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Work Package 2 - Substantive Workshops

Comprehensive Report on Research, Analysis, and Training Concept Development

Results of WP2 Activities:

Desk Research and Needs Analysis • Experience Exchange • Focus Group Studies Competency Mapping • Progress Analysis • Training Concept Development

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- **Fundacja im. Zofii Zamenhof** (**PL**)
- **CNIPA Puglia** (**IT**)
- **Staropolska Izba Przemysłowo-Handlowa** (**PL**)
- **ZDZ Kielce** (**PL**)
- **Epralima** (**PT**)

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1. Introduction and Project Overview

The GastroNet project (An additional set of tools for vocational education and training in gastronomy to improve the professional situation of students on the labor market) is implemented under the Erasmus+ programme, KA220-VET action. The project was launched on 1 January 2024 and is scheduled to end on 31 December 2025, with a total budget of 120,000.00 EUR.

The project addresses a critical gap in vocational education and training (VET) in the gastronomy sector across the European Union. While traditional culinary training programs provide solid foundational skills, they increasingly fail to equip students with the modern competencies required by a rapidly evolving labor market. These competencies include digital marketing, e-commerce, customer acquisition techniques, and entrepreneurial skills – all essential for success in the contemporary HoReCa (Hotel, Restaurant, Catering) industry.

The present document constitutes a comprehensive report on the results of Work Package 2 (Substantive Workshops) activities, presenting the research, analyses, and conceptual outputs that were developed throughout the project implementation period. Specifically, this report covers:

– Desk research and needs analysis resulting from secondary source analysis and partner experience exchange (WP2 Result 1);

– Progress analyses, comparison of focus group research results, competency mapping, and preparation of assumptions for the training concept development (WP2 Result 2);

– The draft version of the training concept, including the division of tasks related to the creation of the training programme (WP2 Result 3).

1.1. Project Consortium

The GastroNet project is implemented by a consortium of five partner organisations representing three EU Member States – Poland, Italy, and Portugal. This transnational partnership ensures a broad perspective on the challenges facing VET in the gastronomy sector and enables cross-border exchange of best practices.

Organisation	Country	Role	Expertise
Fundacja im. Zofii Zamenhof	Poland (Warsaw)	Coordinator	Educational projects, adult education, social inclusion, international cooperation
CNIPA Puglia	Italy (Bari)	Partner	VET provider, catering courses, youth social inclusion, 11 Erasmus+ projects since 2015
Staropolska Izba Przemysłowo-Handlowa (SIPH)	Poland (Kielce)	Partner	Enterprise services, trainings for SMEs and start-ups, business consultancy
Zakład Doskonalenia Zawodowego w Kielcach (ZDZ)	Poland (Kielce)	Partner	VET institution, adult and youth education, teaching and professional development
Epralima	Portugal (Arcos de Valdevez)	Partner	VET school, Restaurant Management courses, Cooking Technician programmes

1.2. Work Package 2 Objectives

Work Package 2 (Substantive Workshops) was designed to serve as the analytical and conceptual foundation for the entire project. Its detailed objectives, as defined in the project application, were:

1.Research and needs analysis resulting from desk research and the exchange of experiences among partner organisations

2.Progress analyses, comparison of the results of focus studies, mapping of competences, and preparation of assumptions for the development of the training concept

3.Development of a draft version of the training concept, division of tasks related to the creation of the training programme

The purpose of this work package was the exchange of experiences, analysis of research related to the subject of the project, brainstorming sessions, formulation of programme and training plan assumptions, and discussion of programme assumptions and methodology of the training being created. Three substantive workshops were organised as part of this package, each contributing to the progressive development of the training concept.

1.3. Activities Implemented

Activity	Venue	Date	Budget (EUR)	Expected Results
Workshop I	Poland	18–20/03/2024	6,000.00	Improving competences, acquiring knowledge from shared experiences
Workshop II	Italy	20–22/05/2024	6,000.00	Competence improvement through desk research analysis and focus group methodology development

Activity	Venue	Date	Budget (EUR)	Expected Results
Workshop III	Portugal	07–09/10/2024	7,200.00	Knowledge, skills, and competences of project beneficiaries
Project Meeting	Poland	04–05/03/2024	2,400.00	Project coordination and management

2. Desk Research and Needs Analysis

The first phase of WP2 activities involved comprehensive desk research conducted by all partner organisations. This research aimed to establish a thorough understanding of the current state of vocational education in the gastronomy sector, labor market conditions, and emerging trends across the three partner countries. The desk research formed the evidence base upon which subsequent activities — focus group studies, competency mapping, and the training concept — were built.

2.1. Methodology of Desk Research

The desk research was conducted using a multi–source approach, drawing on secondary data from official statistical databases (Eurostat, ISTAT, GUS, INE), government policy documents, scientific publications, industry reports, and existing EU–level analyses of the VET sector. Each partner organisation was responsible for gathering and analysing data from their respective national contexts, while the coordinator compiled cross–national comparisons.

The research covered the following thematic areas: (a) general labor market conditions, with emphasis on youth employment and VET sector specifics; (b) the HoReCa sector structure, trends, and employment patterns; (c) the current state of gastronomy–related VET programmes in each partner country; (d) the competency requirements of the gastronomy labor market, including employer expectations as documented in industry

reports and the institutional knowledge of SIPH; and (e) the identification of gaps between educational provision and labor market demands

2.2. European Labor Market Context

According to Eurostat and EURES data, the European HoReCa sector is a major employer, representing a significant share of the total EU workforce. The sector is characterised by seasonal employment patterns, with roughly 60% of hires being seasonal in nature, and a high proportion of flexible and part-time contracts (over 45%).

The average age of workers in the sector is 32 years, with 38% being under 30 — making it one of the youngest workforce sectors in the EU. The sector shows consistent growth in employment demand, However, this growth is accompanied by persistent difficulties in finding qualified personnel, particularly in positions requiring modern competencies beyond traditional culinary skills. There are persistent difficulties in finding qualified cooks, pastry chefs, bartenders, and staff trained in digital tools and customer acquisition techniques.

European EURES data indicates that cross-border mobility in the HoReCa sector remains significant, with substantial cross-border job offers available through the EURES portal. The digital transformation of the sector, the growing importance of sustainability practices, and the internationalisation of gastronomy create new competency demands that traditional VET programmes struggle to address.

