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Digital supported tracking of employment and career progression of apprentices for Quality Assurance in VET

Guidelines and Recommendations on Graduate Tracking of Apprentices in DUAL VET

PDF | August 2025

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This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Project Number: 2022-1-ES01-KA220-VET-000089516

Co-funded by the European Union

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Digital supported tracking of employment and career progression of apprentices for Quality Assurance in VET

WP4- Guidelines and Recommendations on Graduate Tracking of Apprentices in DUAL VET

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CONTENTS

Introduction: 5

PART I: GRADUATE TRACKING POLICIES IN DUAL VET 7

1. Overview of National Policies for Graduate Tracking in Dual VET 7

1.1 Key Policies and Strategies in Türkiye 7

1.2 Key Policies and Strategies in Spain 9

1.3 Key Policies and Strategies in Italy 11

1.4 Key Policies and Strategies in Greece 13

1.5 Key Policies and Strategies in Ireland 14

2. Comparing National Frameworks with European Strategies for Graduate Tracking in Dual VET 16

2.1 Türkiye: Alignment and Divergences with European Policies 16

2.2 Spain: Alignment and Divergences with European Policies 17

2.3 Italy: Alignment and Divergences with European Policies 19

2.4 Greece: Alignment and Divergences with European Policies 21

2.5 Ireland: Alignment and Divergences with European Policies 22

3. Best Practices in Graduate Tracking 23

3.1 Türkiye: Best Practices in Graduate Tracking 23

3.2 Spain: Best Practices in Graduate Tracking 25

3.3 Italy: Best Practices in Graduate Tracking 26

3.4 Greece: Best Practices in Graduate Tracking 27

3.5 Ireland: Best Practices in Graduate Tracking 28

4. Challenges and Areas Needing Further Development in Graduate Tracking 29

4.1 Türkiye: Limitations and Needs in Graduate Tracking 29

4.2 Spain: Limitations and Needs in Graduate Tracking 31

4.3 Italy: Limitations and Needs in Graduate Tracking 32

4.4 Greece: Limitations and Needs in Graduate Tracking 33

4.5 Ireland: Limitations and Needs in Graduate Tracking 35

PART II: RECOGNITION OF PRIOR LEARNING (RPL) AND NON-FORMAL/INFORMAL LEARNING IN DUAL VET 36

1.Comparative Overview of RPL Systems and Validation Practices in Partner Countries..... 36
1.1 Türkiye: National Overview of RPL Policies and Practices..... 36
1.2 Spain: National Overview of RPL Policies and Practices..... 38
1.3 Italy: National Overview of RPL Policies and Practices..... 40
1.4 Greece: National Overview of RPL Policies and Practices..... 42
1.5 Ireland: National Overview of RPL Policies and Practices..... 44
2. Evaluation Criteria and Challenges in RPL Implementation..... 46
2.1 Türkiye: Evaluation Framework and Implementation Challenges..... 46
2.2 Spain: Evaluation Framework and Implementation Challenges..... 48
2.3 Italy: Evaluation Framework and Implementation Challenges..... 50
2.4 Greece: Evaluation Framework and Implementation Challenges..... 52
2.5 Ireland: Evaluation Framework and Implementation Challenges..... 54
PART III: PILOT TESTING THE FOLLOW APP – RESULTS AND REFLECTIONS FROM PARTNER COUNTRIES..... 56
1. Participation and Piloting Context..... 56
2. Virtual Campus – Country-Based Responses..... 57
3. Web App – Country-Based Responses..... 58
4.User Feedback and Improvement Suggestions from National Piloting Reports..... 58
PART IV: GUIDELINES AND POLICY RECOMMENDATIONS..... 61
1. Graduate Tracking in Dual VET: Comparative Insights..... 61
2. Recognition of Prior Learning (RPL) and Informal/Non-Formal Learning..... 62
3. Potential for European-Level Adaptation and Transferability..... 63
4. Forward-Looking Trends and Strategic Challenges in Graduate Tracking and RPL in DUAL VET. 65
5.Forward-Looking Recommendations and Guidance for Future DUAL VET Tools Based on Follow APP Piloting Experiences..... 67
6.Key Improvement Guidelines for Future Graduate Tracking Tools in DUAL VET - Based on Findings from the FOLLOW APP Piloting Phase..... 70

Introduction:

In the evolving landscape of vocational education and training (VET), tracking the employment and career progression of apprentices, as well as recognising prior, non-formal, and informal learning, have become essential pillars for improving transparency, quality assurance, and responsiveness to labour market demands. The FOLLOW APP project addresses these priorities through digital tools and evidence-based research activities that enhance the monitoring and validation of learning pathways within Dual VET systems.

This consolidated report, developed under Work Package 4 (WP4): Guidelines and Recommendations on Graduate Tracking of Apprentices in Dual VET, comprises four interrelated components:

1. **Part I – Graduate Tracking Policies in Dual Vet**: This section provides an overview of national frameworks and strategic initiatives for graduate tracking across five participating countries—Türkiye, Spain, Italy, Greece, and Ireland—highlighting both convergence and divergence with European-level strategies.

2. **Part II – Methodologies for Recognition of Prior Learning (RPL)**: It presents a cross-country analysis of RPL practices and validation systems for non-formal and informal learning, including challenges in implementation and alignment with EU recommendations.

3. **Part III – Piloting Outcomes**: Based on national piloting activities using the FOLLOW APP Virtual Campus and Web App, this section reflects partner experiences in testing the tools' usability, functionality, and applicability in real-world Dual VET contexts.

4. **Part IV – Guidelines and Policy Recommendations**: Drawing from the previous sections, this final part formulates a set of actionable recommendations and methodological guidelines aimed at strengthening graduate tracking and recognition practices in Dual VET, supporting both institutional development and policy innovation.

The findings of this report build upon national contributions and piloting reports from partner organisations and align closely with the project's strategic objectives to foster transparency, comparability, and transferability of graduate outcomes in vocational education across Europe. In doing so, the report also supports the wider goals of the European Education Area and Council Recommendations on tracking graduates and validating non-formal/informal learning.

By offering an integrated reference document with policy-relevant insights and field-tested tools, this WP4 deliverable seeks to empower VET providers, policymakers, and stakeholders to build more effective, data-driven, and inclusive systems for tracking and recognising learning in Dual VET environments.

PART I: GRADUATE TRACKING POLICIES IN DUAL VET

1. Overview of National Policies for Graduate Tracking in Dual VET

1.1 Key Policies and Strategies in Türkiye

Vocational Education Program Types in Türkiye

In Türkiye, vocational education and training (VET) at the secondary level is structured around three distinct program types: the Anatolian Technical Program (ATP), the Anatolian Vocational Program (AVP), and the Vocational Training Center Program. Each program is designed to address different student aspirations and labour market needs.

The ATP and AVP both provide technician qualifications and eligibility for obtaining workplace opening certificates. ATP admits students through a centralized examination, emphasizing academic subjects (73%) and offering limited vocational training (22%). Its focus is on facilitating progression into higher education, including priority placement in related two-year vocational higher education programs without examination, and academic support in the 12th grade.

The AVP, on the other hand, operates through local placement without an entrance exam, offering a balanced curriculum with 47% academic and 40% vocational content. It includes extensive work-based learning (864 hours, 13% of the curriculum) and targets immediate employability, without academic support lessons in the final year.

The Vocational Training Centre Program, Türkiye's core Dual VET model, integrates intensive workplace learning (76%), vocational theoretical instruction (13%), and minimal academic education (11%). Students, aged 14 and above, enrol via direct agreements with employers and receive training four days per week in enterprises, with theoretical education provided one day per week in vocational schools. Upon passing skill exams, students receive a journeyman certificate in the 11th grade and a mastery qualification in the 12th. This program mainly prepares students for direct employment but also offers options for continuing into higher education through additional coursework and a secondary education diploma.

At the higher education level, Türkiye offers associate and bachelor's degree programs through vocational schools, faculties, and research centres. Associate degrees are two-year programs granting technician qualifications, with opportunities for vertical transfer to bachelor's programs. Bachelor's programs span four years and provide advanced technical knowledge, applied research skills, and access to employment in specialized technical fields.

Key Policies and Strategies

National Policy 1: Directive on Dual Vocational Education and Training Programs:
This directive integrated vocational education centres—previously operating within the scope of non-formal education—into formal vocational and technical secondary education through an amendment to the Basic Law on National Education No. 1739. Its objective is to establish clear procedures and criteria for the implementation of Dual Vocational Education and Training (Dual VET) through structured partnerships between institutions affiliated with the Ministry of National Education (MoNE) and industry partners. The directive has been actively implemented since the 2018–2019 academic year, under the authority of the Ministry of National Education.

The directive sets out several key components for the effective implementation of Dual VET. It mandates structured collaboration through formal protocols established between vocational schools affiliated with MoNE and relevant industry sectors. Student admission is subject to clearly defined criteria, including educational prerequisites and mandatory training agreements with enterprises. The practical component of training is primarily conducted within enterprises under the supervision of certified instructors. Responsibilities of both students and businesses are formalized through written vocational training agreements.

In addition, the directive provides detailed guidance on matters such as attendance, leave entitlements, compensation, and social security coverage for apprentices. Evaluation and assessment processes are coordinated by examination boards that include representatives from vocational institutions, chambers, and industry. All practices under the directive are designed to align with the provisions of the Basic Law on National Education No. 1739, Vocational Education Law No. 3308, and relevant social security legislation.

National Policy 2: Vocational and Technical Education Policy Document:

The Vocational and Technical Education Policy Document, officially published on August 10, 2024, presents a comprehensive strategic framework to improve access to vocational education, raise its quality, and ensure alignment with labour market needs. Framed by the principle "Everyone Should Have a Profession," the policy promotes stronger collaboration between vocational education institutions and industry stakeholders. It outlines a series of nationwide reforms, including curriculum updates, infrastructure modernization, and expanded practical training through regional and sector-integrated school models.

A key initiative introduced by the policy is the development of an integrated graduate tracking system, known as e-Mezun, designed to evaluate the effectiveness of vocational education and training (VET) programs. This system consolidates data from multiple national institutions, including the Ministry of National Education (MoNE), the Turkish Statistical Institute (TURKSTAT), the Turkish Employment Agency (İŞKUR), the Social Security Institution (SGK), and the Council of Higher Education (YÖK).By linking education, employment, and social security records, the e-Mezun system enables continuous monitoring of graduates' career paths, providing policymakers with evidence-based insights into how well VET programs prepare students for the labour market.

Additional measures include aligning curricula with Türkiye's digital and green transformation goals, enhancing vocational educators' competencies through sector-specific training, and establishing modern labs and simulation environments, particularly in Organized Industrial Zones. The document also supports initiatives aligned with the defense industry and encourages public awareness through career fairs, competitions, and communication campaigns aimed at improving the perception of vocational education.

1.2 Key Policies and Strategies in Spain

National Policy 1: Organic Law 3/2022 on the Organization and Integration of Vocational Training:

In April 2022, Spain introduced Organic Law 3/2022 with the objective of establishing a unified vocational training (VET) system that incorporates structured graduate tracking mechanisms. The law aims to improve the employability of VET graduates and ensure alignment between training programmes and labour market needs. It requires systematic data collection on graduate employment rates to support policy planning and curriculum reform.

The Ministry of Education and Vocational Training (MEFP) is responsible for setting national-level guidelines, while the regional governments are tasked with implementation within their respective territories. The law is currently active and being progressively rolled out across Spain's autonomous communities. As part of its implementation, digital tracking platforms and employment monitoring tools are being developed.

Key components of this policy include the creation of a data-driven monitoring system to track employment outcomes, enhanced collaboration between companies and training institutions for real-time labour market feedback, and the establishment of a National Observatory for Vocational Training to provide centralized access to tracking data.

Graduate tracking under this framework involves multiple actors. The MEFP oversees national policies and collects education-related statistics. The National Institute of Statistics (INE) contributes with tools such as the Labour Force Survey (EPA), including modules on graduate outcomes. Regional education authorities, such as those in Catalonia and the Basque Country, manage Dual VET implementation and operate their own tracking systems. The Public State Employment Service (SEPE) and regional employment offices provide labour market data and match training outcomes with job market demands. Additional stakeholders, including Chambers of Commerce, sectoral observatories, and VET training centres, contribute sector-specific data and engage in graduate follow-up activities, either formally or through EU-funded initiatives.

National Policy 2: Youth Guarantee Plus Plan (2021–2027):

The Youth Guarantee Plus Plan is a national employment initiative targeting young people under the age of 30. Launched in 2021 and co-funded by the European Social Fund (ESF), it aims to ensure access to both training and employment opportunities.

Graduate tracking mechanisms are an integral part of the plan, particularly for evaluating apprenticeship outcomes and job placement rates.

This policy is led by the Ministry of Labour and Social Economy, in coordination with the Public Employment Service (SEPE) and regional employment services. Its implementation varies by region, with each autonomous community operating its own monitoring programmes for apprentices.

Core elements of the Youth Guarantee Plus Plan include coordinated action between training providers, public employment offices, and businesses; structured job placement support; and personalized career guidance. The plan also prioritizes the digitalization of graduate tracking via SEPE's National Labour Market Observatory, which facilitates the evaluation of labour market integration for young learners.

In addition to these two main policies, other legislative and strategic frameworks support graduate tracking in Spain. These include Royal Decree 1224/2009 on the Recognition of Professional Competences, which ensures the recognition of prior learning, and the Modernization Plan for Vocational Education (2020–2025), which promotes the use of digital tools in graduate follow-up systems.

1.3 Key Policies and Strategies in Italy

National Policy 1: Guidelines for Programming and Implementing Vocational Education and Training (VET) and Higher Technical Education and Training (IFTS) in Dual Mode

Since 2022, Italy has implemented new national guidelines aimed at strengthening the role of work-based learning within the VET system. These guidelines were introduced by the Ministry of Labour and Social Policies, with technical coordination provided by INAPP (National Institute for Public Policy Analysis). The main objective of the policy is to improve the employability of students by ensuring that educational content is more closely aligned with the skills demanded by the labour market.

