



# TRADINNOVATIONS

## Erasmus+ academic partnership cooperation

*At the crossroads of food and societal transitions and culinary heritage*

Lessons & Projections

R. Barbar, B. Leite on behalf of Tradinnovations consortium





**Learning and teaching approach**  
**Enhanced educational Content**  
**Pluri-actors network**  
**Digital platform**  
**Larger dissemination**

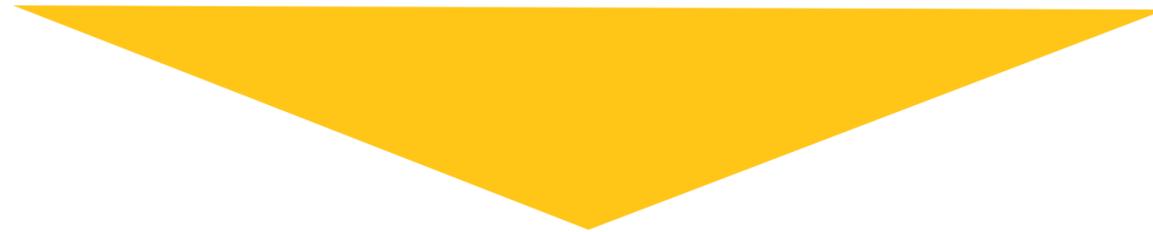


**FOOD HERITAGE**

**SCIENCE**

**SPECIAL NEEDS**

**HUMANITIES**



**INNOVATIVE PROBLEM-BASED  
EDUCATIONAL APPROACH**

# Rappel sur les Workpackages

WP1



**MANAGEMENT**

WP2



**PRELIMINARY  
ANALYSIS**

WP3



**EDUCATIONAL  
CONTENT**

WP4



**DIGITAL  
PLATFORM**

WP5



**COMMUNICATION  
DISSEMINATION**



01

Back to the future!



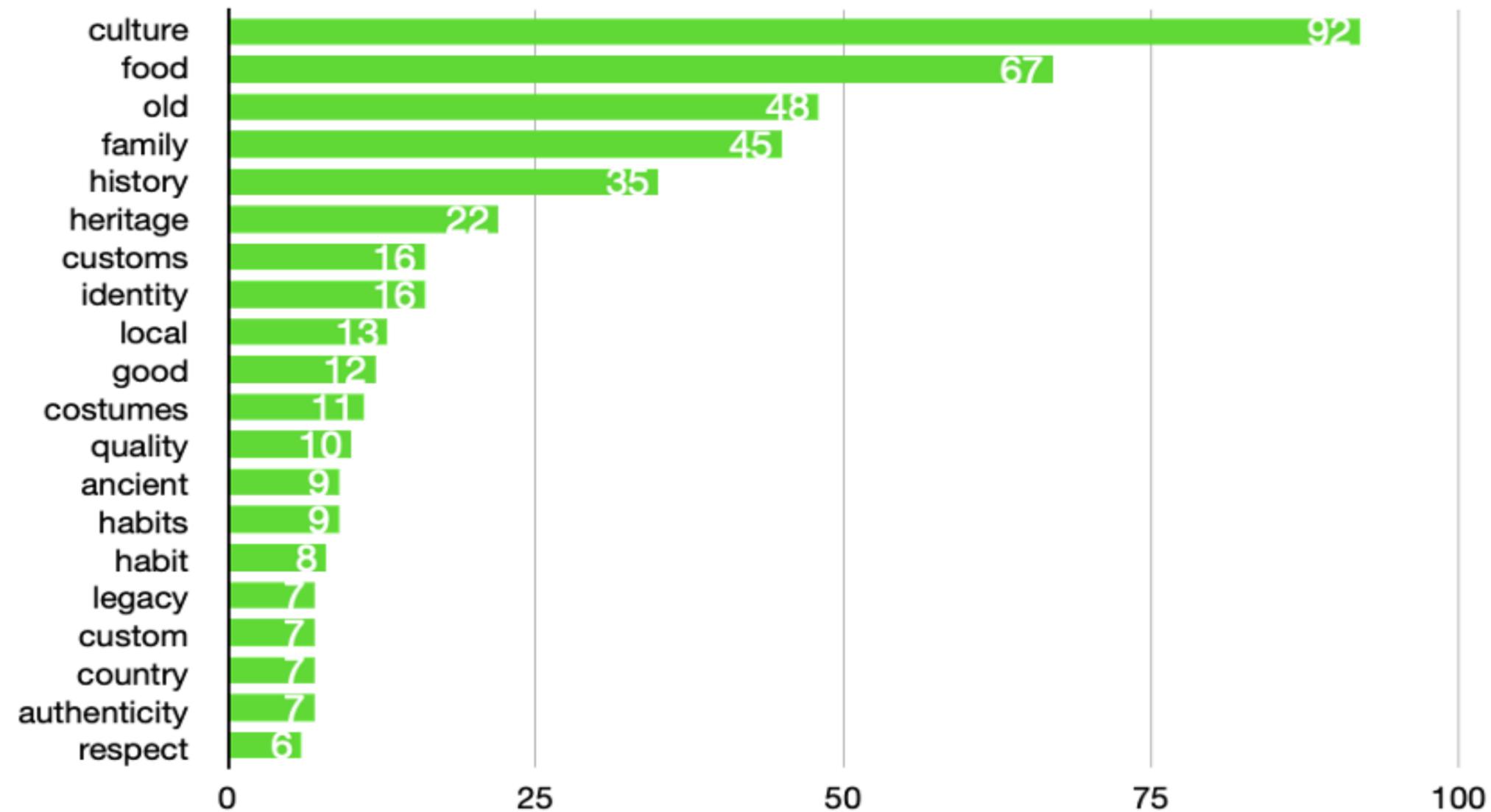
**I. TRADINNOVATIONS SURVEY**  
**“Culinary heritage and innovation: A study of european academic perspectives on traditional and innovative food”**



# Food as a pillar of tradition

300 respondents

Frequency of words associated with: **TRADITION**





# EMOTIONAL CONNECTION to tradition

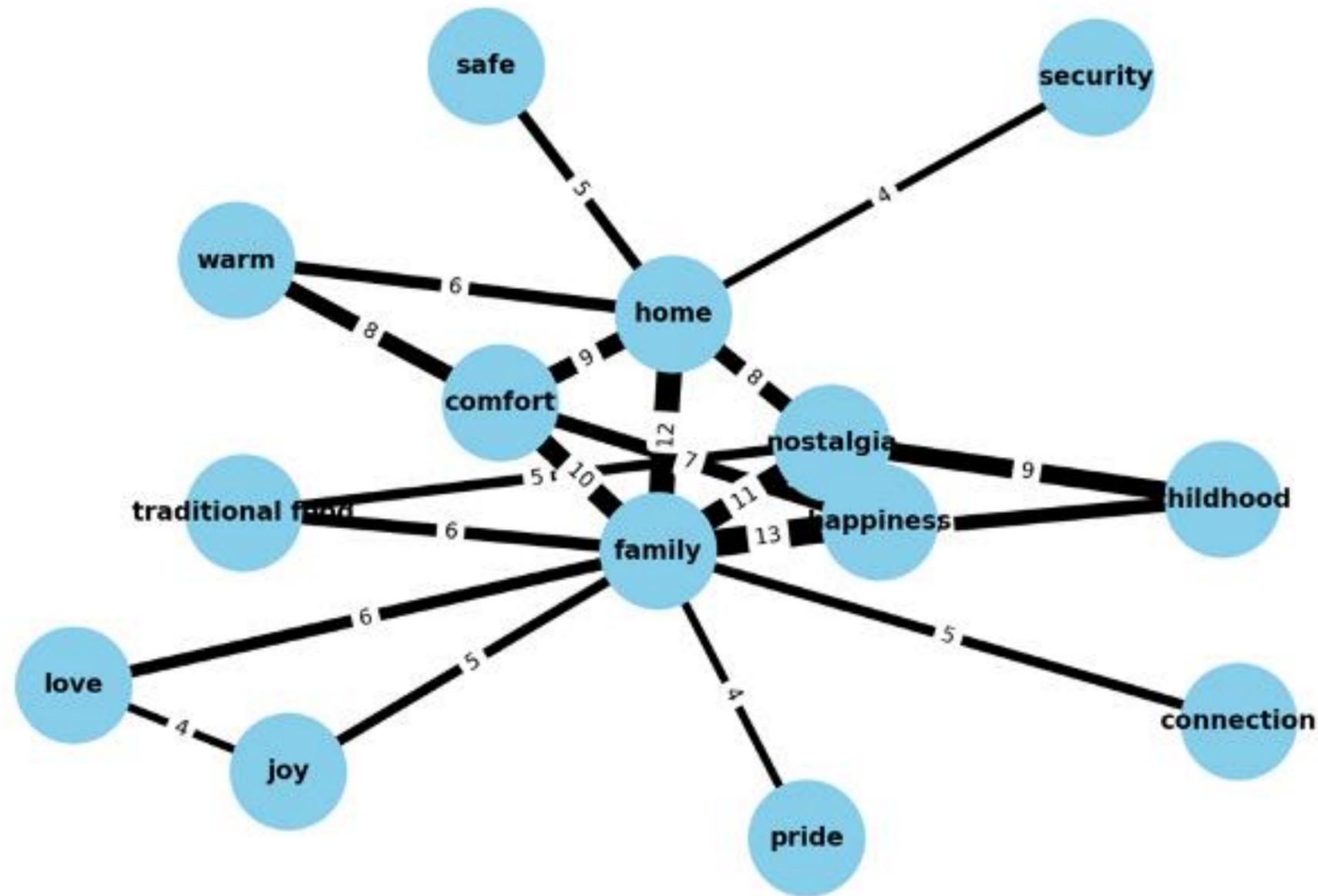
91% has memories of traditional food from childhood

53% has a traditional recipe that goes from generation to generation

Category	Emotions/Feelings
<b>Happiness/Joy</b>	<i>smiling, pleasure, happy, joy, content, good humor, satisfied, pleased, joyful, great, heartwarming, positive, serene, delighted, victory with family, happy and proud, happy and emotional, feeling of joy, feeling happy, makes me smile, it makes me feel at home.</i>
<b>Comfort/Comforting</b>	<i>comfortable, comfort, comforting, security, safe, warm, cozy, feeling of warmth, feeling comfortable, feeling comforted, at ease, feeling homely, homelike, cozy and connected, domesticity, feeling of belonging, feeling cosy, feeling hugged, feeling completed, feeling snug.</i>
<b>Nostalgia/Sentimental</b>	<i>nostalgic, longing, remember my childhood, memories of my grandparents, brings back good memories, grateful, renewed memories, sentimental, nostalgic and close to mother nature, it feels like home, homesick, homesickness, childhood memories, remembering the people of my family, reminiscent of the past, reminiscent of childhood, memories of moments spent harvesting, reminiscent of summer days in my village, reminiscing about the people who used to prepare it.</i>
<b>Connection/Community</b>	<i>connection, community spirit, belonging, family, time with the family, family gatherings, partage (French for sharing), feeling connected, feeling belonging, feeling of togetherness.</i>
<b>Pleasure/Satisfaction</b>	<i>pleasure, satisfied, pleasing, makes me dream, satisfies me, taste of pleasure, pleasure and satisfaction, feels pleasure, pleasing flavors, savory and happiness, feeling of victory.</i>
<b>Other Emotions</b>	<i>curiosity, pride, like home, feeling proud, feeling secure, feeling good, feeling welcomed, feeling accomplished.</i>