2.3. National Labor Market Analyses

2.3.1. Poland

The Polish catering industry has been developing very dynamically, though trends still lag behind Western European markets. The sector requires continuous adaptation to socio-economic development and evolving consumer needs. Research conducted by SIPH and ZDZ Kielce reveals that Polish VET students in gastronomy programmes face several structural challenges: outdated curricula that do not reflect modern industry practices, insufficient modern equipment in schools, and limited exposure to digital tools used in contemporary restaurants and catering businesses.

The Polish labor market shows a growing demand for gastronomy professionals who combine traditional culinary skills with modern competencies in digital marketing, online sales management, and customer relationship management. Industry analyses indicate shortages of staff capable of managing social media presence, implementing e-commerce solutions, and using modern restaurant management software. The analysis identified that students graduating from Polish vocational schools are well-prepared in terms of basic culinary techniques and food safety knowledge, but significantly underequipped in areas of digital competence, entrepreneurship, and modern customer acquisition methods.

2.3.2. Italy

Italy's employment rate for the 20–64 age group stands at approximately 63.5%, significantly below the EU average of 71.8%. Youth unemployment (15–24 years) remains critically high at 20.2%, nearly triple the EU average. The analysis conducted by CNIPA Puglia reveals severe regional disparities, with the Puglia region recording a 47.3% employment rate — considerably above the southern Italian average but well below the national figure.

According to the CNIPA Puglia national report, the Puglia region hosts a significant concentration of catering businesses with positive annual growth. The sector is resilient due to strong local food heritage and tourism. However, the research identified critical shortages in qualified personnel: demand for qualified cooks, pastry chefs, and service staff consistently exceeds supply across the region.

Consumer preferences are shifting rapidly: a growing proportion of young consumers seek culinary inspiration on social media platforms such as TikTok and Instagram and increasingly purchase food online. The Italian food delivery market has experienced significant growth in recent years.

This creates entirely new professional profiles — digital managers, social media specialists, and e-commerce coordinators — for which traditional VET programmes do not prepare graduates.

The gap between educational provision and market demands represents a significant economic cost, with a relatively low proportion of young Italians feeling that their education adequately prepared them for work.

2.3.3. Portugal

The Portuguese gastronomy sector, strongly driven by the country's tourism industry, presents both opportunities and challenges for VET graduates. Research conducted by Epralima in the Norte region identified that while traditional culinary training remains strong, particularly in areas such as Portuguese pastry and regional cuisine, significant gaps exist in the preparation of students for modern restaurant management, digital marketing, and entrepreneurial activities.

Portuguese VET students in gastronomy programmes express strong aspirations towards opening their own businesses or working in international settings, but report feeling inadequately prepared in terms of business management, financial planning, and digital tools. The research highlighted that the Portuguese gastronomy sector increasingly requires professionals who combine artisanal skills with modern technological competencies, including social media management, online ordering systems, and data-driven decision-making.

2.4. Exchange of Experiences — Workshop I

The first substantive workshop, held in Poland on 18–20 March 2024, was devoted to the analysis of the vocational education situation in each partner country, mutual exchange of experiences between partners, with particular emphasis on gastronomy-related subjects. The workshop served as the first opportunity for all consortium members to share their institutional knowledge, best practices, and challenges related to VET in gastronomy.

During the workshop, each partner organisation presented: (a) the structure and content of their VET programmes in gastronomy; (b) their institutional experience with innovation in teaching methods; (c) specific challenges faced in adapting curricula to labor market demands; and (d) examples of successful practices in student preparation for the modern labor market.

The key conclusions from the experience exchange at Workshop I were: (1) all partner countries face a similar structural challenge — the formal VET curriculum has not kept pace with the digital transformation of the gastronomy sector; (2) the desk research and partner experience indicate persistent shortages in digital marketing, customer relationship management, and business management skills among VET graduates across all three countries; (3) the theory-practice balance in current programmes needs to shift towards more practical, hands-on learning experiences; and (4) there is an urgent need for an innovative training concept that integrates digital competencies with traditional culinary skills.

2.5. Key Findings from Desk Research

The consolidated desk research across all three partner countries yielded the following key findings:

- **Digital competence gap:** There is a consistent and significant gap between the digital skills taught in VET programmes and those required by modern gastronomy businesses.
- **Entrepreneurial skills deficit**: Students aspiring to start their own businesses feel inadequately prepared in financial management, business planning, marketing strategy, and cost analysis.
- **Theory-practice imbalance:** Current programmes tend towards a theory-heavy approach (typically 60% theory, 40% practice), while both students and teachers advocate for a practice-dominant model.
- **Insufficiency of modern equipment:** Many VET schools lack modern equipment and software that reflect current industry standards.
- **Rapid sectoral transformation**: The gastronomy sector is undergoing rapid digital transformation, driven by food delivery platforms, social media marketing, and AI-driven analytics, creating new professional profiles.
- **Cross-national convergence**: Despite national differences, the fundamental challenges are remarkably similar across Poland, Italy, and Portugal, validating the transnational approach.

3. Focus Group Research — Methodology and Results

Following the desk research phase, all partner organisations conducted structured focus group studies to gather primary qualitative data from the two key stakeholder groups: VET students in gastronomy programmes and their teachers/trainers. The focus group research was designed to validate the findings of the desk research, to identify specific needs and expectations at the institutional level, and to provide a foundation for competency mapping and training concept development.

3.1. Research Design and Methodology

The focus group research was conducted in two waves (Focus 1 and Focus 2), with standardised templates developed by the consortium to ensure comparability of results across all partner countries. Focus 1 targeted VET students, while Focus 2 targeted teachers and trainers. Each focus group session lasted approximately 2 hours and was conducted by trained facilitators following a structured discussion guide.

3.1.1. Participant Profile

Partner	Focus 1 (Students)	Focus 1 Date	Focus 2 (Teachers)	Focus 2 Date	Total
CNIPA Puglia (IT)	9 students	11.09.2024	7 educators	18.09.2024	16
Epralima (PT)	11 students	18.09.2024	10 teachers	17.09.2024	21
SIPH / ZDZ (PL)	2nd–3rd year students	Sept–Oct 2024	Lecturers	Sept–Oct 2024	Multiple
FZZ (PL)	VET gastronomy students	18.09.2024	—	—	Focus group

3.2. Focus Group Results — Student Perspective

3.2.1. Programme Effectiveness Assessment

Students across all partner countries rate their current VET programmes as providing a solid foundational training in practical kitchen and dining room skills, hygiene, and food safety. The Portuguese students (Epralima) rated their programme at 7 out of 10 overall, acknowledging the strong practical components while identifying significant gaps in market preparedness. Italian students (CNIPA Puglia) similarly valued the hygiene and food safety training, hands-on kitchen experience, and internship opportunities, but pointed to substantial deficiencies in modern competencies. Polish students rated their programmes as good to sufficient, with criticism focusing on the lack of modern practices and equipment.