The guidelines promote the use of multiple forms of dual training models, including simulated work-based learning, enhanced work-based learning, and dual apprenticeship schemes. Emphasis is placed on fostering collaboration between

training providers and local businesses to ensure students gain meaningful, hands-on experience in real company environments.

Another key aspect of this policy is the establishment of continuous monitoring and evaluation mechanisms to assess the effectiveness of training outcomes and their alignment with regional and national labour market demands. By creating structured pathways that integrate formal education and workplace training, the guidelines aim to modernize the Italian VET system and reinforce its relevance in an evolving employment landscape.

National Policy 2: National Recovery and Resilience Plan (PNRR), Mission 5, Component 1, Investment 3 "Dual System"

The National Recovery and Resilience Plan (PNRR), launched by the Italian Government in response to the European Union's post-pandemic recovery strategy, includes a specific investment focus on expanding the dual education system. Mission 5, Component 1, Investment 3—referred to as the "Dual System" measure—seeks to align education and training systems more effectively with labour market needs, particularly in support of youth employability.

Since 2021, the plan has been actively implemented and co-funded through EU recovery mechanisms. It supports a significant expansion of dual training schemes, aiming to reach a broader and more diverse population of learners. It also promotes greater involvement of businesses and local stakeholders in shaping and delivering vocational training content.

To ensure impact, the plan incorporates monitoring and evaluation mechanisms to track employment outcomes and assess how effectively dual training programmes contribute to skill acquisition and labour market integration. This policy represents a large-scale investment in dual education as a strategic tool for Italy's economic and social resilience, particularly in the context of youth transition to employment and the acquisition of future-oriented competences.

National Policy 3: Annual Monitoring of VET Participation and Outcomes

The Annual Monitoring of VET Participation and Outcomes is a continuous research-based policy instrument coordinated by INAPP on behalf of the Ministry of Labour

and Social Policies. It is designed to produce evidence-based insights into the performance of VET systems across Italy by collecting and analysing data on participation rates and graduate outcomes.

The monitoring process involves the collection of both qualitative and quantitative data from all regions and autonomous provinces, covering the participation of learners in VET and work-based learning programmes. It examines employment outcomes by evaluating indicators such as employment rates, types of employment, and economic sectors where graduates are absorbed.

The resulting data serve a critical role in informing public policy and guiding ministerial decisions regarding budget allocation, planning priorities, and the development of VET programmes at both national and regional levels. This monitoring activity provides a key reference for evaluating the real-world effectiveness of vocational training pathways and their capacity to support inclusive, skill-based economic growth.

1.4 Key Policies and Strategies in Greece

In Greece, the tracking of graduates from Dual Vocational Education and Training (DUAL VET) programs is supported by several key national policies and initiatives designed to improve the quality and relevance of vocational education in response to labour market needs. Firstly, the National Organisation for Certification of Qualifications and Vocational Guidance (EOPPEP), under the supervision of the Ministry of Education and Religious Affairs, launched a pilot project to establish a Graduate Tracking System for Initial Vocational Education and Training (IVET). This system aims to gather data on graduates' employment status, further education paths, and the relevance of their training to their current occupations. Secondly, Law 4763/2020, enacted in December 2020, introduced a new legal framework for Vocational Education and Training (VET) and Lifelong Learning (LLL). The law established the National System of VET at European Qualifications Framework (EQF) levels 3, 4, and 5, emphasizing the importance of monitoring and evaluating the outcomes of VET programs. Graduate tracking is a core component of this monitoring process, ensuring that training remains aligned with labour market demands. In addition, EOPPEP collaborates with the National Institute for Labour and Human Resources (EIEAD) to conduct in-depth studies on the outcomes of VET graduates, particularly those from post-secondary VET programs (Institutes of Vocational

Training – IEK). These studies provide both quantitative and qualitative insights into graduates' transition into the labour market, employment rates, and the relevance of their acquired skills. Finally, Greece's efforts are aligned with European policies, including the 2017 Council Recommendation on tracking graduates and EU priorities outlined in the Riga Conclusions and the New Skills Agenda for Europe. These frameworks promote the systematic collection and analysis of graduate data to inform national policy development and enhance the effectiveness of vocational education and training systems.

1.5 Key Policies and Strategies in Ireland

National Policy 1: Transforming Learning 2020–2024 – Ireland's National Further Education and Training Strategy

Ireland's national strategy for Further Education and Training (FET), titled Transforming Learning 2020–2024, establishes a unified vision for developing a more integrated and strategic FET system—encompassing VET—across the country. The policy is structured around three central pillars: building skills, fostering inclusion, and facilitating learner pathways. It positions FET as a system that is universally accessible, rooted in local communities, and responsive to both economic development and social cohesion objectives. The strategy promotes the notion that FET is for everyone, regardless of prior educational attainment.

The implementation of the strategy is led by SOLAS, Ireland's national FET authority. A dedicated project management office and steering group—comprising key stakeholders such as the Department of Further and Higher Education, Research, Innovation and Science (DFHERIS), Quality and Qualifications Ireland (QQI), Education and Training Boards (ETBs), and Education and Training Boards Ireland (ETBI)—was established in 2021 to ensure oversight and coordination.

Regarding graduate tracking, the strategy emphasizes collaborative work between ETBs and QQI in building transparent quality assurance mechanisms for FET provision. It also highlights the importance of investing in innovation, supporting quality enhancement, and engaging with SOLAS on systematic data collection for tracking graduate outcomes. Public awareness efforts are also included, particularly in promoting the diversity of learning opportunities and pathways available through FET.

National Policy 2: The Action Plan for Apprenticeship 2021–2025

The Action Plan for Apprenticeship 2021–2025 is a national policy aimed at building a flexible, inclusive, and high-quality apprenticeship system in Ireland. Overseen by the Department of Further and Higher Education, Research, Innovation and Science, the plan seeks to deliver an apprenticeship model that is attractive and easy to engage with—for both learners and employers—while maintaining high standards and delivering recognised qualifications.

The policy defines five key objectives:

1. A High Quality and Innovative Approach – Apprenticeship pathways are expected to deliver excellence in work-based learning, incorporating innovation to address evolving skill demands.
2. Employer-Driven Responses – Employers across all sectors are positioned as central partners in shaping apprenticeships, ensuring their contribution to productivity and sustainable growth.
3. Apprenticeship for All – The demographic profile of apprentices should more closely mirror the general population, promoting equity and inclusivity.
4. A Valued Option – Apprenticeships are to be recognised across the tertiary education landscape as respected and in-demand qualifications based on real-world experience.
5. A Single Cohesive System – A unified governance structure is envisioned to support a streamlined, stakeholder-informed apprenticeship model.

Graduate tracking is addressed explicitly under Key Deliverable 11, which focuses on supporting apprentices through their learning journey via enhanced communication and learner ownership. It is also reflected in Key Deliverable 2, which calls for the development of a performance framework to evaluate the efficiency and effectiveness of the apprenticeship system, including graduate tracking as a core component.

2. Comparing National Frameworks with European Strategies for Graduate Tracking in Dual VET

2.1 Türkiye: Alignment and Divergences with European Policies

The Directive on Dual Vocational Education and Training Programs, introduced by the Turkish Ministry of National Education (MoNE) in 2018, demonstrates a high level of alignment with several key European vocational education and training (VET) policy frameworks. In particular, the directive reflects the core principles and strategic priorities of the European Alliance for Apprenticeships (EAfA), the European Quality Assurance Reference Framework for VET (EQAVET), and the 2020 Council Recommendation on VET.

In relation to the European Alliance for Apprenticeships (EAfA), the directive establishes clear and formalized cooperation protocols between vocational education institutions and industry partners (Article 7), mirroring the EAfA's call for structured partnerships and shared responsibility in delivering high-quality apprenticeships. Furthermore, the use of written apprenticeship contracts (Article 11) between students and enterprises corresponds directly to EAfA's emphasis on contractual frameworks as a foundation for quality and mutual accountability in apprenticeship training.

The directive exhibits strong consistency with the EQAVET framework, particularly through its quality assurance provisions. The organization of evaluation and certification processes via examination boards composed of representatives from vocational schools, chambers, and industry bodies (Articles 15–28) reflects EQAVET's core quality assurance principles. These mechanisms are designed to ensure both transparency and validity in assessment, while also promoting a culture of continuous improvement. In addition, the directive emphasizes stakeholder engagement as a fundamental component of the vocational training process. Regular participation of social partners—such as employers and sectoral bodies—in the planning and evaluation of training programs (Articles 16–24) is directly aligned with EQAVET's emphasis on inclusive governance and multi-actor collaboration.

The directive is also in close agreement with the 2020 Council Recommendation on VET, particularly in terms of promoting workplace-based learning and flexible learning pathways. A significant proportion of the training defined in the directive

takes place in real working environments (Articles 9–11), which reflects the Council Recommendation's prioritization of practical, job-embedded learning experiences. Moreover, the Turkish system's ability to offer multiple certification options, such as journeyman and master qualifications alongside a secondary education diploma (Articles 15, 28), corresponds to the European Union's goals for permeability between vocational and general education pathways and the recognition of learning outcomes acquired through different formats and settings.

However, despite the strong alignment on paper between Türkiye's directive and European vocational education policies, certain gaps and implementation challenges remain.

One key limitation concerns the lack of a centralized and automated graduate tracking system fully integrated with administrative data sources. While the Vocational and Technical Education Policy Document envisions a graduate tracking database drawing from MoNE, TÜİK, SGK, YÖK, and İŞKUR, the system—known as *e-Mezun*—is still in its early implementation phase and does not yet allow for continuous, real-time monitoring or institutional-level analytics.

Another challenge is the inconsistent capacity of vocational institutions to independently implement graduate tracking mechanisms. Many schools lack trained staff, digital tools, or dedicated protocols for systematically collecting and analysing alumni data.

Furthermore, although the directive mandates workplace learning, the quality and supervision of enterprise-based training vary widely, particularly in smaller enterprises or rural regions where oversight and mentor support may be limited.

Lastly, data interoperability between institutions remains weak, making it difficult to link educational records with labour market outcomes across national systems—an area where more advanced EU Member States such as Finland or the Netherlands have made significant progress.

2.2 Spain: Alignment and Divergences with European Policies

Spain's graduate tracking policies demonstrate a considerable degree of alignment with key European frameworks, particularly the European Quality Assurance in

Vocational Education and Training (EQAVET). Nonetheless, significant structural and procedural differences persist between Spain's national approach and broader European practices.

In the case of EQAVET, Spain incorporates several of its principles by embedding quality assurance mechanisms within its graduate tracking systems. The Spanish National Institute of Qualifications (INCUAL) employs EQAVET indicators to evaluate the employment outcomes of vocational education and training (VET) graduates. Furthermore, Spain has adopted a competency-based education framework, improving transparency in skills assessment and responding to labour market demands. Regional governments have also established dedicated observatories, such as the *Observatorio de la FP* in Castilla y León, in line with EQAVET's recommendations for robust and localized data collection.

Despite these alignments, there are notable discrepancies. Spain lacks a unified national graduate tracking system, whereas EQAVET promotes harmonized EU-wide data collection standards. Additionally, employer participation in Spain's tracking efforts remains limited, contrasting with EQAVET's emphasis on business-education collaboration. The variability in regional implementation across autonomous communities further complicates national coordination, creating inconsistency in meeting EQAVET quality benchmarks.

Regarding the European Credit System for Vocational Education and Training (ECVET), Spain partially aligns with its philosophy through the implementation of credit-based qualifications. The system of Certificados de Profesionalidad reflects ECVET's objective of recognizing skills gained through prior learning. Modular learning pathways have been introduced, enabling partial certification and flexible access to formal qualifications. In addition, Recognition of Prior Learning (RPL) mechanisms in Spain incorporate ECVET principles, supporting the validation of non-formal and informal learning experiences.

Nevertheless, Spain has not fully adopted ECVET's credit transfer system, which limits the mobility of VET graduates across EU countries. The national qualification framework remains highly centralized, making cross-border credit transfer complex. Furthermore, some economic sectors lack clearly defined recognition procedures, whereas ECVET encourages inter-sectoral mobility and harmonization.

In terms of Europass and Microcredentials, Spain has taken steps to integrate these tools into its national qualifications framework. The government endorses Europass digital credentials to improve qualification transparency and portability within the EU. Moreover, universities and VET centers are increasingly offering microcredential courses aimed at enhancing employability and supporting continuous upskilling. There is also growing awareness among employers of the value of microcredentials as valid indicators of specific competencies.

However, the implementation of fully digitalized micro credentials is not yet universal across all Spanish institutions, despite Europass's advocacy for online verification. The acceptance of micro credentials by traditional employers also remains limited when compared to other EU countries. In addition, Spain is still in the process of incorporating micro credentials into its national qualification registers, which delays systemic recognition.

A key point of divergence between Spain and other European countries lies in the absence of a centralized, national-level digital graduate tracking platform. To enhance coordination and data quality, Spain could benefit from adopting a nationwide tracking system, similar to existing models in countries such as Germany, to standardize graduate outcome data collection across all autonomous regions.

2.3 Italy: Alignment and Divergences with European Policies

Italy's national policies on vocational education and training (VET) demonstrate substantial alignment with key European frameworks related to quality assurance, graduate tracking, and skills development. However, variations in regional implementation and systemic integration introduce some discrepancies when compared to EU-level expectations.

The European Quality Assurance in Vocational Education and Training (EQAVET) has played a significant role in shaping Italy's VET strategy. The Italian National Qualifications Framework (NQF) incorporates quality assurance elements that reflect EQAVET's core principles, including the emphasis on continuous improvement and active stakeholder involvement. A structured cycle of planning, implementation, evaluation, and review has been adopted to drive quality enhancement, consistent with EQAVET guidelines. Moreover, Italy has introduced specific indicators and descriptors to assess VET outcomes, closely aligned with those recommended by the

EQAVET framework. Despite this, regional autonomy within the Italian education system results in divergent practices across territories, particularly concerning data collection and graduate tracking. These variations may affect the consistency and comparability of national-level outcomes, diverging from the standardized and harmonized approach promoted by EQAVET.

