have they have learned. 18 students from 7 Ecotrophelia teams participated to the 4 hours on-line workshop.

Mural was used so that everybody could share an example under each competence. After learning the meaning of each competence, we teach them how to.

Activities, methods, tools used to support the strengthening of the entrepreneurial competences

- Peer to peer evaluation form focused on entrepreneurial competences.

- Traffic light to give feedback practised with Mural – split in 3 parts – theory explanation, practise in pairs to give each other feedback following the template, discussion on work in pairs to share with others.

What was a success factor

Giving a complement to one person, it is important for young students to realise their own strengths and gain self-esteem.

What could be improved next time

Students had difficulties to articulate the feedback, they wanted to give. Next time would be better to practices this more, give them more examples or do some role-playing.

Supporting materials for this activity

- Traffic light to give feedback.
- Peer to peer evaluation form focused on entrepreneurial competences.
- Mural template for the workshop - EntreCompFood competences & Feedback

3.3.2. Students' statements regarding EntreComp competencies (CCIS-CAFE)

Each year students had to reflect on their entrepreneurial learning through EntreCompFood training and give a short pitch on their experience to make a video, here their testimonials are found. The video is encouraging other students to join Ecotrophelia competition and experience the entrepreneurship learning firsthand.

Surprisingly, students not knowingly the EntreComp competences, still those are the reason why they embark on the entrepreneurship journey with Ecotrophelia competition.

4. Ecotrophelia Competition Conclusion

Ecotrophelia Competition is important for bringing together students and entrepreneurship. The approach used by the competition incites the learning and development of essential entrepreneurial skills for the development of an innovative food product. In every participating country, Ecotrophelia mobilized many people and institution for the duration of the competition. This generated ideas and projects collaboration such as EntreCompFood.

EntreCompFood project was able to measure the development and learning of entrepreneurial competencies as well as the comparison between students of the same team. A round table regarding the learning of entrepreneurial skills was important to observe from students how they learned and the development of such.

During EntreCompFood project, most of institutions realised that the best way of learning entrepreneurial skill is the hands-on type of work. Building a project from start and developing in depth is essential for the learning by doing approach. This can make students face problems during the development of the project and thus, look for solutions using their capacities and, by so developing skills.

Ecotrophelia competition was a great event to see and measure the development of entrepreneurial competencies. EntreCompFood prizes given to teams expressed the observation of these developed skills during the presentation of their food product and project. Thus, Ecotrophelia became the full expression of entrepreneurial competencies amongst students and a reference for the full expression of EntreCompFood competencies.

Globally, Ecotrophelia is an essential event that are closely linked with EntreCompFood can positively impact the learning of entrepreneurial skills on students.

5. FRANCE

The work done in France consisted of the evaluation of students on different levels of education and young entrepreneurs attached to the incubator body, Food'InnLab, at AgroParisTech. The work was done in a progressive way, first and second year of studies received tailored courses (24 to 30 hours) that indented to present entrepreneurial environment as well as the development of competencies. Third year, MasterNova and Itineraire Entrepreunarial have had their evaluation and learning through projects that are part of the syllabus and the learning process during the educational course (duration of the semester). The Ecotrophelia participating group (different background among students) were followed by a mentor during the whole duration of the project until the end of the championship. Finally, the Food'InnLab, which hosts young entrepreneurs and give them scientific support for the development of their entrepreneurial projects, were evaluated in the interval of a year. Overall, it was assessed different levels of education and entrepreneurial competencies through the whole lot of the educational pathway up to young entrepreneurs starting their company.

An evaluation of the subject's soft skill and entrepreneurial competencies were done with the objective to have a better understanding if the educational system promoted the necessary learning of these competencies through the educational pathway or if there was a need of changing. In addition, a redesign of the educational system could be proposed to cover the lacks and develop weak entrepreneurial skills. This could allow different levels of learning and a consisted acquisition of entrepreneurial skills during the studying period in the university, to expose students to entrepreneurial competencies and promote the learning and evolution through courses.

5.1. EntreCompFood competencies evaluation of the courses

This section describes AgroParisTech university courses (BSc. and MSc.) and the incubator (Food'InnLab) that EntreCompFood project was used to measure the proposed entrepreneurial competencies with the self-assessment questionnaire prior and after the course to estimate the students progress and identify courses strengths and weaknesses.

UC 1A – First Year Engineering Cycle

The first year (UC 1A) of the engineering cycle consists of a core curriculum that exposes the learners for specific issues to life science engineering. They learn to mobilise disciplines around key problems, to get to know each other better and perform group work. The core curriculum consists of scientific and technical disciplines in Life and Environmental Sciences and other disciplines such as Ethics, History and Philosophy of Science, Communication, Languages and Sport.

UC 2A – Second Year – Athens

The second year aims to consolidate the common base of engineering skills such as economic, social, management, engineering, mathematical modelling sciences, and to deepen a specific field (at choice). It is possible for the student to complete training abroad in the second semester.

UC 3A – Third Year – Design and Product Development (CDP)

The third year is the final of the professional and personal project (bac+5 - Master 2). The student must choose to go deeper into a major, a Master's M2 course or training outside the school (particularly abroad). This is the year of specialisation with a first academic semester (in-depth courses, languages) and a second semester devoted to the end-of-study internship, a real engineering project in a real-life situation, leading to the presentation of a thesis. The courses targeted for testing the system in the 3rd year of the cycle are the specialised majors in Food such as CDP (Conception et Développement Produit) and GPP (Génie des Procédés et Production).

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Masternova Proj'Innov – Partnership between AgroParisTech and Neoma Business school.
The MSc. Masternova is the result of a partnership between AgroParisTech and NEOMA Business School and is located at the interface of life sciences and management disciplines, serving innovative projects in the fields of agri-food, health, biotechnology, plant chemistry, cosmetics, etc. The programme is resolutely business-oriented and involves both academics and professionals. It alternates theoretical contributions, case studies and concrete projects, conferences, and company visits. Masternova prepares its students to work at the crossroads of life sciences and managerial disciplines, in the service of innovative projects.

The courses enable students to understand the challenges of the sectors of activity linked to life sciences, to integrate technical and industrial constraints, and to become familiar with the innovations underway in the sectors. It also allows students to acquire skills in corporate strategy, marketing, finance, corporate law, intellectual property, etc. Finally, it allows the integration of the need for dialogue between science, technology, strategy, marketing, and sales.

Food'InnLab – AgroParisTech incubator.
Food'InnLab is a place for experimentation and collaboration for those involved in food innovation. It supports projects up to the production of a proof of concept. It provides areas for experimentation (kitchen and labs), technical and scientific support through the AgroParisTech ecosystem, students, and researchers. It allows the connection between education, research, and business by assembling students and young companies (start-ups) in an entrepreneurial environment. Connecting INRAE-Agroparistech research to new questions and offers a co-constructed field for experimentation.

Ecothrophelia – Students competitions for creating innovative products.
ECOTROPHELIA has the ambition to promote entrepreneurship and competitiveness within the European food industry by implementing a training network of excellence in food innovation and the organization of national and European food innovation competitions "The Student Awards of Food Innovation". ECOTROPHELIA is a great platform for innovation and inspiration for the food industry. It allows capitalizing on the limitless creativity and energy of our brightest and most enterprising students, supported by the best Universities and High Education Institutes.

AgroParisTech team was accompanied in the competition ECOTROPHELIA FRANCE. Entrepreneurial data was collected during the duration of the event to evaluate the team development during the competition time (one year).

Itinéraire Entrepreneuriat
In 2015 AgroParisTech wanted to propose for the students the possibility to access information of starting a company and to mentor students' entrepreneurial projects. Due to the dispersion of students in different campuses, it was necessary to create a specific dispositive that assembled the scientific and master courses but did not resemble the existing courses. It was proposed a program that allowed to initiate students in entrepreneurship on the course of one-week programs (see Course Content section), and to organise entrepreneurial tournaments with project different levels of maturation. The winner projects would be mentored by business angels, scientific and technical guidance, hosting at the AgroParisTech incubator Food'InnLab and a financial prize determined by the University sponsors.

To fully support the program, and give a chance of good projects to flourish, the Institution should mentor the business and the founders even when they become young graduates. Doing so, the project has the necessary support to thrive. Once the project is further developed it can follow a more autonomous path and pursue a more adapted sponsoring and financing.

5.2. Development of entrepreneurial courses and their content

The courses were developed and tailored to give an overview of EntreComp competencies. Some courses focused on the development of a set of skills judged necessary for the students. The courses presented a progressiveness on the teaching method where they started with an idea for further development. The students were separated in groups and each of them had a starting idea to develop. The course advanced by giving tools for students to support the initial project and exposing them to the learning of entrepreneurial competencies. At the end of each course students had to pitch their project for professors and colleagues.

Initiation à l'entreprenariat dans le vivant, ministered for UC 1A, 24h.

The "**Introduction to entrepreneurship**" course was designed with the aim of introducing the entrepreneurship to first year students. The course consisted of lectures about the entrepreneurship. Introducing entrepreneurship and first auto-evaluation of entrepreneurial competencies (ENTRECOMPFOOD questionnaire), creativity sessions and formation of groups, brainstorming session to define an idea for a project to work during course.

Testimony from Start-ups and they project were organized so students could be inspired for the development of their own pitch. Introduction of entrepreneurial tools such as VIANEO for better shaping students' projects. Preparation and training of group pitches to present for the course participants.

The final part of the course was a visit to the incubator Farm Inn Lab, an AgroParisTech agricultural incubator.

Introduction to entrepreneurship

Type of the activity:

Formal learning

Target group:

Students

Developed competences

Creativity, Vision, Ethical & sustainable thinking, Motivation and perseverance, Working with others, Learning through experience.

Structure of the activity

Workshop

Impact and Effort:

It presents entrepreneurship concepts, creativity sessions, working in groups, brainstorming sessions to develop a project during this time. The presence of young entrepreneurs incites the students to hear experiences from people that were at their place at one point. Visiting incubators and companies can be suggested. Preparation for a pitch is also done so students can pitch their project at the end of the course.

The impact can be classified at small to medium.

Learning objectives

Students are exposed to creativity and brainstorming. Working with other to develop the initial project and to introduce students to the entrepreneurial world through the listening of experiences from young entrepreneurs.

Short description of the activity (duration, topic, number of participants)

Total duration course of 24 hours.

Activities, methods, tools used to support the development of the entrepreneurial competences

Brainstorm session; Creativity games; Presentation of companies by their founders; Development of an entrepreneurial project in groups. Pitch preparation and training sessions.

Visit of the incubator at AgroParisTech.

What was a success factor

Students were interested about hearing young entrepreneurs talk about their experiences. Students also appreciated the brainstorm and creativity session. Some groups presented a good dynamic. Students appreciated the hands-on type of teamwork and the quality of the final results that they achieved (pitch). They appreciate the pathway of going from a simple idea to a concrete one.

What could be improved next time

Teaching on how to communicate could help students to better present their ideas and to exchange with their colleagues. Students appreciated less financial analysis of an entrepreneurial project. Mostly theoretical part that they found not amusing for the learning of entrepreneurship.

Proposing a course more complete in order to deepen the knowledge and to mature real projects with the objective to develop new entrepreneurial competences. But this have not happened yet. The final objective is to use diverse pedagogical tools like the ones proposed in this guide.

Initiation à la création d'entreprise dans le vivant, ministered for UC 2A, 30h.
The "Introduction for creating an enterprise" course was designed with the aim to give second year students the tools to turn their intrapreneurial project into companies. It consisted of self-evaluation of entrepreneurial skills, creativity session, group formation for definition of the project, introduction for financial dimensions on the entrepreneurial environment and case study. The course used VIANEO tool for entrepreneurial simulation of student's projects and pitch preparation and final presentation of project. Start-ups entrepreneurs presented their project and gave student tips for their pitch preparation. The course ended with a visit to AgroParisTech incubator Food'InnLab.

<u>Introduction to creating a company</u>

Type of the activity:

Formal learning

Target group:

Students

Developed competences

Creativity, Vision, Ethical & sustainable thinking, Motivation and perseverance, Working with others, Learning through experience.

Structure of the activity

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Workshop/Lecture

Impact and Effort:

Preparation of creativity sessions and basic finance for entrepreneurship. Choose of case study to be studied in class. Presentation about pitching and how to do it. Medium development on entrepreneurial competencies.

Learning objectives

Initial development of a company. Teaching of financial dimensions for entrepreneurship. Teaching pitching strategies.

Short description of the activity (duration, topic, number of participants)

Students are invited to take their idea and to build a business plan. Classes of 16 to 20 people are ideal. This workshop takes 30 hours, one week, 5 days.

Activities, methods, tools used to support the development of the entrepreneurial competences

Brainstorming and creativity sessions, business plan creation and pitch structure through VIANEO method. Learning by doing methods.

- Day 1

Introduction to entrepreneurship and food innovation.

Self-assessment (EntreComp questionnaire)

Creativity session and groups formation

- Day 2

Choosing final ideas and literature review about the project.

Listen and exchange with young entrepreneurs pitching about their project.

- Day 3

Use of VIANEO tool start planning the enterprise.

Presentation of the plan.

Group work to complete VIANEO templates.

- Day 4

Pitch preparation of each group.

Autonomous group work with supervision of the trainer.

- Day 5

Pitch presentation of each group.

Self-evaluation (EntreComp questionnaire).

Debriefing of the course with students, moment for feedback.

Visit of food innovation site or company.

What was a success factor

Students appeared to like VIANEO tool to build the business plan. Teaching how to pitch was also successful. The students also preferred a hands-on type of teamwork and the quality of the final

results that they achieved, the final pitch. Having worked the development of an idea to have a concrete one and a final result was really pleasing for the students.

What could be improved next time

Communication between groups should be worked for next time. Also exercises on how to talk in public. Proposing a course more complete in order to deepen the knowledge and to mature real projects with the objective to develop new entrepreneurial competences. But this have not happened yet. The final objective is to use diverse pedagogical tools like the ones proposed in this guide.

Supporting materials for this activity
VIANEO business design; Template VIANEO; Entrepreneurial creativity; EntreComp questionnaire.

Ingénierie de l'innovation, ministered for UC 3A, 48h lessons spread in 3 months with outside of classroom work.
The "Innovation engineer" course was designed for third year students with the aim of development and management of innovation in the food sector. The course consisted of the ministration of classes regarding innovation management, design thinking, business model building, starting a company, start-up creation with VIANEO tool, valorisation and research funding, case study with company Air Liquide and finally, project pitch and presentation.

<u>Innovation engineering</u>

Type of the activity:

Formal learning

Target group:

Third year Students

Developed competences

Creativity, Vision, Ethical & sustainable thinking, Motivation and perseverance, Mobilising resources, Working with others, Learning through experience

Structure of the activity

Lecture, Seminar, Workshop, Project-based learning.

Impact and Effort:

Innovation management lecture, design thinking seminar/workshop, business model preparation, Case study with real companies. Hight level development of entrepreneurship competencies.

Learning objectives

Building a business plan. Managing innovation. Creating a company. Learning how to look for funding. Development of business case with a real company.

Short description of the activity (duration, topic, number of participants)

Number of participants between 16 and 20. Duration 48 hours spread in 3 months.

Activities, methods, tools used to support the development of the entrepreneurial competences

VIANEO tool to help building the business model. Case study presented by real companies.

Seminar - Process of innovation management and analyses; Food innovation and sustainability; Case study about Ecotrophelia;

Workshop – Design thinking and business model; Creating a company with VIANEO support; Innovation strategies and case study of milk company.

Lecture – Valuing and financing of research; Innovation management in a company and case study.

Development of an entrepreneurial project using VIANEO templates.

What was a success factor

Working with a company. Having time to build a business plan and exchange with the lecturers.

What could be improved next time

Having a better following of students could help to have a stronger business plan and pitch at the end of the module.

Supporting materials

VIANEO business design; GLOSSAIRE BUSINESS DESIGN, Template VIANEO; Entrepreneurial creativity; EntreComp questionnaire.

Ecothrophelia - Team Coached by AgroParisTech Professors
Team for Ecothrophelia was followed up during the projects time where the group receive guidance for the development of the project for the Ecotrophelia competition. It consisted on training for group participants for the event, ideation of product and development of final merchandise. The process is supervised by a team of professors of AgroParisTech.

Food'innLab - Incubator
The Food'InnLab is an incubator from AgroparisTech which offers scientific supports for start-ups, the management of projects and access to the university's professors. It hosts the start-ups at a space dedicated to the development of entrepreneurial projects. It has a test kitchen and labs where prototypes can be prepared and tested.

The space offers a collaborative space where start-ups can connect and exchange with one another. This creates network and build a communitarian environment where they help each other in diverse aspects.

The conditions that Food'InnLab proposes for start-ups allows the development of various competences. Creativity for adaptation to some constraints that usually arise from community life (booking of equipment, kitchen…) pushes young entrepreneurs to use it to find new solutions. Sharing the space, forces the entrepreneurs to work together with others and to develop a sense of autonomy to advance the project. In addition, planning and managing risk is a skill that also is developed when living in community because it forces the anticipation to book spaces and machines.

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Maturation course for real entrepreneurial projects.

The EntreComp project was a great tool to access the development of entrepreneurship on AgroParisTech institution. It helped the assessment of ongoing courses, students and applied methodology. It also opened a discussion between mentors, scrums and students. EntreComp Food project pointed the weak links in the entrepreneurial teaching in AgroParisTech and it inspired the development of a course which has the objective to mature ongoing entrepreneurial projects, shaping it, and make it move from intermediate level to advanced.

The maturation course has as objective to help real entrepreneurial projects. This course intends to carry projects from intermediate to an advanced stage by giving the necessary support to develop the weak links of each project. By giving tailored advice and support, it is expected to cover and give the necessary knowledge to the project to flourish and attain the expected level of development. The AgroParisTech's entrepreneurial ecosystem can give the necessary support to develop strong entrepreneurial ideas and projects.

This course has not been opened to students yet, it is a consequence of the EntreComp project. EntreComp had shed some light into the existing methodology and made professor realise the need for the creation of a maturation course as such.

A specific module for entrepreneurs: Maturing real entrepreneurial projects

Type of the activity:

Formal learning. This course is proposed for a real entrepreneurial projects

Target group:

The target group are people which have an ongoing project at an intermediate level but want to advance it further. They might be lacking some guidance and necessary skills for this development. People who apply to this course are motivated to learn and develop specific entrepreneurial skills. The tutor should select a determined amount of project without affecting mentoring capacity and availability.

Developed competences

Creativity, Vision, Ethical & sustainable thinking, Motivation and perseverance, Mobilising resources, Working with others, Learning through experience.

Structure of the activity

Lecture/Seminar/Workshop/

Impact and Effort:

At the end of the module students should have developed advanced entrepreneurial skills. Such can be described as the capacity to present their project in a convincing pitch form for an audience, realization of a market research in accordance with the project's scope, planification of the next steps (6 months), and to measure the progression of the development of learned entrepreneurial competencies and team management.

Learning objectives

The objective of this course is to mature projects already created which are still in need for guidance to attain an advanced development. It will allow the building of the business model of the future start-up, to determine the time frame of the project and its development, to test the market acceptance, and prepare arguments and strategies to interest future investors.

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Short description of the activity (duration, topic, number of participants)

Entrepreneurial competencies should be learned to reach a progressive development of the project. This can be done by allowing participants to work with experts in the field during the course duration (2 weeks) and identify project's priorities. Training on pitching techniques to value the project and strategies to attract future investors in future presentations should be develop in the course.

Activities, methods, tools used to support the development of the entrepreneurial competences

Pedagogical workshops are intended to train project owners. Proposed workshops are described next and will focus on different themes : (1) human resources management (operational team management, recruitment, co-founders association management, (2) Market vision of the project (quantitative study, market research, BtoB and BtoC strategies) (3) Key points on building the business model/plan and marketing strategy (Vianeo tool to help) (4) Planning of actions in continue (planning and replanning strategies when necessary) (5) Extern communication (pitching techniques, community creation, press communication, project design).

Assessing the participants can be done by the following: punctuality, presence, participation on the available ateliers, and more important by an evaluation of the final presentation. At the end of the module each participating project should be presented to a jury explaining the business model, market research and plan of action. Pitching the project in 20 minutes plus discussion time. A confidential and diverse jury should be part of the final evaluation to give their advice on the projects. Feedback from the teams should be instigated so the module can be improved in future ministration.

Table 1. Organization of a workshop with the parts to be covered.