3.2.2. Key Competency Gaps Identified by Students

Digital skills and technology: This emerged as the most critical gap across all three countries. Students lack practical experience with restaurant management software, online reservation platforms, digital inventory control systems, social media management tools, and e-commerce platforms. In Poland, 74% of students identified online promotion and social media as the most important topic for their future careers.

Entrepreneurship and business management: A significant proportion of students across all countries aspire to open their own businesses but feel inadequately equipped in financial management, cost planning, business strategy, marketing, and human resource management. In Italy, 50% of students identified business start-up as their highest-priority module.

Soft skills and transversal competencies: Students identify insufficient focus on stress management, effective communication with customers, problem-solving in high-pressure environments, teamwork in kitchen settings, and time management. These are precisely the competencies that labor market analyses and industry reports consistently identify as essential.

Modern culinary trends: Limited coverage of sustainable cooking, molecular gastronomy, plant-based cuisine, fermentation techniques, fusion food, and dietary specialisations. Students express strong interest in these areas, which are increasingly demanded by consumers and employers alike.

Gap between school and workplace reality: Students consistently report that the controlled classroom environment does not adequately simulate the fast-paced, high-pressure reality of professional kitchens and restaurants.

3.3. Focus Group Results — Teacher Perspective

3.3.1. Ideal Training Programme Components

Teachers and trainers across all partner countries reached a consensus on the essential components of an ideal training programme for gastronomy VET students. These include: (a) strong grounding in local culinary traditions as a foundation for innovation; (b) exposure to international and fusion cuisine; (c) marketing and digital promotion skills; (d) integration of soft skills throughout the curriculum; (e) regulatory and safety knowledge; (f) sustainability practices; and (g) technology integration including restaurant management software, booking platforms, and data analysis tools.

3.3.2. Recommended Teaching Methodologies

The teacher focus groups produced a strong consensus on the preferred pedagogical approaches: project-based learning using real-world business cases and event management scenarios; simulations and role-playing recreating restaurant scenarios with different staff roles; collaborative learning reflecting real kitchen team dynamics; experiential learning through direct practical experience; mentorship programmes pairing students with industry professionals; and continuous feedback through regular evaluation and constructive criticism.

Teachers universally recommended a shift from theory-dominant to practice-dominant approaches, with a suggested balance of approximately 60% practical and 40% theoretical content. Theory should be immediately followed by practical application, not delivered in isolation.

3.3.3. Transversal Skills Priority

Teachers identified the following transversal skills as critical priorities for gastronomy VET: effective communication; teamwork; problem-solving; time management and multitasking; creativity and innovation; adaptability to emerging trends and technologies; intercultural competencies; stress management; digital skills; and entrepreneurial competencies including business planning and financial management.

3.3.4. Labor Market Alignment Recommendations

Teachers stressed the need for: creating solid partnerships with industry entities; regular curriculum review with industry professionals; integration of emerging technologies and sustainable practices; implementation of flexible, modular curricula allowing specialized pathways; continuous professional development for trainers; and investment in modern laboratory equipment reflecting current industry standards.

3.4. Detailed Focus Group Findings — Italy (CNIPA Puglia)

3.4.1. Student Focus Group (Lecce, 11 September 2024)

The Italian student focus group was conducted on 11 September 2024 with 9 third-year students enrolled in the Food Service Operator — Catering course at CNIPA Puglia, Lecce. The session was facilitated by Giuseppe Montanaro (coordinator) and Gabriella Buttazzo (tutor), following a three-phase structure: introduction, main discussion, and closing synthesis.

The students reported that their programme provides a solid grounding in practical kitchen and dining room skills, with particular strength in hygiene and food safety training. However, they identified critical gaps in several areas. In terms of digital skills, students reported lacking practical experience with restaurant management software, online reservation platforms (such as TheFork, OpenTable), and digital inventory control systems. Several students noted that during internships they encountered these tools for the first time and felt unprepared to use them effectively.

Regarding entrepreneurial preparation, students with aspirations to open their own businesses expressed significant concern about the lack of training in financial management, cost planning, marketing strategy, and business operations. Students also identified soft skills deficiencies, particularly in the areas of stress management under high-pressure service conditions, effective customer communication, complaint handling, and multitasking during busy service periods.

3.4.2. Teacher Focus Group (Lecce, 18 September 2024)

The Italian teacher focus group involved 7 educators from CNIPA Puglia, including teachers of law, English, mathematics, and biology, as well as a tutor and the school director. Teachers emphasized that local culinary traditions should serve as the foundation upon which innovation is built, with international and fusion cuisine introduced as an essential complement given globalisation. Marketing and digital promotion were identified as critical for modern business success.

On teaching methodology, the teachers strongly advocated for project-based learning using real-world business cases, simulations recreating restaurant scenarios with different staff roles, collaborative learning reflecting real kitchen team dynamics, and mentorship programmes with industry professionals. They recommended immediate theory-to-practice integration, where theoretical concepts are taught alongside and immediately applied in practical exercises.

3.5. Detailed Focus Group Findings — Portugal (Epralima)

3.5.1. Student Focus Group (Arcos de Valdevez, 18 September 2024)

The Portuguese student focus group was conducted on 18 September 2024 with 11 students from the 2nd and 3rd year of the Restaurant Management Course — Cooking Technician programme at Epralima. Students rated their programme at 7 out of 10 overall, acknowledging the strong practical cooking components and the quality of chef-teachers, while identifying important gaps in preparation for the modern labor market.

Key weaknesses identified by Portuguese students included: insufficient coverage of modern culinary trends (plant-based cuisine, molecular gastronomy, fermentation techniques, international cuisines); limited digital platform integration and social media

management training; lack of business and financial education for aspiring entrepreneurs; and the significant gap between the controlled classroom environment and the fast-paced reality of professional restaurant kitchens

3.5.2. Teacher Focus Group (Arcos de Valdevez, 17 September 2024)

The Portuguese teacher focus group involved 10 teachers representing diverse disciplines: Baking/Pastry, Economics, ICT, Pedagogy, Psychology, Physical Education, English, and Integration Support. Portuguese teachers emphasized the primacy of practical hands-on training, recommending a 60% practical to 40% theoretical balance. Teachers recommended the development of artisanal technique specialisations, integration of sustainability practices, comprehensive financial management modules, modern technique training, and structured networking with local restaurants, bakeries, and food companies.

