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WP2: Methodological Framework Definition

Activity 2.3: Methodological Framework

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Executive Summary

The EthAI Tour project aims to develop vocational training materials tailored to the labor market's needs to digitize the tourism sector and promote ethical AI use among VET trainers and trainees. This report, part of the WP2, specifically Activity 3, builds on the outcomes of WP2/Activity 2 to define a comprehensive methodological framework. This framework will guide VET centers in integrating AI tools and ethical considerations into their curricula, leveraging methodologies such as Lean, Total Quality Management (TQM), and the European Digital Competence Framework.

Introduction

The tourism sector is experiencing a digital transformation, necessitating the adoption of AI tools that are both effective and ethically sound. To address this, VET programs should evolve to include training on the ethical implications of AI and the responsible use of digital technologies. The EthAI Tour *project* aims to support VET centers in this transition by developing a methodological framework that combines established quality improvement methodologies with modern digital competency standards.

SWOT Analysis of Existing Practices and Identified Skills Gaps

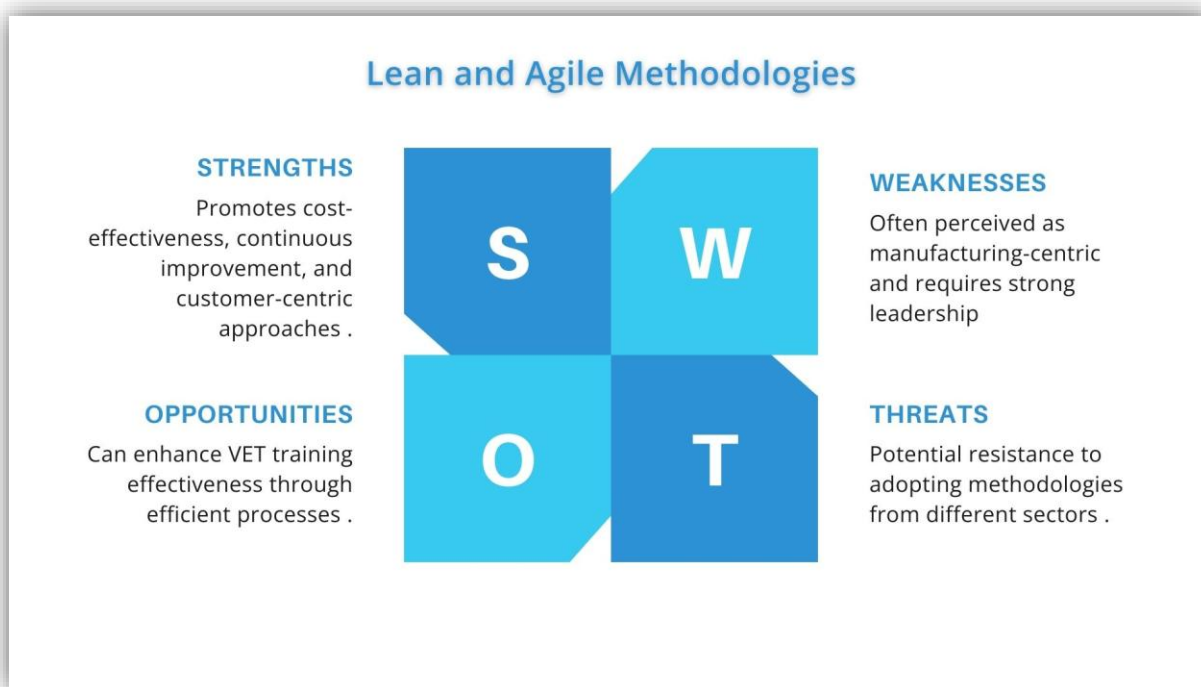


Figure 1: SWOT Analysis for Lean and Agile Methodologies

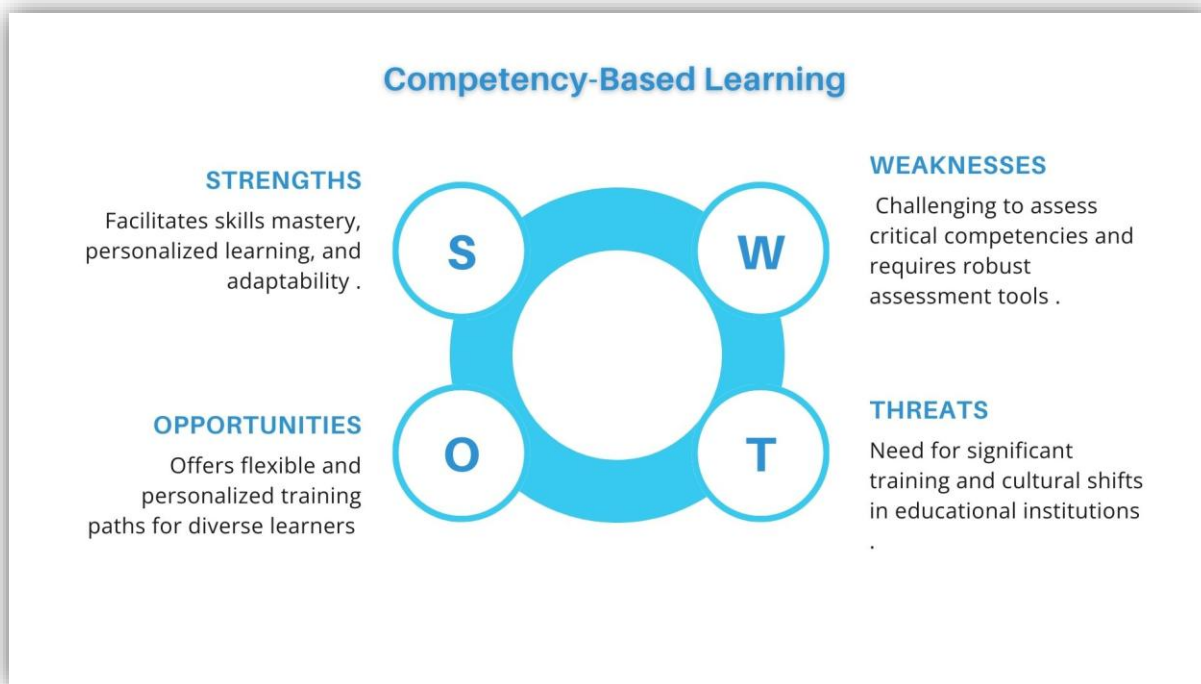


Figure 2: SWOT Analysis for Competency-Based Learning

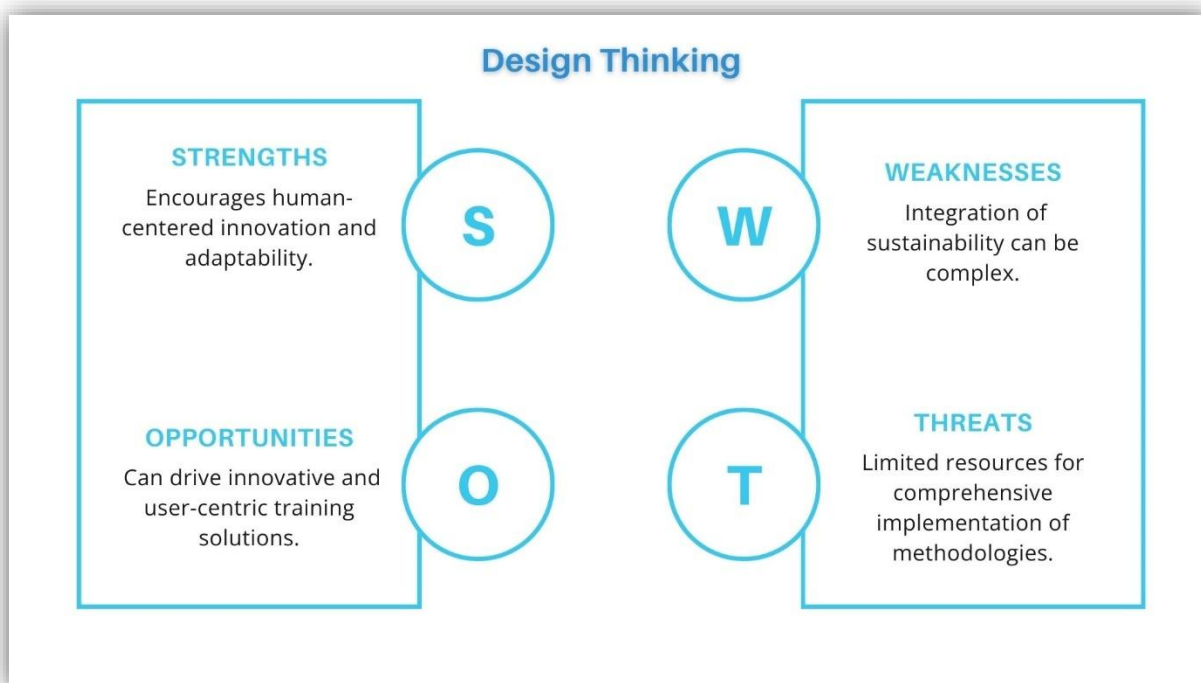


Figure 3: SWOT Analysis for Design Thinking

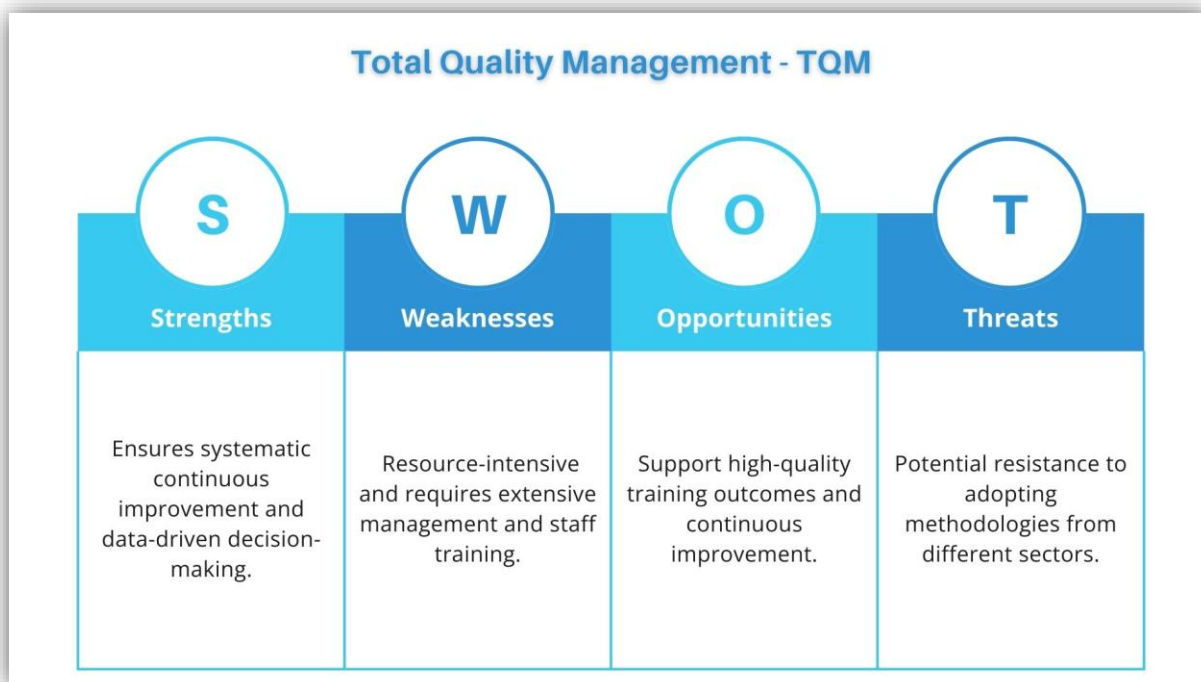


Figure 4: SWOT Analysis for Total Quality Management - TQM

Methodologies of Assessment

Methodologies of Assessment in Greece

Greece