ORGANIZATION OF A WORKSHOP	
Round table	Presentation of projects and their needs.
Reception	1 to 2 hours of interactive course with an expert on previous defined theme, presentation of concept, tools and step by step on utilization.
Experimentation	In site autonomous work of each team with expert mentoring of proposed tools.
Creation	Quick presentation of what was developed with the tools and feedback of the course.
Debate	General feedback from expert and participants.

5.3.Self-assessment questionnaire

5.3.1. Questionnaire application and time points.

The questionnaire for self-assessment of entrepreneurial skills were applied in the beginning of each course and the final point was the end of course. Using these time points we were able to collect the data before the course and at the end making possible a comparison between both time points and giving an overview over the effectiveness of the ministered course allowing for further improvements in the future.

5.3.2. Development of the questionnaire

The questionnaire applied for the assessment of French students were modified to test further competences regarding the governmental program Pépite. It was tested the whole EntreComp competencies and further 5 skills (building a business plan, autonomy, curious, explorer and ability to listen to others, communication and solving complex problems), totalising 20 competencies to be tested for each tested subject. While the EntreCompFood had 8 levels of proficiency for each competency, the French questionnaire had only 4, (beginner, intermediate, advanced, and expert) considering the Pépite questionnaire.

Pépite

Founded by the French Ministry of Higher Education in 2014, Pépite France is a network spread through Student poles for Innovation in Universities having as mission to strengthen the entrepreneurial culture and innovation in higher education by implementing awareness-raising, training, and supporting actions. It fosters connection between students and young graduates which have created business projects in collaboration with companies, as well as support and financing structures.

Autonomy

An important competency for an entrepreneur is the need for autonomy. The need and ability to make own decisions, without the influence of others are factors that drive entrepreneurial autonomy. Entrepreneurs can act independently of others, have the independence of problem solving and complete tasks of their own.

It is the freedom of everyone in the organisation to make decisions in their work environment. It comes to favour the company's work in a proactive manner.

Curious, explorer & able to listen to others

These competencies are essential for an entrepreneur. Being curious allow the development of innovation (in combination with other related skills), it corresponds with the accepting the new, the looking for new experiences and experimenting it. The capacity to listen to others allows to be open to receive criticism and be open for an idea. It also relates with the ability to meet new people.

Solve complex problems

Capacity to solve problems by intellectual coherence. Thinking rationally helps to put solutions in place and explain the foundations. It references to systemic mechanical analysis to influence decision making.

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Communicator

Capacity to relate with others. A person being able to express its ideas in a way the listening part will understand. Persuasion and adaptability for the listeners is also part of a good communicator.

Build a business plan

Essential competency to start a business. It reflects, in detail, a company's objective and how it plans to achieve its goals. It describes the business from marketing, financial and operational standpoints. It can attract the interest of investors and help to secure lending from financial institutions.

5.3.3. Results and Discussion

This section presents the results from the target groups which students participated in the answering of the questionnaire.

5.3.3.1. UC 1A

This section reports the finding of the first-year students before and after the course described on part "Courses Content".

EntreCompFood Competencies
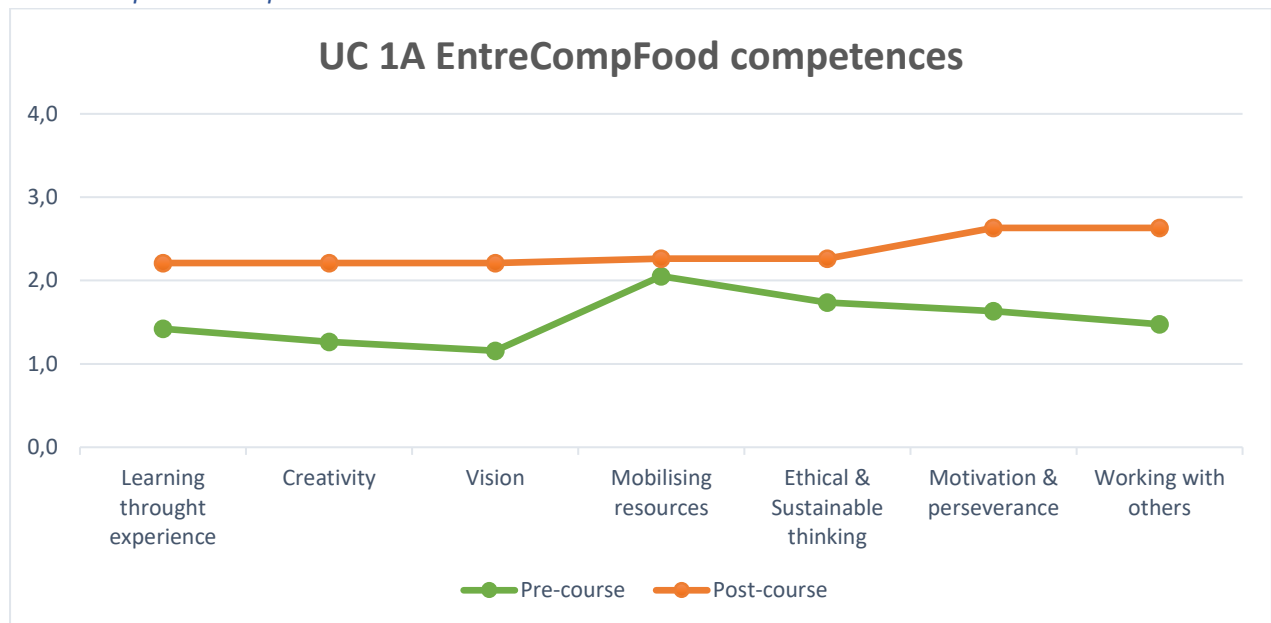
Figure 6. First year students EntreCompFood competencies.

This graph shows the assessed soft skills regarding EntreCompFood project. The graph corresponds of what was expected during the ministering of the developed course for these students. An initial low average is observed, and it corresponds with the "absence" of previous knowledge from the group. Although the course had a 24 hours duration, an increase of the average was expected in certain skills that were presented during the course.

No change in "mobilising resources" consists with what was presented on the course.

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Pépite Competencies

UC 1A EntreComp and Pépite competencies
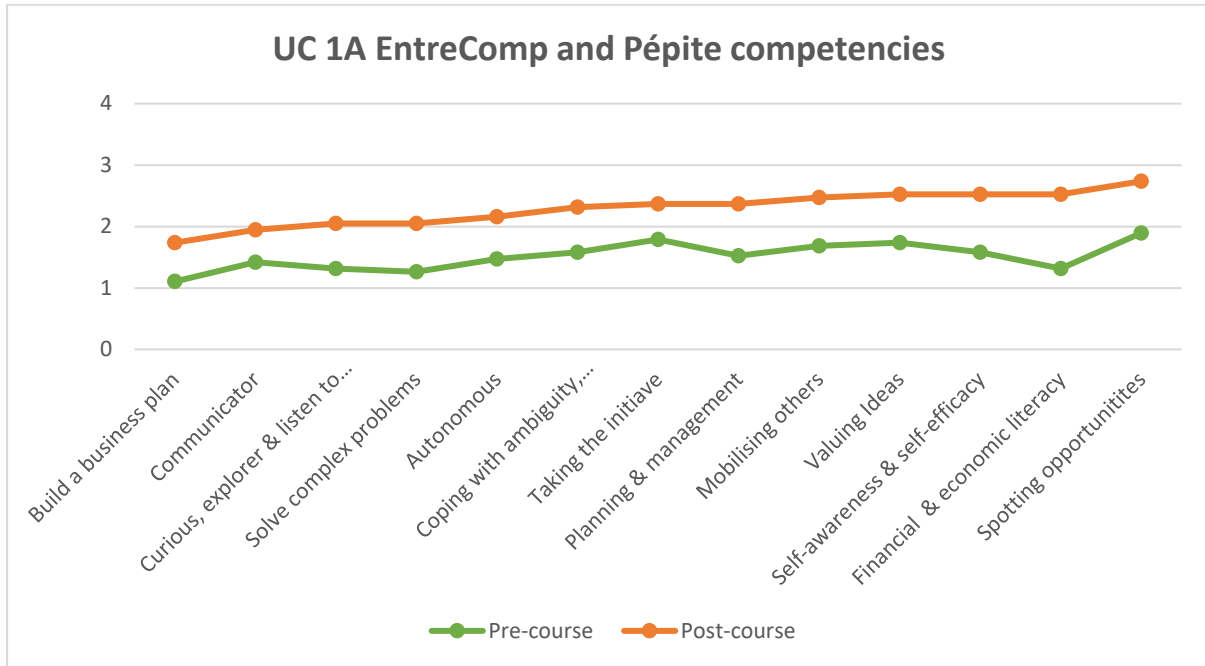
Figure 7. First year EntreComp and Pépite competences.

We believe that a few of the averages presented on this graph are not representative due to its high value for students which did not have contact with the subjects on previous learning experiences. For example, the big change on "Financial & economic literacy", should not have happened since the course ministered for the first year did not have deep financial teaching. This could be due to how students perceived the necessary importance of financial aspects during course. Another interesting point for observation is "Building a business plan", which is very important for the development of a company and thus has an imperative financial aspect. Being the lowest value for both measured points, it suggests that students are not familiarised with the preparation of a business plan.

UC 1A Students' global average
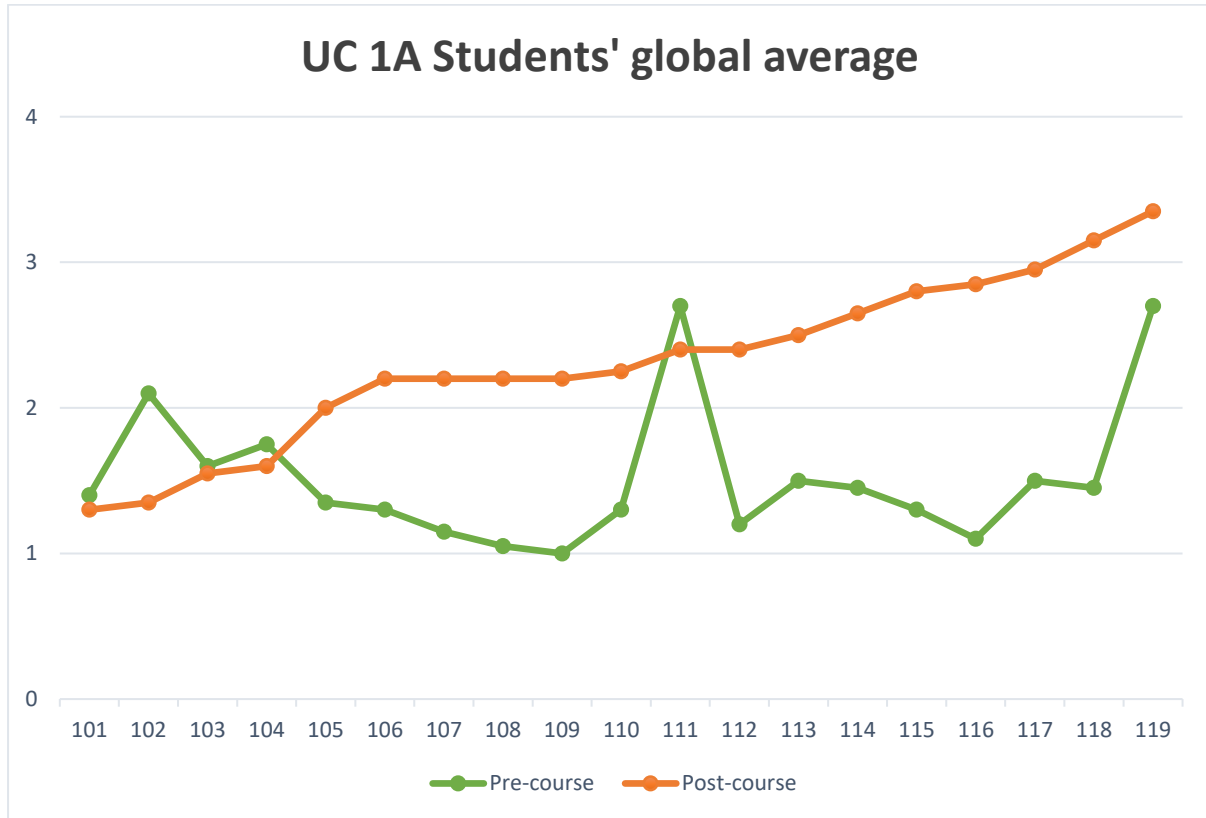
Figure 8. First-year student's global average.

This graph represents the global average of first year students. It was expected a low initial average on global competencies due to the entry level of students. After the introduction course of entrepreneurial competencies, it is noticeable a higher final average point, but some are too high (115; 116; 117; 118; 119) which suggests an over-evaluation of the students. Is perceived that some subjects (101; 102; 103; 104; 111) over-evaluated themselves initially but realised that the learning of entrepreneurial competencies is more complex than what was thought.

5.3.3.2. UC 2A

This section reports the findings of the second-year students.

EntreCompFood Competencies
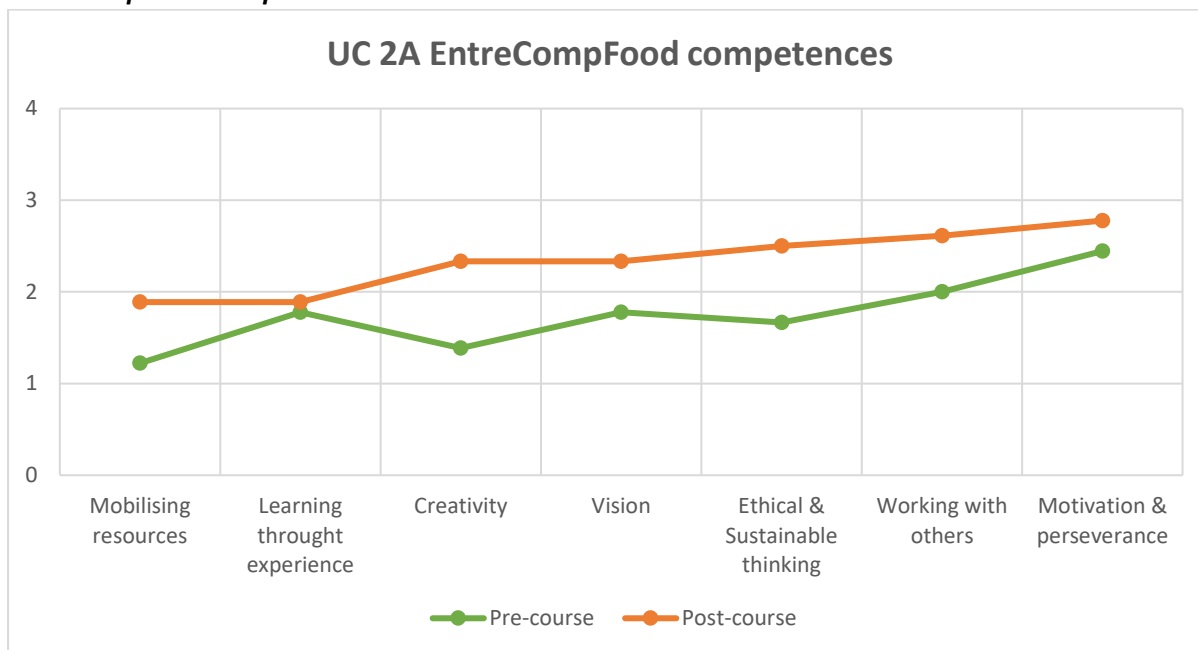
Figure 9. Second-year students EntreCompFood competencies.

The "creativity" points on the presented the great increase post course. The augmentation was expected due to the creativity dynamics performed during the course duration. We can affirm that the course developed the students' creative capacities. The lowest point difference noticed is "Learning through experience", this can be related to the fact that these students haven't been exposed to real life experience or projects during their education. The ability to "Mobilise resources" present a low average. It is to the not exposition of them to financial aspects of entrepreneurship.

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Pépite Competencies
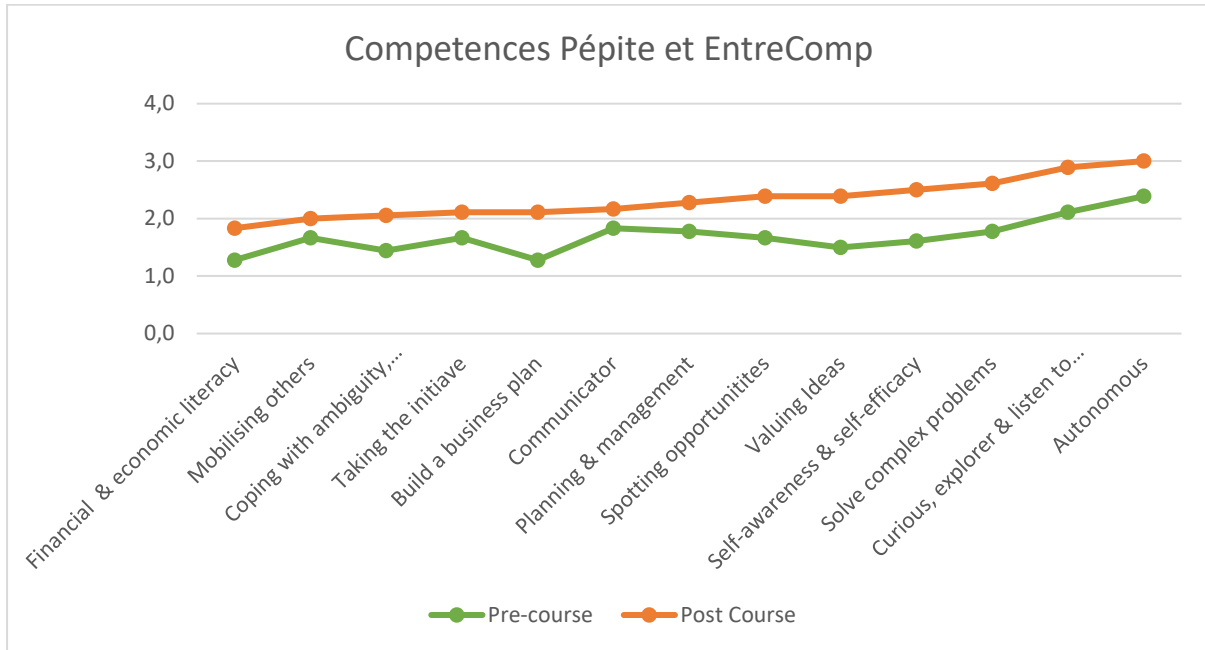
Figure 10. Second-year student Pépite and EntreComp competencies

It is important to notice that "Financial & economic literacy" obtained the lowest value. This was expected due to the insufficiency of the subject on the ministered course. It is also interesting to observe that the global curve grows slowly. It is important to highlight the points further on the right (Solve complex problems; Curious, explorer & listen to other; Autonomy), which can be classified as acquired skill and part of personality that students can develop while exposed to the activities presented on the course.

Global student's average
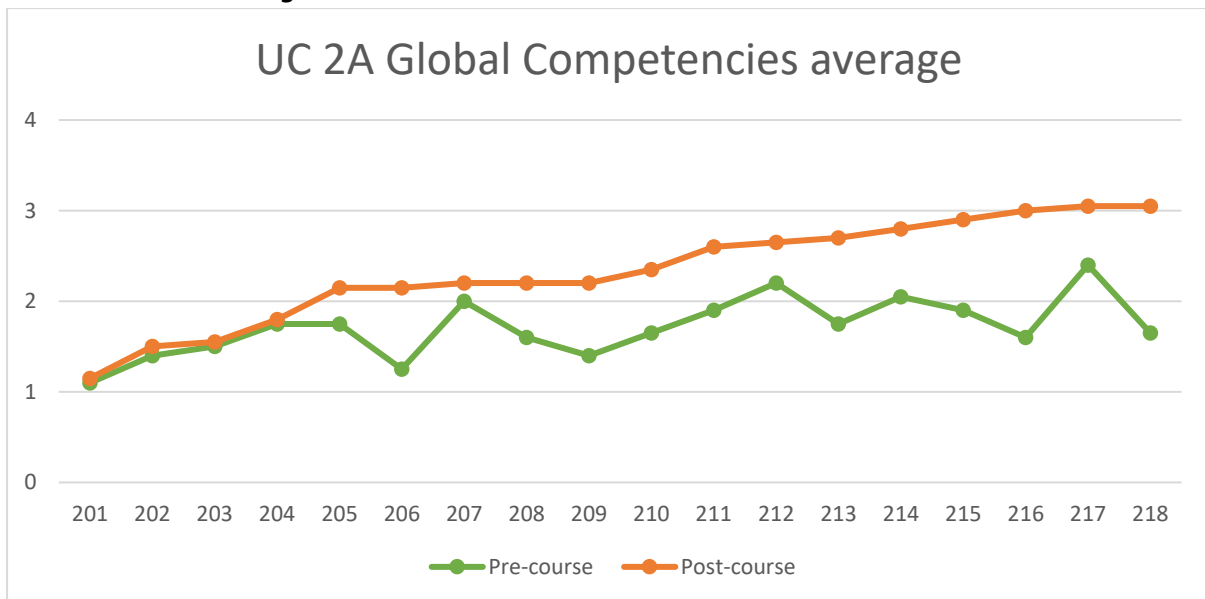
Figure 11. Second-year global average.