3.6. Detailed Focus Group Findings — Poland (SIPH / ZDZ Kielce)

The Polish research was conducted by SIPH and ZDZ Kielce through qualitative surveys and focus group sessions in September–October 2024. Participants included lecturers and students from grades 2–3 at the Technical School of Nutrition and Catering Services in Kielce and Busko-Zdrój.

Polish students rated their programmes as good to sufficient, with criticism focused primarily on the lack of modern practices and up-to-date equipment. Students identified significant shortcomings in manual, technical, and mathematical competences alongside the digital skills gaps common across all countries. Teachers demonstrated enthusiasm and long professional experience, expressing willingness to share knowledge but noting that they themselves need access to continuous professional development.

Recommendations included: increased cooperation between vocational schools and employers; better preparation for employer interviews and portfolio development; inclusion of new technologies including data analysis, AI applications, and e-commerce tools; entrepreneurship courses with marketing and personnel management components; participation in international fairs and conferences; and introduction of a modular system allowing specialisation.

3.7. Transition to WP3 — Summary

As an extension of the WP2 analytical work, preliminary evaluations of the training script developed under WP3/WP5 were conducted in June 2025 with students and trainers at ZDZ Kielce (19 students, 12 June 2025) and CNIPA Puglia (10 students, 5 trainers, 27 June 2025).

Indicator	ZDZ Kielce (PL)	CNIPA Puglia (IT)
Participants	19 students	10 students, 5 trainers
Script rating (very useful)	84% (16/19)	90% (4–5/5)
Top priority module	Online promotion & social media (74%)	Entrepreneurship (50%)
Second priority	Sales techniques & e-commerce (47%)	Advertising & social media (40%)
Internship quality concern	N/A	5/5 (all trainers)
Preferred format	Smartphone/tablet (68%)	Hybrid: print + e-learning + video

4. Progress Analysis and Comparison of Research Results

This chapter presents a systematic comparison of the research findings across all partner countries, identifying convergent patterns, country–specific variations, and common implications for the training concept development.

4.1. Cross–National Comparison of Focus Group Findings

4.1.1. Convergent Themes

The analysis of focus group results across all three countries reveals a remarkable degree of convergence in the identified needs and challenges:

- **Digital competence gap:** Identified as the most critical deficiency in all three countries, regardless of national VET system structure.

- **Entrepreneurial preparation deficit:** In all three countries, a significant proportion of students aspire to entrepreneurial careers but feel their programmes do not adequately prepare them.
- **Theory–practice balance:** The need to shift from theory–heavy to practice–dominant approaches was universally identified.
- **Modern teaching methodologies:** Project–based learning, simulations, role–playing, and blended learning approaches were recommended across all countries.
- **Industry partnership:** All partner organisations identified the need for stronger connections between VET schools and the gastronomy industry.

4.1.2. Country–Specific Variations

Dimension	Poland	Italy	Portugal
Primary concern	Modern equipment, digital tools	Youth unemployment, digital transformation	International exposure, business management
Student aspiration	Practical skills, modern trends	Entrepreneurship, digital marketing	Own business, international career
Industry context	Dynamic growth, Western lag	Tourism-driven, food delivery boom	Tourism dependence, artisanal tradition
Teacher priority	Technology access, CPD	Modular curriculum, industry partnerships	60/40 practice-theory, blended learning

4.2. Quantitative Summary of Research Findings

Indicator	Poland	Italy	Portugal	Average
Overall programme rating	Good/Sufficient	10.07.2026	10.07.2026	~7/10
Digital skills as top priority	74%	40%	High	>50%
Entrepreneurship interest	21%	50%	High	>30%
Prefer digital delivery format	68% mobile	50% hybrid	N/A	87%
Prefer practice-dominant approach	Yes	Yes	Yes	Unanimous
Request for more internships	Strong	Strong	Strong	Universal

4.3. Workshop II – Progress Analysis and Discussion

The second substantive workshop, held in Italy on 20–22 May 2024, was devoted primarily to deepening the desk research analysis, refining the methodology for the upcoming focus group studies, and advancing the competency mapping process. During this workshop, each partner presented the findings from their national desk research and the consortium discussed the design of the focus group instruments and sampling strategy for the research planned for September–October 2024.

The key outcomes of Workshop II included: (a) validation of cross–national convergence in the desk research findings; (b) agreement on the priority competency areas to be explored through the focus group research; (c) finalisation of the focus group methodology and research instruments; and (d) definition of the competency mapping approach that would feed into the training concept development. The discussions at this workshop confirmed that the desk research findings were consistent across all three countries, providing a solid analytical basis for the upcoming primary research phase.

4.4. Workshop III – Culmination and Synthesis

The third substantive workshop, held in Portugal on 7–9 October 2024, served as the culmination of all WP2 activities. This workshop focused on: (a) final synthesis of all research and analysis results; (b) substantive discussion of the developed proposal for pedagogical innovation; (c) fine–tuning the training concept based on all accumulated evidence; and (d) agreement on the organisational and methodological framework for implementation. Workshop III benefited from the full set of focus group results from all partner countries, the complete desk research findings, and the competency mapping outputs, enabling a comprehensive and evidence–based discussion of the training concept.

5. Competency Mapping

The competency mapping exercise was a crucial component of WP2, designed to systematically identify the specific competencies required by the modern gastronomy sector and to compare these with the competencies currently developed through existing VET programmes.

he mapping process drew on the desk research findings, focus group results, and the expertise of the consortium partners.

5.1. Mapping Methodology

The competency mapping process followed a structured approach aligned with the European Qualifications Framework (EQF), specifically targeting Levels 4 and 5 which correspond to upper secondary and post–secondary VET qualifications. The methodology involved: (a) identification of competency areas through desk research and literature review; (b) validation and prioritisation through focus group findings; (c) gap analysis comparing current VET provision with market demands; and (d) formulation of competency profiles for the training concept. The mapping was aligned with the DigComp 2.2 Framework for digital competencies and incorporated both technical (hard) skills and transversal (soft) skills.