In relation to the Council Recommendation on Tracking Graduates (2017), Italy has demonstrated alignment through initiatives designed to monitor employment outcomes of VET graduates. Data collection efforts aimed at assessing graduates' labour market integration reflect the Council's emphasis on systematic tracking as a means to enhance employability and inform policymaking. This recommendation has further encouraged Italy to expand and refine its tracking systems, reinforcing the need for robust data as a foundation for evaluating the effectiveness of VET programs. Nonetheless, as in the case of EQAVET, the implementation of graduate tracking varies across regions and institutions. Differences in data collection methodologies, coverage, and institutional capacity present ongoing challenges for achieving uniform, comparable, and aggregated results on a national scale—outcomes that are central to the European vision for graduate tracking.

Italy's VET strategies also align with the New European Skills Agenda (2016), particularly in terms of improving the responsiveness of training programs to labour market needs. National efforts to strengthen skills intelligence and information systems are consistent with European priorities for fostering employability and competitiveness. The agenda has influenced Italy to invest in mechanisms that support the identification of evolving skill demands and to enhance collaboration between educational providers and employers. These actions aim to ensure that VET curricula remain aligned with emerging industry trends and labour market shifts. However, despite notable progress, there are still challenges in fully operationalizing this alignment. The integration of labour market intelligence into training design and implementation remains uneven, and the pace of curriculum updates does not always keep up with the dynamic evolution of skill requirements.

In conclusion, while Italy's VET and graduate tracking strategies are firmly informed by European policy frameworks, achieving full alignment—particularly in terms of coherence and consistency across regions—remains an ongoing process. The influence of EQAVET, the 2017 Council Recommendation, and the New Skills Agenda

is clear in national policy orientation, yet further efforts are required to harmonize implementation and strengthen system-wide data comparability and agility.

2.4 Greece: Alignment and Divergences with European Policies

Graduate tracking systems have become a key priority across European Union (EU) Member States in recent years, driven by strategic initiatives such as the 2017 Council Recommendation on Tracking Graduates, the New Skills Agenda for Europe, and the Youth Guarantee. These European-level frameworks aim to strengthen the availability and use of graduate data for improving education policy, enhancing the labour market relevance of education and training, and supporting lifelong learning pathways.

In this context, Greece has taken meaningful steps to develop its graduate tracking infrastructure, yet its current system reveals both convergences and notable differences when compared to more advanced European models. Graduate tracking efforts in Greece have been primarily coordinated by the National Organisation for the Certification of Qualifications and Vocational Guidance (EOPPEP), in collaboration with the National Institute for Labour and Human Resources (EIEAD). These efforts have largely taken the form of pilot projects and targeted surveys, focusing particularly on graduates from Institutes of Vocational Training (IEKs). The data collected through these surveys has centred on self-reported indicators such as employment status, participation in further education, and graduate satisfaction regarding the relevance of their training.

Although these initiatives mark substantial progress, Greece's graduate tracking system remains at an early stage of institutional development, particularly in terms of comprehensive coverage, integration of administrative data, and systemic interoperability. In contrast, Member States such as Finland, the Netherlands, and Germany have established more comprehensive and institutionalised systems that rely extensively on linked administrative datasets—including data from social security, taxation, and education registers. For instance, Statistics Finland maintains a highly developed register-based system capable of tracking long-term employment trajectories, regional mobility, and wage development without requiring direct input from graduates. Likewise, in the Netherlands, the combination of the ROA School Leaver Surveys and the DUO administrative database provides detailed and policy-

relevant insights into graduate pathways, forming a critical component of institutional and national feedback mechanisms.

A key methodological divergence between Greece and these countries lies in the type of data employed. While many Northern and Western European countries prioritize register-based systems for their reliability and longitudinal tracking capacity, Greece's reliance on survey-based methodologies makes the system more susceptible to issues such as low response rates, non-response bias, and limited long-term follow-up. Additionally, in countries where graduate tracking is legally mandated and integrated into quality assurance and performance-based funding models, Greece has only partially embedded such mechanisms into its educational governance structures.

From an operational standpoint, the level of multi-stakeholder coordination further distinguishes Greece from more integrated European models. In countries like Austria and Denmark, graduate tracking is managed through coordinated efforts between ministries of education and labour, national statistical authorities, and social partners. Greece, while engaging EIEAD and the Ministry of Education, continues to experience fragmentation and limited data interoperability across education, employment, and social systems. This lack of systemic coordination hinders the development of a fully automated and scalable national tracking infrastructure.

Despite these challenges, Greece is actively pursuing convergence with European best practices. The adoption of Law 4763/2020, aimed at creating an integrated National VET and Lifelong Learning System, demonstrates a policy commitment to strengthening outcome-based monitoring and evaluation. Greece's participation in EU-funded initiatives, including CEDEFOP pilot projects, EQAVET national referencing processes, and the Youth Guarantee Implementation Plan, further underscores the country's strategic intention to enhance both the methodological soundness and the functional relevance of its graduate tracking efforts.

2.5 Ireland: Alignment and Divergences with European Policies

In the Irish context, the Action Plan for Apprenticeship 2021–2025 demonstrates substantial alignment with the European Quality Assurance in Vocational Education and Training (EQAVET) framework. Both the national plan and the European

framework stress the importance of a structured and systematic approach to quality assurance in VET. A key development under the Action Plan is the establishment of a National Apprenticeship Office, which aims to centralise governance and oversight—reflecting EQAVET's emphasis on coherent and transparent quality assurance mechanisms.

The influence of EQAVET principles on Irish policy is clearly visible in the plan's provisions for reviewing the national apprenticeship quality assurance framework and in the implementation of a partner-led system of programme governance. These align closely with EQAVET's indicative descriptors, particularly regarding the active involvement of stakeholders and the cyclical evaluation of programme quality. Furthermore, the plan's focus on enhancing quality assurance through future apprenticeship consortia underlines a commitment to continuous improvement in line with EQAVET guidelines.

Nonetheless, certain discrepancies exist between the Action Plan and the EQAVET framework. While the plan broadly supports the development of a quality assurance culture, it does not explicitly reference the use of specific quality indicators—such as completion rates, employment outcomes, or learner satisfaction levels—that are central to EQAVET's monitoring approach. In addition, EQAVET recommends mechanisms to identify and respond to labour market training needs, which are not fully articulated within the current scope of the Action Plan. Integrating these elements more explicitly could further strengthen the alignment between national apprenticeship strategies and European quality assurance standards.

3. Best Practices in Graduate Tracking

3.1 Türkiye: Best Practices in Graduate Tracking

Practice 1: My Profession, My Life Portal

The "My Profession, My Life Portal" is an online platform developed through the Vocational Skills Mobilisation Cooperation Protocol signed in January 2023 by the Ministry of National Education, the Union of Chambers and Commodity Exchanges of Türkiye, and UNICEF. The portal provides extensive resources for students regarding internships, in-company training, employment opportunities, job descriptions,

educational pathways, salaries, and future job market trends. It also offers interactive tools to help students assess their interests, competencies, and career paths, promoting informed career choices.

This practice enhances access to comprehensive, career-focused information, enabling students to make informed decisions regarding their vocational paths. It strengthens the connection between students and potential employers, thereby improving internship and employment opportunities. Moreover, it fosters a better alignment between student competencies and labour market demands, which ultimately enhances graduate employability. Finally, the portal contributes positively to the overall perception and attractiveness of vocational education by raising awareness of available vocational opportunities.

More info: https://meslegimhayatim.meb.gov.tr/

Practice 2: E-Graduate System

The E-Graduate System ("E-Mezun") is an online platform developed by the Turkish Ministry of Education to systematically monitor graduates from vocational and technical secondary education institutions. It tracks graduates' employment status, higher education progression, and career advancement, evaluating how effectively their vocational qualifications align with labour market needs. The portal collects detailed data on the sectors graduates enter, positions they hold, and their overall career trajectory, providing valuable insights for labour market analysis. Additionally, E-Mezun facilitates direct communication between graduates and employers through features such as job postings, networking opportunities, and career development resources. By strengthening collaboration among educational institutions, graduates, and employers, the system effectively addresses the evolving needs of both graduates and the labour market.

The system offers direct access to employment opportunities tailored to the needs of vocational graduates, streamlining their transition from education to the workforce. It also enhances professional networking by fostering stronger connections between graduates, industry professionals, and peers. In addition, the platform provides data-driven insights into employment trends and graduate career trajectories, allowing for

more effective planning and evaluation of vocational programs. Finally, it improves employability through targeted career support resources, including job application guidance and interview preparation tools.

More info: https://emezun.meb.gov.tr/

3.2 Spain: Best Practices in Graduate Tracking

While graduate tracking in Spain remains under development and lacks a fully integrated national framework, several relevant practices and data sources have emerged at both state and regional levels. Currently, tracking efforts are fragmented, with considerable variation in coverage, methodology, and data integration.

At the national level, the National Institute of Statistics (INE) conducts regular surveys such as the Labour Force Survey (EPA) and the Survey on the Transition from Education to the Labour Market. These surveys provide employment-related data for vocational education and training (VET) graduates. However, they are not conducted with the consistency or depth necessary to support a comprehensive graduate tracking system.

Some autonomous communities have developed their own monitoring mechanisms using administrative data or targeted surveys to assess employment outcomes and satisfaction levels of VET graduates. Nonetheless, these regional efforts are heterogeneous, both in scope and methodology, which limits their comparability and overall usefulness at national scale.

The Ministry of Education and Vocational Training (MEFP) and regional educational authorities also collect academic and enrolment data through systems like the Sistema de Información de la Formación Profesional (SIFP). However, these datasets are rarely connected to labour market outcomes, limiting their potential for meaningful graduate tracking.

In parallel, Spain's Public Employment Service (SEPE) and regional employment offices collect information on registered job seekers, including VET graduates. Although this information could support graduate tracking, it is not yet systematically integrated with education sector databases.

As a result, Spain's existing graduate tracking practices are fragmented and insufficient for capturing the long-term career trajectories of VET graduates. Key challenges include the need to improve data interoperability between educational and employment systems and to standardise methodologies across regions to ensure consistency and comparability. Addressing these gaps remains a strategic priority for building a more coherent and actionable graduate tracking system.

Practice 1: Regional Graduate Tracking Observatory – Castilla y León
The Observatorio de la Formación Profesional in Castilla y León is a dedicated monitoring body that tracks employment rates among vocational graduates. It collects data from employer surveys, feedback from training centres, and regional employment statistics. The observatory publishes annual reports that inform curriculum adjustments in line with regional industry demands. This initiative fosters stronger collaboration between regional governments, vocational institutions, and employers.
More info: https://observatoriofp.educa.jcyl.es/

Practice 2: Real-Time Employment Tracking via Lanbide – Basque Country
Lanbide, the employment service of the Basque Country, employs real-time labour market data to track the career progression of Dual VET graduates. The system cross-references Social Security records and employer-provided data, enabling the generation of sector-specific employment reports. These insights enhance regional workforce planning and help align vocational training with labour market needs.
More info: https://www.lanbide.euskadi.eus/

Ptactice 3: Digital Graduate Tracking via SEPE – National Level
The Observatorio del Mercado de Trabajo, coordinated by SEPE, monitors employment outcomes of young workers, including VET graduates. It compiles data from regional employment services and private sector sources. Although it contributes to labour market analysis, the system does not yet include a dedicated or systematic component for tracking apprentices in Dual VET.
More info: https://www.sepe.es/

3.3 Italy: Best Practices in Graduate Tracking

One of the key best practices in Italy's graduate tracking efforts is the establishment of structured collaboration between governmental bodies, universities, and research

institutions. A notable example of this approach is the partnership with AlmaLaurea, a consortium that systematically collects and analyses data on graduates from member universities. This collaboration facilitates comprehensive monitoring of graduates' transitions into the labour market, including employment outcomes, further education pursuits, and the use of acquired skills. The existence of a centralized and robust database enables policymakers and educational institutions to assess the effectiveness of academic programs, support quality assurance processes, and align educational offerings with labour market needs based on data-driven insights.

Italy also demonstrates strong engagement at the European level through its participation in initiatives such as the European Graduate Tracking Initiative (EGTI). This involvement aims to harmonize methodologies across member states, fostering the adoption of best practices and enabling cross-country comparisons. By benchmarking its performance and aligning with shared indicators, Italy enhances the overall quality of its graduate tracking systems and identifies areas where further development is needed.

Another noteworthy initiative is Italy's participation in the "On Track" project (Project N°: 2018-1-SK01-KA202-046331), which directly addresses one of the key challenges in the implementation of EQAVET—namely, the lack of feedback mechanisms between the review and planning stages of the quality assurance cycle. Since EQAVET operates on a four-stage cycle (planning, implementation, evaluation, and review), the ability to systematically gather, analyze, and interpret evidence from past institutional performance is critical. The "On Track" project seeks to establish and test a VET graduate tracking system specifically for graduates of initial vocational education and training (IVET) schools and institutes. This system aims to close the feedback loop by enabling VET providers to use tracking data to inform future strategic planning and enhance program quality.

3.4 Greece: Best Practices in Graduate Tracking

Greece has implemented several notable practices in the field of graduate tracking, particularly within the vocational education and training (VET) sector, that align with European standards and demonstrate potential for further development.

A key initiative is the pilot Graduate Tracking System developed by the National Organisation for the Certification of Qualifications and Vocational Guidance (EOPPEP). This system focuses on post-secondary VET graduates from Institutes of Vocational Training (IEK), collecting both quantitative and qualitative data on employment status, further education engagement, the relevance of studies to job roles, and employer satisfaction. One of the strengths of this system is its focus on comparing certified and non-certified graduates, which has provided valuable insights: for example, certified IEK graduates are three times more likely to be employed, and 62.97% report working in fields directly related to their studies. Additionally, nearly half of surveyed employers (48.05%) indicated that EOPPEP certification significantly influences recruitment decisions.