This graph presents the global average of each student. There are five subtends which the global difference, pre and post course, do not have an important change. This could be due to the quality of the course ministered, could have some competencies already developed, or did not put enough interest or effort during the course duration. Other students, instead, had a great improvement pre and post course. We believe that this could be an over self-evaluation due to where the students are in their graduation path. These students are second year students, and the course was ministered during the beginning of the year, suggesting that they should have a small increase when compared with first year students.

5.3.3.3.   UC 3A

This section reports the findings of the third year-students.

EntreCompFood Competencies

Overall Average EntreComp Competencies
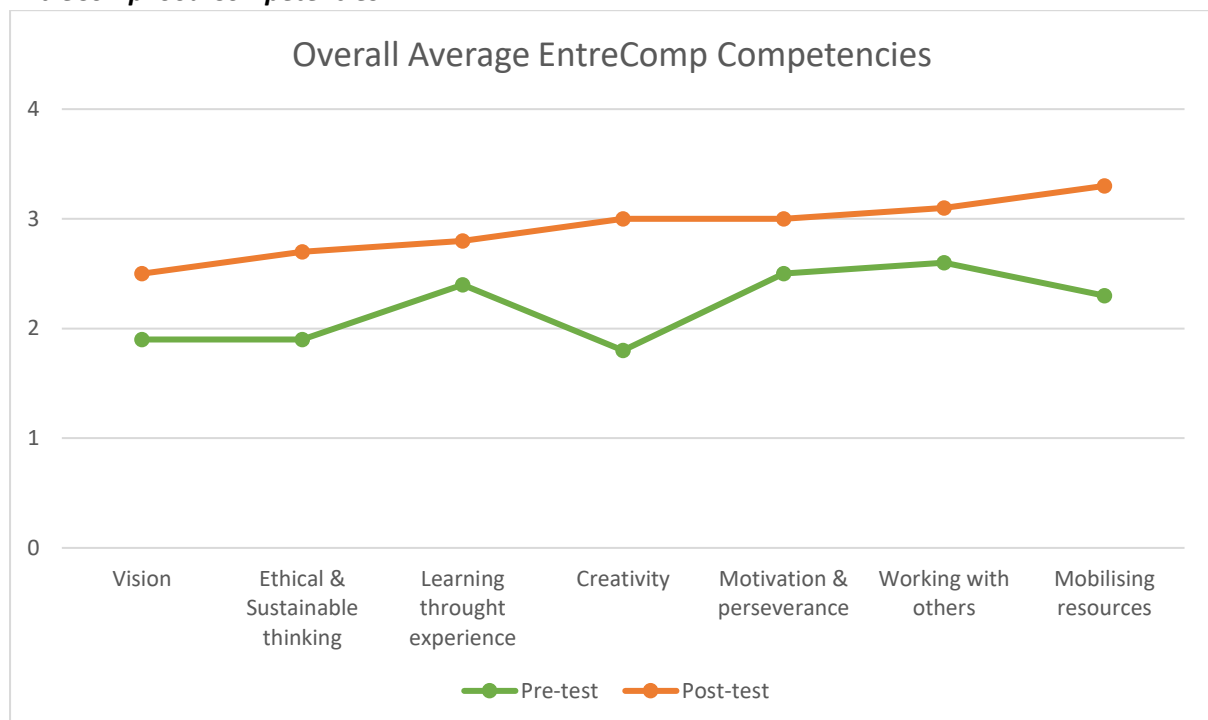
Figure 12. Third-year students EntreComp average.

This graph presents the overall EntreCompFood competencies. The biggest difference is noticeable in creativity. This is due to the focus on creativity development on the ministered course. On the third year of the program, the students understand the importance of "mobilising resources" and can search for investment to sustain their project. We believe that "learning through experience" had a small difference due to the work performed on project during the syllabus of their program. We can affirm that students are well trained on the evaluated competencies.
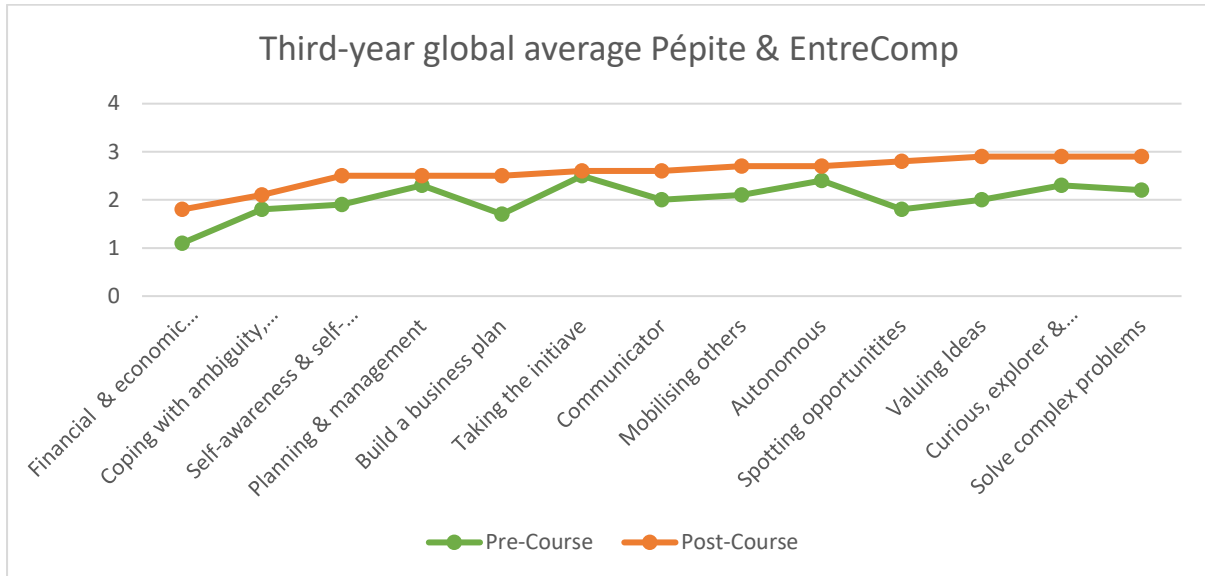
Pépite competencies

Figure 13. Third-year student global Pépite and EntreComp competencies.

This graph presents the other competencies of EntreComp and Pépite. It is interesting to notice that the lowest average is "Financial & economic literacy". This indicates a lack of the study of the subject during the teaching years. A positive impact of the course is noticed on "Building a business plan" although it is necessary to have financial literacy for the construction of one. The points, "Autonomy", "Taking initiative", and "Planning & management" did not present a big difference when compared with pre and post course. This could be due to the learning though the years of study where students must deliver projects. We can perceive a better distribution of the averages; students are more self-aware of their skills and can better evaluate themselves which is expect of third-years students following this higher education program.

Global students' average
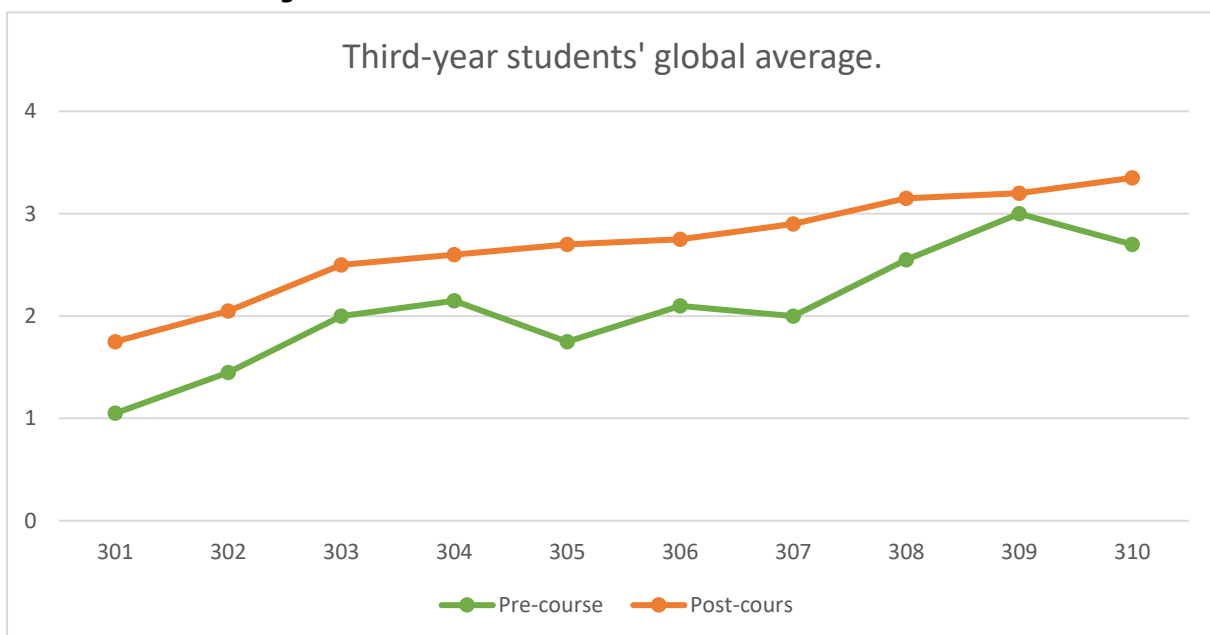
Figure 14. Third-year student's global average.

This graph represents the global average of competences within each student. It is important to observe that students had a constant development after the ministered course. It shows consistency in their learning and professional development. It was expected a higher final average due to what was taught during the development of the course.

5.3.3.4. MasterNova Proj'Innov

This section reports the MasterNova – Proj'Innov results. The data was collected during the whole year of the program. A peer evaluation was also done to assess if the development of entrepreneurial skills were observed by a colleague.

EntreCompFood competencies
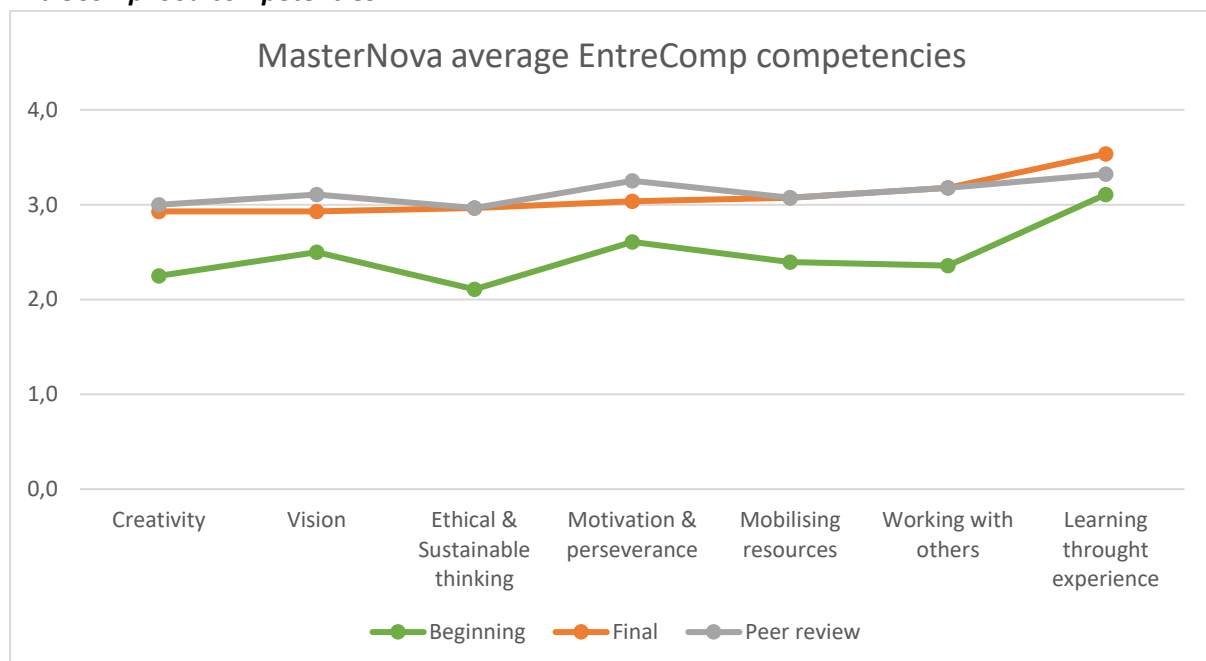
Figure 15. MasterNova's EntreComp competencies' average.

This graph represents the beginning, final and peer revied average of MasterNova students. It is noticed in the initial evaluation that competencies are well distributed. A homogenous distribution of the final average of the competencies is a very good representation of what was taught and learned during course's duration. A homologous peer review line is positive feedback on what was taught during the course. Due to the proposed project during the course, students had to push themselves to learn and solve problems by themselves generating a high "Learning through experience" average.

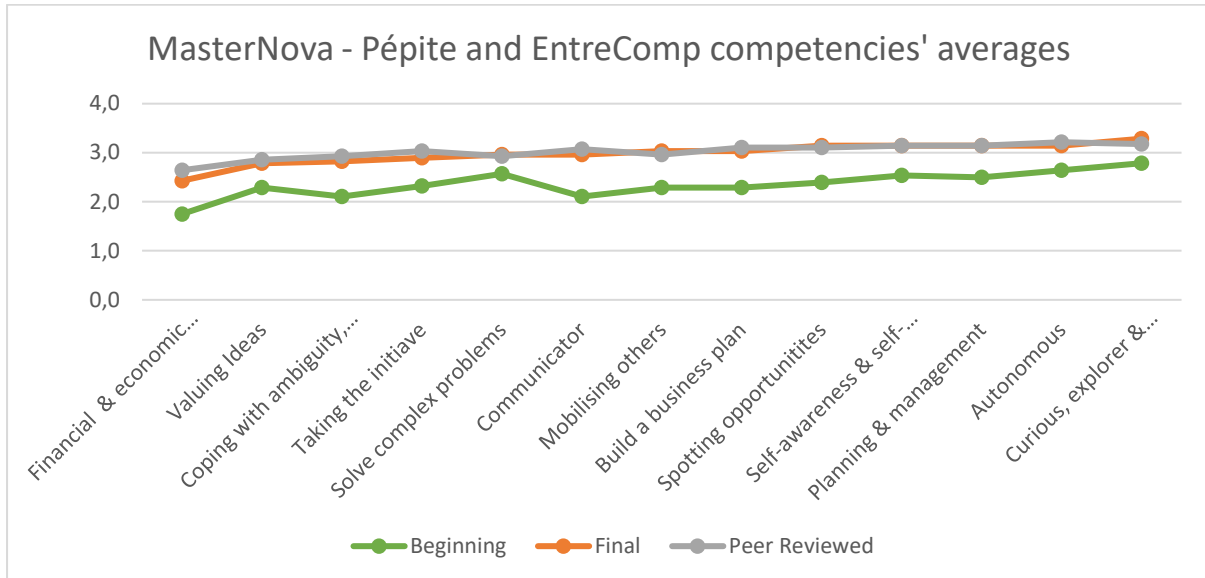***Pépite and EntreComp competencies***

Figure 16. Pépite and EntreComp Competencies

The graph represents the average of EntreComp, Pépite and the peer evaluation on the assessed competencies. It is noticed that "Financial & economic literacy" presents the lowest average. This could be due to the lack of financial teaching regarding economics during the course period. Homogeneous distribution on final and peer reviewed points suggests a validation of the perception of the students on the assessed competencies.

Global students' average
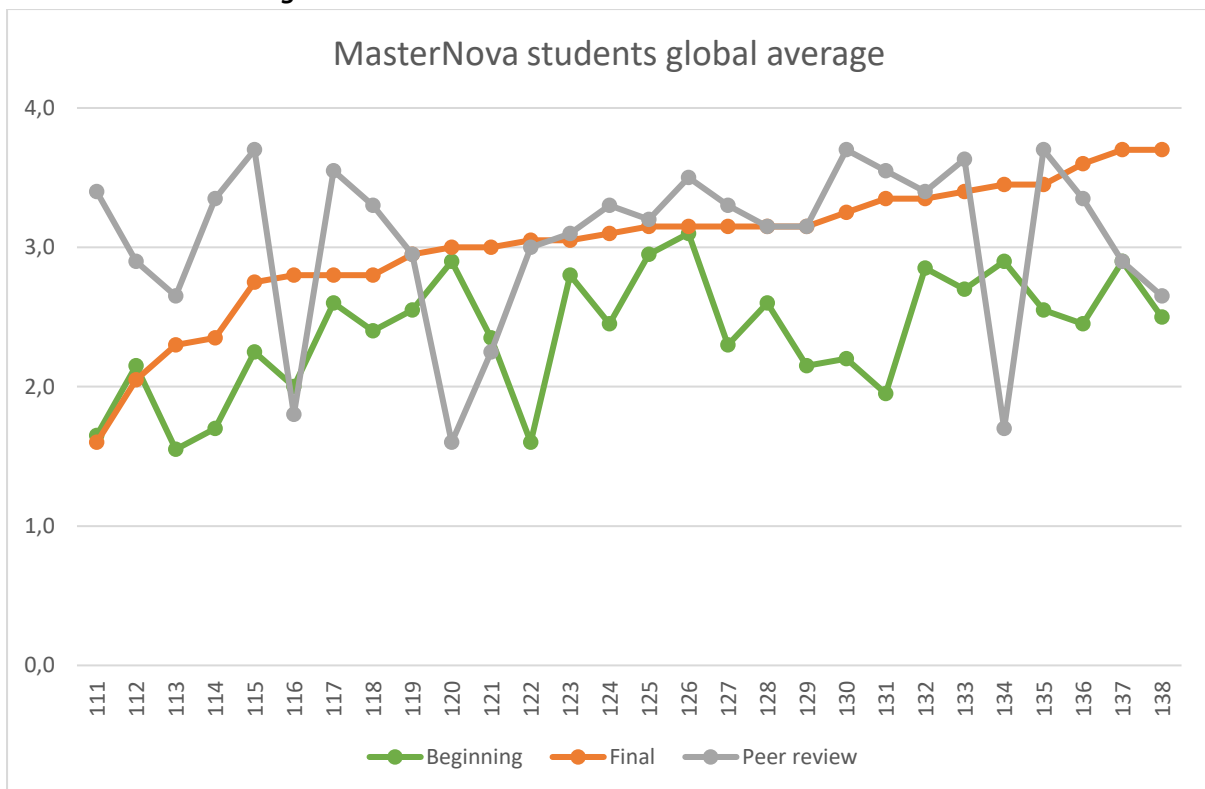
Figure 17. MasterNova students' global average.

This graph represents the student global competencies average when self-evaluating and by a peer. It is perceivable that subjects 111 and 112 did not have an increase during the observed period. On the contrary, when the observation was done by their peer, a high average was considered. This could be due to lack in self-confidence and or/not be aware of one capacity. It is believed that a low point of peer reviewed can be explained by some problems that colleagues could have had between them during the development of the year.

5.3.3.5. Food'InnLab

This section presents the findings on AgroParisTech incubator Food'InnLab. It is believed that for all the results of this section that the entrepreneurs assessed had a better understanding about themselves and more experience with hands on entrepreneurship.