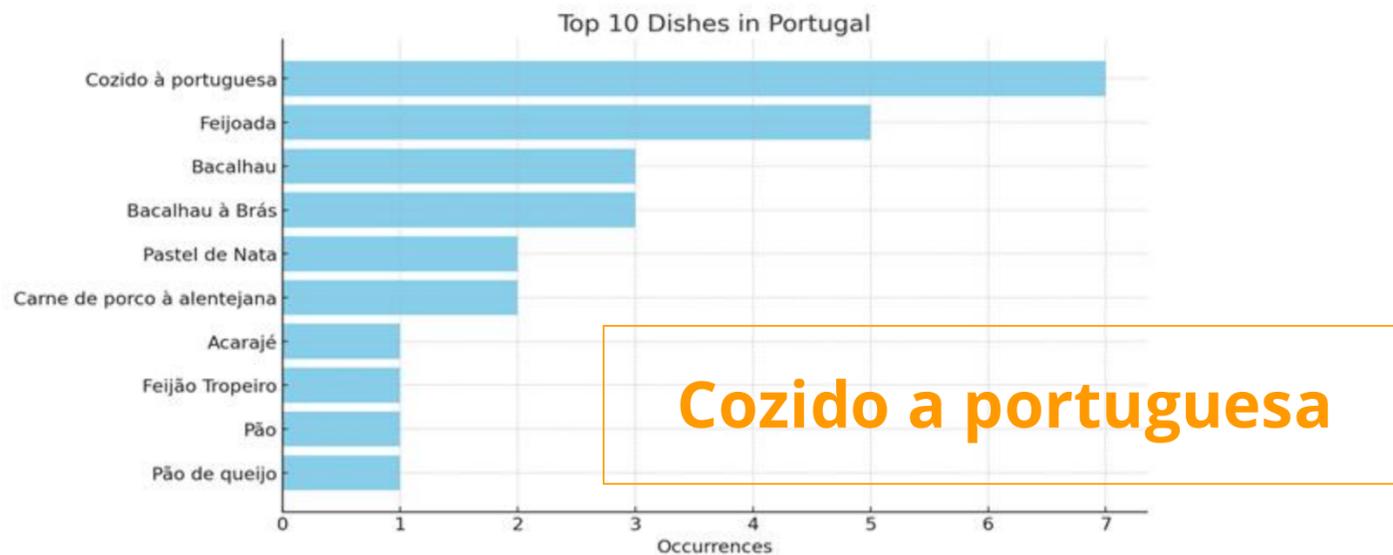
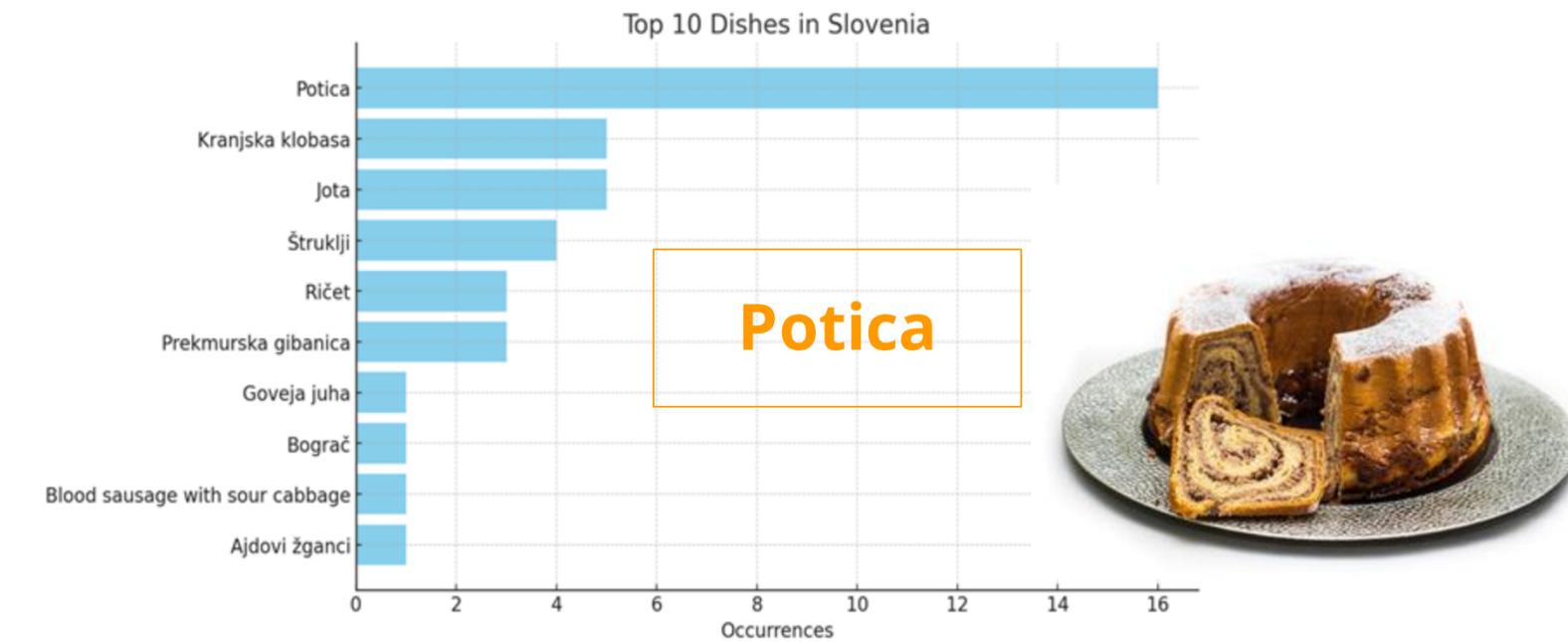
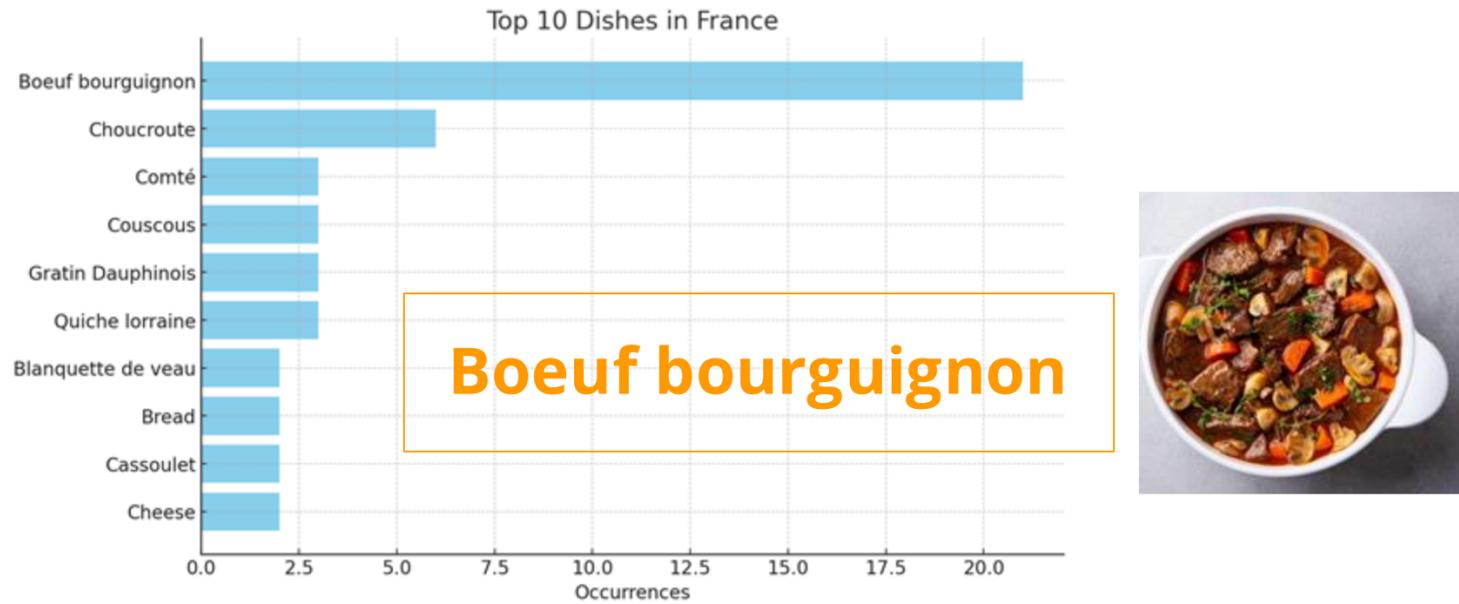
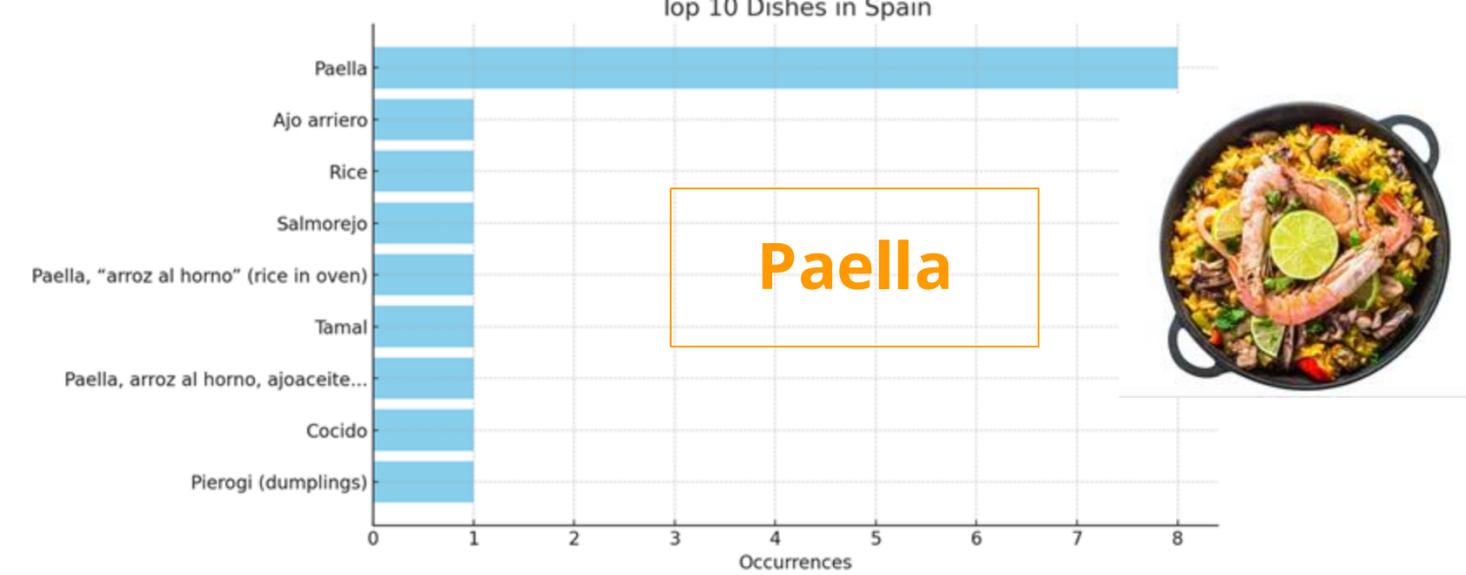
# EMOTIONAL CONNECTION to tradition

Co-occurrence Network of Emotions and Themes from Childhood Traditional Recipe Memories



Each node represents a word or phrase, and the edges between them indicate the co-occurrence, with the thickness of the edges representing the frequency of co-occurrence