In Greece [1], quality assurance in lifelong learning is governed by Law 3879/2010. This law sets quality standards for lifelong learning, emphasizing teacher and trainer competence and professional development. It mandates continuous monitoring and evaluation of the national lifelong learning network, with public funding linked to the effectiveness of these programs.

Legislative measures include:

- **Law 3848/2010:** Focuses on evaluation and meritocracy in education.
- **Law 4009/2011:** Addresses the structure, operation, and internationalization of higher education institutions.
- **Joint Ministerial Decision 26381/2017:** Establishes a quality framework for apprenticeship, detailing obligations for companies and apprentices and mechanisms for evaluating the apprenticeship system.
- **Joint Ministerial Decision 26385/2017:** Provides a quality framework for VET curricula.

For apprenticeship programs, quality assurance covers curriculum design, implementation preparation, actual implementation, and post-implementation

evaluation. The Ministry of Education and Ministry of Labour ensure these processes meet the set quality standards.

European Quality Assurance Reference Framework for VET (EQAVET)

The guidelines for VET providers suggested by [EOPPEP](#), which is the National Reference Point for Quality Assurance in VET and represents Greece in the European network for EQAVET, identify key activities that need to be taken into account “in order to improve quality assurance processes in line with the EQAVET Framework” [2]. These six building blocks, as they are called, are the following:

1. Management culture
2. Approaches reflect the provider's circumstances
3. A culture of self – assessment
4. Support staff training
5. Use data and feedback to improve VET
6. Involvement of stakeholders

European Foundation for Quality Management (EFQM)