EntreCompFood competencies
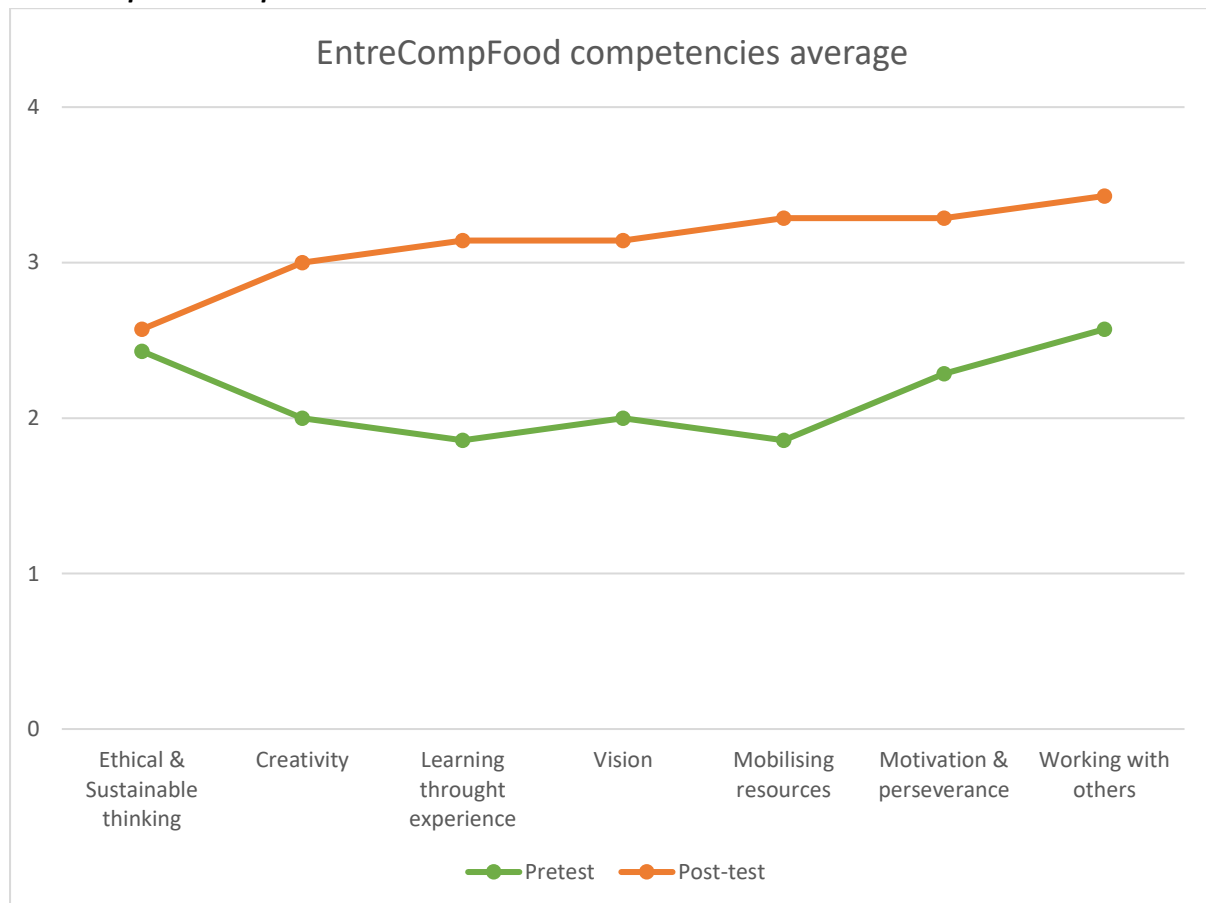
Figure 18. EntreCompFood competencies observed at Food'InnLab incubator

It is observed that the point "Ethical & sustainable thinking" has the lowest end value, this could be due to the absence of tools at Food'InnLab to instigate the development of this skill. Considering that the projects selected to be part of AgroParisTech incubator already have the ethical part, changing it could mean to rethink the whole business plan and the proposed idea.

We can observe that the point "Working with others" has the highest measured average, it is an important indicator of a competency to have to be able to work in a recently born company where everything is taking shape.

"Mobilising resources" had the greatest increase due to the importance of finding fundings so the company can survive and prospect.
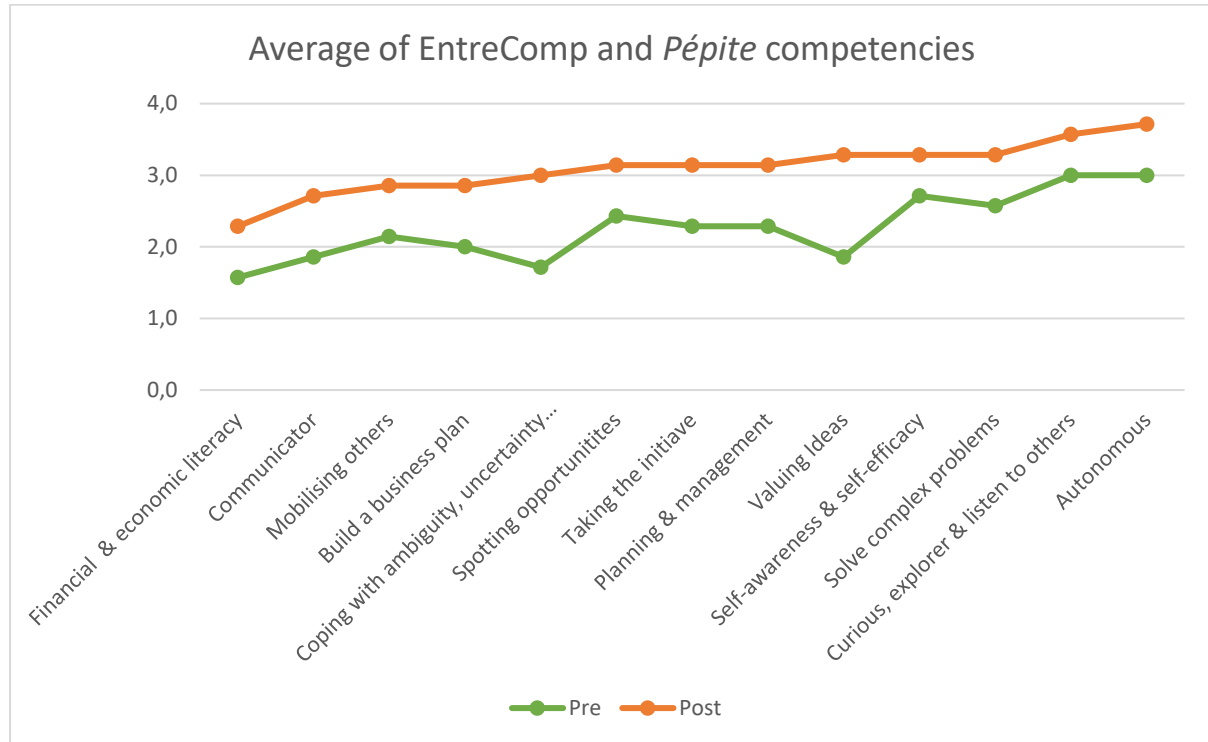
EntreComp & Pépite competencies

Figure 19. Average of EntreComp and *Pépite* competencies.

When managing your own company, "Autonomy" is one of the competencies that were expected to have higher averages than others. This can be observed on the graph above (Figure 14). A great increase is observed in points "Coping with ambiguity, uncertainty and risk" and "Valuing ideas". The latter being the ability to discern a bad idea from a good one and put energy into it to develop and flourish. As for risk, it exists during the whole company development, and it is something that entrepreneurs have to deal daily.

EntreComp Food

Entrepreneurship
Competence
Agri**food** industry

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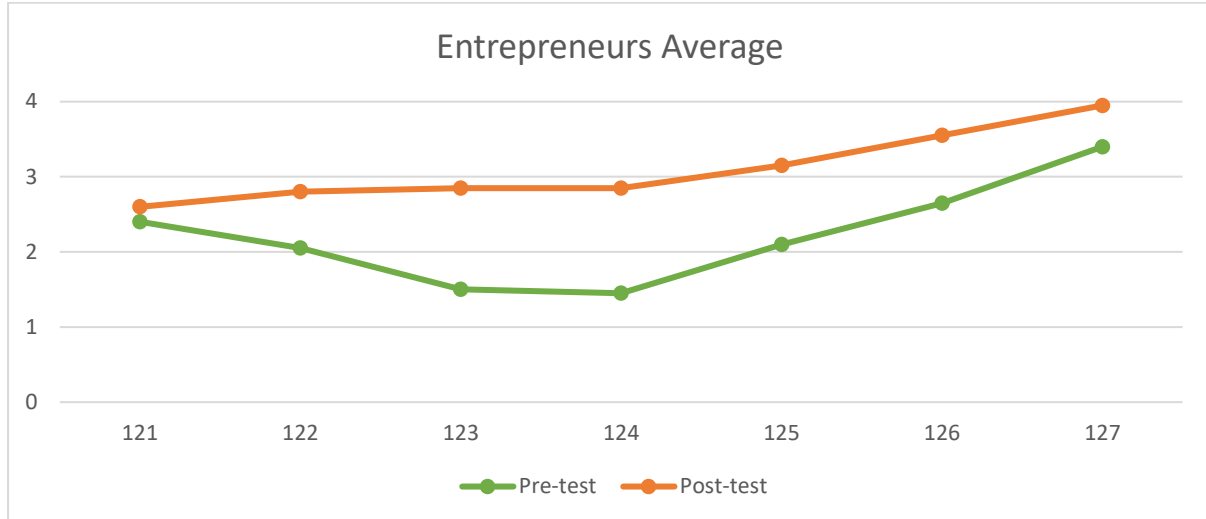
Global entrepreneurs average

Figure 20. Entrepreneurs global competencies' average.

It was expected that the subjects had a higher average than the other groups regarding their experience of starting a company and making it work. It is assumed that subject 121 is very self-demanding, this could explain the little difference between one point and another. Overall, subjects assessed in Food'InnLab have a more representative data due to previous experience, to have completed a degree and to have had personal experiences in entrepreneurship.

5.3.3.6. Itineraire Entrepreunariat

This section reports the findings associated with Itineraire Entrepreneuriat.
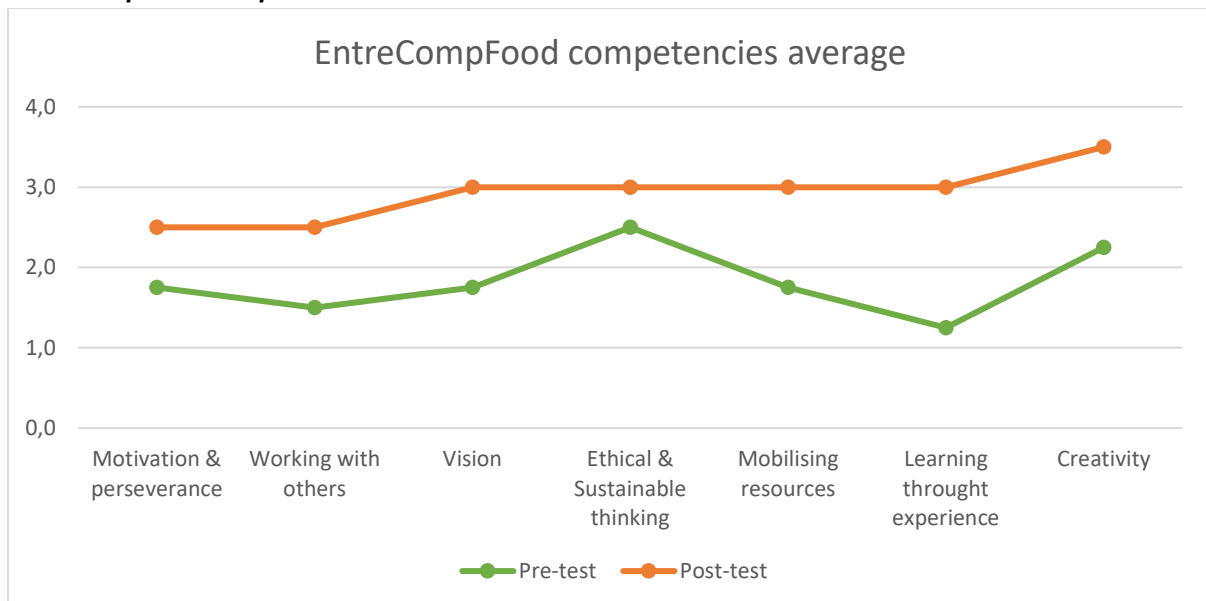
EntreCompFood competencies

Figure 21. Average of EntreCompFood competencies.

Figure 26 represents the EntreCompFood competencies assessed during the course Itineraire Entrepreunariat. The point "Learning through experience" presented the highest difference. It corresponds with what is studied during the course due to the projects that students must perform in order to graduate.
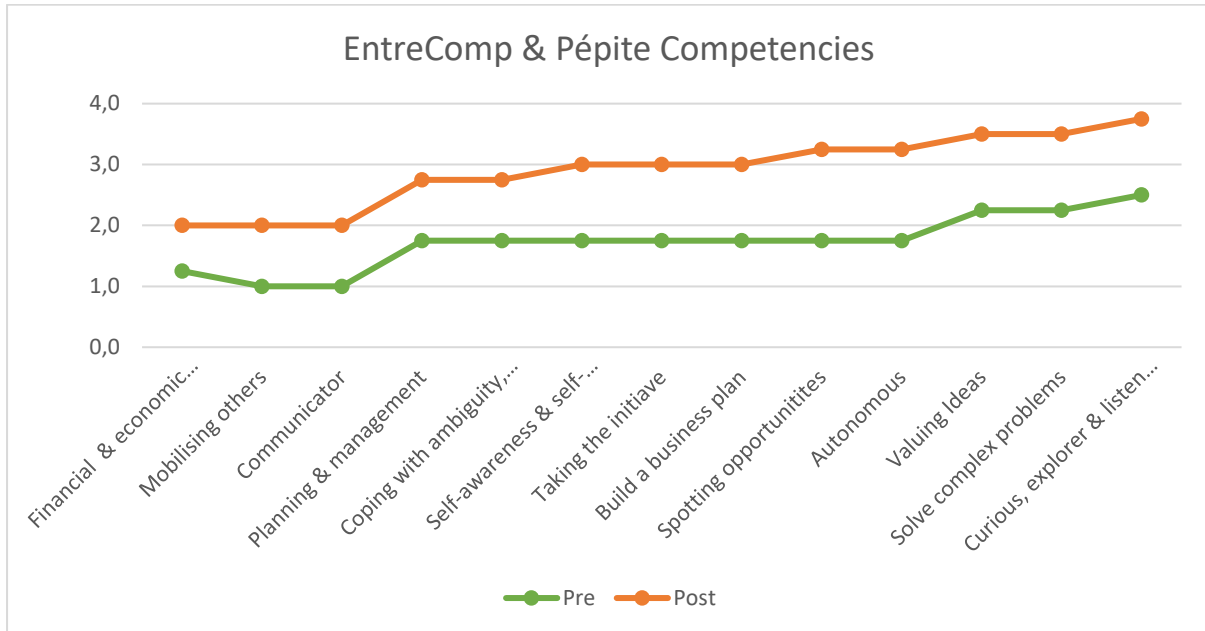
EntreComp & Pépite competencies

Figure 22. Itineraire Entrepreunariat EntreComp & *Pépite* averages.

Figure 27 represents the averages of EntreComp and *Pépite* competencies. "Financial and economic literacy" represent the lowest average. This might mean that students do not have a consistent learning of the subject in question. On the other hand, a high average is observed from "Spotting opportunities" to the far right. The course prepares students for starting and developing a business from an initial idea.
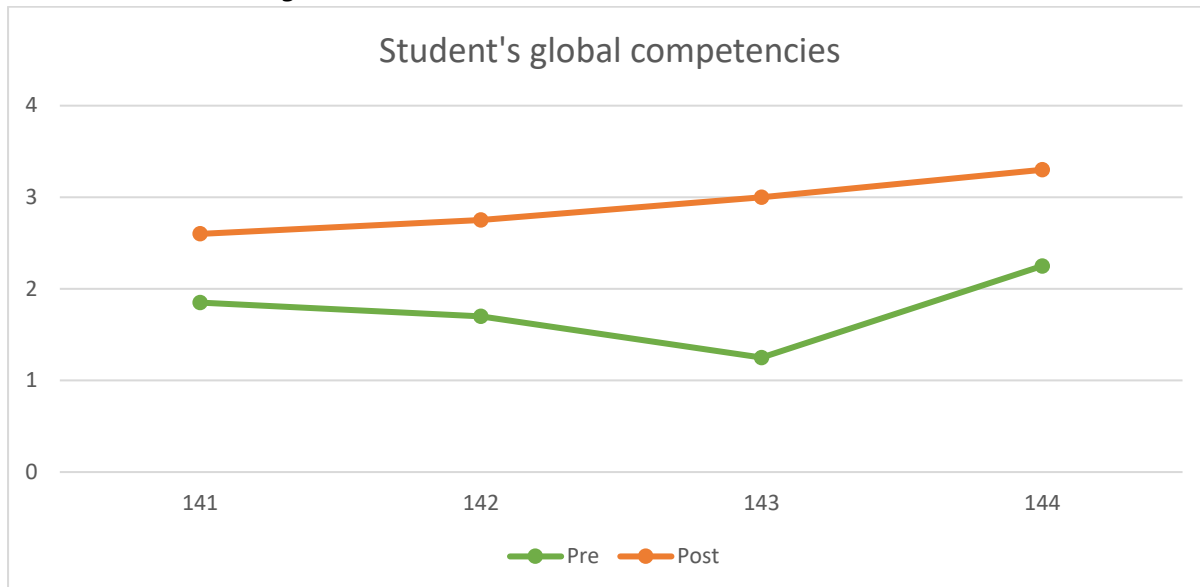
Global students' average

Figure 23. Student's global competencies

In Figure 28 it is possible to observe a steady learning of entrepreneurial competencies. It is important to highlight that some students reached the average equal or higher than 3 which corresponds between advanced and expert levels.

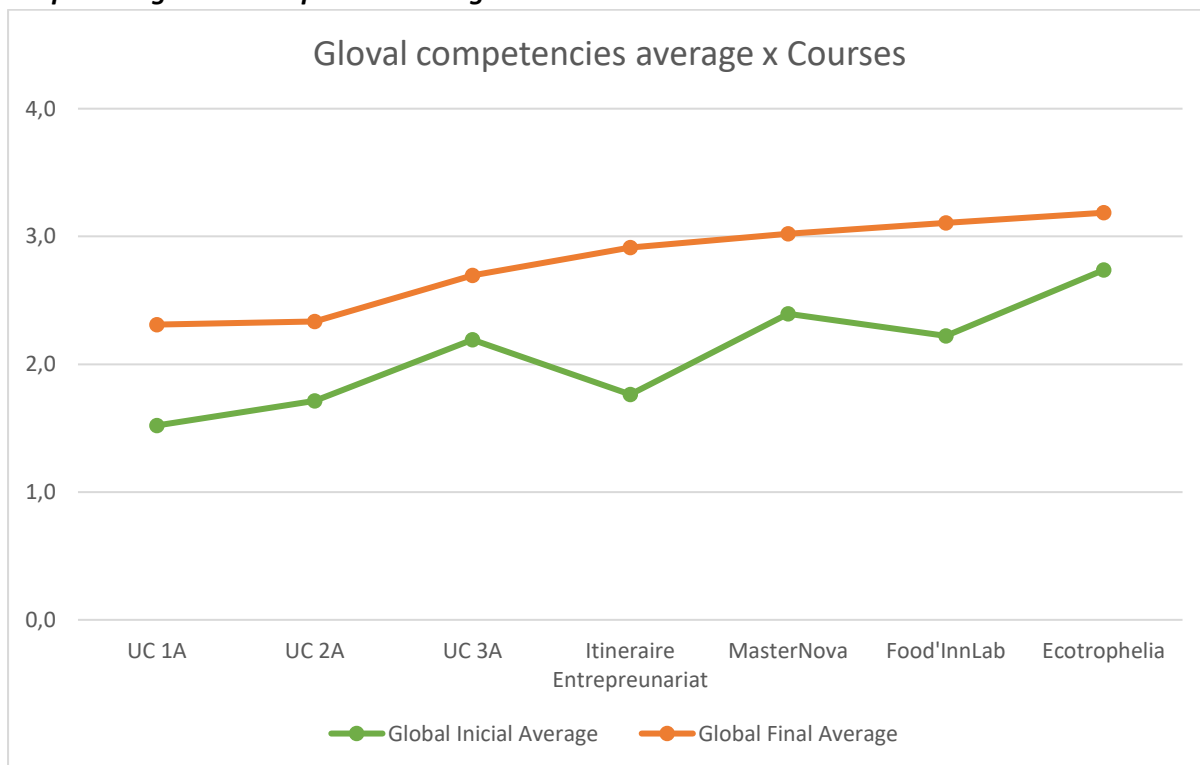**Graph with general comparison among all courses.**

Figure 24. Global average comparison between AgroParisTech courses.