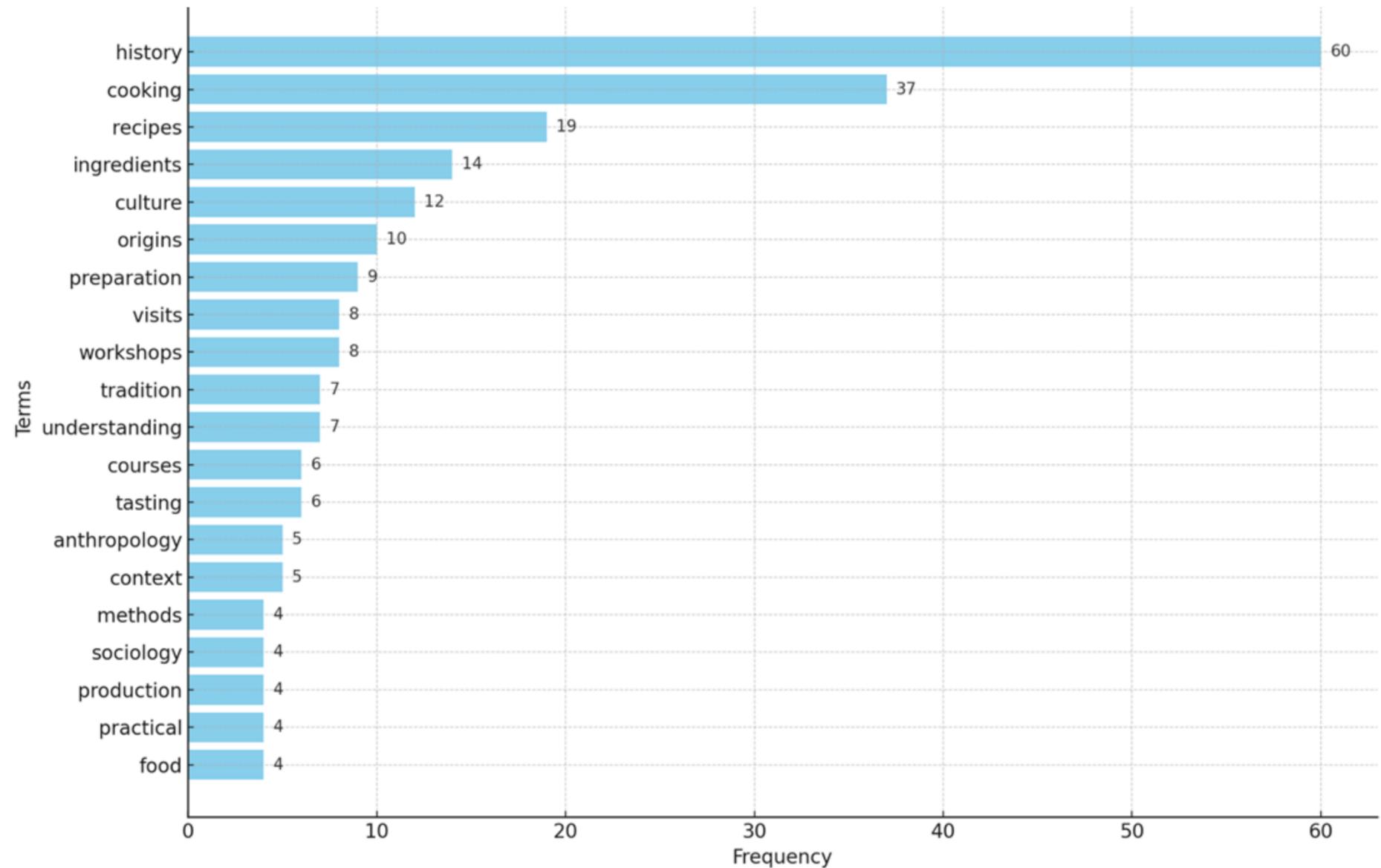
# TRADITIONAL RECIPES



# STUDIES AND RESEARCH - tradition topics

Respondents prioritize:

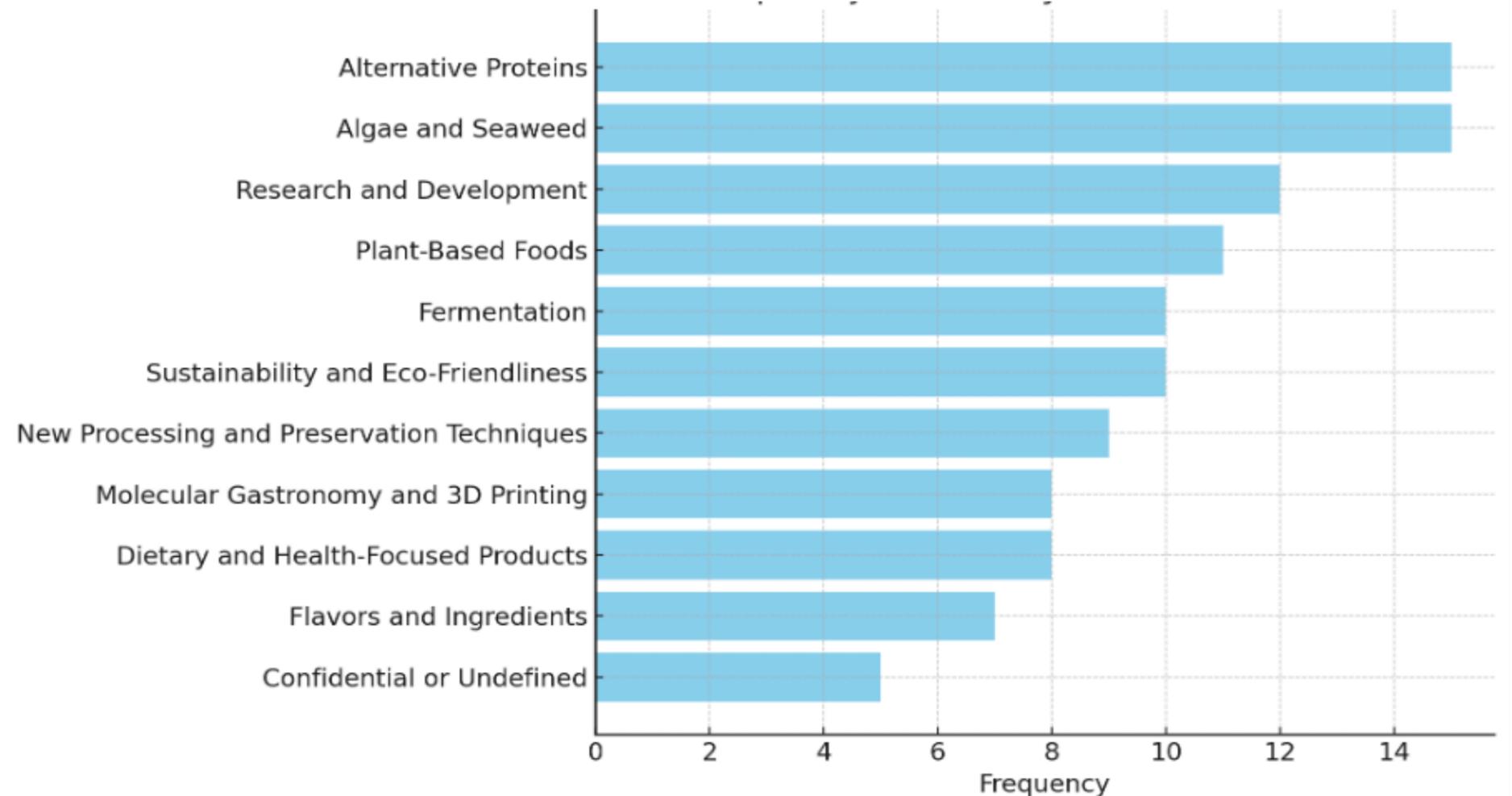
- learning about the history of food traditions,
- strong emphasis on cooking techniques, recipes, ingredients, and culture
- practical experiences such as visits and workshops,
- deep understanding of the origins and preparation methods