5.2. Identified Competency Areas

5.2.1. Technical Competencies

Competency Area	Current VET Coverage	Market Demand Level
Traditional culinary techniques	Strong – well-covered in all countries	High – remains fundamental
Food safety and hygiene	Strong – well-covered	High – regulatory requirement
Digital marketing and social media	Minimal or absent	Very high – critical gap
E-commerce and online sales	Absent	High – growing rapidly

Competency Area	Current VET Coverage	Market Demand Level
Restaurant management software	Minimal	Very high – industry standard
Business planning and finance	Minimal or theoretical only	High – essential for entrepreneurship
Customer acquisition techniques	Minimal	Very high – core project focus
AI tools for gastronomy	Absent	Emerging – growing importance
Sustainable gastronomy	Limited	High – consumer demand driven
Modern culinary techniques	Limited (molecular, plant-based, fusion)	Medium-High – trend dependent

5.2.2. Transversal Competencies

The competency mapping identified the following transversal competencies as critical for gastronomy VET graduates, ranked by priority based on combined student and teacher perspectives, supplemented by employer–side insight through SIPH's institutional knowledge and educators' industry connections: (1) effective communication and customer interaction; (2) teamwork and kitchen collaboration; (3) problem–solving and critical thinking; (4) time management and multitasking; (5) stress management and emotional resilience; (6) creativity and innovation; (7) adaptability and flexibility; (8) intercultural competencies; (9) leadership skills; and (10) digital literacy as a transversal competence.

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5.3. Competency Gap Analysis Summary

The competency mapping exercise confirms that the most significant gaps between current VET provision and market demands lie in the digital and entrepreneurial competency domains. While traditional culinary skills and food safety knowledge are well-addressed by existing programmes, the areas of digital marketing, e-commerce, AI applications, business management, and customer acquisition techniques represent critical deficiencies that the GastroNet training concept was specifically designed to address.

6. Draft Training Concept — Conceptual Assumptions

Based on the comprehensive evidence gathered through desk research, focus group studies, competency mapping, and the progressive discussions at three substantive workshops, the GastroNet consortium developed a draft training concept and a set of conceptual assumptions. This draft framework outlines the foundational structure, thematic scope, and pedagogical approach that were subsequently elaborated into the full pedagogical innovation under Work Package 3.

6.1. Draft Conceptual Framework

The training concept is grounded in constructivist learning theory and is designed to be modular, immediately implementable, and aligned with both the European Qualifications Framework (EQF Levels 4–5) and the European Digital Competence Framework (DigComp 2.2). The concept integrates four primary competency areas into formal gastronomy education:

- **I–driven customer behaviour analytics** – understanding how AI tools analyse customer data to generate actionable insights for personalised service and marketing;
- **Digital marketing strategies (Push and Pull)** – designing and implementing AI–supported marketing campaigns, including both proactive outreach and content–driven attraction;
- **Food design and visual presentation using AI** – using AI image generation tools to conceptualise and refine dish presentations for digital media;
- **Customer segmentation and data literacy** – using analytical tools to segment customers and make data–driven business decisions.

6.2. Pedagogical Approach

The training concept employs a five–stage didactic mechanism designed to maximise learning effectiveness:

- **Stage 1** – Activation of Prior Knowledge: Teachers use discussions, quizzes, or brainstorming to activate students' existing knowledge, establishing a cognitive foundation for new material.

- **Stage 2** – Problem–Based Task Assignment: Students receive realistic business challenges that require combining culinary knowledge with new digital tools. Tasks are deliberately open-ended to encourage creative problem-solving.
- **Stage 3** – AI–Assisted Problem Solving: Students use AI tools (such as ChatGPT for content generation, spreadsheet tools for analysis, Canva AI for visual content) while the teacher guides critical evaluation of AI outputs.
- **Stage 4** – Reflection and Peer Review: Students present solutions to peers and receive structured feedback, developing communication, critical thinking, and professional articulation skills.
- **Stage 5** – Competency Consolidation: The teacher summarises learning outcomes, connects practical exercises to broader theoretical frameworks, and facilitates student reflection on professional applications.

6.3. Programme Structure

The training concept is structured around five main thematic modules, each addressing a critical competency gap identified through the research and analysis phases:

- **Module 1** – Gastronomic Marketing: Market analysis, customer segmentation and positioning, branding for gastronomy businesses, and competitive analysis. This module addresses the gap in marketing competencies identified across all partner countries.
- **Module 2** – Entrepreneurship: Business planning, resource management, financial planning, cost analysis, and restaurant economics. This module responds to the strong student demand for entrepreneurial preparation.
- **Module 3 –** Sales Techniques and Customer Service: Customer loyalty programmes, communication techniques, customer care strategies, and relationship management. This module integrates both traditional interpersonal skills with modern CRM tools.
- **Module 4** – Online Promotion: Social media marketing, gastronomic digital branding, content creation for online platforms, and AI–assisted campaign design. This module addresses the highest-priority gap identified by students across all countries.
- **Module 5** – E-Commerce: Online ordering systems, digital sales tools, food delivery platform management, and digital payment solutions. This module responds to the rapid growth of the food delivery sector and the emerging professional profiles it creates.

6.4. Alignment with European Frameworks

The training concept is explicitly aligned with the European Qualifications Framework (EQF Levels 4–5), emphasising autonomy and responsibility in professional tasks. It also aligns with the DigComp 2.2 Framework, covering all five competence areas: information and data literacy, communication and collaboration, digital content creation, safety, and problem–solving. This alignment ensures that the competencies developed through the GastroNet training programme are recognised and transferable across EU Member States.

6.5. Practical Exercises and Case Studies

The training concept outlines a set of proposed practical exercises, each designed to develop specific competencies identified through the WP2 research. These exercises were developed in direct response to the focus group findings and are intended to form the core of the hands–on learning experience:

Exercise 1 – AI Menu Optimisation: Students use AI tools (such as ChatGPT) to generate menu options for different restaurant scenarios, then critically evaluate and improve the AI outputs using their gastronomic knowledge. The learning objective is to develop the ability to critically assess AI-generated content while leveraging it as a productivity tool. Students must provide 3–5 specific improvements to each AI suggestion, justifying their modifications based on culinary principles, customer preferences, and cost considerations.

Exercise 2 – Food Design and Visual Presentation: Students work with AI image generation tools to conceptualise modern plating designs, then identify weak points and propose corrections based on contemporary plating principles. This exercise develops creative visual skills alongside critical thinking about food presentation for digital media – a competency increasingly important given the role of social media platforms like Instagram and TikTok in restaurant marketing.