Another good practice is the collaborative research conducted by EOPPEP and the National Institute for Labour and Human Resources (EIEAD), which has enriched the graduate tracking process through detailed surveys and field research. These surveys not only capture graduate outcomes but also measure satisfaction and provide feedback loops between training institutions and the labour market. The findings from these studies have been used to inform the development of new occupational profiles and to update existing VET curricula, thereby improving the alignment between training provision and labour market needs. Greece's participation in EU-funded pilot projects and CEDEFOP-supported studies has also contributed to the evolution of its graduate tracking efforts. These projects have helped embed tracking mechanisms into broader policy discussions and encouraged the use of graduate data for evidence-based decision-making.

3.5 Ireland: Best Practices in Graduate Tracking

One of the notable best practices in Ireland's graduate tracking system is embedded within the National Further Education and Training (FET) Strategy 2020–2024, which emphasizes the importance of data and evidence-based policy and reporting. The strategic implementation plan derived from this strategy incorporates dedicated actions to strengthen graduate tracking mechanisms.

A key initiative aligned with this strategic priority is the outcomes report published by SOLAS, Ireland's state agency for FET, focusing on early leavers from FET programs. The report analyses outcomes for learners who enrolled and exited their

courses in 2017, utilizing data from the Programme and Learner Support System (PLSS) and the Educational Longitudinal Database (ELD).

The analysis examines the educational transitions and employment outcomes of early leavers during the 2018 calendar year. It provides valuable insights into the factors influencing learner progression and attrition, including variables such as ISCED field of study, programme category, award level, and salary level for those who entered employment. This study not only facilitates a better understanding of the reasons learners may exit FET programmes prematurely but also supports the tracking of their longer-term educational and labour market trajectories. The findings offer critical evidence to inform policy decisions and improve learner retention and progression strategies within the FET system.

4. Challenges and Areas Needing Further Development in Graduate Tracking

4.1 Türkiye: Limitations and Needs in Graduate Tracking

Identified Gaps in Türkiye's Vocational and Technical Education Policy Paper:

1. Perception and Awareness:

- Persistent negative societal attitudes and biases towards vocational education and training (VET), resulting in vocational pathways being viewed as less desirable or a fallback option.
- Inadequate information dissemination and guidance regarding vocational education opportunities for students, families, and society at large.
- Insufficient career counselling and vocational orientation services in lower secondary education, affecting informed educational and career choices.

2. Infrastructure and Educational Environment:

- Outdated vocational training facilities, workshops, and laboratories failing to reflect current industry technologies and standards.
- Limited financial resources allocated to upgrading vocational training infrastructure, constraining the effectiveness of practical training.
- Duplication of similar vocational programs in the same geographic area, leading to resource inefficiencies and unnecessary expenditure.

3. Curriculum and Program Design:

- Lack of curriculum alignment between secondary-level vocational education programs and higher education institutions, hindering smooth educational progression and career development.
- Rigid duration (uniformly four years) of vocational education programs, irrespective of occupational complexity and actual industry skill demands.
- Insufficient integration of entrepreneurial competencies, soft skills, and foreign language proficiency within vocational curricula, limiting graduates' adaptability in global labour markets.

4. Stakeholder Collaboration and Industry Engagement:

- Weak cooperation and limited authentic partnership between vocational education institutions and industry sectors.
- Ineffective coordination and integration of various local and international vocational education initiatives, leading to fragmented efforts and inefficient resource utilization.

5. Vocational Educators' Competence and Training:

- Vocational teachers frequently lack current and relevant industry experience and continuous professional development.
- Absence of dedicated institutions focused specifically on training vocational education instructors with up-to-date pedagogical and technical expertise.
- Deficiencies in vocational teachers' foreign language proficiency, limiting their capacity to deliver internationally competitive vocational instruction.

6. Graduate Employment and Labour Market Integration:

- High incidence of vocational graduates employed in fields unrelated to their vocational training due to economic and incentive misalignments.
- Employer preference for lower-cost, unskilled labour rather than qualified vocational graduates, negatively impacting job placement rates and skill utilization.
- Vocational graduates’ strong preference for university education rather than immediate entry into the workforce, contributing to persistent skill mismatches.
- Insufficient graduate tracking systems, hindering effective labour market alignment and evidence-based policy development.

4.2 Spain: Limitations and Needs in Graduate Tracking

1. Lack of a Unified National Graduate Tracking System
Description of the issue: Graduate tracking remains fragmented across Spain, with each autonomous community implementing different data collection methods. No centralized digital system exists to consolidate employment data nationwide.
Proposed Improvements:
- Develop a nationwide digital graduate tracking platform.
- Integrate data from SEPE, regional governments, and training providers.
- Ensure compatibility with European tracking models (EQAVET, Europass, Microcredentials)

2. Limited Employer Involvement in Long-Term Tracking
Description of the issue: While companies are engaged in training apprentices, few contribute to long-term employment tracking.
Proposed Improvements:
- Introduce legal obligations for employers to report on apprentice job retention.
- Provide financial incentives for companies to participate in graduate tracking.
- Strengthen collaboration between industry associations and VET providers.

3. Regional Disparities in Data Collection
Description of the issue: Different autonomous communities use non-standardized tracking methodologies, leading to inconsistent national data.
Proposed Improvements:
- Establish national guidelines for graduate tracking.
- Implement a common methodology for data collection across regions.
- Increase coordination between regional education authorities and labour market observatories.

4. Challenges in Tracking SME Apprenticeships
Description of the Issue: Many apprentices complete training in small and medium-sized enterprises (SMEs), which lack resources to track former employees.
Proposed Improvements:
- Develop automated tracking tools for SMEs.
- Provide training support for SMEs to engage in graduate tracking.

- Encourage sector-based tracking through business federations and chambers of commerce.

4.3 Italy: Limitations and Needs in Graduate Tracking

1. Regional Disparities in Graduate Tracking Implementation

There are significant differences in the implementation and effectiveness of graduate tracking across Italian regions. Southern Italy, in particular, faces challenges related to funding, administrative capacity, and coordination, leading to inconsistencies in data collection and analysis. The decentralized nature of Italy's education and training system contributes to fragmentation in tracking efforts.

Proposed Improvements:

- Establish a national coordination body to ensure uniform data collection standards and methodologies across regions.
- Increase financial and technical support for under-resourced regions to enhance their tracking capacity.
- Promote interregional cooperation to share best practices and harmonize tracking methodologies.

2. Limited Integration of Data Sources

Graduate tracking data is collected through multiple sources, including surveys, administrative records, and employment statistics, but these sources are often not fully integrated. This lack of integration can lead to data gaps, duplication, or inconsistencies, reducing the accuracy and reliability of tracking outcomes. Limited cross-referencing between educational records and labour market data makes it difficult to track non-traditional career paths (e.g., entrepreneurship, freelance work).

Proposed Improvements:

- Develop a centralized national graduate tracking database that combines administrative data, labour market statistics, and employer feedback.
- Implement automated data-sharing mechanisms between educational institutions, employment agencies, and social security databases.
- Use AI and digital tracking tools to improve data accuracy and predictive analytics for labour market trends.

3. Lack of Longitudinal Tracking of Graduates

Current tracking mechanisms primarily focus on short-term employment outcomes (6 months to 3 years post-graduation). There is limited information on long-term career progression, skills development, and changes in employment status over time. Without longitudinal data, policymakers may struggle to assess the sustainability of employment outcomes and the long-term effectiveness of VET programs.

Proposed Improvements:

- Extend graduate tracking surveys beyond 3 years to monitor career progression over 5, 10, and 15 years.
- Establish alumni networks and digital platforms that facilitate long-term engagement with graduates.
- Introduce periodic follow-up surveys linked to tax, social security, and professional certification databases to monitor career transitions.

4. Insufficient Stakeholder Engagement in Graduate Tracking

There is limited involvement of employers, industry representatives, and alumni in the graduate tracking process. Tracking is often conducted by government agencies and educational institutions, but feedback from employers on skills gaps is not systematically incorporated. Stronger collaboration with businesses and professional organizations is needed to ensure tracking data informs curriculum updates and work-based learning improvements.

Proposed Improvements:

- Develop public-private partnerships to involve employers and industry bodies in tracking graduates' labour market integration.
- Require companies participating in Dual VET programs to contribute to tracking efforts through structured feedback mechanisms.
- Utilize real-time labour market analytics platforms to incorporate employer-driven data into national tracking systems.

4.4 Greece: Limitations and Needs in Graduate Tracking

Despite recent efforts to modernize and expand its Vocational Education and Training (VET) system, Greece continues to face notable gaps and inconsistencies in the implementation of graduate tracking policies, particularly within the emerging DUAL VET model. One of the most significant gaps in Greece's national approach is the absence of a legally mandated, centralized tracking system that covers all graduates

of DUAL VET programs. While there have been pilot tracking efforts undertaken by EOPPEP (National Organisation for the Certification of Qualifications and Vocational Guidance) and EIEAD (National Institute for Labour and Human Resources), these initiatives have primarily targeted post-secondary IEK graduates and have remained project-based rather than institutionalized. Currently, there is no systematic tracking of graduates from apprenticeship schemes within DUAL VET, which is a critical limitation given the growing emphasis on dual learning pathways in Greece's VET reforms (CEDEFOP, 2019; ReferNet Greece, 2020). In contrast, the European Commission's 2017 Council Recommendation on Tracking Graduates explicitly calls for Member States to develop sustainable, coordinated systems that utilize both administrative data and graduate surveys. These systems should be cross-sectoral, enable longitudinal analysis, and include mechanisms for data sharing between education and employment authorities (European Council, 2017). Greece's current tracking infrastructure diverges from these expectations, particularly in terms of data integration and inter-agency collaboration. Data remains fragmented between the Ministry of Education, DYPA (formerly OAED), and social insurance authorities, with no effective interoperability framework in place. A further gap concerns the use of tracking data for policymaking and quality assurance. In countries with well-developed graduate tracking systems, such as the Netherlands or Finland, data is used not only for monitoring employment outcomes but also for informing curriculum development, funding allocation, and institutional accreditation. In Greece, while Law 4763/2020 lays the groundwork for connecting graduate outcomes with policy evaluation, there is limited evidence that tracking data—where it exists—is systematically fed back into program design or institutional performance assessment, particularly in relation to DUAL VET providers. Another challenge is the lack of continuity and standardisation in tracking methodologies. Surveys and research initiatives carried out so far differ in scope, frequency, and target groups, making it difficult to establish a clear national picture or to make comparisons over time. Moreover, the absence of longitudinal tracking tools prevents the evaluation of long-term impacts of VET programs on career progression, skill utilisation, and income development—key dimensions emphasized in European-level guidance. Additionally, there is an evident gap in stakeholder involvement, particularly of employers and chambers, who are essential factors in the DUAL VET model. In leading systems like Germany and Austria, employers not only participate in apprenticeship training but also contribute to the tracking of graduate outcomes, ensuring that data reflects both educational and labour market perspectives. In

Greece, this level of coordinated stakeholder involvement in tracking is not yet in place. In conclusion, Greece's current approach to graduate tracking in DUAL VET reveals several key policy gaps: the absence of a legal and technical framework for systematic tracking, fragmented data sources, lack of integration with policy and curriculum development, and limited stakeholder coordination. These gaps indicate a partial alignment—but also notable divergence—from the European Commission's recommendations.

4.5 Ireland: Limitations and Needs in Graduate Tracking

One of the primary challenges identified in Ireland's approach to graduate tracking within DUAL VET is the lack of a comprehensive national policy. While Ireland's graduate tracking system has been acknowledged at the European level as effective and comprehensive, the absence of a unified national framework for tracking and monitoring the employment outcomes and career progression of apprentices across all sectors and institutions limits the consistency and comparability of data. Currently, tracking efforts rely heavily on the initiatives and commitments of individual education institutions, leading to fragmented practices and a lack of shared data resources. Addressing this issue would require the development and implementation of a national policy to standardize and support graduate tracking efforts across the board.

A second issue relates to the historical under-representation of vocational education and training (VET) within the Irish education system. Despite recent positive developments led by SOLAS, the traditionally low profile of VET may have contributed to weaker structures for monitoring and engagement. It is suggested that a European directive promoting stronger representation of VET could assist in overcoming this challenge. Enhancing national-level engagement and visibility of VET education would support the development of more effective and inclusive graduate tracking systems in Ireland.

PART II: RECOGNITION OF PRIOR LEARNING (RPL) AND NON-FORMAL/INFORMAL LEARNING IN DUAL VET

1.Comparative Overview of RPL Systems and Validation Practices in Partner Countries

1.1 Türkiye: National Overview of RPL Policies and Practices

The information presented in this section is strictly based on the official national directive titled *"Application and Implementation Guide for Journeyman, Mastership, and Master Instructor e-Examinations"* (2023), issued by the Turkish Ministry of National Education. All procedures, criteria, and evaluation mechanisms outlined below directly correspond to the standards and implementation guidelines defined by this document.

In Türkiye, the recognition of prior learning (RPL) is governed by a directive issued by the Ministry of National Education (MoNE), which outlines the procedures for recognizing, validating, and granting equivalence for vocational skills and competencies acquired through formal, non-formal, and informal learning pathways. This directive primarily facilitates the awarding of journeyman (*kalfalık*) and mastership (*ustalık*) certificates in accordance with national occupational standards and qualifications.

The directive sets out specific eligibility criteria for applicants. Individuals must be at least 22 years of age and must have completed primary or lower-secondary education. Applications are submitted to Vocational Training Centers (*Mesleki Eğitim Merkezleri*) affiliated with MoNE and are initiated through Türkiye's national digital government platform (*e-Devlet*). The theoretical exams are administered via MoNE's standardized electronic testing platform known as *e-Sınav*, which ensures nationwide consistency in exam procedures.

In line with the Vocational Education and Training (VET) Law No. 3308, applicants are required to demonstrate that they have acquired sufficient professional experience and competence. For instance, individuals who can document at least five years of work in a given occupation and who pass the relevant assessment examinations may be awarded a mastership certificate. If these individuals also hold a secondary

education diploma, they may be granted a VET high school diploma through this process.

The assessment process includes both theoretical and practical evaluations. Theoretical exams are conducted electronically and consist of 50 multiple-choice questions administered in a single 80-minute session. Practical skill assessments are carried out by an official examination commission and are recorded continuously via video in line with standardized "Skill Exam Assessment Criteria" defined for each profession. The video recordings are stored securely for a minimum of one year. To successfully pass, candidates must achieve a combined score of at least 50%, calculated as 40% from the theoretical exam and 60% from the practical assessment.