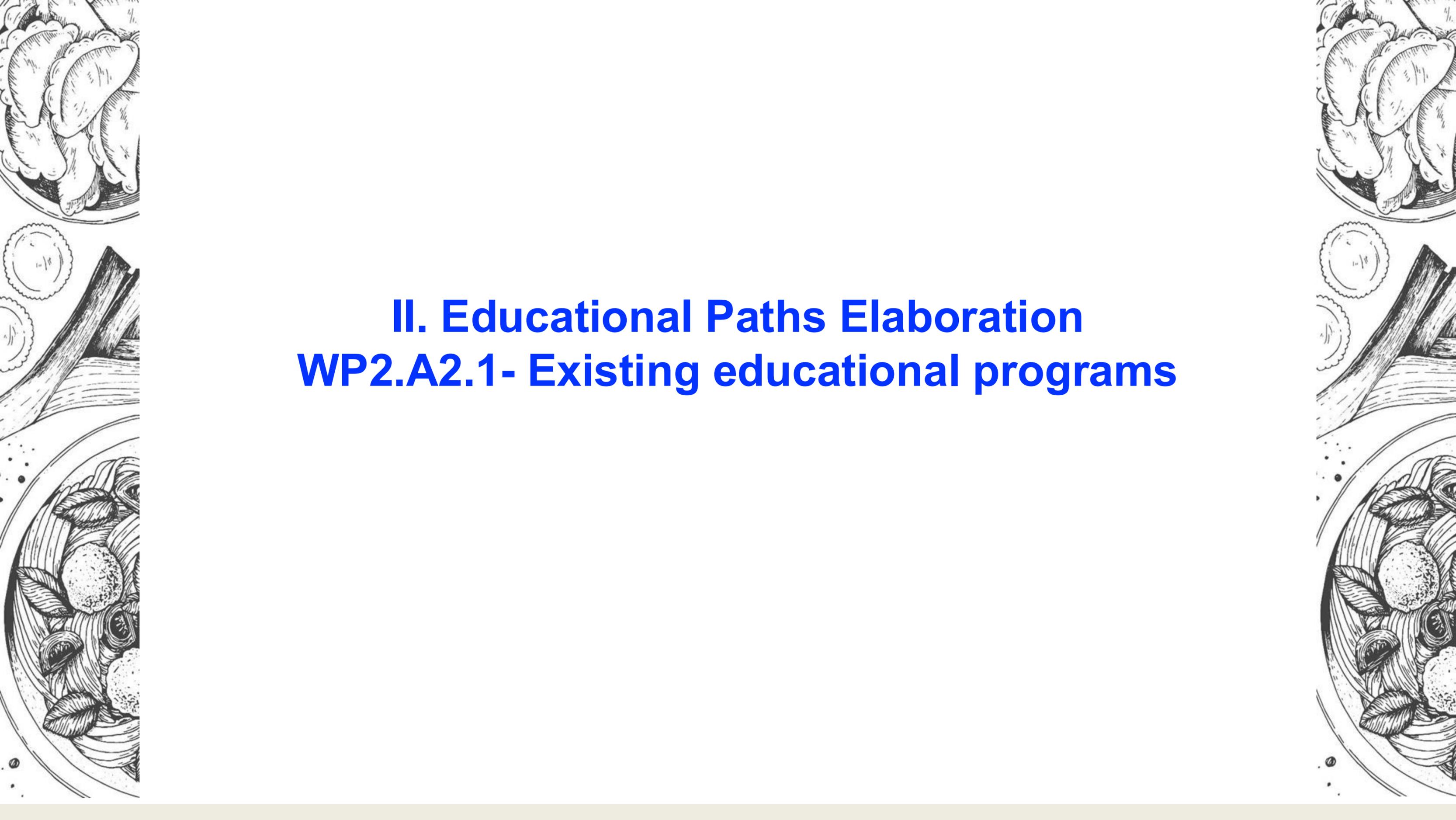


# STUDIES AND RESEARCH - innovation topics

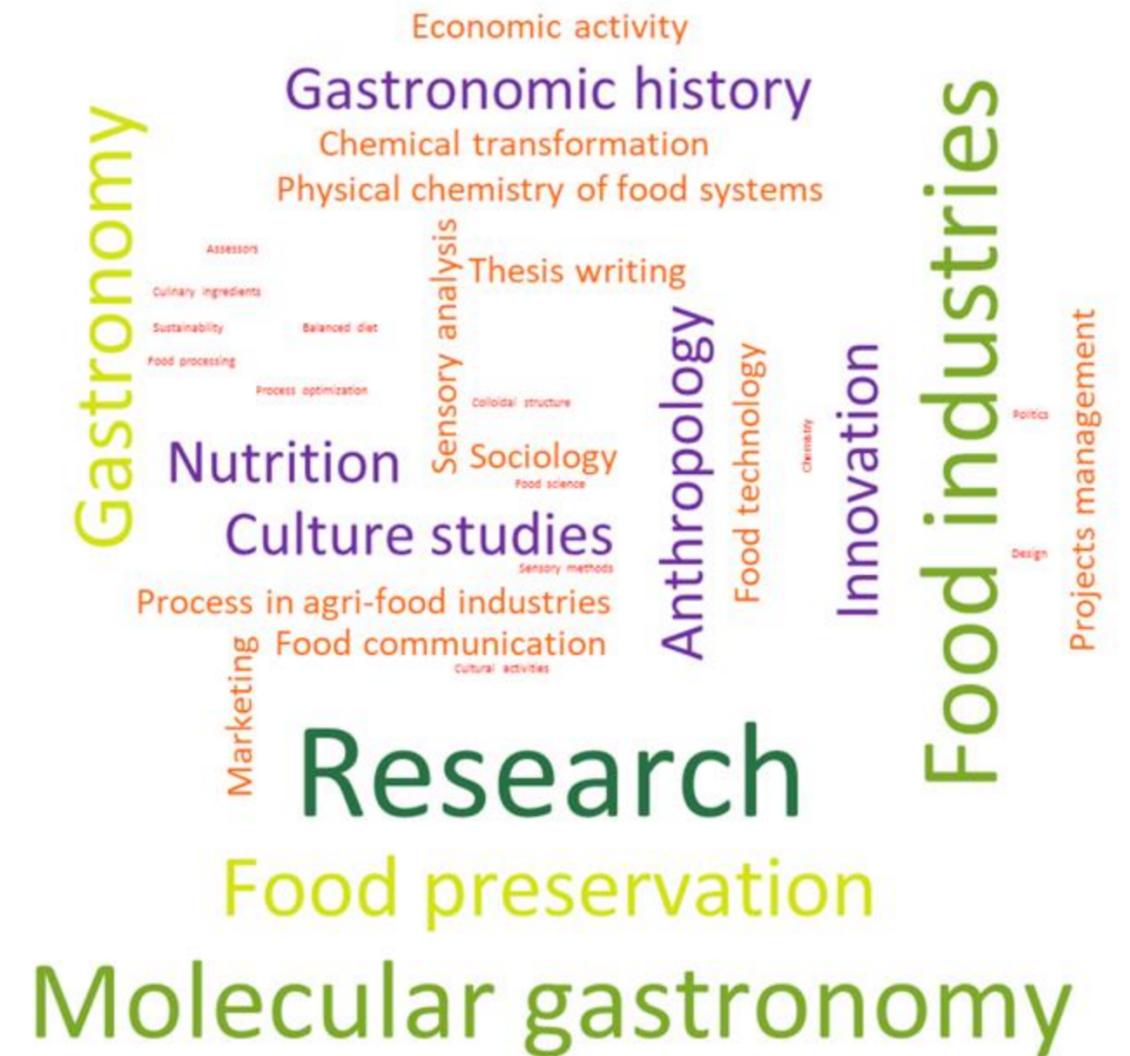
Strong emphasis on:

- sustainability,
- alternative protein sources,
- the use of algae and seaweed.



A decorative border surrounds the central text, featuring black and white line drawings of various food items. At the top, there are dumplings in a bowl. Below that, there are round flatbreads or crackers. In the middle, there are cinnamon sticks and a stack of flatbread. At the bottom, there is a bowl of spaghetti with meatballs, mushrooms, and herbs.

**II. Educational Paths Elaboration**  
**WP2.A2.1- Existing educational programs**



**Bachelor's and master's degrees identified by HEI partners and associated institutions.**

**The most frequent keywords presented as a word cloud**

Table 2.- Mean of credits and relation with the project by level.

	Subjects	Mean	Standard deviation
Bachelor	30	6.1	5.1
Credits Master	35	4.0	2.1
Other	2	2.3	1.1
Bachelor	30	3.2	1.1
Relation with the project (1-5) Master	35	2.8	1.8
Other	2	4.5	0.7

**Long life learning**

Based on keywords, the following knowledge areas were identified as potential beneficiaries of the Tradinnovation project:

### **1. Research and Development (R&D):**

- Focus on "Research," "Development of new food products," and "Trends, development, and evaluation."
- "Molecular gastronomy" and "Food preservation" are in the main areas of study.
- "Food technology" and "Physical chemistry of food systems. »

### **2. Food Science and Technology:**

- Address topics such as "Food industries", "Processes in the agri-food industry", and "Sensory analysis."
- "Innovation" in the context of gastronomy and food technology.

### **3. Cultural and Sociological Aspects of Food:**

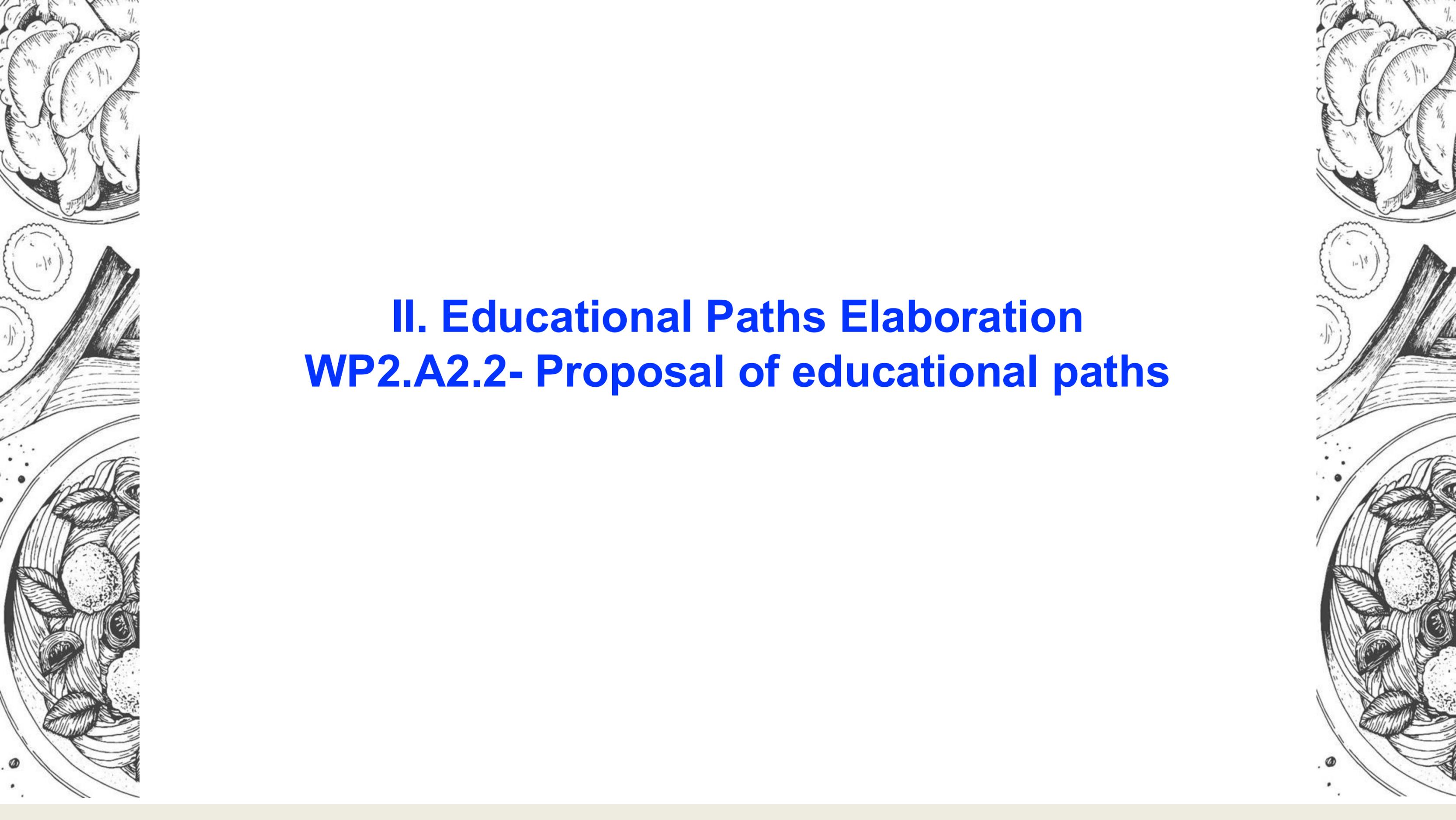
- Include "Anthropology," "Cultural studies," and "Gastronomic history."
- Exploring how culture and society influence food and gastronomy.

### **4. Nutrition and Health:**

- Cover subjects like "Nutrition," "Balanced diet," and "Health." Considering the relationship between nutrition and health.

### **5. Business and Marketing in the Food Sector:**

- Focus on "Marketing" and the "Economic activity" related to the food industry and given entrepreneurship and project management in this context.

A decorative border surrounds the central text, featuring black and white line drawings of various food items. At the top, there are dumplings in a bowl. Below that, there are round flatbreads or crackers. In the middle, there are cinnamon sticks and a stack of flatbread. At the bottom, there is a bowl of spaghetti topped with meatballs, mushrooms, and herbs.