An internationally recognized management framework that helps organizations manage change and boost performance is the EFQM Model [3]. Since its introduction, the EFQM Model has given businesses all around the world a guide for creating a culture of innovation and development. Some of the objectives of the EFQM model are the following: It assists in defining your goal, cultivating strong leaders, overcoming special organizational problems, creating your culture, changing your organization, predicting the futures, supporting agile practices.

Over the last several years, an increasing number of businesses, institutions, and organizations from the public and private sectors have used the EFQM approach. We have discovered examples and studies of its use in businesses providing social services, hotels, elementary and secondary schools, pharmacies, and other environments, with varying degrees of excellence.

Total Quality Management (TQM)

TQM is linked to continuous improvement regarding an organisation's performance. However, the increased competitiveness among institutions necessitated the use of TQM principles in higher education as well. The Quality Assurance Unit (MODIP) is in charge of implementing TQM concepts and conducting its evaluation at Greek institutions. It is used in order to improve the educational work and the quality services through internal and external evaluation procedures. Moreover, according to a research study in private sector Higher Education Institutions in Greece, “the TQM elements mostly adopted by the Greek HEIs concern the following: student focus, leadership and top management commitment, strategic quality planning, process management and teaching staff and employee involvement. On the other hand, the most significant results achieved by the sample HEIs concern quality performance improvement, teaching staff and employee satisfaction, operational performance improvement and the positive impact on society.”

The application of TQM is also applied in the Greek Public Sector as, based on Law 3230/2004, quality tools as the following are used: Management by Objectives, Indicators Measuring Efficiency and Effectiveness, the Common Assessment Framework and the Quality Certification through ISO.