Figure 29 presents the global competencies average between AgroParisTech courses. First and second year were expected a lower average since students are only beginning their studies. For third year, Itineraire Entrepreunariat, and MasterNova, it is important the theorical aspects of developing projects which can prepare for the real-life situation. This can be related to what can be seen in the Food'InnLab incubator and Ecotrophelia. The first that hosts companies which deal with the struggles of starting a company and the second which promotes an environment that pushes students to the edge of entrepreneurial competencies learning.
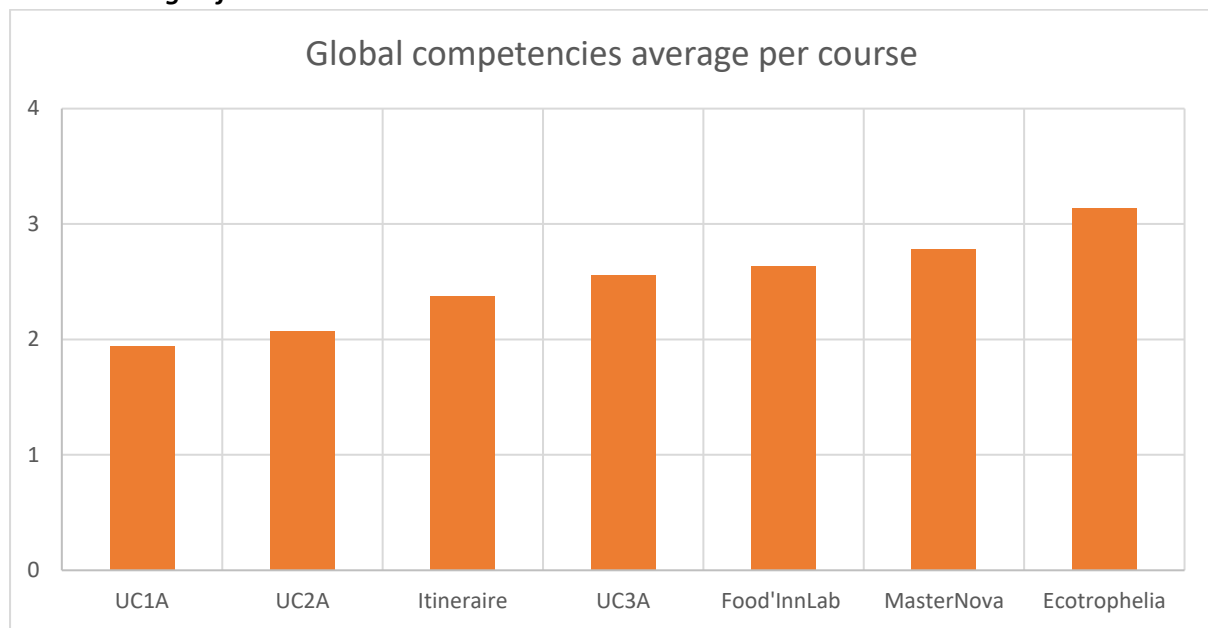
Global average of courses

Figure 25. Comparative of courses regarding the average of the global competences.

This graph represents the average of the whole EntreComp competencies and the tested courses/programs. It is observed that the UC1A and UC2A have the lowest averages values. As previously discussed, this is due to the beginning of their studies where students have not been exposed to entrepreneurship and are learning about it through the proposed courses.

Ecotrophelia obtained the highest value amongst assessed groups. Having participants from different backgrounds and being mentored by university professors had a great impact on developing entrepreneurial skills.

5.4. Conclusion

In France, EntreComp food project found a stablished entrepreneurial teaching methods and activities. Nonetheless, the project was useful for measuring the development of these students in entrepreneurial competencies. Moreover, teachers could assess and identify weak links in existing methods and propose new ones.

The proposal of the Maturation Course emerged from the data gathered during the measurement of entrepreneurial competencies. At AgroParisTech, EntroComp had a crucial role in identifying the weakness in the entrepreneurial methodology used and what should be improved. Professors have realized the lack of an intense course to mature and boost the transition real projects from intermediate to advances stage.

Another positive point brought from EntreComp project was the follow of the AgroParisTech Ecothrophelia team where it opened a discussion about the learning of entrepreneurial competencies during the competition by discussing with students. The positive aspect of Ecotrophelia is that students were immersed in an entrepreneurial project and had to develop a new food product. Mentors also learned about how to conduct an entrepreneurial project and this was beneficial for them and their teaching methodology.

The AgroParisTech incubator Food'InnLab also plays an important role on the development of entrepreneurial skills. Harbouring companies inside the university promotes an entrepreneurial environment where companies can exchange their learnings. Courses could be developed to help companies advance in project management and scientific methodology skills.

Improvements could be made on the teaching of entrepreneurial competencies. Interaction between students and entrepreneurs could happen more often and in a planned manner, perhaps entrepreneurs mentoring students' projects.

Having a reference person for receiving entrepreneurial projects can help the development of entrepreneurship. This person would make more accessible entrepreneurship, could formalize the idea with the committee and favour the project development within the institution's ecosystem.

In conclusion, EntreCompFood project had a positive impact for the further development of entrepreneurship at AgroParisTech. It made possible to measure students learning within given courses, to assess weak links and to develop methodologies to improve it. Moreover, it gave ideas to further develop the entrepreneurial ecosystem and to support the teaching of entrepreneurial competencies.

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Agrifood industry

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6. Slovenia

6.1. Courses descriptive and EntreCompFood competencies evaluation.

In the food area of University of Ljubljana, the Biotechnical faculty offers a bachelor study program Food Science and Nutrition (BSc) and two masters study programs Food Science (MSc) and Nutrition (MSc). Students of related BSc and MSc study programs at UL-BF, e.g. Agronomy, Biotechnology, Animal Science, Microbiology, may broaden their knowledge in agri-food by choosing elective courses on food and nutrition.

The Food Science and Nutrition (BSc) study program has as the main goal to train students to an expert level in the areas of food and nutrition. Thus, emphasizing skill related knowledge in food production and processing, quality and marketing of food, nutrition as a natural continuation of food. The graduate is trained to plan, organize, manage, and control food production and human nutrition, as well as some accompanying activities, considering natural, social, and environmental principles in food production and the implementation of safe and healthy human nutrition.

The study year at UL-BF is divided into four blocks, the first two blocks represent the winter semester, and the last two the summer semester. Most courses are conducted within one block (7 weeks), except for larger ones which can stretch over two blocks.

There are currently no special courses dedicated to entrepreneurship on the first level of UL-BF study programs, but the development of entrepreneurial competencies was incorporated into the existing courses. The curriculum of the selected courses was adjusted to promote the teaching of key EntreComp competencies. An evaluation of subjects' entrepreneurial competences was done to better understand if the modifications of the course curriculum promoted the development of the competencies.

6.2. BSC study program of food science and nutrition

6.2.1. Unit operations in the food industry

Type of the activity: formal learning

Target group: BSc students of Food science and nutrition study programme

Developed competences

Working with others, Learning through experience, Motivation and perseverance, Mobilising resources,

Structure of the activity

Lectures and project-based assignment

Impact and Effort:

High impact/high effort

EntreComp Food

Entrepreneurship
Competence
Agri**food** industry

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Learning objectives

The goal was to understand engineering approach to solving technological problems in the food processing industry. Students had to solve project-based assignment which encouraged creativity, working with others, motivation and utilization of different resources.

Short description of the activity (duration, topic, number of participants)

Students had to complete project-based assignment titled "Adiabatic dryer". 60 students were asked to divide themselves into groups of 4 and they were given one week to submit the solution. Group activity increases discussion, experimentation, enthusiasm and generation of new ideas. Afterwards they had to solve a quiz on Kahoot! platform and they were also given a task to upgrade the submitted solution of the project-based assignment. They were allowed to access internet and/or mobilize other resources in order to finish their task.

Activities, methods, tools used to support the development of the entrepreneurial competences

Kahoot!, Excel or Calc for calculation and data visualization, animations and movies of engineering processes, project-based assignment were used during lectures to better understand engineering principles and advance EntreComp competences.

What was a success factor

Ability to learn new skills and persistence were key success factors.

What could be improved next time

More Kahoot quizzes, invited guest lecturers, use of mobile devices during laboratory tutorials to enhance motivation and creativity.

Supporting materials for this activity
Annex 1: Project assignment

Annex 2: Kahoot report.

Annex 3: Survey for Students on the acquired competences during this activity

KVIZ - TP

2 Quiz	Točka 9 predstavlja
Correct answers	Temperaturo rosišča.
Players correct (%)	93,10%
Question duration	90 seconds

Answer Summary

Answer options	▲ Temperaturo suhega termometra.	♦ Temperaturo mokrega termometra.	● Temperaturo zmrzišča.	■ Temperaturo rosišča.
Is answer correct?	X	X	X	✓
Number of answers received	0	2	0	27
Average time taken to answer (seconds)	0,00	80,81	0,00	61,19

Player Details

Player	Answer		Score (points)	Current Total Score (points)	Answer time (seconds)
1. Skupina	✓	Temperaturo rosišča.	582	582	75,171
1. Skupina -2	✓	Temperaturo rosišča.	582	582	75,187
10. B	✓	Temperaturo rosišča.	623	623	67,919

Picture: Quiz made with Kahoot tool, where correct answer is set.

6.2.2. Winemaking

A third year BSc Food science and technology elective course where students learn about the theoretical basis of wine production. A special feature of the course is seminars in the framework of theoretical lectures, where students choose a topic to present and deepen the knowledge, which they present to classmates who come from different study programs and consequently different education background. The latter, comment, ask questions, look for solutions, evaluate the presenters. The lecturer directs them in the discussion to think and connect. Laboratory tutorials and field work are also part of the subject that applies theory into practice.

Type of the activity: formal learning.

Target group: students of 1st year of MSc study programme Food Science

Developed competences: Creativity, Ethical & sustainable thinking, Motivation and perseverance, Working with others, Learning through experience

Structure of the activity: in person Lectures / Seminar / Laboratory tutorials / Field work

Impact and Effort: High impact / high effort

Learning objectives

Learn how to work in teams/groups; how to monitor the process of winemaking in order to ensure quality of the end product.

Short description of the activity (duration, topic, number of participants)

Consolidation and upgrading of knowledge on grape processing, deepening the basics and highlighting current content. Emphasis on understanding and connecting theoretical and practical knowledge, and above all critical and sustainable thinking. A special feature of the elective course are enrolled students of other study programs, to whom we adapt every year with the content of lectures. Above all, their positive contribution is different prior knowledge and thinking.

Activities, methods, tools used to support the development of the entrepreneurial competences

Combination of lectures, testing comprehension of new content (Mentimeter), discussion, work in small groups and presentation of seminars.

What was a success factor

Students were able to gain critical overview of the learned knowledge, and were able to complement each other knowledge through debate. Through independent project work, they gained confidence in obtained knowledge. Also, students developed the ability to see the problems in wider perspective, enabling them to see a field of Winemaking as a whole.
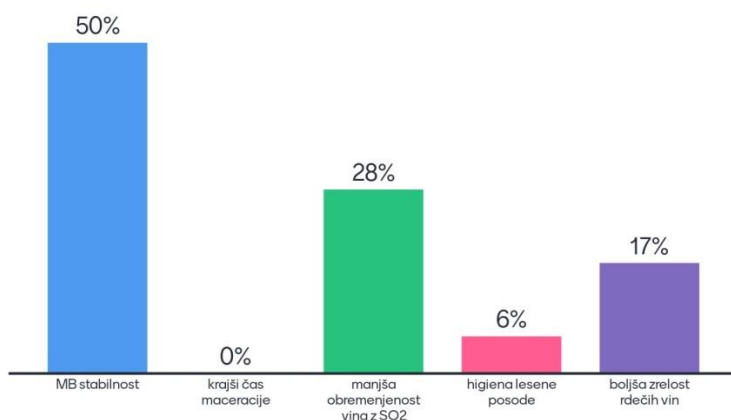
What could be improved next time

There was some room for improvement in self-assessment of the students and in curriculum assessment from student point of view.

Supporting materials for this activity
Examples of comprehension of new content testing with Mentimeter tool:
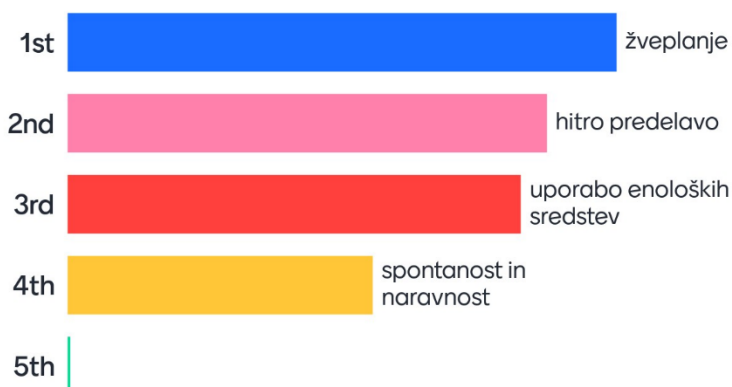
Kaj je tehnološka prednost UZ obdelave vina?

MB stabilnost	krajši čas maceracije	manjša obremenjenost vina z SO2	higiena lesene posode	boljša zrelost rdečih vin
50%	0%	28%	6%	17%

Dejavniki beljakovinske nestabilnosti vina

Strongly disagree — Strongly agree

- izoelektrična točka in molekulska masa — 4.1
- sorta vinske trte — 3
- kemijska sestava vina (pH, alkohol) — 4.4
- vremenske razmere med dozorevanjem grozdja — 3.8
- postopki pre- in pridelave — 4.3

Prilagojena vinifikacija obsega:

Kaj določa specifiko letnika?
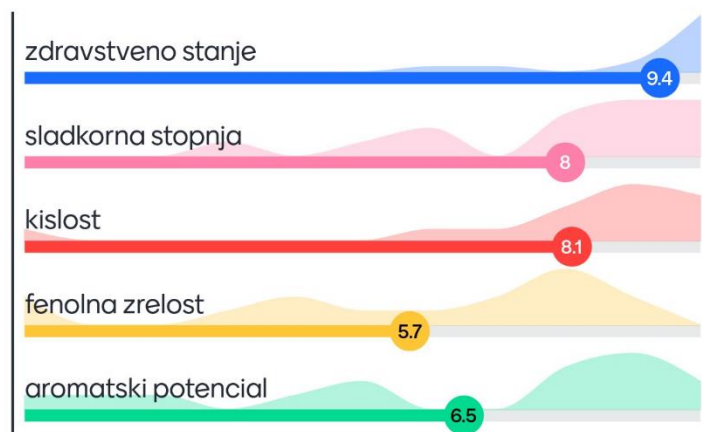
6.3. MSC study programs of food science, nutrition and biotechnology

6.3.1. Nutrition engineering

An elective subject at MSc study program. It is based on food production and quality control, new products development, use of fat substitutes, additives, meat analogue properties, etc. Laboratory tutorials include a variety of topics, for example preparation and evaluation of various ready meals, rheological properties of emulsions, preparation of meat analogue, evaluation of sponge cake with

increased protein content. The implementation of tutorials is based on independent and creative work.

Type of the activity:

Formal learning

Target group:

MSc students of Food science and Nutrition study programmes

Developed competences

Working with others, Vision, Creativity, Motivation and perseverance, Learning through experience, Mobilizing resources.

Structure of the activity

Laboratory tutorial

Impact and Effort:

High impact/high effort

Learning objectives

Learn how to work in groups, learn how to be creative and motivate, learn how to present the results.

Short description of the activity (duration, topic, number of participants)

Based on the knowledge acquired during previous tutorials 30 MSc students were divided into smaller groups (3-5 students per group), where they were instructed to brainstorm, to be creative and have a vision about the product based on functional properties (developing recipes, thinking about functional ingredients, appearance of final product, calculating nutritional value). The activity was divided into two days; the first day was devoted to product development, and the next day was dedicated for its presentation.

Activities, methods, tools used to support the development of the entrepreneurial competences

- working in groups, brainstorming, creativity
- PPT presentation and Google Jamboard for the final product evaluation focused on entrepreneurial competences

What was a success factor

Students were motivated for work, creative, full of new ideas and satisfied with group work. The final result was a new product.

What could be improved next time

Next time the activity could be upgraded, some additional tools should be proposed for the evaluation of the final product.

Supporting materials

Annex 1: Learning material: Development of 7 entrepreneurial skills (ppt)

6.3.2. Wine technology

A first year MSc Food Science study program, where students are upgrading their knowledge gained at a third-year BSc Winemaking course. Students are deepening the basics and highlighting the specifics of current content.

Type of the activity:

formal learning

Target group:

Masters students of Food Science.

Developed competences

Ethical & sustainable thinking, Working with others, Learning through experience

Structure of the activity

Lectures, seminars, laboratory tutorials, field work.

Impact and Effort:

Students developed holistic approach in problem solving in the field of Wine technology, furthermore they developed the skills needed for working with others and learning trough experience. There was high effort needed to organise smaller groups of students and to develop appropriate projects for students to work on them.

Learning objectives

Upgrading knowledge, deepening the basics and highlighting current content (specifics of each vintage year), understanding and connecting (theoretical knowledge with practical results), critical thinking. Combination of lectures, consolidation of knowledge and new content, testing of understanding (Mentimeter), discussion, work in small groups and presentation of seminars.

Short description of the activity (duration, topic, number of participants)

Students were involved in working in small groups. The division of students into smaller groups was done according to their original study program, and sometimes mixed. They have always consulted on a specific task, finding relevant information and resources. They were very successful in their task, creative and capable of teamwork. As a special feature, this year we also connected to our students the presentations of Erasmus student seminars, which took place in English and actually represented extensive research (more than project work).

Activities, methods, tools used to support the development of the entrepreneurial competences

Presentation, project evaluation, brainstorming, group work and Mentimeter.

What was a success factor

The students could hardly wait to consolidate their knowledge and understanding of the lectures by Mentimeter. Despite the large number of students present at the lectures, they met the knowledge test differently. It was very obvious how everyone wrote down the answers, justifications and often had some additional question or opinion. In this way, significantly greater communication and their motivation was established.

**What could be improved next time**

On the part of the students, I would like them to objectively self-assess themselves before and after the lectures, to find out for themselves their progress, and above all to fill in the questionnaires in greater numbers. Evaluating my work would also be more than welcome - so I would actually find out what they want, in what direction I can contribute to their desired competencies through activities.

Supporting materials for this activity:
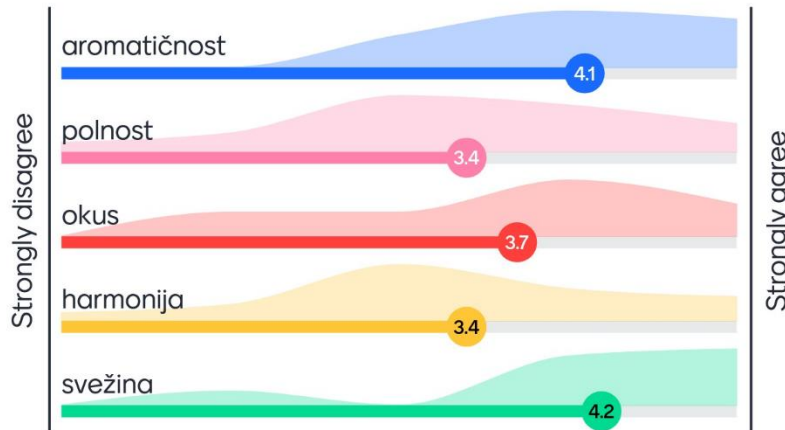APPENDIX 1: Example of Mentimeter use.

Razvrščanje primernosti metod za študente
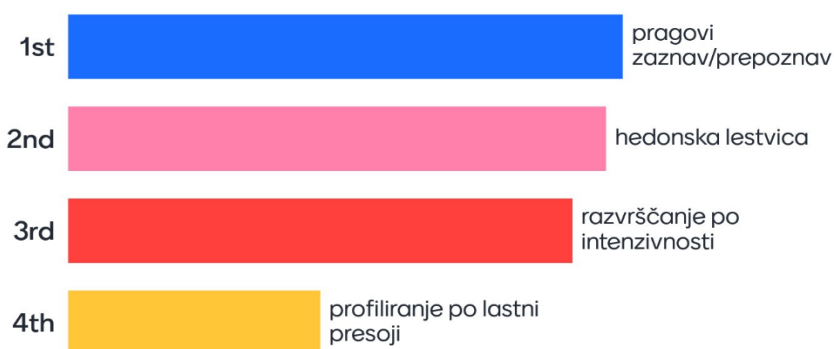
Vpliv nizke temperature na okus vina

Specifically, in the above two cases, we concluded the lectures in the tasting room with sensory analysis of wine related to various tests and temperature.

6.3.3. Food safety

First-year course of MCs Food Science study program where students learn on different aspects of food safety, including technological risks and their control, through lectures, seminars, and laboratory tutorials.

Type of the activity: formal learning

Target group: students

Developed competences: Creativity, Motivation and perseverance, Working with others, Learning through experience.