Applicants for journeyman certification must provide evidence of at least 468 hours of relevant vocational training or equivalent work experience. Mastership certification requires both possession of a journeyman certificate and documentation of at least five years of vocational experience in the relevant field. The directive also includes provisions for converting previously completed vocational training into recognized work experience, using a conversion rate of 160 hours per one month of experience. Partial completion of formal vocational education reduces the required experience duration—by six months per completed semester or one year per completed academic year.

Examinations for journeyman and mastership certification are held six times annually—in February, April, June, August, October, and December. Individuals who completed a three-year vocational education program before the 1986–1987 academic year may be awarded a mastership certificate without further examination. Furthermore, vocational qualifications obtained abroad are recognized through this equivalence process, provided that relevant documentation is submitted and validated by MoNE.

In addition to journeyman and mastership certifications, the directive also regulates the awarding of the *Usta Öğreticilik* (Master Instructor) certificate. This certification requires candidates to already hold a valid mastership certificate and to complete at least 40 hours of accredited pedagogical training. Those who meet these criteria are eligible to serve as instructors in formal vocational education institutions.

Türkiye's recognition system for prior learning provides a structured and accessible pathway for adults to formalize their vocational competencies. Administered through regional Vocational Training Centers under MoNE, this framework integrates standardized evaluation mechanisms, digital application tools, certification benchmarks, and equivalence procedures to align non-formal and informal learning with national qualification standards.

1.2 Spain: National Overview of RPL Policies and Practices

Spain has developed a comprehensive framework for the recognition of competences acquired outside the formal education system. This system is grounded in a robust legal foundation and closely aligned with European standards, enabling the formal validation of professional skills gained through non-formal and informal learning pathways. Despite several operational challenges, Spain's approach demonstrates a strong commitment to inclusive, lifelong skills validation.

The central legal instrument guiding RPL in Spain is Royal Decree 1224/2009, which establishes the framework for recognizing professional competences acquired through work experience or non-formal learning. This decree enables individuals without formal qualifications to validate their skills and, where appropriate, obtain official recognition. The process is particularly relevant for individuals aiming to improve their employment prospects or access further education. Candidates are required to submit a portfolio demonstrating relevant experience, which is evaluated through interviews and skill demonstrations conducted by authorized evaluators. Upon successful assessment, candidates are awarded Certificates of Professionalism (Certificados de Profesionalidad), which are recognized nationwide.

The implementation of this process is coordinated by several institutional actors. The Instituto Nacional de las Cualificaciones (INCUAL) is responsible for managing and updating the qualification standards. Regional education and employment authorities oversee the application process and coordinate the assessment procedures. Vocational Education and Training (VET) centers and training institutions support candidates throughout the process by offering guidance and assessment services.

In addition to the procedures outlined in Royal Decree 1224/2009, INCUAL oversees a parallel methodology focused on the alignment of work-based and non-formal

training with the Marco Español de Cualificaciones para la Educación Superior (MECU) and the European Qualifications Framework (EQF). Under this scheme, candidates undergo competency-based evaluations, including practical tests. Employers play an essential role by certifying workplace-acquired skills. The recognized competencies may then be transferred into formal VET pathways, reducing the need for repeated instruction and allowing for accelerated learning trajectories.

Another application of RPL in Spain is observed within the Formación Profesional Dual (FP Dual) system, particularly in regions such as the Basque Country, Catalonia, and Castilla y León. In these autonomous communities, RPL is integrated into Dual VET to formally recognize the work-based learning experiences of apprentices. Within this context, apprentices can validate practical experience as formal academic credit. Employers issue official certificates of the skills acquired by apprentices, which are then acknowledged by training institutions and incorporated into formal curricula.

The integration of RPL into sectoral contexts has been exemplified by a series of noteworthy case studies. One such example is the automotive sector, where the car manufacturer SEAT has collabourated with INCUAL and VET centers to establish an RPL mechanism for employees engaged in vehicle assembly, maintenance, and production. Through this process, workers can receive formal qualifications based on their job experience. The outcomes have included a 20% reduction in hiring time for certified apprentices, improved salary prospects, and increased labour mobility within the EU automotive sector.

A second case study highlights the hospitality industry in the Basque Country. The Basque Culinary Center has developed an RPL process specifically designed for professionals in gastronomy and hospitality. This system enables chefs, bakers, and other hospitality workers—many of whom have gained their skills informally or through apprenticeships—to validate their experience and receive official vocational certifications. As a result, career mobility has improved significantly, and employer engagement in training and certification has increased. Moreover, integration with European recognition frameworks has enabled certified professionals to access employment opportunities across EU countries.

1.3 Italy: National Overview of RPL Policies and Practices

Italy has established a structured and evolving regulatory framework to support the recognition of prior learning (RPL) and the validation of non-formal and informal learning, particularly within the context of Dual Vocational Education and Training (VET). This system is built upon several core legislative measures aimed at enabling individuals to certify their competences regardless of how and where they were acquired.

The foundation of the national certification system is *Legislative Decree No. 13/2013*, which defines the norms and standards for identifying, validating, and certifying competences acquired outside formal education. This was further operationalized by the *Inter-Ministerial Decree of June 2015*, which ensures that regional qualifications are aligned with national standards and facilitates their recognition across the country. To strengthen implementation, *Guidelines adopted on January 5, 2021*—in collaboration with key ministries such as Labour, Education, University and Research, Public Administration, and Economy and Finance—outlined rules for the delivery of RPL services. These guidelines support the right to lifelong learning as established by *Law No. 92/2012*, and promote the interoperability of awarding bodies within the National System of Certification of Competences.

This legislative framework has established a unified approach for identifying and certifying competences. It enhances the flexibility of the VET system and ensures that RPL plays a critical role in integrating individuals into Dual VET by recognizing their existing skills. Although the national legislation provides a unified framework, implementation is the responsibility of regional authorities, leading to variation in tools and delivery methods. As such, individuals seeking recognition of prior learning are advised to consult local VET providers for region-specific procedures.

Methodology 1: Individual Competence Assessment- This methodology focuses on evaluating competences acquired through formal, non-formal, and informal means. Individuals document their prior learning experiences via a structured portfolio, which may include resumes, certificates, work samples, and letters of reference. Evaluators assess these portfolios and may conduct interviews or practical exams. If successful, individuals receive formal recognition of competences that may lead to partial or full qualifications. The Ministry of Education and the Ministry of

Labour set overarching guidelines, while regional governments and accredited educational institutions conduct the assessments.

Methodology 2: Portfolio Assessment-Portfolio assessment emphasizes the development of a detailed record of learning achievements to support entry into VET programs or grant credit within Dual VET. Portfolios typically include personal statements, certificates, project work, and reflective accounts that demonstrate learning outcomes. Assessors evaluate the portfolios for relevance and level of competence. This methodology is implemented by regional authorities and accredited training providers, with possible involvement from sectoral bodies to ensure alignment with industry standards.

Methodology 3: Competency Examinations- When documentary evidence is insufficient or additional verification is required—particularly in regulated professions—competency examinations are employed. Candidates undergo written, oral, or practical tests aligned with national qualification standards. These exams are developed and administered by professional associations and certification bodies, with oversight from regulatory agencies and support from training providers.

Case Study 1: Roma Tre University and the National Forum of the Third Sector
This research initiative explored the strategic competences of managers within the National Forum of the Third Sector and identified the best methods to enhance and validate them. Using an action research approach, the study implemented a skills portfolio and autobiographical tools in line with EU guidelines. The findings emphasized the importance of educational activities in guiding participants through the Identification, Validation, and Certification (IVC) process. The study also revealed that non-cognitive competences dominated the skillsets of managers, underscoring the need for a cultural shift in training and assessment practices.

Case Study 2: Center for Lifelong Learning (CAP), University of Bari
Launched as a pilot in 2015, this initiative supports lifelong learning among university students—especially foreign and refugee students—by offering recognition services for learning acquired abroad. The service includes soft skills assessment, recognition of undocumented qualifications, and the conversion of experiential learning into academic credits. The process centers around the individual's life story and integrates input from the university system and the Puglia Region's VET system. It

has led to enhanced employability, social inclusion, and the development of operational protocols for delivering RPL services.

Case Study 3: "Competenze Migranti in Toscana" (COMMIT)
Completed in December 2021, this project—funded by the Asylum, Migration and Integration Fund (FAMI)—focused on improving the employability of third-country nationals in Tuscany. Partners included regional employment agencies, municipalities, and social enterprises. The project emphasized skills transparency, recognition of migrant qualifications, and inclusion into professional networks. It operated on two levels: creating an integrated service network and piloting innovative methods of competence validation. Institutionalized IVC services for migrants continued through the end of 2022.

1.4 Greece: National Overview of RPL Policies and Practices

In Greece, the responsibility for the recognition of prior learning (RPL) lies with the National Organisation for the Certification of Qualifications and Vocational Guidance (EOPPEP). EOPPEP is the central authority overseeing procedures for the certification of qualifications, including those acquired through non-formal and informal learning contexts. The Greek RPL framework is supported by the Hellenic Qualifications Framework (HQF), which is aligned with the European Qualifications Framework (EQF). This alignment ensures that competences are assessed and recognized irrespective of the context in which they were acquired, promoting comparability and transparency within the European education and training area.

Currently, the application of RPL in Greece is primarily focused on two domains:

- Certification of non-formal vocational training, particularly through IEK (Institute of Vocational Training) programs.
- Adult learning and second-chance education initiatives aimed at enhancing the qualifications and employability of adult learners.

The methodology followed in these contexts generally includes:

- Submission of documentation such as work experience records, portfolios, or training certificates;
- Oral or written assessments or practical demonstrations of competence;

- Mapping and alignment of demonstrated skills with occupational profiles listed in the National Qualifications Catalogue.

However, within the framework of Dual Vocational Education and Training (Dual VET), no specific or formalized national methodology for RPL currently exists. While workplace experience may informally contribute to the learning process, there is no codified, transparent mechanism that allows the validation and recognition of informal or experiential learning toward formal qualifications or progression routes within Dual VET. This presents a significant limitation for learners who possess substantial prior experience but are nevertheless required to complete the full curriculum from the beginning.

For example, in the "Metaptychiako Etos – Mathiteias" (Post-Secondary Apprenticeship Year) that follows the completion of IEK programs, there is no established system for recognizing prior informal work experience or competencies gained through volunteerism. Consequently, individuals entering Dual VET programs—despite already possessing relevant competencies—cannot benefit from structured recognition, resulting in inefficiencies in both time and learning outcomes.

Case Studies

Although Greece does not yet have an institutionalized and nationwide RPL system integrated into Dual VET, certain pilot initiatives and sector-specific applications coordinated by EOPPEP illustrate the potential for broader implementation.

One of the most notable applications of RPL has been in the certification of adult educators operating in Lifelong Learning Centres. Professionals with extensive experience in non-formal education—such as trainers affiliated with NGOs, IEKs, or other vocational and adult learning institutions—can pursue official certification of teaching competence through a structured RPL process. This process includes:

- Submission of portfolios documenting teaching experience;
- Participation in structured interviews and simulation-based assessment activities;
- Evaluation based on alignment with the national occupational profile for adult educators.

This case demonstrates a successful model for validating non-formal and informal competences and offers a scalable approach for wider implementation in other sectors, including Dual VET.

1.5 Ireland: National Overview of RPL Policies and Practices

Ireland has established a comprehensive framework for the recognition of prior learning (RPL) that operates across both the further and higher education and training sectors. This framework is grounded in national principles and operational guidelines that promote accessibility, consistency, and quality assurance in the assessment and recognition of prior learning. Two core methodologies define the structure of RPL practice in Ireland: the formal policy-based approach governed by Quality and Qualifications Ireland (QQI), and the practitioner-led initiatives coordinated by the RPL Practitioner Network.

Methodology 1: Principles and Operational Guidelines for the Recognition of Prior Learning in Further and Higher Education and Training

Objective and Scope:

This methodology is based on the principles and operational guidelines developed by the National Qualifications Authority of Ireland (NQAI), following extensive consultation with relevant stakeholders. These guidelines are embedded in national policies for access, transfer, and progression in further and higher education and training. The primary objective is to ensure that learners' prior formal, non-formal, and informal learning experiences can be fairly assessed and formally recognized.

Application:

The implementation of these guidelines is managed by Quality and Qualifications Ireland (QQI), the national body responsible for qualifications and quality assurance. QQI works in coordination with awarding bodies in further and higher education to address operational challenges, implementation processes, and the resourcing needed to fully embed RPL practices across institutions. This includes fostering consistent application of the guidelines and ensuring institutional readiness for RPL integration.

Responsible Institution(s):

- Quality and Qualifications Ireland (QQI)

Methodology 2: The RPL Practitioner Network

Objective and Scope:

Established in 2015, the RPL Practitioner Network Ireland is a practitioner-led, voluntary initiative that brings together professionals engaged in RPL from diverse backgrounds, including quality assurance, education policy, human resources, and career guidance. The network seeks to provide a unified practitioner voice, foster a community of practice, promote good practice based on both national and international perspectives, and inform ongoing policy development.

Application:

The activities of the RPL Practitioner Network are organized around four core pillars:

1. Networking: The network facilitates connections among RPL practitioners, enabling the sharing of experience and relationship-building across sectors.
2. Community of Practice: Members actively collabourate to exchange knowledge, apply it in their institutions, and collectively shape the future of RPL implementation.
3. Awareness Raising: The network advocates for the personal, social, and economic impact of RPL through knowledge dissemination and practitioner-led storytelling.
4. Contribution to Policy: By providing a platform for dialogue, the network contributes to local, national, and international policy debates on RPL.