What is more, based on the paper on Quality Assurance Mapping in Greek Service Companies [4]. Greek companies offering services, despite their small size, seem to follow progressively the trends of international and competitive markets, implementing various QMSs. At the same time, it shows that the majority of companies ask for external quality consultants to help them with the proper design and implementation of the selected standards. On the other hand, this review reveals that only few publications presented exhaustively the methodology that was followed by service companies in order to design and apply a QMS."

Methodologies of Assessment in Spain

On March 23, 2022, the Spanish government enacted a significant Organic Law [5] aimed at organizing and integrating Vocational Training (VT). This law is a key component of the 2022 Plan for Modernization of Vocational Training and introduces a new VT model built on three fundamental pillars: VT provision, recognition of prior learning, and career guidance. Additionally, the law formalizes and regulates micro-credentials (or micro-training) within the VT system.

The new legislation enhances flexibility and accessibility in VT by establishing a modular and flexible framework for lifelong learning. It offers a variety of training courses of different durations and learning volumes, including micro-training, modules, VT programs, and specialized courses. All these provisions are cumulative, certifiable, and accreditable, enabling learners to tailor and advance their training paths according to their personal needs and aspirations.

Structure and Progression

The VT system is organized into five ascending grades (A, B, C, D, and E), creating clear training pathways. Each individual's training experience is documented in the national Register of Vocational Training, providing an up-to-date Training-Professional Life Report accessible to all citizens. This structure supports a wide range of courses, from shorter units or micro-credentials (grades A, B, and C) to full degrees (grade D) and specialized courses (grade E). This approach allows individuals to design their training itineraries to align with their professional goals and work needs, with all training being cumulative, certifiable, and accreditable, facilitating the achievement of various professional qualifications.

Quality Assurance in Higher Education

Higher education in Spain encompasses:

- University education.

- Certain non-university programs, including advanced vocational training, artistic education (especially advanced studies in plastic arts, design, and sports), all part of specialized education programs.

Evaluation and Quality Assurance Framework

A comprehensive Evaluation and Quality Assurance Framework is outlined by the Technical Assembly for Quality and Evaluation of VT [6]. This framework, based on the European Quality Assurance Framework for Vocational Education and Training (EQUAVET), includes planning, implementation, results, and updates. It addresses various aspects such as planning and supply, teacher activities, training staff and experts, VT system center profiles, coordination between centers, vocational guidance, accreditation of competencies, innovation participation, and adjustment to environmental needs. Trainee assessments are a crucial verification source [7].

Data Collection and Reporting

Data collection supports monitoring several key metrics, including:

- Participation rates
- Accreditations, certificates, or diplomas issued
- Budget utilization
- Vacancy coverage
- Job offer coverage in various sectors
- Active methodologies implementation
- Labor market integration levels
- Feedback from training participants and companies
- Educational/training continuity results
- Teacher and training staff participation in continuous training

The General State Administration (GSA), in collaboration with autonomous communities, prepares a biennial report on the state of the VT system. This report includes data from autonomous communities and evaluations by independent bodies. Every four years, a study on training cycles, employability, and future human capital needs is included.

Quality Systems in Educational Institutions

Public vocational education institutions are encouraged to implement internal quality frameworks for continuous improvement, potentially using independent quality management certifications. Private institutions may also be considered for public funding grants if they have independent quality certifications.

Quality Plans and Advanced Vocational Training

Authorities promote improvement plans for educational centers, with resources allocated as per regulations. The VT system's quality evaluation follows EQUAVET indicators, ensuring continuous improvement and innovation in collaboration with business and trade union organizations. The evaluation aims to identify key quality elements and provide evidence for informed decision-making.

Inspection and Compliance

The State Education Inspectorate, part of the Ministry of Education, Vocational Training, and Sports (MEFD), oversees compliance with educational regulations across the nation. This includes ensuring curriculum adherence, qualification conditions, and equitable educational rights. The inspectorate works with autonomous communities, who manage their education inspections and contribute to external evaluation processes.

Quality Assurance in Adult Education and Training

Adult education and training involve lifelong learning, professional training systems, and occupational training. Various bodies, including regional education authorities and labor authorities, ensure the quality of these programs. SEPE and FUNDAE are key organizations for employment-related training, supporting evaluation, monitoring, and continuous improvement. The PIAAC program assesses adult competencies in key skills, with Spain participating in both its first and second cycles, providing valuable data for policy decisions and system improvements.

Methodologies Assessment in Malta

Secondary Education

In Malta, secondary education assessment incorporates both formative and summative methods within classroom and school-based settings. Formative assessment provides ongoing feedback on both learner progress and the teaching process. Coursework, integral to many subjects, often occurs under teacher guidance, allowing students access to necessary support and resources. Some coursework requires research outside the classroom. The COVID-19 pandemic disrupted coursework completion in the 2019/2020 and 2020/2021 school years due to social distancing measures. In subjects like Art, Fashion & Textile Studies, and Home Economics, students compile portfolios showcasing their efforts and achievements, which are used for coursework assessment.

At the end of each school year, students take annual exams in most subjects, excluding PE, Design & Technology, Home Economics, and Personal, Social & Career Development (PSCD). These exams are created by education officers and/or heads of department in collaboration with the Educational Assessment Unit. Exams are graded on a 100-point scale, with moderation conducted by education officers or heads of department to ensure scoring reliability.