**II. Educational Paths Elaboration**  
**WP2.A2.2- Proposal of educational paths**

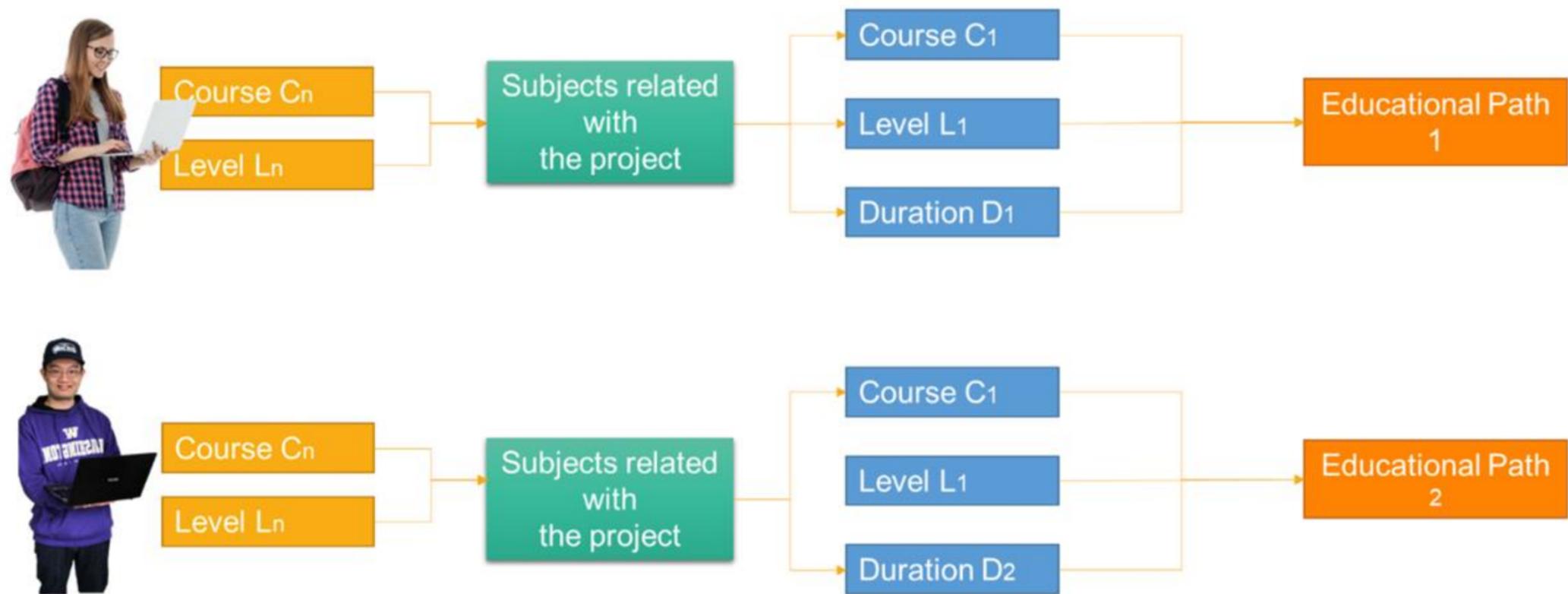
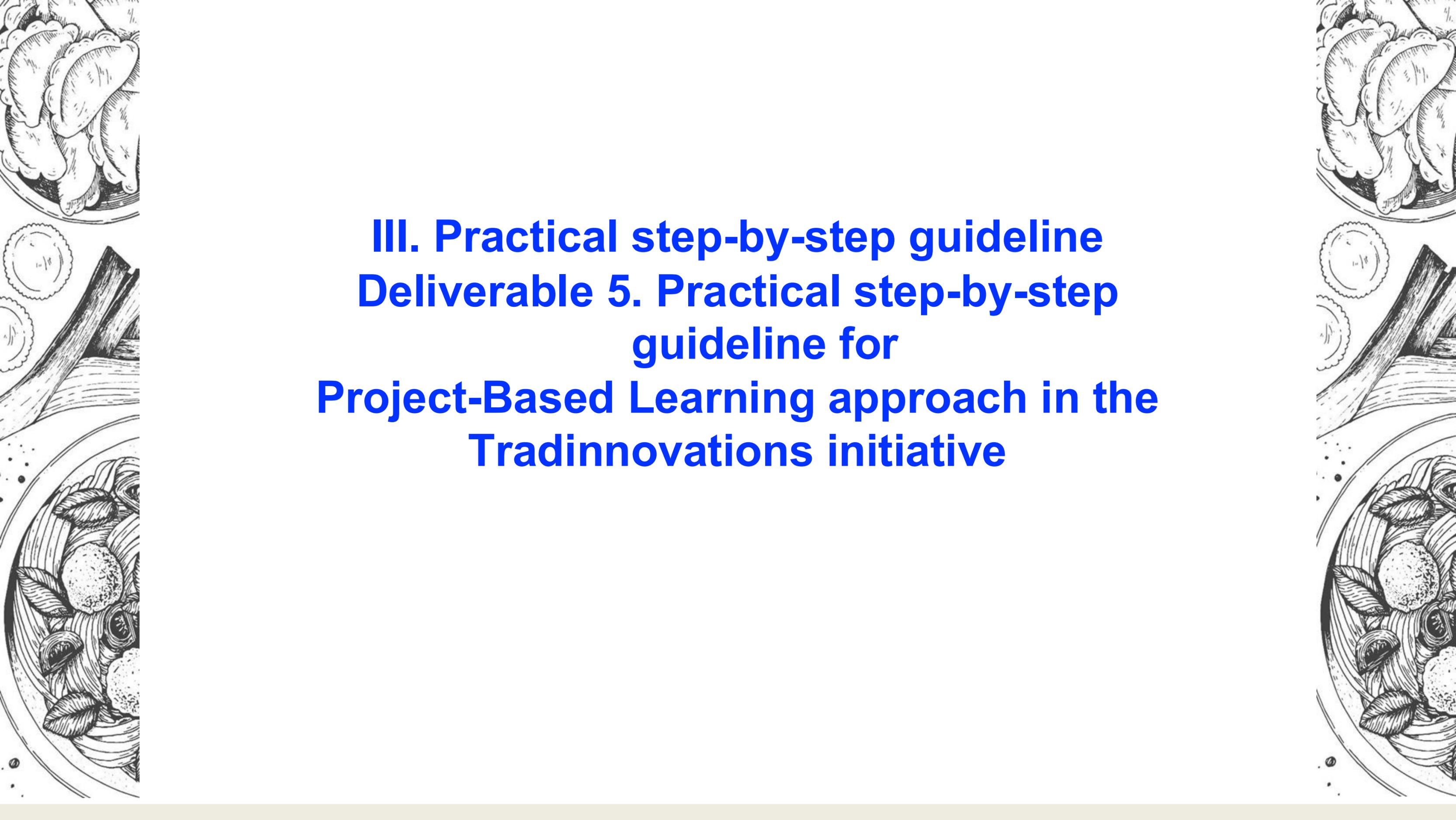
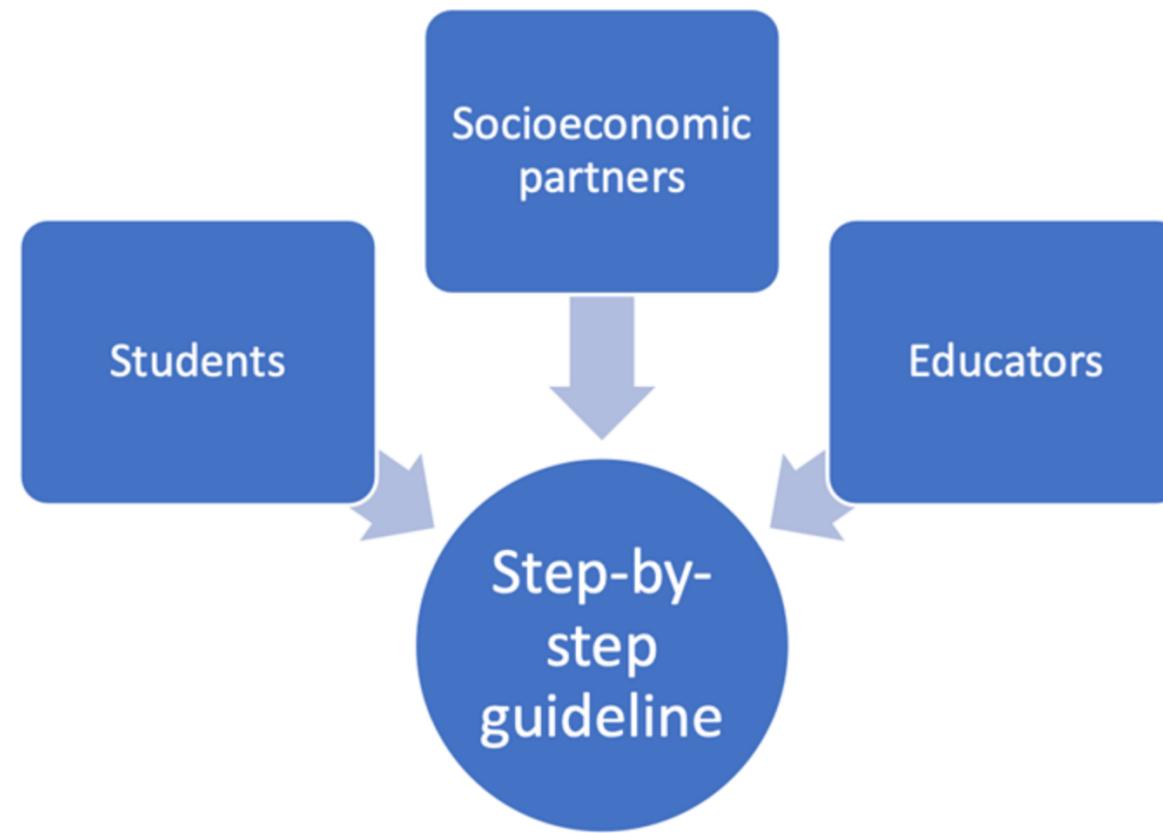


Figure 1.- Creating adaptive and learning-centered educational path.

The slide features a decorative border on the left and right sides. The top part of the border shows a plate of dumplings. Below that, there are circular items, possibly flatbreads or small cakes, and a cinnamon stick. The bottom part of the border shows a bowl of food, likely a salad or a dish with noodles and vegetables.

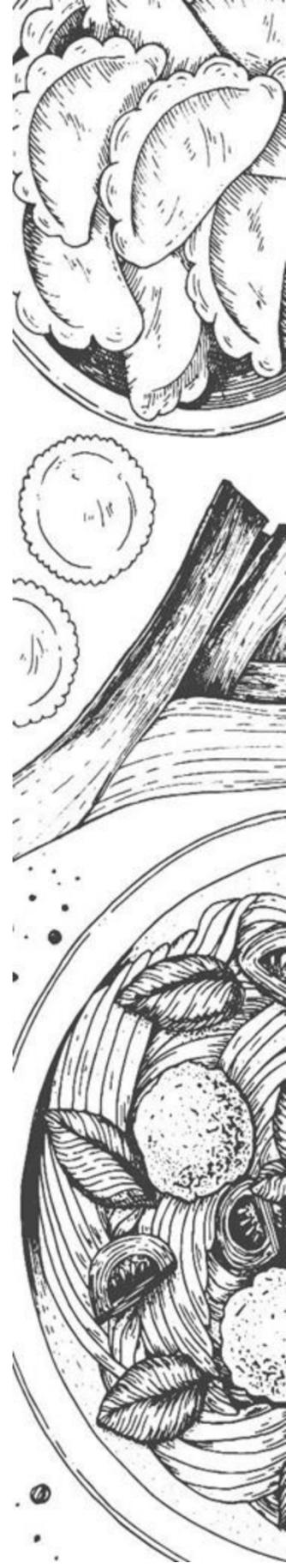
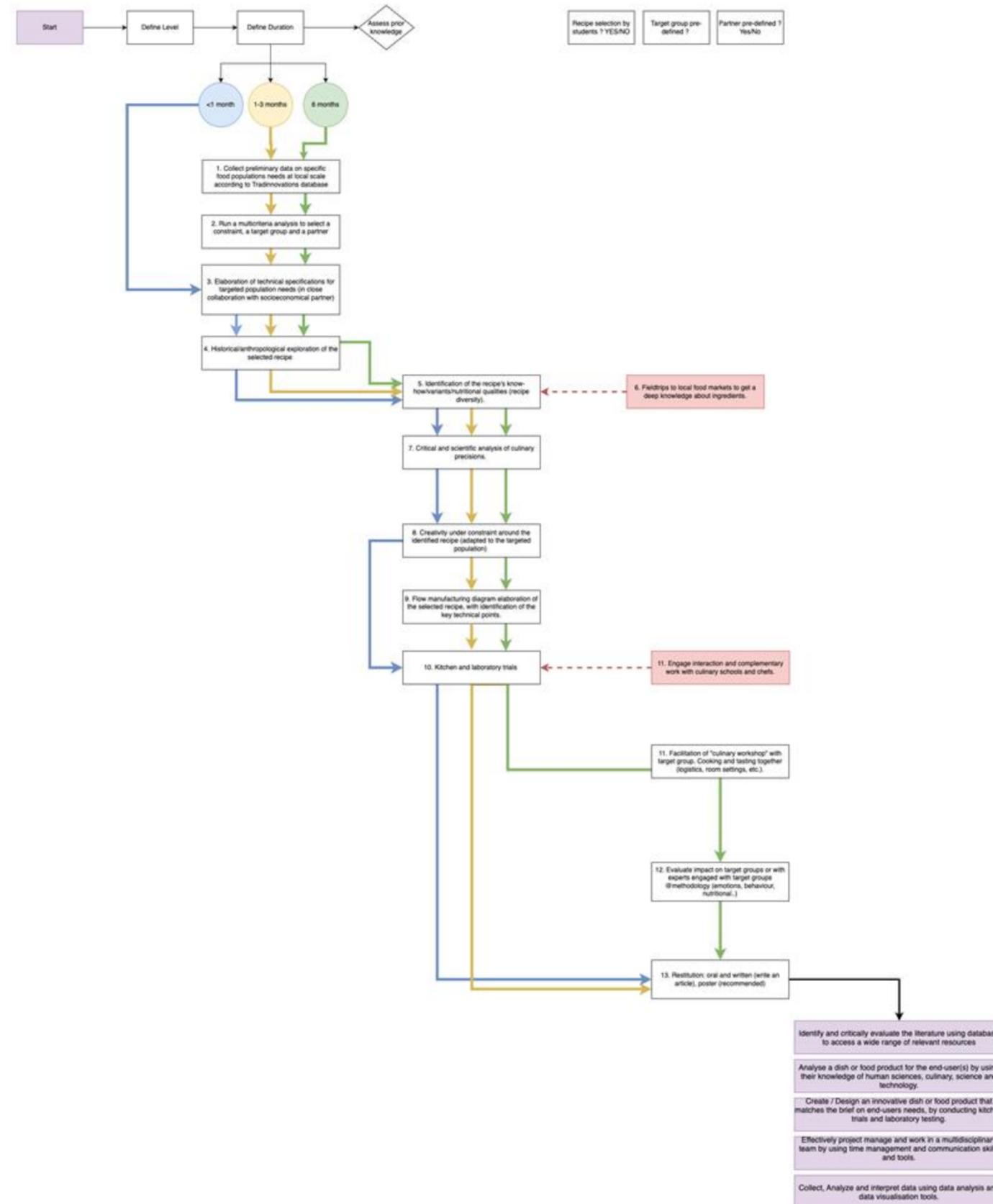
**III. Practical step-by-step guideline**  
**Deliverable 5. Practical step-by-step**  
**guideline for**  
**Project-Based Learning approach in the**  
**Tradinnovations initiative**