Responsible Institution(s):

While the network functions independently, it is supported by a number of key Irish education stakeholders, including:

- Education and Training Boards Ireland (ETBI)
- Irish Universities Association (IUA)
- Institutes of Technology Ireland (IOTI)
- National Centre for Guidance in Education (NCGE)
- National Forum for Teaching and Learning (NFTL)
- Quality and Qualifications Ireland (QQI)

2. Evaluation Criteria and Challenges in RPL Implementation

2.1 Türkiye: Evaluation Framework and Implementation Challenges

Evaluation Criteria for RPL Effectiveness

The recognition of prior learning (RPL) system in Türkiye employs a set of rigorous and structured evaluation criteria to ensure reliability, fairness, and alignment with national qualification frameworks. First and foremost, all assessments are aligned with the National Occupational Standards (NOS) and National Qualifications (NQ) as approved by the Vocational Qualifications Authority (Mesleki Yeterlilik Kurumu – MYK). This alignment guarantees consistency across evaluations and ensures the relevance of certified competencies to the labour market and national education objectives.

Verification of learning outcomes is another critical dimension of the evaluation process. Applicants are required to submit a comprehensive set of documentation that may include educational diplomas, MYK-issued qualification certificates, employment history, and official records from the Social Security Institution (SGK). These documents undergo thorough validation through Türkiye's national electronic systems such as e-Devlet and SGK databases, enhancing the credibility and traceability of the recognition process.

Assessment methods are structured and standardized. Theoretical assessments consist of 50 multiple-choice questions administered electronically in an 80-minute session. Practical assessments require applicants to demonstrate relevant skills, which are continuously recorded via video and archived for a minimum of one year. Competency validation is based on a combined score, with a 40% weighting from the theoretical exam and 60% from the practical assessment. Candidates must achieve a minimum total of 50 points to pass, ensuring that both cognitive and applied competences are adequately evaluated.

Transparency and accountability are embedded into the system. Candidates may appeal the results of practical assessments within five working days of announcement. In such cases, an independent evaluation committee reviews the recorded video evidence to ensure objectivity. Moreover, the availability of exams six

times a year—in February, April, June, August, October, and December—ensures regular and equitable access to certification opportunities.

Equivalence and credit recognition mechanisms further support the inclusiveness and flexibility of the system. Prior vocational learning is equated using a standardized conversion: 160 learning hours are considered equivalent to one month of vocational experience. Additionally, partial completion of formal vocational education is recognised by reducing required work experience—by six months per completed semester and one year per completed academic year—making the system more responsive to learners' educational backgrounds.

Challenges and Solutions in RPL Implementation

Despite the system's robust regulatory and procedural framework, several challenges persist in the implementation of RPL in Türkiye.

The first major challenge is the insufficient awareness and information among the target population. Many individuals who are eligible for RPL remain unaware of the available opportunities, the specific eligibility criteria, the documentation required, and the application procedures. This information gap limits participation, thereby reducing the potential of RPL to support formal certification and labour market inclusion. To address this challenge, it is recommended that Türkiye implement nationwide, targeted information campaigns. These should leverage a mix of communication channels, including digital media, social networks, vocational schools, employment agencies, and professional chambers. Establishing accessible and user-friendly informational resources—alongside regular awareness-raising events and workshops—would greatly improve engagement and informed participation.

A second challenge relates to the complexity and length of documentation processes. The application process demands extensive and often detailed documentation, including verified employment histories and multiple certificates. This complexity can create administrative burdens and act as a deterrent for potential applicants. To alleviate this issue, the development of a centralized digital application platform is proposed. Such a platform would provide clear, step-by-step guidance for applicants and enable streamlined integration with national databases like e-Devlet and SGK, significantly simplifying the verification and submission process.

2.2 Spain: Evaluation Framework and Implementation Challenges

Evaluation Criteria for RPL Effectiveness

Spain has developed a robust framework for evaluating the effectiveness of Recognition of Prior Learning (RPL) by applying a set of well-defined criteria. These include the number of individuals obtaining formal qualifications through RPL pathways, comparative employment rates between RPL graduates and non-RPL workers, industry feedback on the relevance of the recognized competencies, and the efficiency of the process in terms of time required to obtain qualifications. Additionally, satisfaction levels among both employers and participants are also monitored to ensure responsiveness to stakeholder needs.

These evaluation criteria serve to ensure transparency, fairness, and credibility across the recognition process. By aligning with European quality standards—namely EQAVET and ECVET—Spain enhances the international acceptance and comparability of its RPL mechanisms. The use of impartial third-party evaluators, including the Instituto Nacional de las Cualificaciones (INCUAL) and sectoral committees, further strengthens the objectivity and validity of outcomes. In practical terms, these methodologies have enabled measurable improvements in labour market performance for graduates benefiting from RPL.

Spain's RPL system is underpinned by a comprehensive legal foundation, most notably Royal Decree 1224/2009, which enables the validation of professional competencies acquired outside formal education. Its integration with both national and European qualification frameworks supports mobility and lifelong learning. Sector-specific implementation, particularly in industries such as automotive and hospitality, further demonstrates the system's adaptability and relevance.

Challenges and Solutions in RPL Implementation

Several limitations persist. The RPL process in Spain remains administratively burdensome and time-consuming, which discourages widespread participation. Moreover, the lack of digital integration in many regions results in reliance on in-person procedures, limiting accessibility. Small and medium-sized enterprises (SMEs) frequently lack the awareness, financial capacity, or institutional support to facilitate employee participation in RPL processes.

Three primary challenges have been identified:

1. Administrative Complexity

Applicants often face a cumbersome and time-intensive documentation process, making the RPL pathway inaccessible to many, especially those without guidance or institutional support.

2. Low Awareness and Participation

Many workers and employers are unfamiliar with the benefits and availability of RPL. This lack of visibility contributes to low participation, particularly among SMEs who are less likely to invest in employee upskilling without incentives.

3. Lack of Digital Integration

The predominance of paper-based application and assessment systems creates barriers to efficiency and scalability. Few digital tools currently support remote or online validation, impeding broader adoption.

These challenges are exacerbated by broader socio-economic factors. Limited employer engagement, particularly among SMEs, stems from a lack of financial incentives and structural support. Economic barriers may deter individuals from pursuing certification, especially in the absence of state-subsidized options. Furthermore, the rigidity of some labour market sectors diminishes the practical value of RPL certifications, limiting their impact on career mobility.

To address these systemic issues, a range of strategic solutions has been proposed:

- **Digitalization of the RPL Process**: Developing comprehensive online platforms for remote submission of applications and supporting documents could significantly improve user experience and reach.
- **Financial Incentives for Employers**: Offering subsidies or tax benefits to SMEs that actively support employee qualification through RPL would increase institutional engagement.
- **Awareness Campaigns**: Launching coordinated national outreach initiatives targeting both workers and employers would raise awareness and increase the uptake of RPL opportunities.

In conclusion, Spain's RPL system is underpinned by strong policy and legal infrastructure. However, to fully realize its potential, targeted reforms are required in accessibility, digital infrastructure, and stakeholder participation. Drawing on successful practices from countries such as Finland could further enhance the system's efficiency, inclusiveness, and impact.

2.3 Italy: Evaluation Framework and Implementation Challenges

Evaluation Criteria for RPL Effectiveness

Italy has adopted a structured evaluation framework to assess the effectiveness of its Recognition of Prior Learning (RPL) methodologies, especially within the context of the Dual Vocational Education and Training (VET) system. The country's approach is anchored in alignment with the Italian National Qualifications Framework (QNQ) and the European Qualifications Framework (EQF), ensuring transparency and standardization across all regions. Regional Validation Committees are responsible for ensuring that all RPL assessments adhere to national and regional guidelines, fostering consistency and credibility in the validation of competences.

The evaluation process is designed to ensure both validity and reliability. A variety of assessment tools are used—including portfolio reviews, practical demonstrations, and structured interviews—to produce well-rounded evaluations. Certified assessors are involved in the process to ensure objectivity and fairness. Italy places strong emphasis on aligning recognized competences with labour market demands, involving sectoral bodies, employers, and trade unions in shaping and reviewing RPL standards. These standards are updated periodically to reflect evolving economic and technological needs.

Accessibility and inclusivity are also key priorities in the Italian RPL system. Special attention is given to disadvantaged groups such as unemployed individuals, migrants, and low-skilled workers. Digital tools have been introduced to simplify and streamline the application and assessment process, ensuring wider reach and efficiency. Data collected through RPL practices are used to track employment rates and career progression of RPL graduates, and these are integrated into national and regional labour market observatories such as the National Institute for Public Policy Analysis (INAPP).

The observed outcomes of this framework have been substantial. RPL has increased employability by contributing to higher job placement rates among individuals whose prior learning has been formally recognized. This aligns with legislative efforts such as Legislative Decree No. 13/2013, which sets general rules for the identification and validation of non-formal and informal learning. RPL has also enhanced career mobility by enabling transitions between sectors and promoting broader access to job opportunities. In addition, company involvement in competence validation has improved, strengthening collaboration between education and industry. By formally acknowledging learning acquired outside traditional settings, Italy has bolstered the credibility of non-formal and informal learning pathways.

Challenges and Solutions in RPL Implementation

Despite these successes, several challenges persist. One of the most significant is the lack of sufficient resources—both financial and human—which limits the availability of qualified assessors, and the administrative capacity needed for widespread RPL application. This issue is more pronounced in less economically developed regions. In response, increased government investment and partnerships with the private sector have been proposed, alongside the introduction of digital platforms to automate parts of the process and reduce manual workloads.

Another challenge is the uneven implementation of RPL policies across regions. Northern regions generally have more established systems, whereas southern regions often lack the infrastructure and trained personnel to deliver consistent services. Standardizing procedures and investing in capacity-building at the regional level are seen as essential measures to address this disparity.

Furthermore, awareness of RPL opportunities remains limited among both workers and employers. Many individuals—particularly those in informal employment or with non-traditional backgrounds—are unaware that their skills can be formally recognized. At the same time, some employers do not fully appreciate the value of RPL-certified qualifications. National and regional campaigns have been recommended to raise awareness, along with employer engagement programs and targeted outreach to vulnerable groups such as older workers and migrants.

Inconsistencies in assessment quality present an additional barrier. Variability in assessor training and evaluation tools leads to unequal outcomes. To remedy this,

Italy is working toward establishing national quality standards and ensuring continuous professional development for assessors. Regular audits and reviews are also proposed to maintain high standards across institutions.

Finally, the validation of informal and non-formal learning experiences remains a complex issue due to the lack of universally accepted benchmarks. The development of sector-specific competency standards, greater employer involvement in evidencing employee skills, and the introduction of micro-credentials and digital badges have been proposed to address these difficulties and better capture the diversity of learning experiences.

2.4 Greece: Evaluation Framework and Implementation Challenges

Evaluation Criteria for RPL Effectiveness

In Greece, the implementation of Recognition of Prior Learning (RPL) methodologies has progressed incrementally over the past decade, forming part of the country's broader efforts to align its vocational education and training (VET) systems with European frameworks. Although the institutional and legal foundations for RPL are in place—primarily through the National Organisation for the Certification of Qualifications and Vocational Guidance (EOPPEP)—the national system for evaluating RPL effectiveness remains fragmented and underdeveloped.

Currently, Greece lacks a unified, systematic framework for assessing the efficiency and outcomes of RPL implementation. Nevertheless, at the institutional and programmatic levels, several operational criteria are used to uphold the credibility and transparency of the process. A fundamental benchmark is the alignment of recognized learning outcomes with the Hellenic Qualifications Framework (HQF), which is referenced to the European Qualifications Framework (EQF). This alignment ensures that non-formal and informal learning outcomes correspond to specific occupational profiles or qualification descriptors, reinforcing the objectivity and consistency of assessments.
Verification through documented evidence is another critical element of the Greek RPL process. Candidates are generally required to submit portfolios containing proof of prior learning, including work experience, certificates, and tangible examples of acquired skills. These portfolios form the basis for evaluation by certified assessors or designated committees, promoting transparency in decision-making. Moreover,

standardized assessment procedures are implemented in certain fields, such as adult educator certification and selected technical trades. These assessments may involve structured interviews, written examinations, or practical demonstrations that adhere to nationally developed EOPPEP guidelines.

Despite these procedural strengths, significant gaps remain in the effective implementation of RPL in Greece. The absence of a centralized digital platform impedes the efficiency of application and assessment processes, while a shortage of trained personnel in VET institutions restricts the system's capacity to meet demand. Additionally, the lack of regular monitoring and evaluation mechanisms means that Greece is unable to systematically assess the quality, reach, or long-term impact of RPL initiatives. Public awareness of RPL remains limited, further constraining its potential as a tool for educational and labour market integration.

Challenges and Solutions in RPL Implementation

Compared to more advanced European models, Greece's RPL framework remains at a formative stage. While sector-specific successes have been recorded—particularly in adult education, tourism, and technical professions—the national system lacks coherence and comprehensiveness. There is no overarching strategy to ensure the lifelong validation of experiential learning across education levels or occupational sectors.

A comparative perspective highlights the limitations of the Greek model. In countries such as France, Portugal, and Finland, well-established RPL frameworks demonstrate the benefits of institutional commitment and legislative support. For example, France's *Validation des Acquis de l'Expérience* (VAE) entitles individuals to have their prior learning recognized through a legally guaranteed process. It is publicly funded, accessible, and often leads to full or partial qualifications. In contrast, RPL in Greece is not recognized as a legal entitlement and remains largely confined to selected occupations or pilot schemes.
Another key shortcoming is the absence of data collection on RPL participation, success rates, or post-certification outcomes such as employability or access to further education. This lack of systematic evidence hinders policy evaluation and impedes efforts to refine or scale up RPL practices nationally.

In summary, while Greece's RPL system has made important strides in aligning with European principles—such as learning outcome orientation, quality assurance, and procedural transparency—its operationalization remains limited in scope and accessibility. To address these shortcomings, Greece must invest in stronger institutional coordination, improved digital infrastructure, capacity-building for assessors, and comprehensive public awareness campaigns. Enhancing stakeholder engagement and embedding continuous monitoring mechanisms will be essential for transforming RPL into a viable and inclusive instrument for lifelong learning, mobility, and labour market advancement.