Upon completing compulsory secondary education, students may sit for the Secondary Education Certificate (SEC) exams, administered by the MATSEC Examinations Board at the University of Malta. Some SEC exams, such as languages and music, include oral/aural components, and others include coursework/school-based assessments, with coursework marks comprising 15% to 60% of the total grade. SEC exams have two papers: a core paper (Paper I) for all students and a second paper (Paper II) with two levels of difficulty (Paper IIA and Paper IIB), accommodating different competency levels. Grades from SEC exams determine whether students attain a Level 2 or Level 3 qualification on the Malta Qualifications Framework (MQF).

Upper Secondary Education

At the general upper secondary level, schools use both formative and summative assessments, with half-yearly and end-of-year exams crucial for student progression. These institutions prepare students for Matriculation exams, administered by the MATSEC Board. To earn a Matriculation Certificate, students must achieve at least 44 grade points by passing six subjects, including two at Advanced Matriculation level, Intermediate Matriculation Systems of Knowledge, and three at Intermediate Matriculation level. Grades A to E (with A being the highest) determine the grade points for each subject.

Other Post-Secondary Education Providers

The primary public post-secondary education providers in Malta are the Malta College of Arts, Science and Technology (MCAST) and the Institute for Tourism Studies (ITS).

i) Malta College of Arts, Science and Technology (MCAST):

MCAST is the main Vocational Education and Training (VET) provider, offering courses from MQF Introductory Levels A & B to MQF Level 7. Assessment is conducted through continuous assessment and time-constrained assignments (TCAs), focusing on learning outcomes that reflect knowledge, skills, and competences.

Continuous Assessment: Students are evaluated through various tools throughout the academic year. Coursework is based on Learning Outcomes and Grading Criteria, communicated through coursework documentation.

Assessment Documentation: Includes an Assessment Front Sheet, Coursework Brief/Task Sheet/Assignment Brief. Feedback includes assessor marks, feedback on performance, and recommendations for improvement.

ii) Institute of Tourism Studies (ITS):

ITS emphasizes student-centered learning, teaching, and assessment, ensuring alignment with the Malta Further and Higher Education Authority (MFHEA) standards.

Student Support: Includes formative assessment feedback and informal feedback during lectures. Programmes are competence-based, supported by academic coordinators and learning coaches.

Pedagogy: Involves various methods like practical sessions, discussions, and ICT to make content engaging and understandable.

Quality Assurance in VET

The Malta qualifications framework (MQF) and the Malta Further and Higher Education Authority (MFHEA) ensure quality in VET and higher education. The national quality assurance framework, launched in 2015, applies to all forms of upper secondary, higher initial VET, and continuing VET. It combines internal quality assurance with external audits, guided by European standards and enriched by EQAVET indicators.

Institutions like MCAST, ITS, and the University of Malta have undergone external quality assurance audits. VET providers use EQAVET indicators to plan quality programs and

continuous improvement, supported by regular feedback from employers and other stakeholders.

Methodologies Assessment in Italy

European Quality Assurance Reference Framework for VET (EQAVET)

The mutual interactions between OECD expertise, EU 'modernization agenda' and the Bologna Process have contributed to make the politics of comparison by standards and output measures one of the most influential factors determining the policy agenda setting at both national and local level. According to the report on developments in vocational education and training policy in 2015-2019 presented by CEDEFOP [8], a quality assurance framework for VET had been formally approved in 2012 and partially implemented in 2015, most specifically applied to initial vocational education and training (IVET), continuing vocational education and training (CVET), and related work-based learning. Evaluation of schools, including those offering Vocational Education and Training (VET), relied on regular surveys assessing student learning outcomes and directly linked to EQF level descriptors, with central management overseeing the process. Here, VET schools were required to:

- Prepare a self-assessment report following national guidelines.
- Meet standards set by Regions and Autonomous Provinces for all training bodies accessing public funding.
- Be accredited.

For 2016-20, the country's priority in this matter is to revise, update and carry out the national approach for quality of education and training. To this end, in 2019, the national accreditation system has been reviewed in line with the legislative decree no 150/2015, to incorporate indicators suggested by the EQAVET recommendation. After the implementation of the extensive National Qualifications Framework (NQF), the European Qualifications Framework National Coordination Point (EQF NCP) introduced a revised referencing report with the aim to improve the effectiveness of VET programs within the State-Regions Agreement, defining minimum standards for accrediting training providers' service quality while willing to prevent training failure or/and decrease dropout rates. For this matter, the provincial centres for adult education (CPIAs) have completed their evaluation process by creating a self-assessment report tailored to the unique characteristics of these institutions [9].

In recent years, the quality approach has evolved through three main steps: evaluation, accreditation, and self-assessment. Evaluation entails an external analysis conducted by appropriately selected and trained commissions. Conversely, the accreditation process verifies adherence to specific pre-established standards. Self-assessment, on the other hand, is an internal procedure aimed at gauging and enhancing the performance of study and research programs. This article primarily focuses on self-assessment. The general procedure to create the self-evaluation questionnaire can be summarised in six points:

1. Studying literature or indications about the objective.
2. Creating a schema of categories and sub-categories.
3. Weighting the sub-categories.
4. Creating a questionnaire.
5. Creating a formula in order to synthesise the questionnaire on a graduated scale.