Structure of the activity: seminar works

Impact and Effort:

High impact/high effort.

Learning objectives

Updates to teaching and learning methods would be:
(i) For seminar exercises: The supplement would be self-paced as part of seminar exercises. The content would be related to processing data from laboratory exercises and current studies in the scientific literature.
(ii) For laboratory exercises: In addition, there would be an introductory part in which, according to the knowledge gained in the lecture and examination literature, a scientific problem is defined in the context of seminar exercises and a decision is made to carry out the experimental work.

As a conclusion, the student should prepare a presentation of his results in small groups of students. This would involve new tools and newly acquired skills as a pedagogical leader and student.

Final outcome: Laboratory research analysis, discussion, pitch with ppt presentation

Short description of the activity (duration, topic, number of participants)

The experimental work in the laboratory practical is followed by the seminar paper, in which students must understand the problem and further evaluate and present the results of the experimental work in conjunction with scientific literature. All 52 students in the food safety course participated in this activity. The objective of this activity was first to acquire basic knowledge of safety and risk guidelines in the food industry to ensure the production of safe food. In addition, students improved their individual time management and collaboration with each other, increasing their creativity and effectiveness.

Activities, methods, tools used to support the development of the entrepreneurial competences

- Strengthening collaboration and dialogue between students
- Increasing motivation and focus of thinking
- Development of learning opportunities / support through programs
- Change of didactic approach, preparation of a data transmission system
- More independent study of scientific literature
- Encourage critical thinking and discussion

What was a success factor

- Obtain a software tool used by all students for data entry
- Minimize uploading of documents and editing of a common document
- Improving communication between students and this must be very focused
- Improving collaboration between students, which is necessary for the presentation of the results
- To have the opportunity to view the work as you prepare for the presentation

What could be improved next time

- Updates with the aforementioned tools have been considered primarily in the conduct of laboratory exercises and seminar exercises
- We intend to include the updates in the future in the preparation of the research project to allow students to continue working and researching - and this allows the current upgrade of the course with MS teams, which allows to obtain files and create new subgroups. In this way, we enable students to continue working within the course after the end of the Food Safety course, to prepare their results statistically and present them as a whole, to compare them with the scientific literature and to write a small research article
- In the future we intend to provide updates with the inclusion of MS teams tools in lectures and seminars on food safety, in particular organization through MS teams and collaborative work through Power Point / MS teams
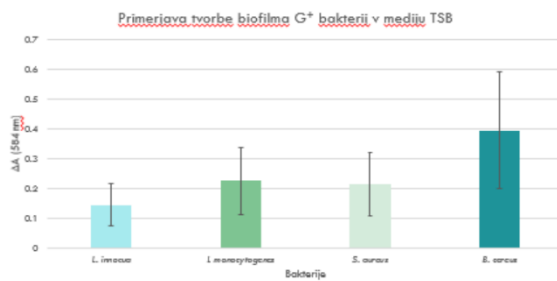
Supporting materials for this activity
YouTube-FoodSafetySupportingMaterial

Figure 1. Students at Food Safety course and their laboratory work.

Primerjava tvorbe biofilma G+ bakterij v mediju TSB

Bakterije	Povprečna A
Listeria innocua	0,1437
Listeria monocytogenes	0,2244
Staphylococcus aureus	0,2139
Bacillus cereus	0,3934

Bakterije	Povprečna A (literatura)
Listeria innocua	0,1435
Listeria monocytogenes	0,0775
Staphylococcus aureus	0,5547
Bacillus cereus	0,5201

$P_{vrednost} = 1,98299 \times 10^{-29}$

Figure 2. Results of the experimental work in the laboratory and their evaluation.
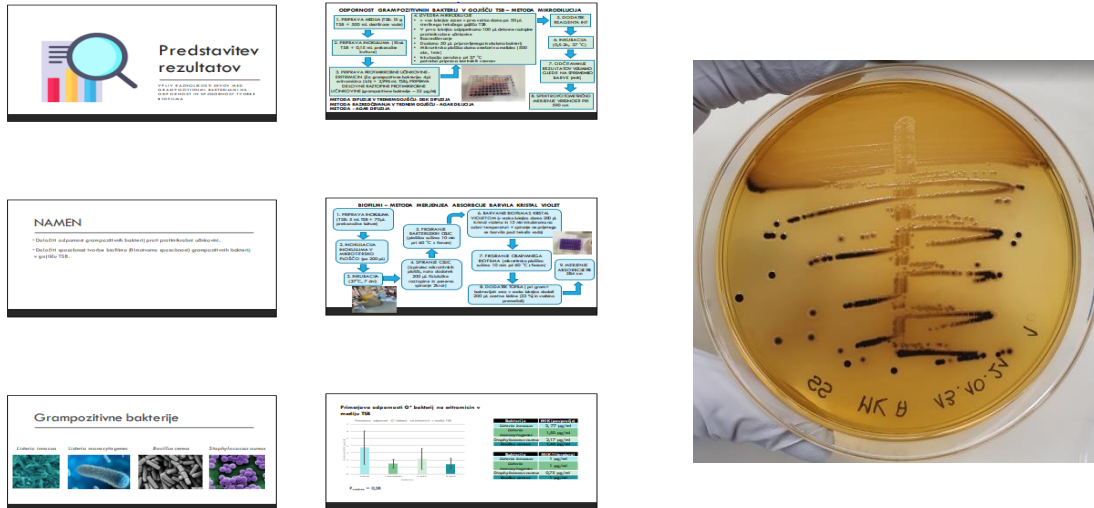
Figure 3. Example of Power Point presentation / MS Teams.
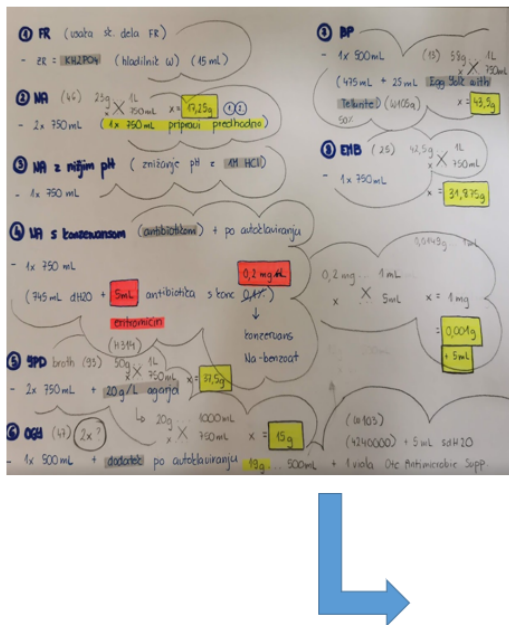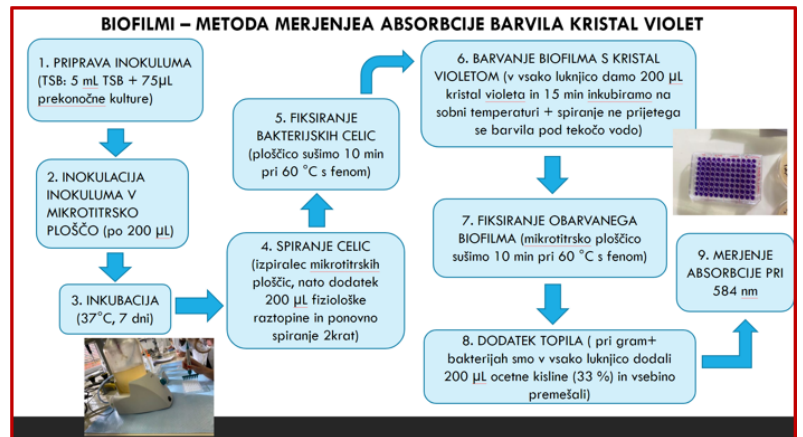
Figure 4. Example of planning experimental work through drawing a scheme by hand or through the use of MS Teams.
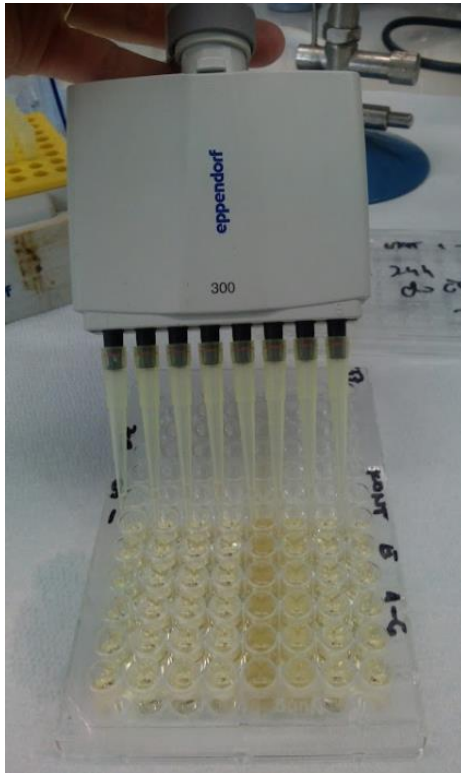
Figure 5. DEVELOPED ENTRECOMP COMPETENCES.

6.3.4. Food hygiene

Type of the activity: formal learning

Target group: BSc students of Food science and nutrition study programme

Developed competences: Creativity, Motivation and perseverance, Motivation and perseverance, Mobilising resources, Working with others, Learning through experience, Working with others

Structure of the activity: lectures, laboratory tutorials

Impact and Effort:

High impact/high effort.

Learning objectives

Learn how to work by themselves and how to work in groups, learn how to create concepts, ideas and perform conclusions on the basis of their own experiences and reference data, learn how to evaluate data and present the results and to develop discussion.

Short description of the activity (duration, topic, number of participants)

As part of the lectures, students were offered independent work - VPZ (4x in 7 weeks), which they carried out outside the time of pedagogical activities via Moodle. This encouraged independent study and learning, to some extent creativity in solving individual tasks, and cooperation with colleagues

from the same year. Out of 64 students, 58 participated. In laboratory exercises (LV), students had the opportunity to perform the so-called on-the-spot colloquium before each exercise (individual), and after the completion of the laboratory exercises, each group had a presentation of the results and a discussion. The purpose of these activities was to encourage independent study and learning, work with others, creativity, and use as many different resources as possible. All students (64) participated in these activities.

Activities, methods, tools used to support the development of the entrepreneurial competences

independent work/ motivation/ joint problem solving and presentations / teamwork / creativity / pptx presentations in groups.

What was a success factor

Independent work/study/problem solving was a motivation for ongoing work, in which students prefer to work as an individual rather than as a group and also do not want a joint conclusion. On the other hand, the group presentation of the results of laboratory work was a completely suitable way of working for students, which also encourages joint and team work, where the main advantage is the possibility of an in-depth explanation of the obtained results.

What could be improved next time

Communication, teamworking and content integration could be improved with activities connected to motivation and creativity.

6.3.5. Sensory analysis

First-year subject of MCs Food science study program, where students learn on how to perform sensory analysis, definitions of odor and taste, aroma, texture, etc. as well as different methods and tests to assess quality and acceptability of different food products.

Type of the activity: formal learning

Target group: MSc students of Nutrition and Food Science study programmes

Developed competences: Creativity, Ethical & sustainable thinking, Mobilising resources, Working with others, Learning through experience

Structure of the activity: Seminar

Impact and Effort: High impact / medium effort.

Learning objectives

Learning objectives of the Seminars were deepening the knowledge as well as skills on a certain thematic and questions related to the sensory analysis or consumer studies that students address individually or in group work. Although seminars involve studying different literature source, they are not limited solely to theoretical engagement. As sensory analysis is a part of product innovation and new product development, the main task of the seminar was conceptualization of an innovative product addressing the SDG goals in the frames of collaborative participation.

Short description of the activity (duration, topic, number of participants)

Pedagogical activities within seminars comprised an initial lecture with explanation and examples of competences to understand the difference between skills and competences; overview of SDGs and main points that needed to be addressed and discussed within the seminar (literature, sources, target consumer besides focusing of sensory-related objectives such as definition of key drivers of the product, role of sensory attributes within the concept). Further, students (n=45) were asked to divide into groups of 4-5 and by the next joint session discuss ideas of the product, think about a target consumer group and search for relevant additional literature. Joint session was dedicated to an exchange of product idea with peers, argumentation of proposed product and a target consumer group and was composed of joint session, group works and joint discussion. Basing on the feedback from peers, students defined the product idea to develop further according to the goals set. As a result, each group submitted a written report on their innovative product idea and presented their idea orally in front of peers, teacher and external jury member who also raised questions, comments. Two student groups out of 9 manufactured their product and offered it for tasting. After all presentations students were asked to vote for 3 best food product ideas.

Activities, methods, tools used to support the development of the entrepreneurial competences

Moodle platform for sharing basic study materials, Google Jamboard for initial product idea presentation and discussion, break-out session in webex platform for group work and preparation of comments. Product ideas were presented orally using pptx presentation, in front of the class, the teacher and professional from the food industry. Mentimeter was used for voting for the best product idea.

What was a success factor

During the course they found it interesting and challenging. In the final course evaluation, they stated that the course helped to advance their competences and motivated them to think further about new product development and applying for student competition like Ecotrophelia. They stated, that comparing to a theoretical seminar, this type was more useful and educating for them, offering them better insight in a part of the food development process. Some groups even presented their pilot products not just an idea and description of the product.

What could be improved next time

Encourage more peer discussion and dedicate more time for that, methods for target customer definition (e.g. persona), inviting guest lecturers.

Supporting materials for this activity:

Picture 1: Initial idea presentation and peer to peer discussion (using Jamboard and webex online communication with joint session and break-out rooms).

Picture 2: Product idea pitching – focus on sensory methods to determine sensory characteristics of the product and consumer acceptability

Picture 3: Voting for the best three food product ideas (using Mentimeter).

Picture 4: Call for self-evaluation (using google forms questionnaire).

6.3.6. Food biotechnology

An elective course on Biotechnology study program that offers topics of bioactive compounds, fermentation, microbial production, etc. through lectures, seminars, and laboratory tutorials.

Type of the activity: formal learning (elective course)

Target group: BSc students of Biotechnology study programme

Developed competences: Creativity, Motivation and perseverance, Working with others, Learning through experience

Structure of the activity: laboratory tutorials

Impact and Effort:

High impact/high effort.

Learning objectives

Learn how to work in groups, create ideas and brainstorm, plan the experiment, evaluate data, present the results and discuss the results between groups.

Short description of the activity (duration, topic, number of participants)

Laboratory tutorials (15 hours) were performed as a project work (Isolation of pigment phycocyanin from microalgae Arthrospira platensis and its integration in the food product). Students were divided into four groups of 3 or 4. Each group looked for the corresponding literature, collected ideas how to carry out a project and presented the project plan to other groups. Then each group performed calculations for preparation of all reagents and solutions, experiment set up, timetable, different assays for the pigment characterization and at the end prepared food product including the pigment. After performing all experiments, each group presented results to other groups followed by discussion between groups.

Activities, methods, tools used to support the development of the entrepreneurial competences

Group work. Brainstorming inside groups for creating ideas, planning the experiments and results evaluation. Ppt presentation of results and discussion.

What was a success factor

Students worked in small groups, where they were instructed to brainstorm in groups for creating ideas, planning the experiments and results evaluation, while they were simultaneously developing their competences such as creativity, working with others, learning through experiences and motivation and perseverance.

What could be improved next time

Each group could be responsible for one part of the project. Only by collaborating between groups they can finalize the project. Thus, they have to work with others and have higher motivation and perseverance.

6.4. Self-assessment questionnaire

6.4.1. Questionnaire application and time points.

Students have answered the questionnaire developed within EntreComp project, based on the development of EntreCompFood competencies. The questionnaire in Slovenia was only answered after the course on the following subjects: Sensory analysis, Winemaking, Unit operations in food industry, and Nutrition engineering, since it was not yet available at the beginning of the courses.

6.4.2. Development of the questionnaire

The questionnaire was developed to assess the development of EntreCompFood competencies (Vision, Ethical and sustainability, Creativity, resources mobilization, working with others, motivation, and perseverance, and learning through experiences) by students at each course. While EnterCompFood has 8 levels of proficiency for each competence, the Slovenian questionnaire had only 4 (beginner, intermediate, advanced and expert), based on French example. The French questionnaire was translated to Slovene and accompanied with straightforward examples for each level of proficiency, for students to better evaluate the level they are at.

6.5. Results and Discussion

6.5.1. BSc Students

A total of 17 students answered the questionnaire on BSc level, of which 12 were attending the course Unit operations in the food industry and 5 were attending the course Winemaking. One of the students reported that he/she does not possess any of the listed competencies, not he/she had gained any during the course. Other students reported mostly with average proficiency score, the average of all competencies and students of BSC studies was 2,04. The EntreComp competence that ranked the highest among students was motivation and perseverance, and creativity, working with others ranked the lowest.
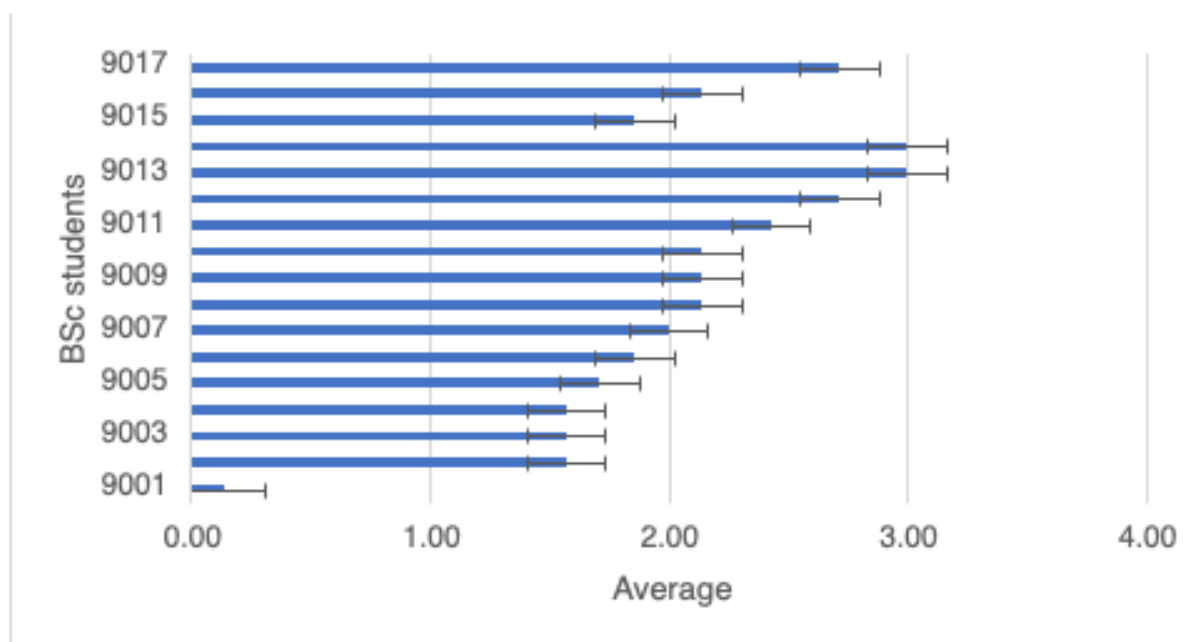

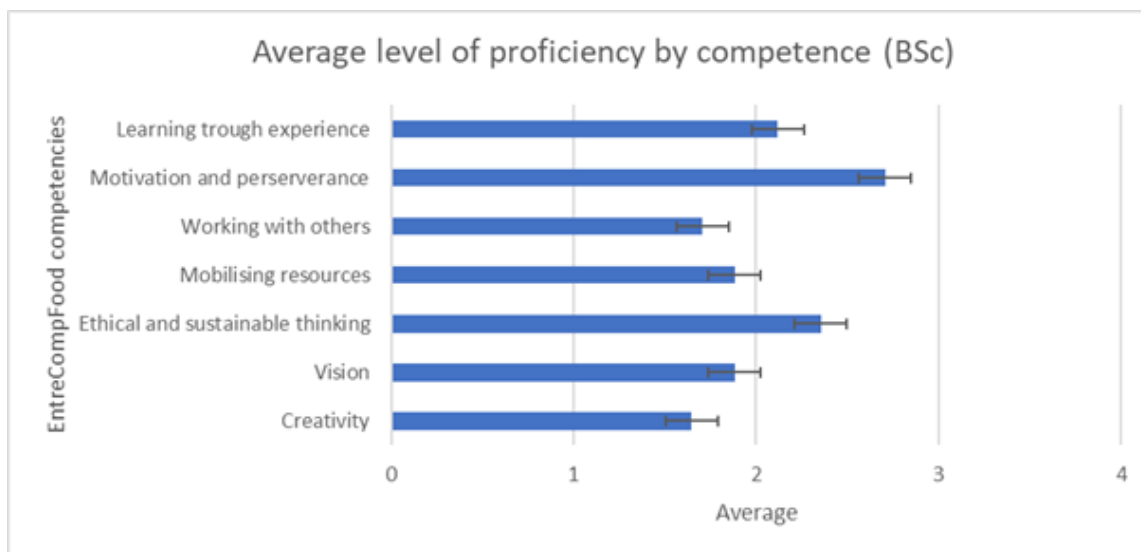*Figure 26.* Average level of proficiency by BSc. students.