Exercise 3 – Designing Push and Pull Marketing Campaigns: Students design both proactive promotional messages (Push strategy) and AI–powered content marketing plans (Pull strategy) for specific restaurant scenarios. The Push component involves creating personalised promotional communications using tools like Mailchimp or HubSpot,

while the Pull component involves developing content strategies for social media platforms. Students work in teams, simulating a real marketing department.

Exercise 4 – Customer Data Segmentation: Using anonymised customer order data provided as spreadsheets, students sort customers by frequency, preference, and visit timing, create pivot tables, and assign customer segments with written justification for their classification decisions. This exercise develops data literacy and analytical competencies essential for modern restaurant management and customer relationship management.

The training concept also includes 9 detailed case studies based on real international companies (adapted for educational purposes), including examples from major food service chains and independent restaurants. These case studies cover topics such as AI-driven loyalty programme implementation, social media marketing strategy, food delivery platform integration, and sustainability-focused business model development. The case-based approach ensures that students work with authentic business scenarios rather than abstract theoretical exercises.

6.6. Teacher Support and Professional Development

Recognising that the successful implementation of the training concept depends critically on teacher preparedness, the concept includes a dedicated teacher support structure. A teacher's guide provides background reading on AI and digital marketing, facilitation notes for each exercise, and suggestions for further professional development. Teachers are not expected to be AI experts; rather, they are positioned as facilitators who guide students' critical engagement with digital tools.

The professional development component addresses the finding from the focus groups that teachers themselves need support in keeping pace with industry developments. Recommended activities include: participation in industry internships and placements; attendance at technology and gastronomy conferences; peer learning exchanges with teachers from partner institutions; and access to online resources and professional communities. The consortium's transnational structure provides a natural framework for ongoing professional exchange between educators in Poland, Italy, and Portugal.

6.7. Proposed Innovative Elements

The draft training concept proposes several innovative elements intended to distinguish it from traditional gastronomy VET programmes:

(a) Integration of AI tools: The concept is among the first VET training programmes to systematically integrate AI tools into gastronomy education, including AI-driven customer analytics, AI-assisted content creation, and AI-supported marketing campaign design.

(b) Case-based approach with real-world examples: The programme includes detailed case studies based on real companies (adapted for educational purposes), providing students with authentic business scenarios rather than abstract theoretical exercises.

(c) Modular and flexible design: The concept is designed as a set of self-contained modules that can be integrated into existing VET curricula without requiring a complete curriculum redesign, making it immediately implementable across different national contexts.

(d) Dual-format delivery: The programme is designed for blended delivery, combining face-to-face instruction with digital resources and online learning platforms, reflecting the preferences expressed by students in the focus groups.

(e) Evidence-based design: Every element of the training concept is directly grounded in the empirical research conducted through the desk research and focus group phases, ensuring that the programme addresses documented rather than assumed needs.

7. Division of Tasks for Training Programme Development

The development of the full training programme based on the WP2 training concept involved a systematic division of tasks among consortium partners, leveraging the specific expertise and resources of each organisation. This division was agreed upon during Workshops II and III and was formalised as part of the transition from WP2 to WP3 activities.

7.1. Task Allocation Framework

Task Area	Lead Partner	Supporting Partners	Deliverables
Focus Group Research	CNIPA Puglia (coordination)	All partners (national implementation)	Focus group reports from PL, IT, PT; consolidated analysis
Desk Research: Labor Market	CNIPA Puglia	SIPH, Epralima	Labor market reports (EU, IT, PL, PT)
Desk Research: VET Analysis	ZDZ Kielce / SIPH	FZZ, CNIPA, Epralima	VET system analysis across partner countries
Competency Mapping	FZZ (methodology)	All partners (national data)	Competency matrix, gap analysis
Training Concept Development	Fundacja Zamenhof (coordination)	All partners	Draft training concept, module structure
Training Script Development	Fundacja Zamenhof / SIPH	CNIPA, ZDZ, Epralima	5 training modules (WP3/WP5)
Pedagogical Innovation	Fundacja Zamenhof	All partners	Smart Gastronomy pedagogical innovation
Quality Assurance	FZZ	All partners	Quality reports, evaluation forms

7.2. Implementation Timeline

The division of tasks followed a phased implementation approach aligned with the project timeline:

- **Phase 1** (January – March 2024): Project launch, partnership agreement, initial desk research, and preparation for Workshop I. Partners initiated their national desk research activities and prepared materials for the first exchange of experiences.
- **Phase 2** (March – May 2024): Workshop I (Poland), deepening of desk research, launch of focus group studies (Focus 1), and preparation for Workshop II. The focus group templates were finalised and distributed to all partners.
- **Phase 3** (May – September 2024): Workshop II (Italy), completion of focus group studies (Focus 1 and Focus 2), competency mapping, and initial formulation of training concept assumptions.
- **Phase 4** (September – December 2024): Workshop III (Portugal), consolidation of all research findings, finalisation of competency mapping, development of the draft training concept, and formal agreement on the division of tasks for the training programme and pedagogical innovation development (WP3).
- **Phase 5** (November 2024 – April 2025): Development of the pedagogical innovation and training programme based on the WP2 conceptual framework, under the coordination of Work Package 3.

7.3. Quality Assurance of WP2 Outputs

The quality of WP2 outputs was ensured through the Quality Assurance framework managed by FZZ. This included: standardised templates for focus group research (ensuring comparability across countries); peer review of desk research reports by other consortium partners; progressive validation of findings through the three workshop discussions; quality assessment criteria applied to all deliverables; and regular reporting to the Quality Management Team. The Quality Management Team (QMT), composed of one representative from each partner organisation, reviewed each WP2 output before its finalisation, ensuring consistency, quality, and alignment with the project objectives.

8. Methodology of Substantive Workshops and Research Process

8.1. Workshop Organisation and Facilitation

Each of the three substantive workshops was organised according to a standardised methodology developed by the consortium during the project planning phase. The workshops followed a participatory format, combining plenary presentations with working group sessions, brainstorming activities, and structured discussions. Each workshop was hosted by a different partner organisation, allowing the consortium to experience the educational and professional contexts of all three partner countries firsthand.

Workshop I (Poland, March 2024) was hosted by Fundacja im. Zofii Zamenhof and focused on the exchange of experiences and the launch of the analytical framework. Two representatives from each partner organisation participated, including educators, teachers, professional staff, and members of partner institutions. The workshop programme included presentations on the VET situation in each country, a structured brainstorming on the challenges facing gastronomy education, and the development of guidelines for the subsequent focus group research.