6. Robustness analysis

All EQAVET indicators are integral to the national accreditation system for providers seeking public funds. As today, the qualifications outlined in the inaugural referencing report are utilized by nearly 85% of individuals engaged in education and training.

Regarding employment prospects for low-skilled adults, the efforts made during the reporting period were outlined in the Report on the implementation of the Council recommendation 'Upskilling pathways: new opportunities for adults' in Italy. The report serves as a foundation for establishing the Italian stance, emphasizing the approach of addressing all low-skilled individuals collectively, rather than focusing solely on specific categories.

European Foundation for Quality Management (EFQM)

There are very few data on the application of EFQM standards in Italy, mostly complementing already existing ISO 9001 and national standards. To spread European quality standards, EFQM has established an international network of National Partner Organizations (NPOs) formed by National Quality Associations. In Italy, this role is fulfilled by the Italian Association for Quality Culture (AICQ) (www.aicqna.com) with the assistance of its eight federated associations, mostly present in Northern Centre Italy: AICQ Piemontese, AICQ Centronord, AICQ Triveneta, AICQ Emilia-Romagna, AICQ Tosco Ligure, AICQ Centro Insulare, AICQ Meridionale, AICQ Sicilia.

Institutional careers and support services often adhere to ISO norms. When considering these data within a comprehensive approach to institutional quality, the ISO model appears to be more prevalent in these contexts. This is largely due to its status as an internationally recognized standard. As reported by various stakeholders, universities, uncertain about government policies, tend to prefer adopting a model that provides greater certainty. Additionally, choosing this model offers economic advantages and introduces elements of discretion, as Higher education Institutions can select which structures to certify.

Total Quality Management (TQM)

A significant hurdle in instituting and executing a comprehensive National Qualifications Framework (NQF) in Italy has been the multitude of stakeholders engaged and the intricate nature of the education, training, and qualification system. Various qualification repositories and quality assurance mechanisms exist at both national and regional levels, each managed independently by the respective awarding bodies. Additionally, economic, and social partners at national, regional, and local levels play a role in the development and revision of qualifications, as well as in the implementation of the national system for certifying competencies.

Despite recent efforts to incorporate basic Total Quality Management criteria into higher education models, the primary focus of higher education remains on meeting compliance requirements. Inspired by ISO, Universities, particularly, emphasize compliance, being detailed on the factors under analysis. The only explicit reference to Total Quality Management, referred under Article 6 of Presidential Decree 80/2016, is on self-evaluation and the concept of continuous involvement, which involves a thorough

reconsideration of organizational culture facilitated by leadership taking responsibility for managing change.

Assessment Methodologies in Romania

In Romania, the adoption of the European Qualifications Framework (EQF) has been pivotal in aligning the country's educational qualifications with European standards, thereby facilitating cross-border mobility and lifelong learning initiatives. Through the establishment of the National Qualifications Framework (NQF), Romania has harmonized its qualification levels with those of the EQF, ensuring transparency and comparability across the European Union. This alignment not only enhances the recognition of Romanian qualifications but also fosters mutual trust and confidence in the education and training systems within Europe [10].

A significant aspect of Romania's commitment to quality assurance in education and training is evident through its implementation of the European Framework for Quality Assurance in Education and Training (EQAVET). By integrating quality assurance frameworks at both the systemic and provider levels, Romania endeavors to enhance the overall quality of its education and training systems. This approach underscores Romania's dedication to continuous improvement and adherence to European quality standards.

In terms of qualifications and curriculum development, Romania has embraced the principles outlined in the European Quality Assurance Reference Framework (EQARF). This involves the development of the National Curriculum based on validated Professional Training Standards by Sectoral Committees. Additionally, Romania has adopted a Local Development Curriculum, allowing for customization to meet local needs effectively. Accreditation of education and training programs, along with the active involvement of employers in certification exams, further underscores Romania's commitment to ensuring the relevance and quality of its qualifications.

Europass, a comprehensive toolset comprising documents such as CVs and language passports, has been extended in Romania to support various forms of mobility. This extension includes referencing qualifications to the Romanian National Qualifications Framework (NQF), the European Qualifications Framework (EQF), and the European Credit System for Vocational Education and Training (ECVET). By standardizing the presentation of qualifications, Europass facilitates smoother transitions across borders, thereby promoting employability and professional mobility.

Guidance and counseling services play a crucial role in supporting lifelong learning and career development in Romania. These services focus on imparting career management skills, providing access to specialized support services, and ensuring the delivery of high-quality guidance to individuals across various educational and employment pathways.

The adoption of the European Skills, Competences, Qualifications, and Occupations (ESCO) framework further enhances Romania's efforts to categorize labor market skills

and qualifications. By aligning with international classifications such as the International Standard Classification of Occupations (ISCO-08) and the International Standard Classification of Education (ISCED), Romania seeks to improve the recognition and validation of skills acquired through non-formal and informal learning experiences.