2.5 Ireland: Evaluation Framework and Implementation Challenges

Evaluation Criteria for RPL Effectiveness

In Ireland, the evaluation of Recognition of Prior Learning (RPL) methodologies is shaped by national initiatives and supported by academic and institutional resources. One of the most comprehensive sources examining the effectiveness of RPL practices is the report titled *A Current Overview of Recognition of Prior Learning (RPL) in Irish Higher Education*, developed by the National Forum for the Enhancement of Teaching and Learning. This document identifies several key evaluation criteria that guide and assess the implementation of RPL across higher education institutions.

Among the primary criteria are institutional commitment to RPL, national drivers and initiatives supporting RPL practices, and the integration of RPL into continuing professional development (CPD) for academic staff. Additionally, the report emphasizes the importance of staff training in both the assessment and support of RPL applicants, the existence of common definitions and national policy guidance, and the availability of reliable data collection methodologies to monitor the use and outcomes of RPL.

These criteria are designed to ensure both the reliability and efficiency of the recognition process by promoting consistency across institutions and encouraging evidence-based evaluation of prior learning. The structured development of RPL staff and the emphasis on institutional capacity-building serve to maintain high standards of assessment integrity and learner support.

The Irish RPL system is often cited as an example of success within the European context. The 2020 Irish country report within the *European Inventory of National Qualifications Frameworks (NQFs)* notes that RPL initiatives in Ireland have developed organically, backed by a strong commitment to best practices. The same report highlights the supportive legislative framework underpinning the National Framework of Qualifications (NFQ), which facilitates RPL opportunities across all qualification levels for individuals whose prior learning has been assessed as equivalent to formal learning outcomes. Furthermore, the report identifies the RPL Practitioner Network—a voluntary group fostering collaboration and the exchange of good practice—as a distinctive strength of the Irish approach to the validation of non-formal and informal learning (VNFIL).

Challenges and Solutions in RPL Implementation

Despite the progress made, Ireland faces several persistent challenges in the implementation of RPL. As noted in the *European Inventory of NQFs 2020*, one of the central challenges is the absence of a universally adopted definition and shared understanding of RPL across all sectors. This lack of consensus complicates the development of coherent national policies and practices.

Another major issue is the limited integration of data systems across different regions and education sectors, which hinders comprehensive tracking and monitoring of RPL participation and outcomes. The need for improved guidance services embedded within RPL procedures is also evident, as learners require structured support to navigate application, assessment, and recognition stages. Moreover, there is a perceived shortfall in available resources for capacity building—both in terms of funding and qualified personnel—which restricts the expansion and consistent delivery of RPL services nationwide.

To address these issues, Ireland would benefit from continued investment in shared frameworks, enhanced data systems, and the development of integrated guidance and support mechanisms. Efforts to foster collaboration among educational institutions, policymakers, and practitioners—as exemplified by the RPL Practitioner Network—will remain essential to ensuring that RPL remains a viable and inclusive pathway for recognition and progression.

PART III: PILOT TESTING THE FOLLOW APP – RESULTS AND REFLECTIONS FROM PARTNER COUNTRIES

This section presents the outcomes of national piloting activities conducted in Türkiye, Spain, Italy, and Greece to test the usability, effectiveness, and relevance of the FOLLOW APP digital tools —the Web App and the Virtual Campus. Each country engaged vocational education professionals to evaluate the practical application of the tools, collect user feedback, and identify challenges and areas for improvement.

Importantly, as will be seen in the final section of this report, the findings gathered during the piloting phase also contain valuable implications for the design and development of future projects and digital tools in Dual VET. They serve not only as evaluative data for the current initiative but also as forward-looking insights to guide similar efforts in the broader European context.

1. Participation and Piloting Context

Country	No. of Participants	Participant Profile	Engagement Method	Timeline
Türkiye	8	VET trainers in public schools (ICT, marketing, gastronomy)	Online training & remote platform testing	June 2025
Spain	12	Dual Vocational Training Teachers, Counsellors, Apprentices	Online & face-to-face, guided materials	March–July 2025
Italy	5	VET teachers	In-person presentation & remote testing	June–July 2025
Greece	8	Trainers in Dual VET programmes	Online VOOC walkthrough & online testing	July 2025

Table-1

2. Virtual Campus – Country-Based Responses

Question	Türkiye	Spain	Greece	Italy
Ease of navigation	66.7% rated 4, 16.6% rated 5(very easy)	75% rated 4, 25% rated 5(very easy)	87.5% rated 4–5(very easy)	60% rated 4, 40% rated 5(very easy)
Technical issues encountered	None reported	None reported	None reported	1 minor issue
Progress tracking clarity	83.3% rated clear	100% rated clear	62.5% rated very clear, 37.5% rated clear	80% rated clear, 20% neutral
Clarity of Instructional Guide	83.3% clear	100% clarity	100% clarity	75% rated clear, 25% rated very clear
Applicability of Training Modules	66.7% rated applicable, 16.6% highly applicable	75% rated applicable, 25% rated neutral	100% rated applicable, 25% rated highly applicable	100% rated applicable, 25% rated highly applicable
Effectiveness of practical activities	66.7% rated highly effective	75% rated effective, 25% rated neutral	100% rated highly effective	75% rated effective
Relevance of VOOCs	66.7% highly relevant	50% neutral, 50% relevant	62.5% rated relevant, 37.5% rated highly relevant	40%highly relevant, 40%neutral, 20%relevant
Interactivity of VOOCs	83.3% engaging or very engaging	75% engaging, 25% neutral	87.5% rated very engaging or engaging	60% engaging, 40% highly engaging
Knowledge improvement	83.3% rated positive	50% neutral, 50% positive	100% rated positive	40% moderate, 20% significant, 40% neutral
Confidence applying VC knowledge	83.3% confident	75% confident	87,5% confident, 12,5% neutral	60% confident, 40% neutral
Recommend to others	100% Yes	100% Yes	100% Yes	100% Yes

Table-2

3. Web App – Country-Based Responses

Evaluation Question	Türkiye	Spain	Greece	Italy
Ease of access and use	66.7% rated 4, 16.7% rated 5	50% Easy, 50% Very Easy	87.5% rated 5, 12.5% rated 4 (100%)	60% Easy, 40% Very Easy
Technical issues	0% reported issues	0% reported issues	0% reported issues	20% reported an issue (1 out of 5-(questionnaire crash))
Usefulness of form creation	83.3% found useful (ratings 4–5)	100% positive	75% rated 5, 25% rated 4	20% rated 3, 40% rated 4, 40% rated 5
Relevance to professional practice	100% rated relevant (ratings 4–5)	100% rated relevant	40% rated 5, 40% rated 4, 20% rated 3	40% rated 5, 40% rated 4, 20% rated 3
Confidence creating forms	83.3% confident (ratings 4–5)	100% confident	50% rated 4, 50% rated 5	100% rated 4 or 5
Improved tracking ability	66.6% reported improved ability (ratings 4–5)	100% confirmed improvement	50% rated 4, 50% rated 5	20% rated 2, 20% rated 3, 40% rated 4, 20% rated 5
Recommend to others	100% Yes	100% Yes	87.5% Yes, 12.5% Maybe	80% Yes, 20% Maybe

Table-3

4.User Feedback and Improvement Suggestions from National Piloting Reports

Türkiye

Virtual Campus:

- UI elements like "Overview," "Start Now," “Check,” “Retry,” and quiz items remain in English.
- Some test questions in VOOCs are entirely in English (e.g., VOOC 3.1, 3.2).
- The "Instructor" tab does not redirect to the "My Profile" section.
- Lack of visual progress indicators within units.

- "Show Solution" only displays the correct answer, no explanation (not all questions need explanations).
- Instructional strategies and assessment types are repeated generically across units.
- Instructional guide lacks visual walkthroughs for LMS use.
- Module instructions (e.g., "write a report") are vague.
- No downloadable templates (e.g., for consent forms, stakeholder maps).
- No suggestions for low-tech implementation (e.g., phone-based tracking).

Web App:

- Web App is not functional on mobile devices; login and form creation are unavailable.
- Forms cannot be edited once published.
- No option to mark questions as required.
- Instructors can only choose from a predefined list — no custom questions.
- No confirmation appears after clicking "Copy URL."
- Excel export format is vertically stacked and hard to analyze.
- Suggestions include drag-and-drop, preview mode, autosave, field additions (e.g., email, VET provider), more question types (Likert, yes/no), and better localization.

Greece

Virtual Campus:

- In the Greek version, VOOC titles in the search function remain in English.
- In True/False quizzes, the options appear in English instead of "Αληθές" and "Ψευδές".
- In Unit 1.3, Test 4: a question incorrectly marks all answers as wrong even though the correct answer is selected.

Web App:

- No major issues reported.
- A few suggestions include expanding Web App functionality (e.g., follow-up notifications, system integration), but these were stated as future recommendations, not as current problems.

Italy

Virtual Campus:

- One participant experienced a page crash when switching language or opening a questionnaire.
- One respondent suggested improving visual presentation/layout.
- One respondent did not fully explore the platform and couldn't provide detailed feedback.

Web App:

- The CSV exports all responses into a single column, making interpretation difficult.

Suggestions include:

- Allowing more than one final test per module (for reinforcement).
- Enhancing visual layout/design.
- Including a user-friendly, more efficient export format.

Spain

Virtual Campus:

- No technical issues or usability problems were reported.
- Multiple users gave "Normal" or "Good" ratings to visual appeal and engagement.
- Practical activities were considered helpful but not transformative.
- The content was described as "too theoretical" by one participant.

Web App:

- Interface is usable but lacks aesthetics and visualization capabilities.
- Exported responses are shown in "monotonous" text boxes (no tables/graphs).
- Improvement suggestions:
- Better visual presentation of results (charts, tables).
- Improved UI for aesthetics and usability.
- Greater customization and clarity for practical use.

PART IV: GUIDELINES AND POLICY RECOMMENDATIONS

This section synthesizes the key findings and national policy recommendations from five partner countries—Türkiye, Spain, Italy, Greece, and Ireland—regarding graduate tracking in Dual VET and the recognition of prior learning (RPL). The insights reflect both country-specific and shared European trends, with attention to systemic strengths, persistent gaps, and forward-looking strategies.

1. Graduate Tracking in Dual VET: Comparative Insights

All five countries acknowledge the critical importance of graduate tracking as a cornerstone for aligning vocational education with labour market outcomes. However, significant differences persist in terms of legal frameworks, institutional coordination, data integration, and employer involvement.

- **Türkiye** has a centralized tracking system coordinated by MoNE and linked with TÜİK, SGK, YÖK, and İŞKUR. Despite strong policy foundations and innovative tools like E-Mezun, tracking is not yet legally mandated for all VET institutions. Regional disparities and lack of employer feedback mechanisms limit the effectiveness of current practices.

- **Spain** presents a decentralized model where tracking practices vary significantly across autonomous communities. While legal structures exist, the lack of harmonized methodologies and employer participation weakens national coherence. Innovative examples like Lanbide and Observatorio de la FP offer potential for cross-country adaptation.

- **Italy** has made progress in integrating graduate tracking with apprenticeships, yet challenges remain due to uneven regional implementation, limited standardization, and weak feedback loops between education and industry.

- **Greece** currently lacks a fully institutionalized graduate tracking framework, relying primarily on pilot initiatives. The need for legal mandates, data interoperability, and alignment with EQAVET is strongly emphasized.

- **Ireland**, despite having high-level structures for education data, lacks a specific national policy for Dual VET graduate tracking. There is a clear call for centralized platforms, standard survey protocols, and stronger employer collaboration.

Policy Recommendations:

- Establish national legal mandates for graduate tracking across all VET providers (e.g., Türkiye, Greece, Ireland).
- Create unified digital platforms for real-time, multi-stakeholder data integration (e.g., Türkiye's proposed "E-mezun").
- Extend tracking periods to include mid- and long-term outcomes (e.g., Türkiye's 5-year model; Ireland's 6 months/3 years framework).
- Institutionalize employer engagement via mandatory reporting and feedback mechanisms (e.g., Spain, Ireland, Türkiye).
- Promote regional tracking units that align national strategies with local labour market realities (e.g., Türkiye).
- Use tracking outcomes as KPIs for VET school evaluation and funding (e.g., Türkiye, Italy).
- Embed data literacy into staff training and involve career guidance teams in tracking platforms (e.g., Türkiye, Greece).

2. Recognition of Prior Learning (RPL) and Informal/Non-Formal Learning

While all countries have RPL systems in place, the degree of accessibility, procedural simplicity, and digital integration varies.

- Türkiye and Spain have legally defined RPL frameworks, but bureaucratic complexity and low public awareness restrict participation, particularly among marginalized or older workers. Türkiye calls for modular micro-credentials and nationwide digitalization.
- Italy integrates RPL into its National Qualifications Framework but faces fragmentation in implementation. The emergence of digital tools and portfolios is noted, though not widespread.
- Greece lacks a comprehensive legal framework and structured methodology. Future steps include digital e-portfolios, sector-specific guidelines, and embedding RPL in the national qualifications framework.

- Ireland demonstrates relatively advanced RPL oversight but emphasizes the need for standardization in Dual VET and more integration with employment policies.

Methodological and Policy Recommendations:

- Simplify and digitize application processes through centralized online platforms integrated with national services (e.g., Türkiye, Greece).
- Develop modular, stackable credentials to make RPL more flexible and appealing (e.g., Türkiye, Italy).
- Expand assessor capacity and training in rural/underserved regions (e.g., Türkiye, Italy, Greece).
- Conduct awareness campaigns to inform workers and employers, using real-life success stories (e.g., Türkiye, Italy, Greece).
- Include RPL-certified qualifications in employment incentive schemes and public procurement (e.g., Türkiye).
- Establish national indicators and statistics to track RPL uptake and impact (e.g., Türkiye).

3. Potential for European-Level Adaptation and Transferability

The national analyses carried out across the five partner countries highlight a range of promising practices that hold relevance for wider European adaptation, while also revealing significant implementation challenges that must be addressed to achieve meaningful policy transfer.