Workshop II (Italy, May 2024) was hosted by CNIPA Puglia and was devoted to deepening the desk research analysis, finalising the focus group research instruments, and advancing the competency mapping methodology. The workshop programme included presentations of national desk research findings, comparative analysis sessions, and working group discussions on the focus group design and training concept assumptions. The Italian context provided valuable exposure to the specific challenges of VET delivery in southern Italy, including high youth unemployment and the importance of tourism-driven gastronomy.

Workshop III (Portugal, October 2024) was hosted by Epralima and served as the culmination of WP2 activities. The workshop focused on the final synthesis of all research findings, substantive discussion of the pedagogical innovation proposal, and agreement on the training concept framework and task division. The Portuguese context highlighted the importance of artisanal preservation alongside modernisation, and the role of tourism in shaping gastronomy education needs.

8.2. Focus Group Research Methodology

The focus group research methodology was developed collaboratively by the consortium and implemented consistently across all partner countries. The methodology was based on the Focus Group Interview (FGI) approach, involving structured group discussions conducted by trained facilitators with deliberately selected participant groups.

8.2.1. Research Instruments

Two standardised focus group templates were developed for the project: Template Focus 01 (for student participants) and Template Focus 02 (for teacher/trainer participants). These templates ensured that the same thematic areas were explored in all partner countries, enabling meaningful cross-national comparison of results. The templates included both structured discussion guides with predefined questions and open-ended sections allowing for country-specific exploration of relevant themes.

The student template (Focus 01) covered the following areas: perception of current programme scope and usefulness for future professional work; assessment of programme adaptation to modern labor market needs; identification of programme strengths and weaknesses; expectations regarding programme content and teaching methodology; views on the theory-practice balance; assessment of internship experiences; and suggestions for programme improvement.

The teacher template (Focus O2) addressed: characteristics of an ideal training programme for gastronomy VET; the role and structure of internships and practical placements; recommended teaching methodologies and approaches; priorities for curriculum improvement to better align with labor market needs; assessment of transversal skills development; and views on technology integration and digital tools in gastronomy education.

8.2.2. Participant Selection

Focus group participants were selected using purposive sampling to ensure representation of the key stakeholder groups. Student participants were drawn from 2nd and 3rd year students in gastronomy-related VET programmes, representing students who had sufficient experience with the programme to provide informed assessments while still being in a position to benefit from improvements. Teacher participants were selected to represent the diversity of disciplines involved in gastronomy VET, including both technical culinary subjects and supporting disciplines (economics, languages, ICT, psychology).

8.2.3. Data Collection and Analysis

All focus group sessions were documented through structured notes taken by facilitators and, where possible, audio recording (with participant consent). The data was analysed using thematic analysis, with each partner organisation producing a national report following a standardised structure. These national reports were then subject to cross-national comparative analysis by the consortium, identifying both convergent themes and country-specific variations.

The quality of the focus group research was assured through several mechanisms: standardised templates and discussion guides; training of facilitators in focus group methodology; peer review of national reports by other consortium partners; and validation of findings through triangulation with desk research data and the expertise of the consortium members.

8.3. Desk Research Methodology

The desk research was conducted using a systematic approach to secondary data collection and analysis. Each partner organisation was assigned responsibility for gathering and analysing data from their national context, while also contributing to the European-level analysis. The primary data sources included:

(a) Official statistical databases: Eurostat for EU-level data; ISTAT for Italian statistics; GUS (Central Statistical Office) for Polish data; INE (Instituto Nacional de Estatística) for Portuguese statistics; OECD employment and education databases;

(b) Policy documents: EU policy papers on vocational education and training; national VET strategies and reform documents; European Qualifications Framework documentation; DigComp 2.2 Framework specifications;

(c) Industry reports: HoReCa sector analyses; food delivery market reports; tourism and gastronomy industry outlooks; employer surveys on skill needs;

(d) Academic sources: Scientific publications on VET effectiveness; research on competency-based education; studies on digital transformation in the food service sector; pedagogical innovation literature.

The desk research was conducted iteratively, with initial findings presented and discussed at Workshop I (March 2024), refined based on feedback and new data during the period between workshops, and finalised for comprehensive analysis at Workshop II (May 2024) and Workshop III (October 2024).

8.4. Competency Mapping Methodology

The competency mapping process combined top-down and bottom-up approaches. The top-down component drew on European frameworks (EQF, DigComp 2.2) and existing competency models for the HoReCa sector to establish a comprehensive competency framework. The bottom-up component used the focus group findings and desk research to identify which competencies are currently developed through existing VET programmes, which are demanded by the labor market, and where the most significant gaps exist.

The mapping was structured around three categories: technical (hard) competencies specific to gastronomy and food service; digital competencies aligned with DigComp 2.2; and transversal (soft) competencies essential for professional success in the sector. For each competency area, the mapping assessed: the current level of coverage in VET programmes (rated as strong, moderate, minimal, or absent); the level of demand from the labor market (rated as very high, high, medium, or low); and the resulting gap (critical, significant, moderate, or minimal).

The competency mapping output served as the direct input for the training concept development, ensuring that the GastroNet programme specifically targets the most critical competency gaps identified through the research process.
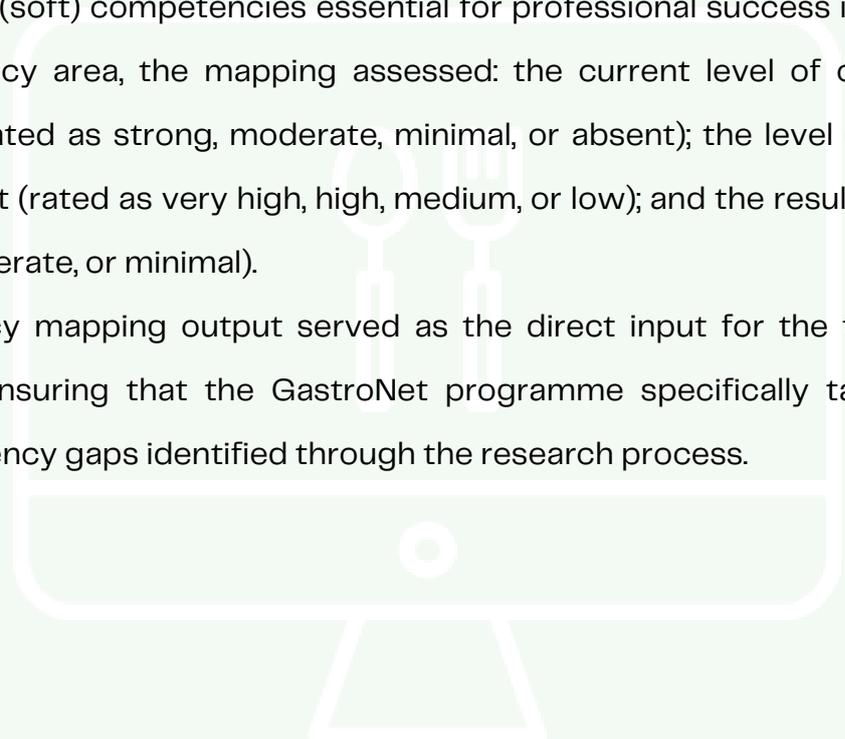
9. Conclusions and Transition to WP3