The European Credit System for Vocational Education and Training (ECVET) plays a vital role in facilitating the validation, recognition, and accumulation of knowledge and experiences acquired through diverse learning or work situations. Romania's focus on developing qualifications based on learning outcomes and adhering to ECVET specifications underscores its commitment to enhancing the quality and relevance of vocational education and training (VET) programs to meet the demands of the labor market.

Quality assurance in both initial and continuing vocational education and training (VET) programs is a priority for Romania. In the realm of initial VET, quality assurance mechanisms encompass VET school self-assessment, program and provider authorization and accreditation, external evaluation, and monitoring of vocational certification exams. These measures are overseen by the Romanian Agency for Quality Assurance in Pre-university Education, ensuring compliance with national standards and promoting continuous improvement in VET provision.

Continuing VET programs in Romania also undergo rigorous quality assurance processes, including program and training provider authorization, external evaluation, and self-assessment. Coordinated by the labor ministry, these mechanisms aim to ensure the quality and relevance of continuing VET programs, thereby contributing to the upskilling and reskilling of the workforce to meet evolving labor market demands.

In summary, Romania's commitment to quality assurance in education and training is evident through its alignment with European frameworks and standards. By prioritizing transparency, comparability, and continuous improvement, Romania aims to enhance the quality, relevance, and recognition of its qualifications, thereby fostering lifelong learning, professional mobility, and socio-economic development.

Methodological Framework for VET in Tourism

The rapid advancement of AI and digital technologies necessitates an evolution in vocational education and training (VET) within the tourism sector. This framework leverages insights from the Activity 2.2 analysis, incorporating successful methodologies and addressing identified skills gaps. By integrating AI literacy and ethical considerations, the proposed methodological framework aims to enhance the quality, relevance, and adaptability of VET programs in tourism, ensuring alignment with industry demands and societal expectations.

Drawing on the results from WP2/A2, the following components form the bedrock of our innovative methodological framework:

1. Lean Methodology:

- Value Stream Mapping: Identify and optimize processes that add value to the learner, reducing waste and improving efficiency in educational delivery (Womack & Jones, 1996).
- Continuous Improvement (Kaizen): Encourage incremental improvements in teaching methodologies and administrative processes through regular feedback and assessment (Imai, 1986).

2. Total Quality Management (TQM):

- Customer Focus: Center the training around learner needs, ensuring the curriculum is relevant and up-to-date with industry requirements (Oakland, 2003).
- Process-Oriented Approach: Standardize and streamline educational processes to ensure consistency and quality in training delivery.

3. European Digital Competence Framework (DigComp):

- Competence Development: Align training objectives with the digital competencies outlined in DigComp, ensuring learners are equipped with essential digital skills

Proposed Methodological Framework

The proposed EthAI Tour Methodology integrates several key components to create a robust framework for VET programs in the tourism sector. This framework is innovative in its holistic approach, combining Lean principles, Total Quality Management (TQM), Competency-Based Learning, and Design Thinking, while aligning with the European Digital Competence Framework and emphasizing ethical AI use.

1. AI Integration in Curriculum: The inclusion of AI literacy courses within the curriculum offers VET students a foundational understanding of AI's role in the tourism sector. By delving into topics like machine learning and data analytics, students can grasp the practical applications of AI in optimizing tourism experiences. These courses not only prepare students for the evolving job market but also cultivate a mindset of innovation and adaptability.

2. Ethical AI Use: Comprehensive modules on the ethical implications of AI empower VET learners to critically evaluate AI systems and their impact on society. The integration of ethical AI principles could be based on the "Ethics Guidelines for Trustworthy AI" by the

European Commission [11] into all training modules. Thus, trainees will be prepared to use AI tools responsibly, addressing ethical concerns and building trust in AI applications within the tourism sector. Also, through case studies and debates, students develop a nuanced understanding of issues like data privacy and algorithmic bias, equipping them to navigate ethical dilemmas in real-world scenarios. This ethical awareness fosters responsible AI deployment within the tourism industry [12]. By focusing on ethical AI use, the methodology ensures that trainees are not only skilled in using AI tools but also aware of the ethical implications, promoting responsible AI practices.

3. DigiComp Framework: Integration with the European Digital Competence Framework [13] ensures that VET programs align with recognized standards of digital proficiency. By incorporating DigiComp, VET institutions can systematically assess and develop students' digital competencies, ensuring they are equipped for the digital demands of the tourism industry. This alignment enhances the credibility and relevance of VET qualifications in the job market. This alignment ensures that VET programs are not only high-quality and relevant but also consistent with European standards, facilitating cross-border recognition of skills and qualifications.

4. Lean Integration: Lean methodology, traditionally used in manufacturing and business sectors, is innovatively applied to the educational context to streamline operations and focus on value creation for learners. Incorporating Lean principles into VET programs emphasizes efficiency and continuous improvement within tourism education. By streamlining processes and minimizing waste, VET institutions can optimize resource allocation and enhance student learning experiences. Lean methodologies empower VET educators to adapt curriculum delivery methods to meet evolving industry needs, ensuring graduates are well-prepared for the dynamic tourism sector [14].