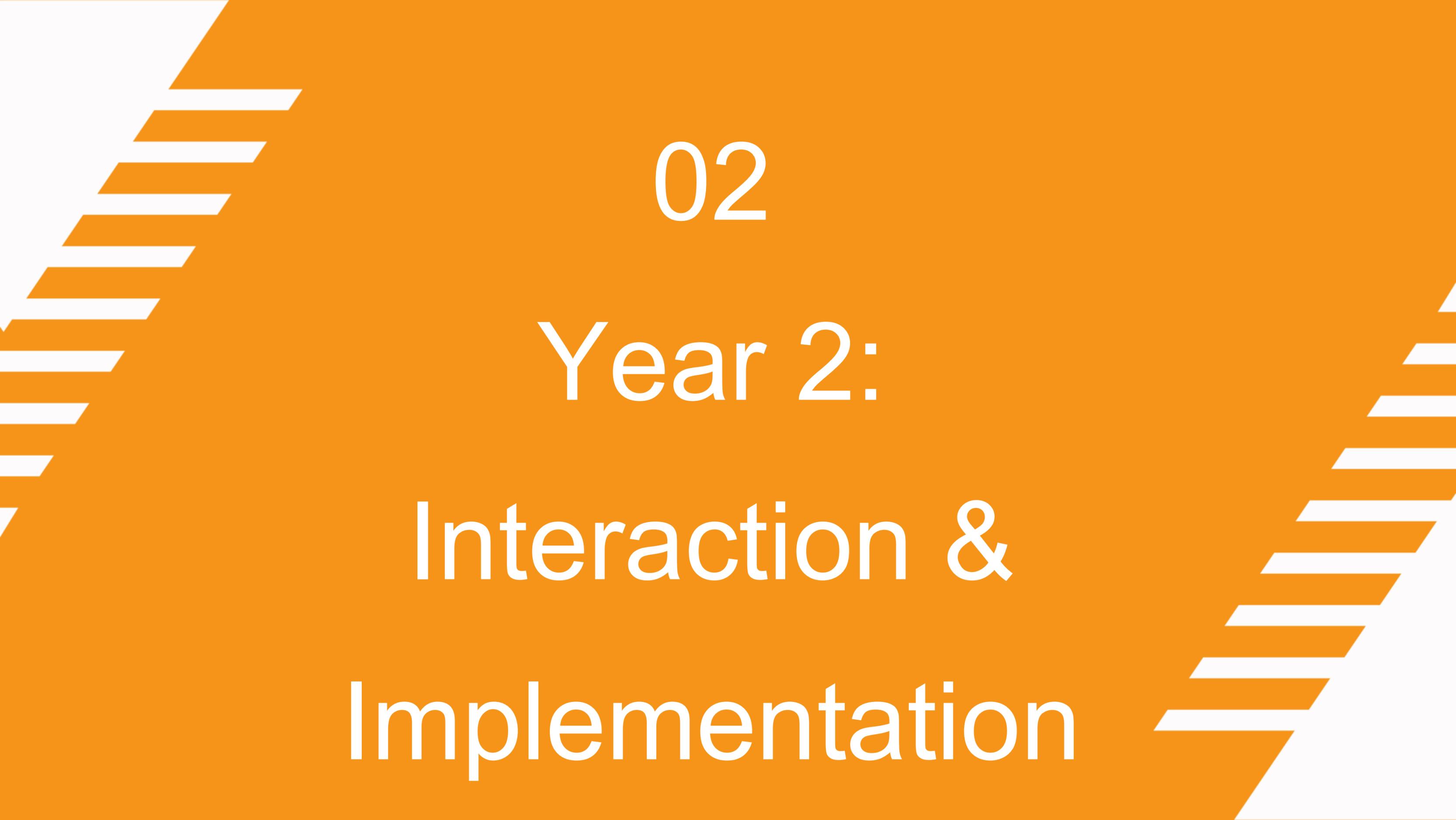


Mindmap

- Poster evaluation sheet (annex A.1)**
- Project evaluation sheet (annex A.2)**
- Oral defense evaluation sheet (annex A.3)**
- Written report evaluation (annex A.4)**

# TRADINNOVATIONS - LEARNING PATHS BY DURATION





02

Year 2:

Interaction &  
Implementation

## *02: Interaction & Implementation*

### Workpackages

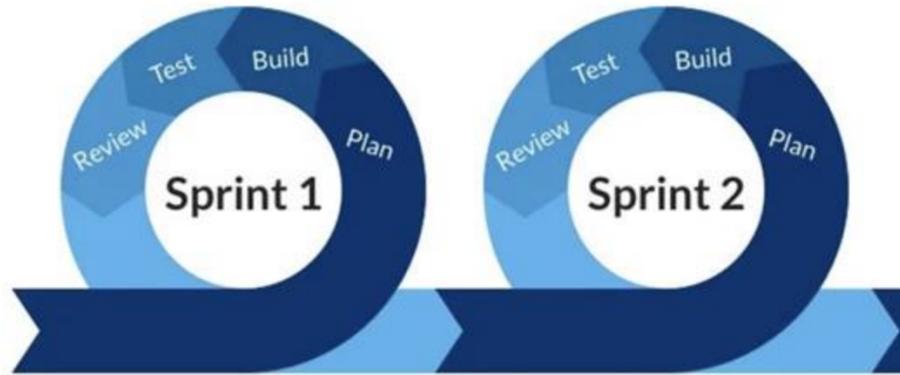
**Start: September 2024**

### **Objectives**

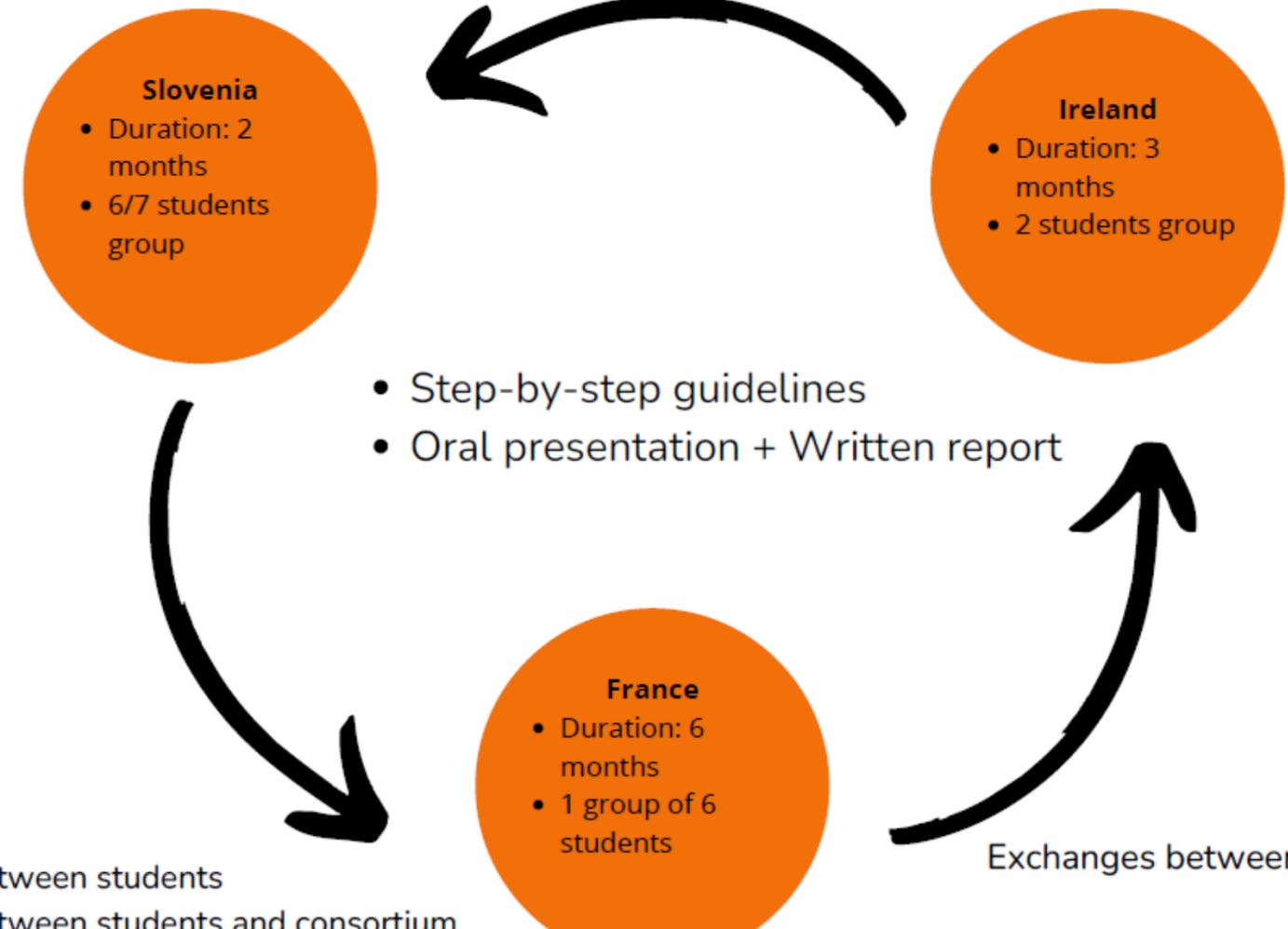
- Sharing educational resources
- Giving students access to the latest knowledge (traditions/innovations)
- Start project-based learning
- Encourage students to write scientific articles on their experiences