Figure 27. Average level of proficiency by competence in BSc course.

6.5.2. MSc Students

A total of 24 students answered the questionnaire on MSc level, of which 9 attended the course Nutrition engineering, 9 attended the course Sensory analysis, and 6 attended the course Wine technology. Since the course Food Biotechnology and Food safety were already finished before the questionnaire was developed in Slovene, we could not attain answers from students attending those courses. The average level of proficiency among MSc students was 2,35, with motivation and perseverance again ranking the highest, and ethical and sustainable thinking ranging the lowest.
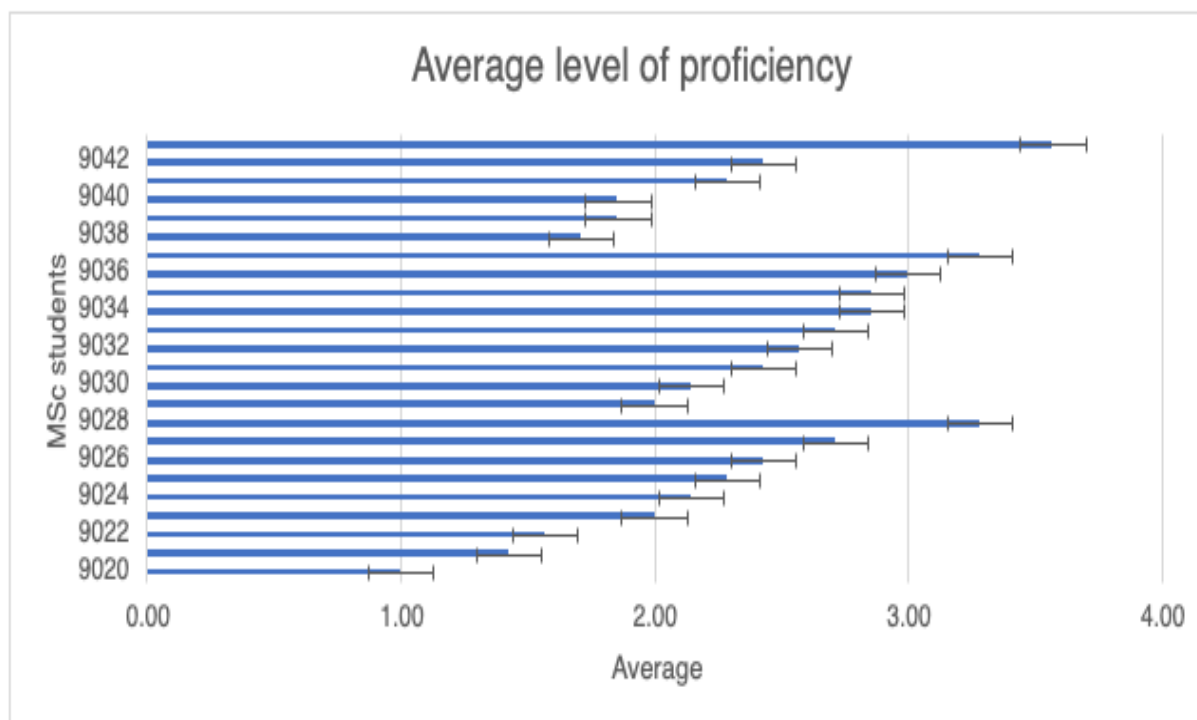

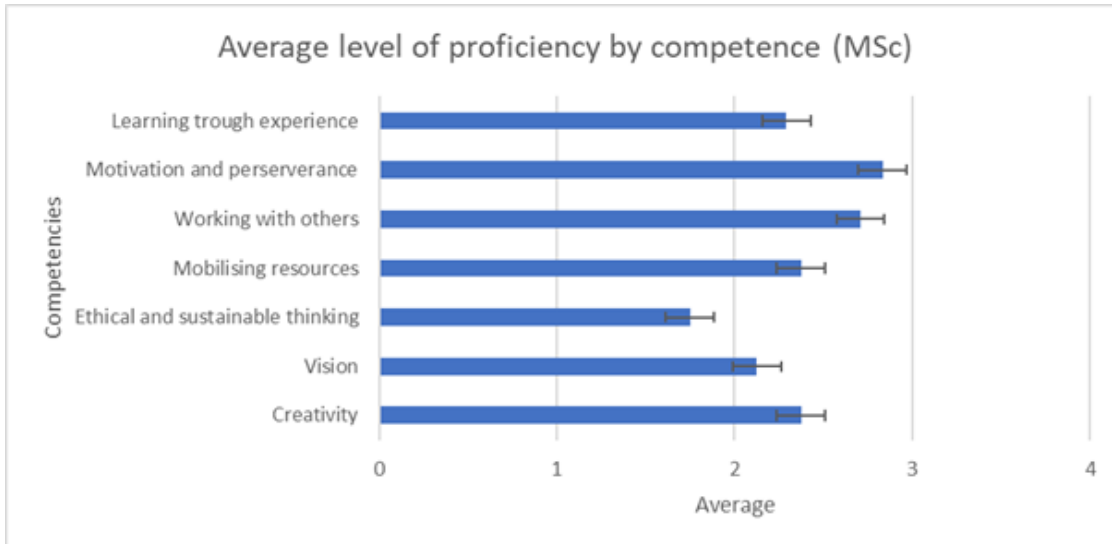*Figure 28.* Average level of proficiency by MSc. students.

Figure 29. Average level of proficiency by competence

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6.5.3. Comparison between MSC and BSC students

The average proficiency score for BSc students was lower than for MSc students, being 2,04 and 2,35 respectively. The difference was expected since MSc students should already have more developed competencies, especially with seminars and laboratory work. The biggest differences were observed in creativity, mobilizing resources and working with others, where MSC students evaluated themselves as more experienced. Interestingly ethical and sustainable thinking received a higher score among BSC students, that may be due to the subject they were listening to and the involvement of professors or may be due to the lack of understanding. Vision, motivation, and perseverance and learning trough experience were similarly evaluated among BSC and MSC students.
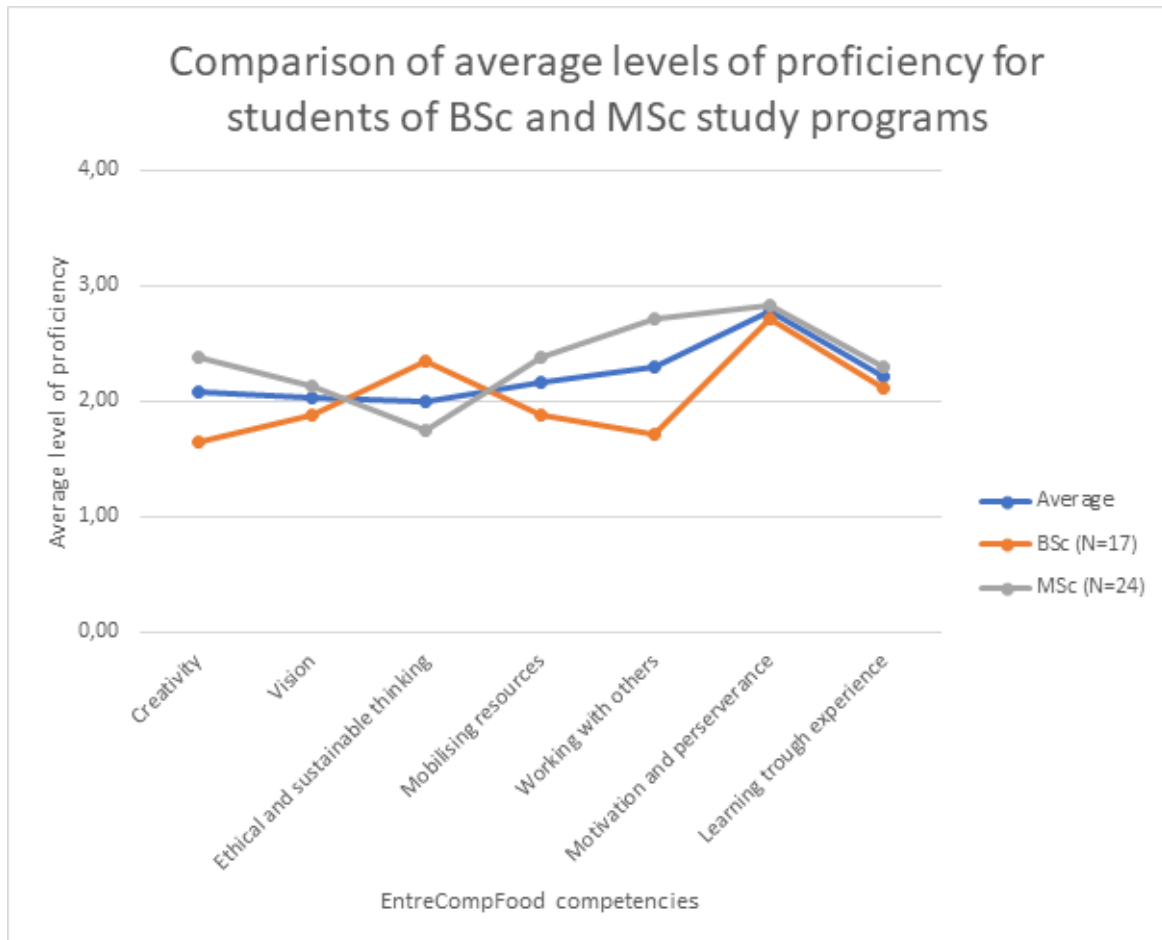
Figure 30. Comparison of averages between BSc. and MSc. students.

6.5.4. Comparision between courses

In average, the highest proficiency level was reported by students attending the course Sensory analysis. The seminar activity of developing a new product based on SDG goals has helped to develop the competencies of students such as: working with others (3,44), creativity (3,22) and motivation and perseverance (3). Even though students had to consider SDG goals in the development of their product, ethical and sustainable thinking was reported below average. This may also be due to the understanding of what this actually means, and the hard work needed to include the sustainability aspects in product development, which may have discouraged students from educating themselves more in this direction.

The lowest average proficiency level was reported by BSc students of Unit operations in the food industry, where the proficiency level was below average (1,83). Although activities during lessons have encouraged the development of working with other and creativity, they ranked the lowest amongst students. Students might be too critical when self-assessing, either due to a bad experience in the group or during course.

Unit operations in food industry is considered among students as one of the hardest subjects in 3rd year of BSc in Food science and nutrition program. On the other hand, it is observed that ethical and sustainable thinking was explored a lot on this subject, since students have developed this competence above average.

It can be concluded that the activities, methods, and tools used during courses Winemaking, Wine technology and Sensory analysis have helped students to develop EntreCompFood competencies. Unfortunately, answers from students attending the courses Food safety and Food Biotechnology could not be obtained, so they were not included in the analysis. When interpreting the results, it is considered the fact that an initial measurement was not performed so a strong conclusion cannot be affirmed since students might have different predispositions to the competencies measured.
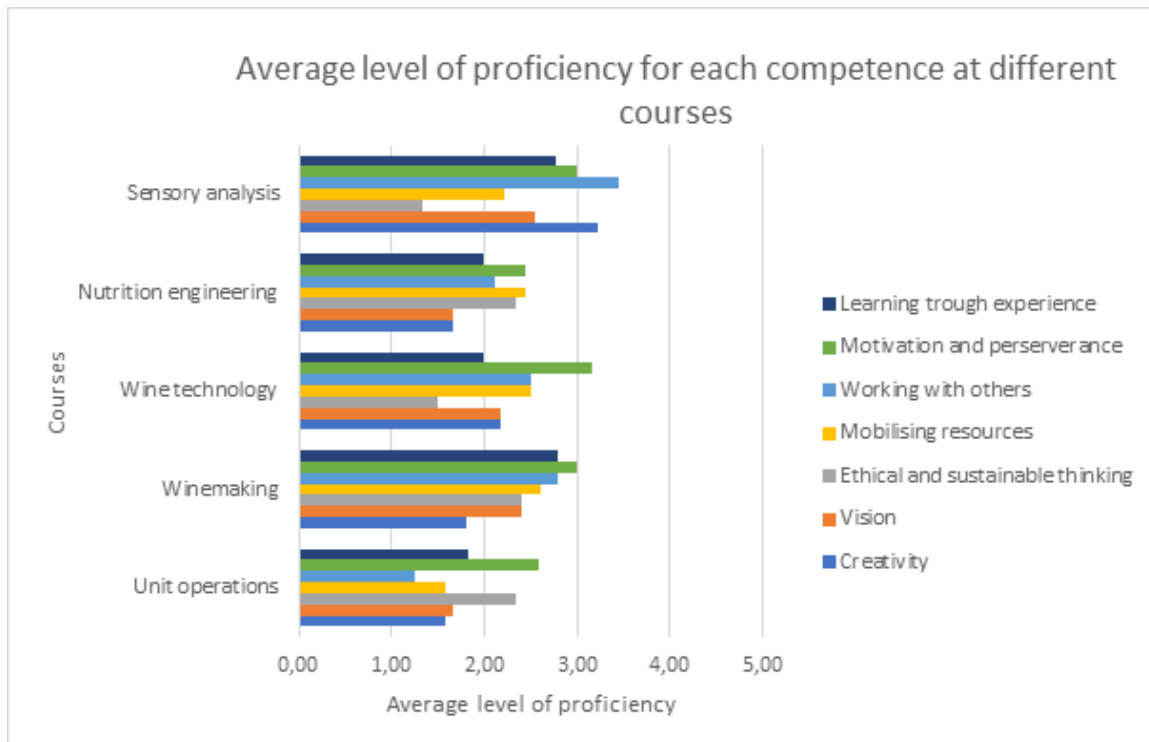

Figure 31. Average level of proficiency for each competence in different courses.

6.6. Conclusion

At University of Ljubljana the development of EntreComp competencies with different activities, tools and methods was incorporated into the seminar and laboratory practices of the described courses. Seminar lessons at Biotechnical faculty were mostly identified by students as an additional burden with no great effect on their knowledge or competencies. There is place for improvement and by EntreCompFood project a lot was done to support professors with knowledge and new ideas to make the seminars more interesting and useful for students. Based on students' reactions, the improved curricula of seminars and laboratory work helped them to be more focused and have more motivation on the proposed projects. They stated that compared to a theoretical seminar, this type was more useful and educational for them, offering a better insight into the subject presented on class.

During the courses students were interested in new approaches, the changes were entertaining and educational. They were motivated for work in groups, to be creative, and full of new ideas. Students preferred having laboratory tutorials or seminars over lessons, they were more independent to learn, to work in group and, to have the opportunity to brainstorm, rather than just follow the teacher's instructions.

At the end of each course students were asked to evaluate the work and methods used. In the discussion, they stated that all adjusted courses helped to advance at least some entrepreneurial competences. Before applying for the final exam, students had to evaluate the course in an online questionnaire, where the results were encouraging.

After the course, professors were also asked to evaluate the implementation of the project-based teaching and give ideas for further improvements. Professors believe that the changes were well received. They made the dynamic between students and teachers easier, faster, and more efficient when teaching. The changes also allowed a clearer link between the practical knowledge on laboratorial practices and of the seminars. Due to the positive response of students' assessment, tools applied will probably become a regular part of courses. Furthermore, additional quizzes, inviting guest lecturers and other uses of mobile devices may be applied to motivate students for learning entrepreneurial skills. Professors also recognized the importance of peer discussion and will encourage it. With the use of different approaches, the participation and active involvement of students in the study process was already significantly increased, but there is still a lot of potential for further improvement.

The students' self-assessment should be applied before and after the course duration, to map out their progress. Students should also be more motivated to fill in the self-assessment questionnaires in greater numbers. Professors also stated that evaluating their work would also be more than welcome - so they would find out what students want, in what direction they can contribute to their desired competencies through activities and courses.

It was also emphasized that entrepreneurial thinking is foreign to students, but university professors also have little experience. Professors would need to learn more about entrepreneurial competencies through EntreComp project and by so to develop knowledge on how to apply them. It is important to note that when working with entrepreneurial both parties learn, the students and professors.

7. SPAIN

As a result of the work carried out by Andalucía Emprende (AE) within the EntreCompFood project, awareness was raised about the importance of using the EntreComp Framework in the daily work of an institution that has been working in entrepreneurship for almost 30 years. The fact of having centers located in rural areas, spread on the total of the Andalusian territory, has made it easier to work on the entrepreneurial capacity of many young Andalusians who want to undertake in the agri-food sector.

Cooperation with Andalusian entrepreneurs have been promoted with programs developed by Andalucia Emprende inspired by the EntreComp project competencies.

7.1. Empezar TV

Type of the activity:

Non formal learning

Target group:

Teachers or trainers / students / young entrepreneurs / employees…

Developed competences:

Creativity, Vision, Ethical & sustainable thinking, Motivation and perseverance, Mobilising resources, Working with others, Learning through experience

Structure of the activity:

Competitions, Conferences, Webinars, Fieldwork, Laboratory Tutorials, Hackathon

Impact and Effort:

To promote entrepreneurship in Andalusia, AE had to innovate in its way of working, mainly forced by the post-pandemic reality, going from receiving face to face entrepreneurs in the offices to going abroad via online tools. In this way, it has been possible to reach more people, favoring the promotion and training of entrepreneurs, and all following the guidelines of EntreComp. For this, the creation of a national multiplatform streaming channel designed by and for entrepreneurs, called empezar.tv, has been key. This initiative already has more than 70 programs broadcast and accumulates 548,000 views only on Youtube, reaching two million impacts on all its social networks. The world is changing and we don't want to be left out.

Within empezar.tv we have tried to include a whole series of resources for entrepreneurship where can be found different videos with key information to undertake and work on entrepreneurial skills.

Learning objectives:

This resource aims to address current entrepreneurship issues to help young entrepreneurs get their business ideas off the ground. It is the first "Netflix for entrepreneurs", as it is a free subscription OTT platform that offers potential and real entrepreneurs personalised content on the four phases that make up the entrepreneurial process: awareness of the option of entrepreneurship as a way to

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personal and professional development and employability today (called "promotion"); the "creation" of the company to make it viable and with guarantees of survival in the market; its "acceleration", so that it develops as quickly and as well as possible; and "scaling", to help it to seek new markets, contributing to its expansion and consolidation.

Short description of the activity (duration, topic, number of participants):

Learning entrepreneurship in a fun and didactic way, acting on education to promote innovative and sustainable entrepreneurship, which responds to the needs and challenges we face as a society today. Stimulating the acquisition and development of entrepreneurial skills in students. This resource, whose differential lies in its firm commitment to entrepreneurship as a fundamental strategy in the training of people throughout their lives, aims to address entrepreneurship beyond the traditional productive facet, establishing three dimensions: **personal**, to make the life project a reality in an active way; **social**, to stimulate initiatives that contribute to the improvement of the quality of life, solidarity and the common good; and **productive**, to favor the creation of wealth in a respectful and environmentally sustainable framework, stimulating the acquisition of basic competences (soft skills) to face the dynamics of the labor market.

7.2. Some of the programs / activities that we can find and that develop key competences of EntreComp are:

7.2.1. Maverick.

Learning trough experience. Centered on entrepreneurs who had changed the rules of the game and, with their initiatives, reinvented the world. We meet the person behind the entrepreneur. What motivated them to follow this path, what were their first step, their first stumbles and first triumphs. An inspiration for those that are struggling to begin.

7.2.2. The Great Quiz

Creativity. A game like contest that helps bringing the main concept of entrepreneurship to the table. Its knockout contest format allowed more than 1.085 students from more than 85 school to participate in six proposed entrepreneurship games.

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7.2.3. Numb3rS

Mobilizing resources. A multiplatform format in which news of entrepreneurship is discussed through videos and podcasts. Five parts are available and are presented by youtubers such as Anitabetwice or Kikillo. They explain concepts, data, and curiosity in fields like economy, entrepreneurship, and business culture.