5. Design Thinking: Training programs and workshops on Design Thinking enable VET educators to foster a culture of innovation and problem-solving among students. By embracing human-centered design principles, educators can empower students to identify and address challenges within the tourism sector creatively. Through collaboration and iteration, students develop the skills to design solutions that prioritize user needs and enhance tourism experiences [15]

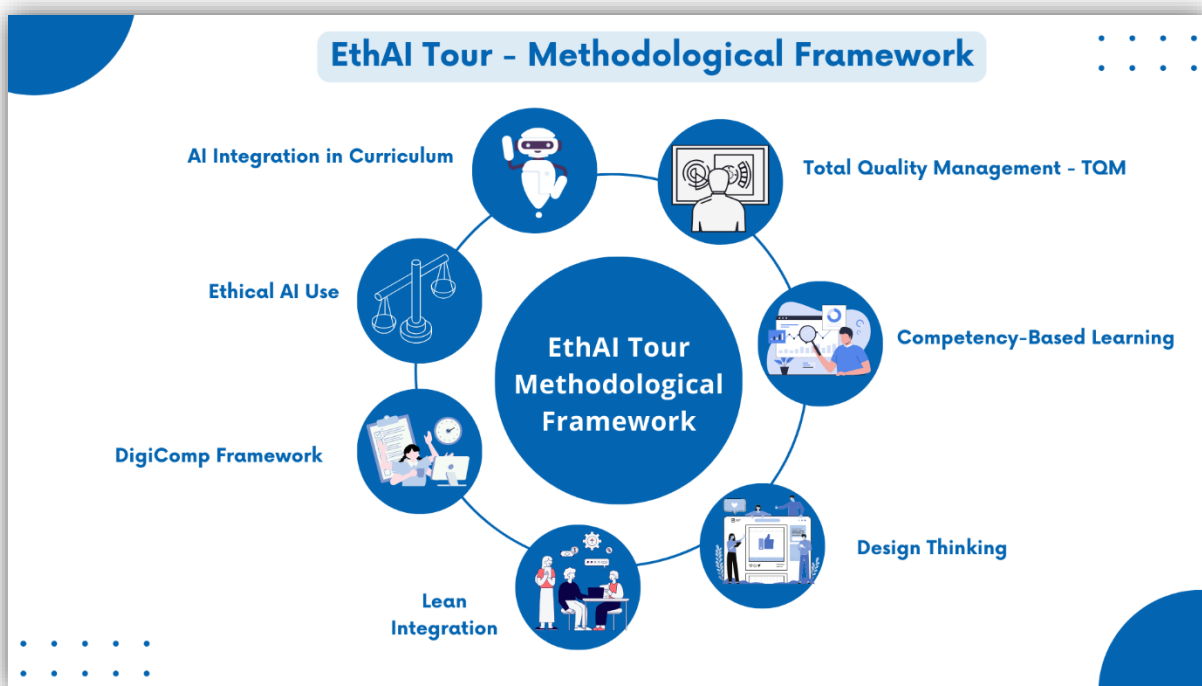
6. Competency-Based learning: Innovation labs within VET institutions provide students with experiential learning opportunities to apply AI technologies in real-world tourism contexts. By engaging in hands-on projects and collaborations, students develop practical skills and innovative thinking, enhancing their employability in the tourism industry. Additionally, research collaborations with universities and institutions enable VET programs to stay abreast of cutting-edge AI developments and contribute to industry knowledge [16]

7. Total Quality Management: Total Quality Management (TQM) principles ensure that VET programs consistently deliver high-quality education that meets the needs of students and industry stakeholders. By prioritizing continuous improvement and customer satisfaction, VET institutions can enhance the relevance and effectiveness of their programs. Implementing TQM practices fosters a culture of excellence and accountability, ultimately equipping graduates with the skills and knowledge to excel in the competitive tourism sector [17].

Implementation and Monitoring

To ensure the successful implementation of the EthAI Tour methodological framework, the following steps will be taken:

- ✓ **Training VET Educators:** Educators will receive training on the new methodologies and tools, ensuring they are well-prepared to deliver the updated curriculum.
- ✓ **Curriculum Development:** Develop and revise curricula to integrate the proposed methodologies, ensuring they are relevant and effective.
- ✓ **Regular Monitoring and Evaluation:** Establish key performance indicators (KPIs) and regular evaluation processes to monitor the effectiveness and quality of the training programs.
- ✓ **Feedback Mechanisms:** Implement feedback mechanisms, such as Lean coffee meet-ups and online questionnaires, to continuously gather input from stakeholders and make necessary adjustments.



Conclusion

The EthAI Tour methodological framework aims to enhance the quality and efficiency of VET programs in the tourism sector by integrating proven methodologies and aligning with European standards. By focusing on lean principles, continuous improvement, competency-based learning, design thinking, and ethical AI use, the framework ensures that VET centers can effectively prepare trainees for the evolving digital landscape.

This proposed framework is designed to guide the VET sector in adopting AI tools responsibly while ensuring high-quality training that meets labor market demands.

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