**WP3**

# 02: Interaction & Implementation

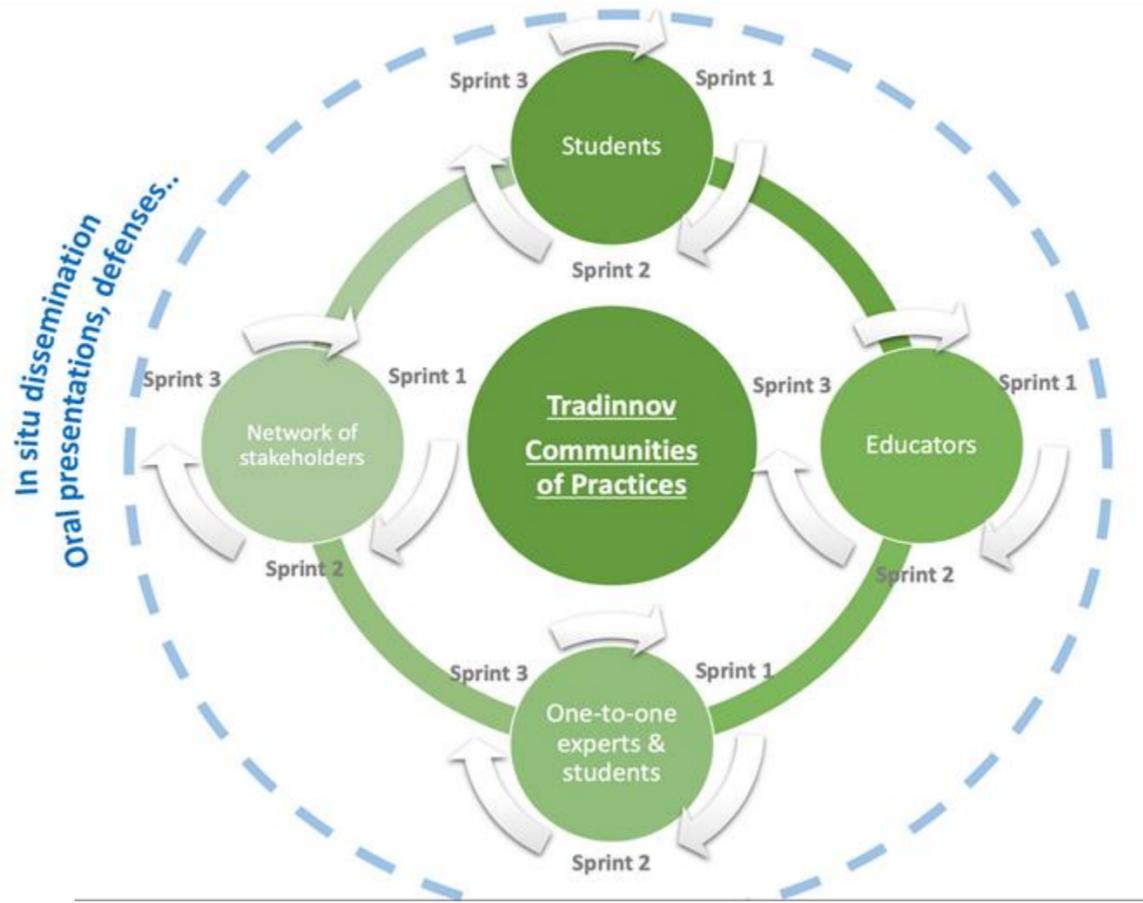


## Feedback Sprint 1



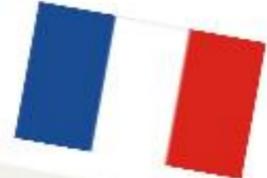
Exchanges between students  
Exchanges between students and consortium

Exchanges between educators



# 02: Interaction & Implementation

Testing paella and tarte tropezienne for Alzheimer's patients



Students are making the dishes for the assignment



Informal sensory analysis with students from another programme



Some recipes that Slovenian students have worked on

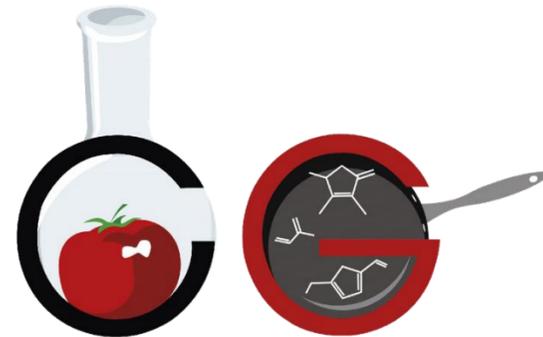


## 02: Interaction & Implementation

### Recommendations:

- The educator should provide **clear guidelines on communication and teamwork from the beginning of the project**. They should be written into the brief and marks allocated to them.
- The educator should ensure that the **students understand project-based learning** and how they are expected to work together on this project.
- **A database should be provided with resources, recipes and target groups**. This will aid in the early decision-making part of the project and then help to guide student led learning throughout. The idea is not to give them the answer, but rather to ensure the project starts correctly.
- **Strong educator guidance at the beginning of the project**. The educator then steps away once the project is underway correctly.

# MSc in Gastronomic Sciences Student's Project-based Learning



Ciências Gastronómicas



- For the 2nd semester of the 2024/25 academic year, the assessment of the subjects "Hydrocolloids in Food" and "Development of New Products" were integrated into the context of the TradInnovations project.
- First, the TradInnovations project's main goals and the concept of inclusive gastronomy was presented: *"an emerging field within culinary studies, grounded in the ethical imperative to make food practices accessible, safe, and meaningful for diverse populations. It addresses the growing need to adapt traditional and contemporary recipes to accommodate dietary restrictions stemming from allergies, intolerances, medical conditions, religious or ethical convictions, and cultural practices."*

# *MSc in Gastronomic Sciences Student's Project-based Learning*

- Then, the students were challenged to organize themselves in of 3-4 people and create a new food product based on a traditional recipe and adapt it to the diet of one or more groups of people with dietary restrictions (e.g., dysphagia and other limiting medical conditions, plant-based, food intolerances and allergies, religious restrictions, etc.) using different hydrocolloids.

## Students have been advised that:

- Regular meetings should take place with the supervisors to discuss the various options, problems encountered and the evolution of the project;
- During the project they would be asked to answer self-assessment questionnaires;
- They must have a laboratory notebook, shared by the various members of the group, and exclusively for the project context.

## Overall Phases

1. Kickoff & Planning;
2. Dietary Research;
3. Recipe Adaptation;
4. Lab Work & Optimization;
5. Final Evaluation.



## **Phase 1: Planning**

- Group meeting to discuss the work to be carried out and its various components;
- Work schedule. This should be reviewed regularly and the work adapted accordingly, considering the defined time constraints.

## **Phase 2: Dietary Focus**

- Choice of a specific dietary restriction and the motivation for the choice – must be different for all groups (do not repeat);
- Research into the characteristics of the chosen group's diet and prepare a report on this, identifying, for example, ingredients that cannot be used, adapting textures, etc.;
- Identify a professional (e.g., nutritionist), patient association, etc. who can provide support (through questionnaires, interviews or small meetings) and at the end evaluate the work carried out. Ideally, a collaboration protocol should be signed.

## **Phase 3: Traditional Recipe Analysis**

- Choosing a traditional recipe with characteristics that are not compatible with the group in question;
- Collection of information on the importance of traditional dishes/comfort food for identity and well-being;
- Historical/anthropological/sociological research on the dish (food ethnography), associating it, if applicable, to a region and its characteristics, its history, etc.;
- Carrying out visits, interviews related to the dish (optional);
- Clear writing of the original recipe for the dish (if there are several versions, select one);
- Nutritional evaluation of the recipe;

## **Phase 3: Traditional Recipe Analysis**

- Identification of the ingredients/characteristics of the dish that are not compatible with the diet of the group in question;
- Identification of the role of the ingredients to be eliminated/added to make the dish compatible with the diet of the group in question. Description of the functional properties they perform;
- Identification and description of culinary techniques to be changed;
- Identification of hydrocolloids that can replace them and provide some of the functional properties. This requires an in-depth study of the characteristics of these hydrocolloids and their application methods. The hydrocolloids chosen should preferably be those given in the classes (or others, if necessary).
- Identification of other ingredients necessary to improve organoleptic properties.

## **Phase 4: Prototyping**

- Initial tests to select hydrocolloids and other ingredients to use;
- Development of a first version of the dish;
- Carrying out a focus group and/or laboratory tests (e.g., TPA, colorimetry, etc.) and identifying aspects to improve;
- Optimization of the dish;
- Nutritional evaluation of the recipe;
- Presentation of the dish to the instructors.

## **Phase 5: Hydrocolloids in Food Evaluation**

### **Evaluation:**

- Research/documentation of the work and a poster (50% of the final grade, 25% each);
  - Oral presentation (20% of the final grade);
  - Evaluation of the result obtained (30% of the final grade).
- Preparation of a poster about the work to be exhibited at the “Researchers’ Night” at the “Pavilion of Knowledge – Ciência Viva” museum;
  - Carrying out an oral presentation, supported by slides, for the last class;
  - Preparation of a report, in the format of a scientific article (see International Journal of Molecular and Physical Gastronomy / IJMPG template). There is the possibility (desirable) of publishing it later in the IJMPG.

# **Phase 5: Food Product Development Evaluation**

## **Ideas for developing a new food product or service**

### **Components:**

1. Brief description of the product (summary of objectives and characteristics) developed for “hydrocolloids in food”;
2. Motivation for product or service development;
3. Desirable characteristics;
4. Target audience;
5. Type of new product or service with justification;
6. Detailed description of the product or service (including, where applicable, type of packaging and its characteristics);
7. Evaluation of the determinants of success/failure;
8. Strategies for market introduction.

## Opportunities

- **Summer School:** exchanges with international student teams and opportunity to compare approaches and share ideas.
- **IJMPG:** to publish a first scientific article in the context of the master's degree, preparing them to carry out a new publication with the work to be developed in the MSc thesis.
- **Museum Activity / Researcher's Night:** to interact with a wider audience, share ideas and impressions and improve communication skills.

## **Skills Developed**

- 1. Scientific and Technical Competencies:** In-depth knowledge of hydrocolloids; Food product development and reformulation; Nutritional evaluation of recipes; Laboratory methods and food testing.
- 2. Research and Critical Thinking Skills:** Ethnographic, historical, and sociocultural food research; Critical analysis of specific dietary needs; Scientific justification of choices.
- 3. Soft Skills:** Teamwork and collaboration; Time and project management; Scientific and visual communication; Systematic documentation and organization; Empathy and inclusive design; International collaboration.
- 4. Competencies for Sustainable Innovation:** Creative thinking in food heritage adaptation; Valuing traditional knowledge through contemporary innovation; Developing food technologies with social and cultural impact.