In addition, "I wish they had told me before", are interviews presented by Carlos Blanco in which entrepreneurs explain the mistakes made when starting they project and how to avoid it.

7.2.4. Emprendepedia

Motivation and perseverance. Case studies that focus on solving problems at the beginning of entrepreneurial project.

7.2.5. Buzzfeed, to start

Vision. Nine flash courses were developed and spread through social media where entrepreneurship and journalism come together to present the best startups at a global scale.

7.2.6. Conecta

Working with others. Two monothematic sessions aimed at uniting ideas to establish valuable connections and generate synergies in aspects such as the challenges of entrepreneurship, team building or the importance of a good story when communicating an idea (storytelling) through virtual meetings like in **Networking Restarts** event in which the establishment of contacts, the creation of alliances, and business synergies go through speed dating between entrepreneurs to build a network.

7.2.7. SmartDay Rural Revolution

Ethical and sustainable thinking. A meeting where digitalization has been discussed as an opportunity for growth in our rural areas, to inspire Andalusian entrepreneurs through experts, institutions, and opinion leaders to address challenges and key aspects in the implementation and development of a business idea in the agri-food sector.

7.2.8. Hackathon

Vocational training. Meeting of young people in which through the resolution of a real challenge and linked to the SDGs of the 2030 Agenda, they test key entrepreneurial skills.

7.2.9. Entrepreneurial camps

Targeting nearly 100 young Andalusian entrepreneurs to test their skills and abilities to transform an idea into a successful company with the mentoring of investors and professionals, in a scenario where innovative methodologies are applied in a practical and fun way. The target group comprises young people between 18 to 35 years old with an entrepreneurial attitude, technicians, higher technicians, Graduates and Higher Degree or Degree Training Cycle students.

The entrepreneurial camp lasted for 52 hours. A journey into entrepreneurship has been made favoring ideas and progressing them into sustainable entrepreneurial actions through shared experiences and teamwork. campamentodeemprendimiento.es

Activities, methods, tools used to support the development of the entrepreneurial competences:

Varies depending on the activity described IN THE PREVIOUS POINT

What was a success factor?

It is a very dynamic format that allows you to connect with young people
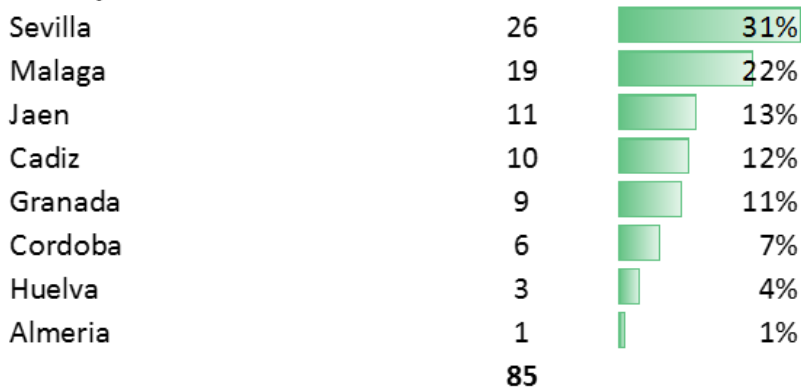
What could be improved next time?
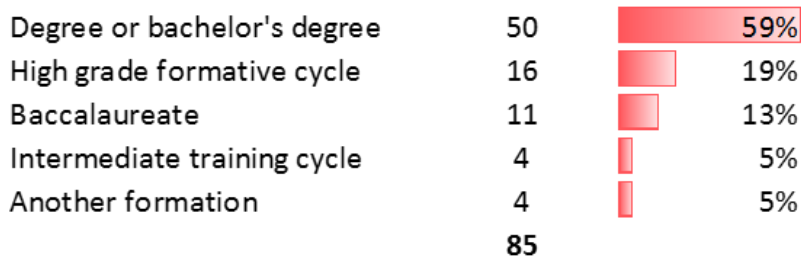
Dissemination of this resource

Supporting materials:

Annex 1: Link empezar.tv

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Participants

Sevilla	26		31%
Malaga	19		22%
Jaen	11		13%
Cadiz	10		12%
Granada	9		11%
Cordoba	6		7%
Huelva	3		4%
Almeria	1		1%
	85		

Training level

Degree or bachelor's degree	50		59%
High grade formative cycle	16		19%
Baccalaureate	11		13%
Intermediate training cycle	4		5%
Another formation	4		5%
	85		

Employment situation

Workers	40		47%
Students	31		36%
Job search	14		16%
	85		

Figure 32. Number of participants in Entrepreneurial Camp according to their regions, training level and employment situation.

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Campamento Emprendimiento Top 100

Ficha 2. **Corner Coaching/Entrecomp.**
Misión y Visión. Técnica del escalador

Contenido	Recursos	Tiempo dedicación	Entrecomp. Ficha
Diferencias entre misión y visión. Realizar una primera reflexión sobre el proyecto emprendedor	Infografía. Dinámica.	1:00 hora	Ficha diseñada para trabajar partiendo desde un Nivel básico hacia una progresión de nivel intermedio e incluso avanzado.

El objetivo de esta dinámica es ayudarte/ayudaros a pensar sobre vuestro proyecto emprendedor. Tener clara la misión, visión del proyecto.

- **Misión:** es la razón de ser de un proyecto y responde a las siguientes preguntas. (qué, cómo y para quien del proyecto)

    o ¿Qué hacemos?

    o ¿A qué nos dedicamos?

    o ¿Cuál es nuestra razón de ser?

    o ¿Quiénes son nuestro público objetivo?

7.3.The "Escape Room"

Type of the activity:

Non formal learning

Target group:

Students / young entrepreneurs / employees

Developed competences:

Creativity, Vision, Ethical & sustainable thinking, Motivation and perseverance, Mobilising resources, Working with others, Learning through experience

Structure of the activity:

The methodology may seem like a game, and this is how we want participants to feel, but the goal is to detect and analyse competencies to improve their skills and abilities. With the design of the Escape Room Emprendedor, an instrument is offered to generate learning in the field of entrepreneurship, working on cooperation, critical thinking, and shared creativity.

Impact and Effort:

The use of the methodology of "Escape Room" in a formative context, transcends the game, and needs a preparation of the dynamics and the trainers.

The "Escape Room" experience allows participants to work in a different context with other people, who may have different ages, abilities, interests, and degrees of responsibility. For observers, this experience allows them the possibility to see how participants behave depending on the situation, or the decisions they must make, with the aim of giving information on how to improve the professional and personal skills of each member of the same team, and of the team, and finally establish a training program to retrain the people and the team itself.

Learning objectives:

The "Escape Room" is an online game that can be very interesting to analyze methodologically, and is useful for developing and improving social skills, especially teamwork, leadership, initiative, communication, and collaboration.

Short description of the activity (duration, topic, number of participants):

The activity consists of solving puzzles, solving riddles, looking for information in a document and other evidence in order to escape from somewhere in the shortest possible time.

The duration of the activity will be 90 minutes (Estimated 25' of introduction / explanation, 45' of game and 20' of closing and delivery of diplomas).

The game will be done in groups of at least 2 people.

The game is done in person or on a computer through the internet, it is not recommended on a small mobile device.

If any group is blocked in any test, there is the possibility to ask for clues.

The instructions of the game will be given by the technical staff, who will provide the code to start the game.

Activities, methods, tools used to support the development of the entrepreneurial competences:

The activity is based on an escape game in which you must solve puzzles, solve riddles, look for information in a document and other tests in order to escape from somewhere in the shortest possible time. The story is about some high school students who hide in the CADE (Work centers and business accommodation) after learning about a secret project of a leading company from which they want to get the know-how. They are locked up and must escape so that they are not discovered.

What was a success factor?

Participants appeared to like how entrepreneurial activities presented in as game format

What could be improved next time?

The story could be changed and more entrepreneurial activities could be implemented.

Supporting materials:

Annex 1: Dossier ESCAPE ROOM
Annex 2: EntreComp Cards competences
Annex 3: Diploma of participation

7.4. Entrepreneurship kit

Andalucía Emprende has designed an educational entrepreneurship itinerary to encourage students to acquire the entrepreneurial skills and abilities appropriate to each educational stage, with a learning- by doing methodology and going through the different phases of the educational entrepreneurship process: Explore, Develop, Present.

Entrepreneurship Kit, is composed of workshops designed to stimulate in the students the acquisition and development of entrepreneurial skills, especially the competence of sense of initiative and entrepreneurial spirit.

They have been programmed to respond to the **different educational stages**, following a training itinerary based on the learning by doing methodology and attending to the phases of the entrepreneurship process: Explore – Develop - Present.

The structure of the Entrepreneurship Kit, allows to adapt to the needs and resources of the teaching staff, although it is convenient that the students receive throughout the academic year all the training itinerary corresponding to their educational stage, being at the discretion of the Entrepreneurship Strategy of the Educational Center and the availability of the resources of Andalucía Emprende, the workshops to be given at each stage or level of studies.

7.5. Results & Discussion

The promotion of EntreCompFood project has been carried from 12/2021 to 06/2022. During this time, action was taken online and in person and a total of 39.807 people attended the promotion of entrepreneurial culture. The participants were exposed to entrepreneurial competencies and it generated an engagement between the entrepreneurial community and Andalucia Emprende. Dealing with a lot of people taught Andalucia Emprende to have a more human approach when assessing entrepreneurial skills with young entrepreneurs. It made accessible entrepreneurial knowledge to regions in Spain presented on the table 1.

FOMENTO CULTURA EMPRENDEDORA				
Provincia	Actuación	Beneficiarios hombres	Beneficiarios mujeres	Beneficiarios totales
ALMERÍA	151	1.653	1.674	3.327
CADIZ	209	2.517	2.681	5.198
CORDOBA	210	2.477	2.504	4.981
GRANADA	211	2.747	2.502	5.249
HUELVA	212	1.237	1.351	2.588
JAEN	213	2.843	2.534	5.377
MALAGA	214	3.038	3.669	6.707
SEVILLA	215	3.133	3.247	6.380
TOTAL	1.887	19.645	20.162	39.807

Table 2. Regions of Spain and its number of participants in Andalucia Emprende.

7.6. Conclusion

The EntreCompFood project has meant for Andalucia Emprende an internal improvement in the work dynamics. With the tools provided and developed during the duration of the project it was possible to change from an environment where the focus were the numbers, investments, and financing on business project to people and their entrepreneurial skills. This change helped to spot their weaknesses and strengths and for doing so to train them in becoming better entrepreneurs, measure their capabilities and use concrete tools adapted to their needs at an individual level.

Andalucia Emprende will keep working with what was learned from EntreCompFood project due to the capacity of improvement methodologies that it has to offer to keep growing and improving, internally and externally.

8. Conclusion of the pilot project

EntreCompFood project have helped map the development of entrepreneurship on different institutions within participating partner countries. It had presented with methodologies to follow and make flourish entrepreneurial competencies among students and professors, as well as the open public with an interest on entrepreneurship.

EntreCompFood project had a very positive impact on how to assess the development of entrepreneurial competencies in different levels of teaching. It helped to determined weak links in existing programs. Moreover, it helped develop entrepreneurial committees in institutions to put entrepreneurial practices in place. It also shed light in which practices needed improvement and helped the development of new practices and courses.

Ecotrophelia competition was a great event to see and measure the development of entrepreneurial competencies. EntreCompFood prizes given to teams expressed the observation of these developed skills during the presentation of their food product and project. Thus, Ecotrophelia became the full expression of entrepreneurial competencies amongst students and a reference for the full expression of EntreCompFood competencies.

Globally, EntreComp Food positively develop entrepreneurial competencies on different stages within the participating institutions. Naturally, it developed a committee at University of Ljubljana and helped the teaching of entrepreneurship. Spotting weak links was important to rethink courses and develop new ones, in the case of AgroParisTech where it was essential for the creation of 'Maturing real entrepreneurial projects' course. It can and will help student to reach for the necessary entrepreneurial skills during their academic years, thus preparing and closing the actual gap between University and Industry.

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Annex 1: Template questionnaire for teachers exchanging entrepreneurship teaching methods

STUDY PROGRAM (YEAR, semester): Kliknite ali tapnite tukaj, če želite vnesti besedilo.

COURSE TITLE: Kliknite ali tapnite tukaj, če želite vnesti besedilo.

COURSE STRUCTURE: *Lectures / Seminars / Seminar tutorials / Laboratory tutorials / Field work*

SHORT DESCRIPTION OF PEDAGOGIC ACTIVITY; LEARNING OBJECTIVES OF THE COURSE:

Kliknite ali tapnite tukaj, če želite vnesti besedilo.

1. DEVELOPMENT OF ENTRECOMP COMPETENCES

WHICH ENTRECOMP COMPETENCES WERE DEVELOPED / ADVANCED BY THIS ACTIVITY?

☐Creativity

☐Vision

☐Ethical & sustainable thinking

☐Motivation & perseverance

☐Mobilizing resources

☐Working with others

☐Learning through experience

☐Financial & economic literacy

☐Mobilising others

☐Coping with ambiguity, uncertainty & risk

☐Building a business plan

☐Communication

☐Planning & management

☐Spotting opportunities

☐Valuing ideas

☐Self-awareness & self-efficacy

☐Solving complex problems

☐Curious, explorer & listen to others

☐Autonomy

☐Taking initiative

☐OTHER:

WHICH METHODS (and tools) WERE USED TO DEVELOP/ADVANCE THESE COMPETENCES?

e.g. pitch presentation, project evaluation, brainstorming, mind maps, group work,… Jamboard, Miro….

EXPLAIN HOW THE METHODS, TOOLS AND ACTIVITIES USED SUPPORTED THE DEVELOPMENT OF ENTRECOMP COMPETENCES?

2. ASSESMENT/SELF ASSESMENT

WHICH ASSESSMENT / SELF-ASSESSMENT TOOL(S) WERE APPLIED?

e.g. self-reflection, self-assessment questionnaire, teacher assessment, …

HOW DID STUDENTS REACT TO NEW TEACHING/LEARNING TECHNIQUES THAT WERE USED?

e.g. During the course they found it boring, interesting, overlading, …? They suggested …. In final course evaluation they stated …

WILL YOU CONTINUE WITH THESE ACTIVITIES IN YOUR COURSES? WHY YES/NO?

Kliknite ali tapnite tukaj, če želite vnesti besedilo.

HOW CAN YOU IMPROVE YOUR ACTIVITIES/COURSE TO BE EVEN MORE ENCOURAGING FOR STUDENTS TO DEVELOPE/ADVANCE ENTRECOMP COMPETENCES?

Kliknite ali tapnite tukaj, če želite vnesti besedilo.

PLEASE REPORT ANY OTHER FINDINGS/OBSERVATIONS THAT YOU WOULD LIKE TO SHARE:

Kliknite ali tapnite tukaj, če želite vnesti besedilo.

Annex 2: ENTRECOMPFOOD QUESTIONNAIRE FOR STUDENTS

Reflection on acquired entrepreneurial competencies

The questions bellow are related to the development of your entrepreneurial competencies.

Think about the knowledge and competencies that you have used or developed in the course on the subject of _____ and choose the one you most identify with. In addition to the statements, descriptions are added to make it easier to understand each statement. You can only select one statement.

If you do not identify with any of the statements, select the answer "None of the above".

For each competency, you also have the option to write an example / event that explains your definition under a particular statement.

The results will be pooled and anonymized and used for evaluation within the EntreComp competencies.

The results will also be sent to your email address. We suggest that you save the results and continue to upgrade your competencies and re-evaluate yourself over time.

There are no wrong answers.

1. **CREATIVITY: Developing creative and goal-oriented ideas.**

Choose the most appropriate statement *

- I know how to create new ideas or solutions for existing needs.
- I can use different techniques to create new ideas (ICT, brainstorming, mind maps, ...).
- I know how to involve co-workers in creating new ideas, researching, and testing.
- I know how to design and implement the process of generating and validating ideas (for example, leading a meeting where we create new ideas using different techniques with colleagues/coworkers).
- None of the above.

Justify the above answer with a brief description of the case

2. **SPOTTING OPPORTUNITIES: Discovering and identifying opportunities to create value.**

Choose the most appropriate statement *

- I recognize opportunities and needs, for example, I recognize the possibility of improving a particular product.
- I can analyze needs in different contexts and identify opportunities, for example, I analyze the composition of a particular product and identify the opportunity to improve it for different target groups.
- I strive to improve solutions and established procedures, for example to improve a particular technological process.
- I design and implement the process of generating ideas (for example, meeting with colleagues using various techniques - brainstorming, mind maps,…), which will create added value or upgrade solutions to the identified problem.
- None of the above.

Justify the above answer with a brief description of the case

3. **VISION: Striving to realize your vision of the future.**

Choose the most appropriate statement *

- I imagine the future using different scenarios of the course of events. For example, if I finish a year with a good average grade, It will be easier for me to get a job.
- I develop my vision of the future for a particular project and work out different possible outcome scenarios. For example, I want to get a job in a high-tech food company, if I gain experience with various projects in this field during my studies and gain the appropriate competencies, I will have a greater chance of employment.
- I analyze the context, build my strategic vision and identify different ways to implement it. For example, in the current market situation, food companies do not hire, I want to get a job in a high-tech food company, so I will have to gain very good experience and prove in my knowledge that they will want to have me in their ranks. I will take part in various competitions, gain experience with an internship in a similar company abroad, etc.…
- I can convince others of my choice between different scenarios in a changing context, such as convincing my colleagues to take part in the Ecotrophelia competition, as this will gain them the competencies and experience that will make them better employable later on.
- None of the above.

Justify the above answer with a brief description of the case

4. **ETHICAL AND SUSTAINABLE THINKING: Assessing the consequences and impacts of ideas, opportunities, and actions.**

Choose the most appropriate statement *

- I can say that I respect the environment and society.
- Whenever I decide on a solution, I wonder about the ethical and sustainable consequences.
- I can analyze the ethical and sustainable consequences of proposed solutions, such as how the use of a particular raw material affects the environment and society.
- Using various methods to analyze the sustainable and ethical aspects of our project (environmental and social impact), I can suggest solutions and improvements.
- None of the above.

Justify the above answer with a brief description of the case

5. **MOBILIZING RESOURCES: Collection and management of tangible, intangible and digital resources that we need to carry out a particular idea/project.**

Choose the most appropriate statement *

- I can easily find additional resources and contacts for a specific project, such as solving my tasks in the pedagogical process (preparation of a seminar).
- For a specific project, such as solving my tasks in the pedagogical process (preparation of seminars), I regularly use different sources and networks of contacts.
- I know how to effectively use different resources to achieve the best possible result in a project (preparation of a seminar), for example who to turn to for help with legislation and how to get the most useful answer.
- I can use the available resources (professional help, literature, links with companies) and determine the necessary resources (financial and material) to carry out a particular project (for example, product development in the framework of the Ecotrophelia competition).
- None of the above.

Justify the above answer with a brief description of the case

6. **WORKING WITH OTHERS: Networking, collaboration and networking.**

Choose the most appropriate statement *

- Working in a team is not a problem for me.
- I also participate in project work with peers outside of lectures.
- I know how to lead a team and work with remote communities.
- With the help of various tools and methods, I can create a space to promote the work of my team (for example, using tools for collaborative work - Moodle, MS Teams, Google Docs or live with various methods and incentives/motivation).
- None of the above.

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Justify the above answer with a brief description of the case

7. MOTIVATION AND PERSEVERANCE: Stay focused and persevere.

Choose the most appropriate statement *

- I am driven by challenges and do not give up quickly.
- I know how to set goals, measure my progress, and overcome obstacles that I encounter on the way to my goal.
- Even when faced with adversity, I insist on achieving my goals.
- I adapt to failures and failures and know how to motivate others.

Justify the above answer with a brief description of the case

8. LEARNING THROUGH EXPERIENCE: Learning through activities.

Choose the most appropriate statement *

- I have a desire to gain individual experience (reading a book, attending a workshop, imitating, watching recordings, ().
- I know very well what my limitations are and in which area I still have to upgrade my competencies.
- I am not afraid of mistakes but I use them to learn and improve.
- I recognize when I am successful and if I am not, I adjust my vision, goals and action plan accordingly.
- None of the above.

Justify the above answer with a brief description of the case

You answered all the questions
Thank you for reflecting on your work and your time.

EntreComp Food

Entrepreneurship Competence
Agrifood industry

Project title:

**Applying EntreComp to attract young people to the 1st European manufacturing sector:
the agri-food industry**

About us:

You want to know more details about our project?

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Zbornica kmetijskih in živilskih podjetij

Univerza *v Ljubljani* *Biotehniška* fakulteta

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