The comprehensive research, analysis, and conceptual work conducted under Work Package 2 has provided a robust, evidence-based foundation for the development of the GastroNet training programme and pedagogical innovation. The key conclusions from the WP2 activities are as follows:

First, the desk research and needs analysis confirmed that the gastronomy VET sector across the EU faces a structural challenge: the digital transformation of the industry has created new competency demands that traditional educational programmes do not adequately address. This finding was consistent across Poland, Italy, and Portugal, validating the transnational approach of the project.

Second, the focus group research provided rich qualitative data directly from the two primary stakeholder groups – students and teachers. The convergence of their perspectives across three countries strengthens the validity of the findings and ensures that the training concept is grounded in documented needs rather than assumptions.

Third, the competency mapping exercise systematically identified the specific competency gaps that the training programme must address, with digital marketing, e-commerce, AI tools, entrepreneurship, and customer acquisition techniques emerging as the highest-priority areas.

Fourth, the draft training concept developed through the WP2 process provides a clear, modular, and implementable framework for the pedagogical innovation. Its alignment with the EQF and DigComp 2.2 frameworks ensures European relevance and transferability.

Fifth, the agreed division of tasks ensures that each partner contributes their specific expertise to the development of the training programme, maximising the quality and relevance of the final outputs.

The WP2 outputs – the research and needs analysis, the focus group findings, the competency mapping, the training concept assumptions, and the division of tasks – collectively formed the input for Work Package 3 (Pedagogical Innovation), where the full training programme, the pedagogical innovation document (Smart Gastronomy), and the training script were developed and piloted.

9.1. Contribution to Project Objectives

The WP2 activities made a direct and substantial contribution to the achievement of the overall project objectives. The project aimed to increase the competences of VET learners graduating from gastronomic schools in the fields of sales techniques and customer acquisition based on new technologies and the Internet. The desk research and focus group studies provided the evidence base demonstrating the specific areas where these competences are lacking, while the training concept development translated this evidence into a concrete, implementable educational framework.

The exchange of experiences between partners, achieved through the three substantive workshops and ongoing collaboration, resulted in increasing the knowledge of the educational staff of the participating organisations. Teachers and trainers from all partner institutions gained exposure to different national approaches to gastronomy VET, innovative teaching methodologies, and digital tools for education. This cross–border knowledge transfer represents a significant added value of the project's transnational design.

The preparation of the training concept for students of catering schools, which was a declared project result, was successfully achieved through the systematic and evidence–based approach of WP2. The concept was developed not on the basis of theoretical assumptions, but on the documented needs and expectations of the primary stakeholder groups – students, teachers, and the labor market – across three EU countries.

9.2. Sustainability and Transferability

The WP2 outputs have significant sustainability and transferability potential. The desk research and focus group findings provide a comprehensive snapshot of the state of gastronomy VET across Poland, Italy, and Portugal that can serve as a reference for future educational planning in these countries and beyond. The competency mapping framework can be adapted and applied to other VET sectors facing similar digital transformation challenges.

The modular design of the training concept ensures that individual modules can be adopted independently by VET institutions in different national contexts, without requiring adoption of the complete programme. This flexibility significantly enhances the potential for transfer to other EU countries and educational settings. The alignment with European frameworks (EQF, DigComp 2.2) further supports cross-border transferability.

The research methodology itself – combining desk research, focus group studies, competency mapping, and progressive workshop-based development – represents a replicable model for evidence-based curriculum development that can be applied to other VET sectors and educational innovation projects.
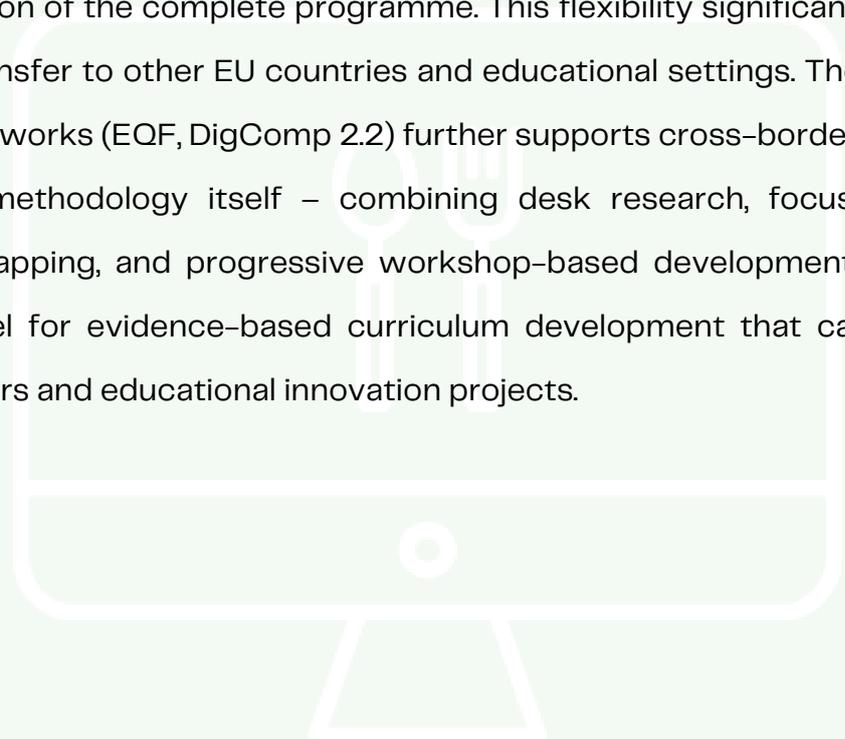
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