# 02: MSc in Gastronomic Sciences Student's Project-based Learning

## Projects Follow Up

Students	Food Restriction	Base dish	Idea	Job done
José, Luccas e Mariana	Gluten and fish allergies Vegans	"Massada de peixe" Fish stew with pasta	Recreate "Massada de peixe" while maintaining the textures of pasta and fish and the flavors of the sea.	<ul style="list-style-type: none"> <li>- Concept;</li> <li>- HC identification;</li> <li>- Research.</li> </ul>
Alexandre Paula e Cristóvão	Vegans	"Bacalhau com todos" Cod boiled with vegetables	Plant-based version of "Bacalhau com todos", recreating its elements with plant-based ingredients and modern techniques.	<ul style="list-style-type: none"> <li>- Concept;</li> <li>- Research.</li> </ul>
Verónica, Letícia e Mobina	Dysphagia	"Cozido à Portuguesa" Portuguese-style Stew	A modified texture version of the "Cozido à Portuguesa".	<ul style="list-style-type: none"> <li>- Familiarization with dish;</li> <li>- Concept;</li> <li>- Research;</li> <li>- HC identification and techniques.</li> </ul>
Pedro Sónia e Sílvia	Plant-based Note by note Eggs allergy	"Ovo Moles de Aveiro" Egg yolk and sugar sweets from Aveiro	Develop a "Note by Note" version of "Ovos Moles de Aveiro", using pure compounds and maintaining the sensory characteristics.	<ul style="list-style-type: none"> <li>- Concept;</li> <li>- Research;</li> <li>- Note by Note theory;</li> <li>- "Ovos Moles": Context and cultural importance.</li> </ul>

## 02: MSc in Gastronomic Sciences Student's Project-based Learning



**Massada de Peixe**



**Bacalhau com Todos**

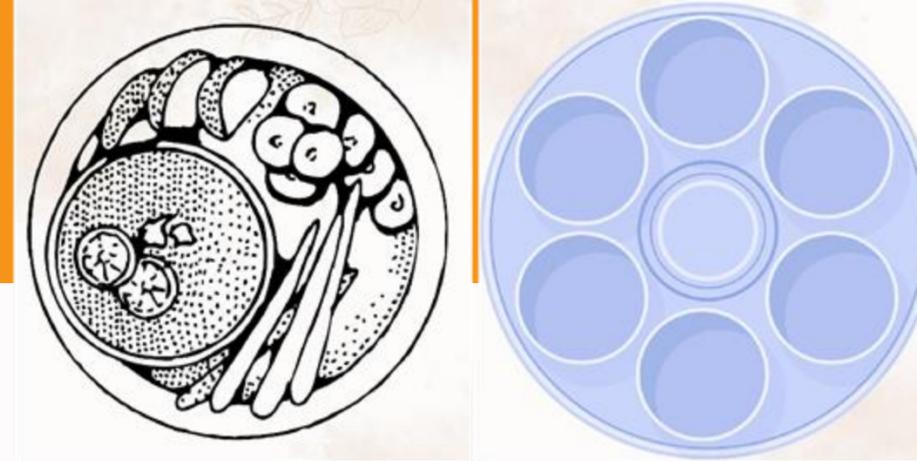


**Ovo Moles de Aveiro**



**Cozido à Portuguesa**

## 02: Interaction et implémentation



### DIGITAL PLATE FORM

Workpackages

# WP4

#### Reminder of objectives:

- Offer customized educational paths for students, allowing them to develop specific skills based on their interests and educational background.
- Create an educational online platform for student's access according to their specific educational path the resources needed for their projects.

**The Tradinnov platform will be hosted directly on the IT platforms of the institutes.**

- Implement, test and improve the online platform.

#### Activities:

- Back up available content for platform feeding.
- Education platform implementation.
- Educational platform testing.
- Education platform improvement.



# Discussion

## Workpackages

- how to better integrate the use of educational platform in PBL approach?
- how to stimulate intercultural interactions among students, any events/seminars online to be implemented?
- are communities of practices among students, educators and socioeconomic stakeholders possible to pursue at long term?
- what kind of different types of articles based on students projects and educational sciences related to the project's activities could be submitted
- Evaluation of impact of new adapted recipes: sustainability? Emotional? Cognitive?



03

# Perspectives



## 03: What's coming

### Activities in museums

#### General public activities

Events could be organized for the general public in connection with the Tradinnov project.

Examples in France:

**November 17–19, 2025:** The opening colloquium for the “Alimentation Initiative” at Sorbonne University, Paris. Open to the general public, the event will explore the connection between food and culture. (Christophe Lavelle)

--> Such events could serve as an excellent opportunity to showcase the Tradinnov project.

#### Students activities

##### 1. Cultural and Educational Activities

Students can attend exhibitions and they can participate in conferences. These activities aim to broaden their general cultural knowledge and enhance their understanding in support of their projects.

##### 2. Collaborative and Experiential Events

Collaborative events involving students can also be organized. For instance, a partnership could be established between students from Institut Agro Montpellier and the “Ecole des Beaux-arts” in Montpellier. This collaboration could focus on a project combining food engineering and food art.

Additionally, workshops managed by students could be organized, such as experimenting with new recipes developed as part of the Tradinnov project.

WP5

# 03: What's coming

## PROPOSED PROGRAM FOR TRADINNOVATIONS SUMMER SCHOOL IN LJUBLJANA (1<sup>st</sup> – 3<sup>rd</sup> July 2025)

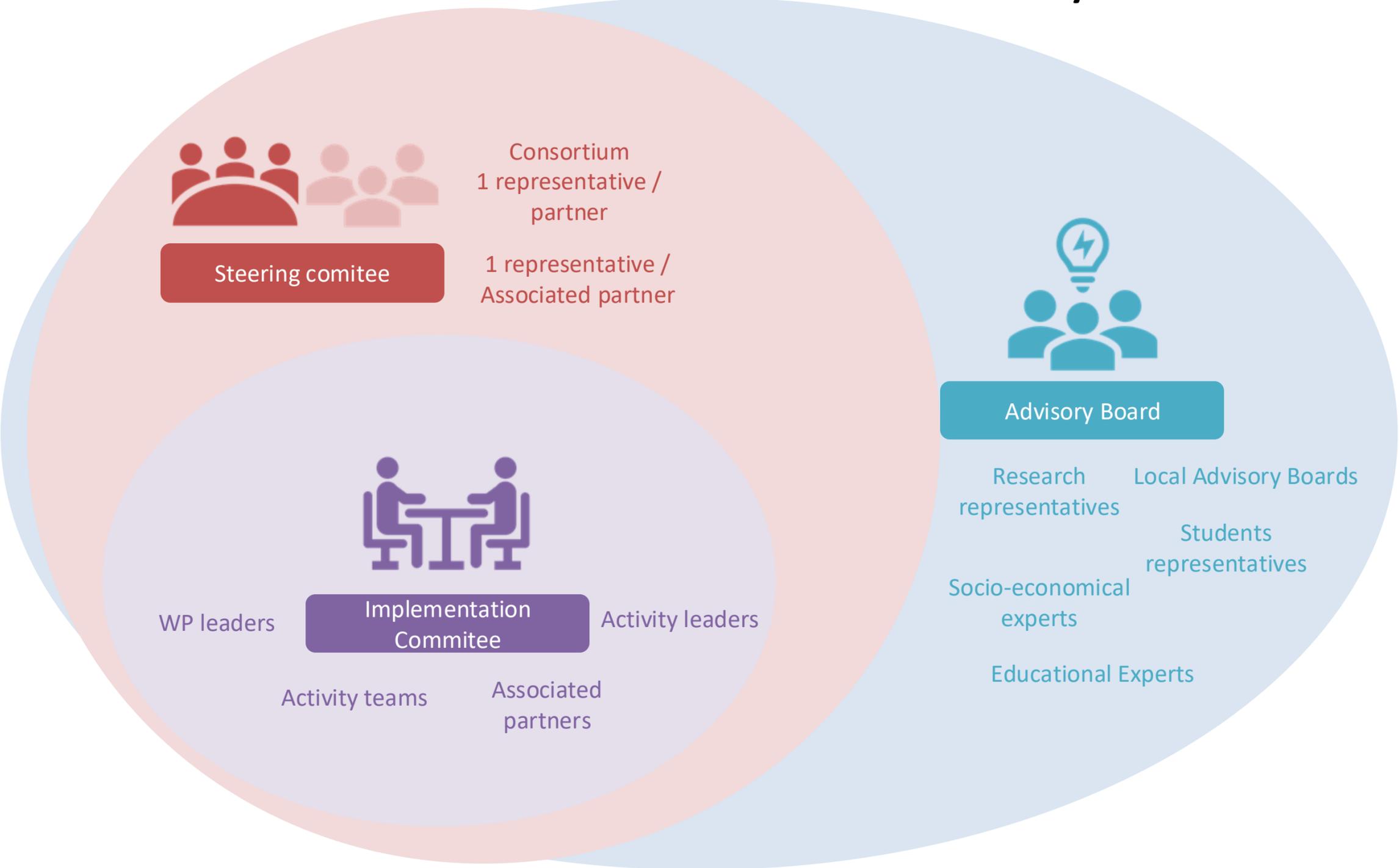
	Monday, 30.6	Tuesday, 1st July	Wednesday, 2nd July	Thursday, 3rd July	Friday, 4th July	
8:30-9:00	Travel	<i>Welcome breakfast (BF)</i>	<i>Breakfast at the faculty (BF)</i>	<i>Breakfast at the faculty (BF)</i>	<i>It's wort staying and exploring Ljubljana - there is an "open kitchen" festival ever Friday on the main market (10:00-21:00)</i>	
9:00-10:00		Icebeakers Short presentation of Tradinnov project	Lecture 1 (Anu): Kitchen chemistry	Workshop 2 (Nanna): MISTERY BOX		
10:00-11:00			Lecture 2 (Mojca): Sensory analysis in food innovations			
11:00-12:00			Lecture 3 (Roisin): Testing Precisions to Determine Optimal Recipes			
12:00-13:00		Introduction and presentations of Tradinnov seminars by students (6 presentations: 15min presentation, 10 min questions)	<i>Catering lunch (by BF)</i>	<i>Catering lunch (by BF)</i>		
13:00-14:00		<i>Catering lunch (by BF)</i>	Field trip: between tradition and innovation (bus)	Lecture 4 (Puri): Interaction between science and cooking	Travel	
14:00-15:00		<i>Guided walk around the campus</i>		Lecture 5 (Paulina): Inclusive Gastronomy - A Challenge that Requires Creativity, Innovation and Clear Communication		
15:00-16:00		Workshop 1 (Chistrophe): INNOVATE UNDER CONSTRAIN		Transnational meeting		Feedback on the Summer School
16:00-17:00						Ljubljana City tour
17:00-18:00		Dinner preparatons		Free evening (evening meal in self-organisation)		
18:00-19:00	Cocktail dinner on the faculty, prepared by TN students					
19:30						

Workshop 1 and 2 will take place in the study kitchen

Lectures and the Transnational meeting will take place in the classrooms.

# 02: Interaction et implémentation

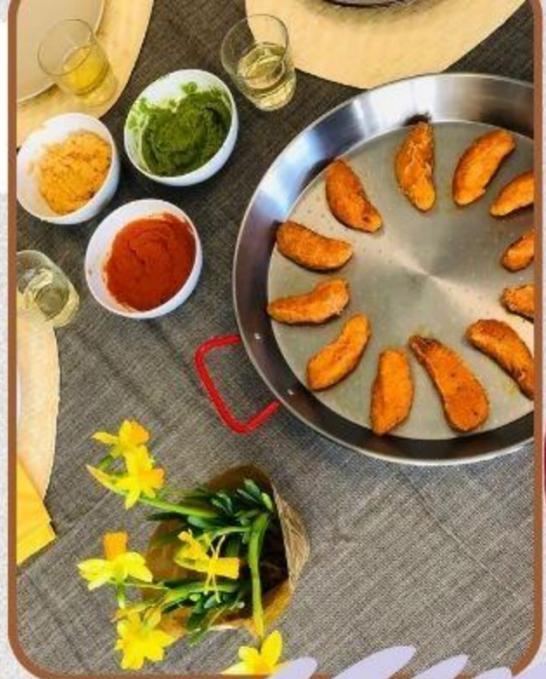
## Première rencontre de l'advisory board



# Discussion

## Workpackages

- Art & Science: educational sciences perspective
- how could the project dynamic be maintained after the erasmus+ ending and the role of advisory board?
- Potential research project with interdisciplinary approach?
- Communication [Newsletter](#)



Nourrir  
les souvenirs