Spain presents particularly notable models in this regard. The Lanbide system, developed in the Basque Country, integrates real-time employment tracking through Social Security data, offering a powerful tool for aligning vocational education outcomes with labour market realities. Similarly, the Observatorio de la FP in Castilla y León functions as a regional vocational training observatory, which supports policy design and evaluation. However, both mechanisms operate at the regional level, resulting in inconsistencies in graduate tracking methodologies and data quality across the country. To address this, Spain's report recommends the creation of a unified national graduate tracking platform that harmonizes data collection and reporting across autonomous communities.

Türkiye, on the other hand, demonstrates significant digital innovation through tools such as the E-Mezun system and the Mesleğim Hayatım portal. These platforms aim to combine career guidance with graduate tracking and labour market alignment. Although promising, their use remains limited by fragmentation in data sources and the absence of a legal obligation for VET institutions to participate in tracking activities. Türkiye's report proposes the development of an integrated Graduate Data Hub and the establishment of regional monitoring units to better reflect local labour market dynamics, with these structures aligned to European frameworks such as EQAVET and the broader push for micro-credentials and real-time data ecosystems.

Italy's experience contributes valuable insights into the validation of informal and non-formal learning through the use of digital portfolios and sector-specific RPL frameworks, all of which are anchored within a centralized qualifications system. However, regional disparities in implementation persist, and the adoption of digital tools remains uneven. The Italian report calls for the development of standardized assessment tools, enhanced use of digital portfolios to document informal competencies, and national awareness campaigns to improve stakeholder engagement and consistency across the country.

Ireland's national report offers a structured recommendation to implement graduate tracking surveys at 6 months, 1 year, and 3 years post-graduation, aligned with EQAVET indicators. While such a system is not yet in place, the detailed framework reflects a strong potential for European benchmarking. Furthermore, the presence of networks such as the RPL Practitioner Network positions Ireland well for fostering cross-sectoral and cross-national learning. Nonetheless, the lack of a national graduate tracking policy for Dual VET remains a critical barrier to implementation.

Finally, Greece emphasizes foundational elements needed for European-level alignment, despite being in earlier stages of system development. The Greek report highlights the importance of legal harmonization in RPL practices, the creation of digital tools such as e-portfolios, and the adaptation of successful European models such as France's VAE and Portugal's Centros Qualificados. However, the current graduate tracking mechanisms are still in the pilot phase, and employer involvement remains limited. The report stresses the need for interoperable data systems, sector-specific RPL guidelines, and the integration of graduate tracking into EQAVET quality assurance cycles.

Across all five countries, the practices described—whether already implemented or proposed—offer meaningful insights for the European VET landscape. Yet, their transferability depends not only on their technical structure, but also on addressing contextual challenges such as decentralization, regional disparities, digital readiness, and institutional coordination. The reports consistently emphasize that European-level policy learning must be coupled with tailored support for national implementation if these promising models are to contribute to a more cohesive and inclusive VET ecosystem across Member States.

4. Forward-Looking Trends and Strategic Challenges in Graduate Tracking and RPL in DUAL VET

The five national reports included in this comparative analysis offer converging insights into the future directions and anticipated challenges surrounding graduate tracking and the recognition of prior learning (RPL) within Dual VET systems. While each country faces distinct contextual realities, common priorities and forward-looking needs are evident.

In Türkiye, there is a strong emphasis on building institutional capacity for graduate tracking. The reports highlight that the effectiveness of national-scale monitoring systems depends heavily on the ability of vocational education staff—such as school managers, teachers, and data officers—to develop and operate localized tracking mechanisms. The future of graduate tracking is envisioned as a shift from static data collection to dynamic, real-time monitoring, capable of capturing longer-term employment, education, and skills development trajectories. This requires not only technological advancements but also robust policy frameworks that support integrated data flows between local and national levels. Ethical considerations around data use, privacy, and protection are expected to intensify, particularly as systems become more comprehensive. Additionally, Türkiye anticipates a need for more granular, regionalized data to tailor VET policies to local labour markets and calls for expanded RPL application to emerging sectors such as digital technologies, green jobs, and care work. The evolution of tracking systems is also expected to incorporate indicators of career resilience, job displacement, and lifelong learning engagement.

Spain identifies several similar trajectories. The integration of artificial intelligence (AI) and big data analytics into graduate tracking and labour market forecasting is

expected to grow, enabling more accurate and adaptive policy responses. Spain also points to remote work and digital careers as drivers of new tracking models that must accommodate non-linear employment patterns. A stronger focus on cross-border recognition of qualifications is anticipated, alongside the need for more dynamic and adaptable RPL frameworks that reflect lifelong learning paths. Importantly, as digital tracking systems expand, Spain flags the need to proactively address data privacy concerns.

Italy underlines the rising role of automation and AI in both graduate tracking and RPL validation. Future systems are expected to deploy AI-based analytics to assess the efficacy of apprenticeship programs and monitor graduate trajectories in real time. Italy also highlights the growing importance of modular credentialing systems—particularly micro-credentials and digital badges—which can provide flexible, stackable learning pathways. Challenges anticipated include digital inequality, particularly in rural regions, and the risk of fragmentation if EU countries fail to harmonize their RPL systems and qualification frameworks. The need for flexible, inclusive, and up-to-date policy tools is considered essential to meet rapidly evolving labour market demands.

In Greece, the future of RPL and graduate tracking is closely tied to digital transformation. The national report anticipates an expansion in the use of e-portfolios, blockchain-based credential verification, and integrated graduate tracking platforms, all of which are expected to improve system transparency, accessibility, and efficiency. Greece also stresses the necessity of real-time and longitudinal data to enhance monitoring efforts. Future frameworks must support micro-credentialing, informal learning pathways, and the increased mobility of both learners and workers across borders. Interoperability between educational and labour market databases, legal provisions for flexible validation, and institutional embedding of tracking systems are seen as critical enablers for progress.

Ireland envisions the evolution of graduate tracking systems to include broader outcome metrics such as upskilling, sectoral transitions, and resilience to job displacement. These metrics extend beyond traditional measures of employment status and income levels. The Irish report suggests that future frameworks should continue to emphasize lifelong learning and adaptability, aligning with EQAVET principles and ongoing European efforts toward standardization. As digital tools and feedback mechanisms become more integral to VET monitoring, the focus will

increasingly shift to ensuring the meaningful and secure use of data, guided by ethical standards and institutional oversight.

5.Forward-Looking Recommendations and Guidance for Future DUAL VET Tools Based on Follow APP Piloting Experiences

The piloting results collected across Türkiye, Spain, Italy, and Greece have provided invaluable insights into the practical use of the FOLLOW APP's Virtual Campus and Web App. While overall satisfaction levels were high, particularly in terms of usability and perceived relevance, participants also pointed to several specific areas where further refinement would significantly improve the tools. These reflections—many of which were shared across partner countries—should serve as guiding reference points for future projects of similar nature, particularly those involving digital solutions for graduate tracking in DUAL VET.

First and foremost, the importance of **complete and coherent localization** cannot be overstated. Both the Greek and Turkish reports noted persistent language inconsistencies in their localized versions of the Virtual Campus. Elements such as quiz labels (e.g., "True/False"), interface buttons ("Overview," "Start Now"), and some test questions appeared in English, disrupting user immersion and accessibility. In the Greek version, for instance, the platform failed to recognize the correct answer in a GDPR-related multiple-choice test, marking all options as wrong. Turkish participants similarly struggled with untranslated quiz content and interface commands, which occasionally impaired navigation. These issues, though minor on the surface, affected the professional image and usability of the tools. Ensuring full linguistic consistency—including metadata, buttons, assessment feedback, and navigation cues—should be considered a baseline requirement moving forward.

Beyond language, **the visual design and interactivity of the platforms** received a more nuanced reception. While Greek and Italian users appreciated the overall layout and found it easy to navigate, around half of the Turkish and Spanish participants described the visual presentation as average or lacking in dynamism. The absence of progress indicators within individual VOOC units—such as checkmarks or visual bars—was flagged in Türkiye as a missed opportunity to support learner engagement. In Spain, the need for a more stimulating design was implied through

general calls for better aesthetic presentation, especially in the mobile app's results and data visualization. These comments suggest that while the core infrastructure is solid, future iterations should aim for greater visual refinement and interactive responsiveness, particularly in high-volume or mobile use contexts.

In terms of **educational content and pedagogy**, participants across all countries acknowledged the instructional guide's value, especially its logical structure and clarity. However, Turkish users observed that certain critical components—such as uploading courses to an LMS—were reduced to single-paragraph explanations, with no visual walkthroughs or concrete steps provided. Given that many VET trainers may not have prior e-learning experience, the inclusion of screenshots, sample templates, and annotated examples is essential to bridge theory and application. Similarly, Spanish and Turkish participants both noted that the "assessment" and "methodology" sections of the training modules tended to repeat the same generic strategies (case studies, role plays, group discussions) across multiple units, without adapting them to the specific content or context of each module. The lack of variation and contextual alignment may reduce both pedagogical impact and learner motivation. A stronger emphasis on task-specific assessment formats, clearer task instructions (e.g., "design a form"—but in what format?), and support for low-resource contexts would enhance the practical utility of the modules.

The **training modules** offer a pedagogically rich and methodologically ambitious framework aimed at strengthening curriculum alignment, learner tracking, and workplace collaboration in vocational education and training. However, the practical applicability of the modules may be limited by their high level of theoretical density, technical complexity, and the cognitive demands placed on participants. The document frequently draws upon advanced instructional models, quality assurance cycles, and design-based approaches. While these frameworks provide a robust academic foundation, they may be challenging to interpret or apply without prior familiarity.

The **learning activities** often involve multi-step analytical exercises, system documentation, data visualisation techniques, and evaluation planning processes that require digital fluency, confidence in working with structured templates, and in some cases, familiarity with tools such as spreadsheets, online dashboards, or privacy-compliant tracking systems.

As for the **VOOCs**, these were widely appreciated for their modularity and flexibility, particularly the ability to enter at any point and self-pace one's learning. However, several issues were raised that merit attention. In both Türkiye and Greece, users found that the "Instructor" tab failed to redirect to the intended profile section, disrupting smooth navigation. Across countries, the "Show Solution" button in quizzes offered no reasoning for correct answers, limiting the opportunity for deeper learning. Participants from Spain and Italy appreciated the content overall but suggested that the relevance of some VOOC topics felt moderate rather than highly aligned with their daily practice. Future VOOC development would benefit from a clearer articulation of learning outcomes per unit, contextualized examples, and just-in-time explanations within assessments to foster deeper engagement.

The **Web App** emerged as a particularly promising tool, especially for its form-creation function and Excel export capability. Nonetheless, usability limitations were consistently flagged across reports. In Türkiye, the mobile version did not allow users to log in or create forms, restricting its use to passive browsing. Once a form was published, it could not be edited, and no notification appeared upon copying its link. Instructors could only use pre-set questions, with no option to mark fields as required or to create their own items. Users from both Italy and Türkiye found the Excel export layout difficult to interpret, as all data was listed vertically in a single column. Spanish participants, while positive about the QR functionality and offline access, also suggested that the mobile app's results view lacked visual appeal and that the data analytics remained underdeveloped. In future versions, the Web App should include editable and previewable form workflows, tabular Excel exports with row-based respondent data, custom question fields, conditional logic, and mobile-first responsive design.

In conclusion, several transversal recommendations emerged that cut across countries. Spanish users emphasized the need for continuous professional development—particularly in digital skills and innovation in pedagogical practice. Both Spain and Türkiye stressed the importance of integrating follow-up mechanisms into graduate tracking, such as notification systems, preferred contact fields, and tools for alumni engagement. The potential of the Web App and Virtual Campus as scalable solutions was clearly recognized, but so too was the need for deeper

institutional anchoring—through integration with national alumni systems, school ERPs, or stakeholder networks.

6.Key Improvement Guidelines for Future Graduate Tracking Tools in DUAL VET - Based on Findings from the FOLLOW APP Piloting Phase

1. **Translate All Interface Elements Completely**: All interface elements (buttons, quiz answers, menus, labels) must be fully localized to the target language, including "True/False," "Overview," and quiz feedback sections.

2. **Ensure Consistent Language Across Platform Components**: Ensure complete linguistic consistency in every part of the system, including VOOC titles, navigation cues, button texts, and metadata.

3. **Fix Malfunctioning Navigation Tabs**: All navigation elements within the platform should function as intended and redirect users to the correct destinations. For instance, the "Instructor" tab in VOOCs must redirect correctly to the designated profile or dashboard section to avoid dead ends or confusion. Such navigation dead ends hinder user experience and must be resolved to ensure smooth movement across the platform.

4. **Add Visual Progress Indicators Within Units**: Include progress bars, checkmarks, or step-by-step indicators inside each VOOC unit to support learner orientation and motivation.

5. **Include Explanations for Correct Answers in Quizzes**: "Show Solution" functions should explain *why* an answer is correct to deepen understanding (if necessary)—not just show the answer itself.

6. **Avoid Repetition of Generic Teaching Methods**: Each module should propose task-specific pedagogical methods instead of repeating the same formats as role play or case study without contextual adaptation.

7. **Clarify Task Instructions with Output Formats**: Tasks that use verbs like "design," "create," or "write" should specify the expected format (e.g., Word document, Google Form, chart, sketch).

8. **Provide Editable and Ready-to-Use Templates:** To improve clarity and usability of the Training Modules, every task that asks users to "design," "create," or "develop" something should be accompanied by a concrete example or completed version of that task. For instance, if the task is to design a stakeholder map or draft a GDPR-compliant consent form, include a visual sample or editable template beside the instruction. This reduces ambiguity, saves time, and makes the activity immediately actionable—especially for time-constrained or non-technical users.

9. **Include Visual Step-by-Step LMS Upload Tutorials:** The process of uploading a course to a learning platform (like Moodle or LearnPress) must be supported by screenshots and detailed walkthroughs.

10. **Structure Exported Data in Tabular Format for Usability:** When designing data export functions in future tools, ensure that responses are structured in a user-friendly tabular format—where each respondent occupies one row and each column represents a specific question. Avoid listing all answers in a single vertical column, as this format complicates data interpretation and analysis for educators and administrators.

11. **Allow Instructors to Create Custom Questions:** Instructors must be able to create their own form questions—not just use predefined lists—to adapt surveys to their institutional needs.

12. **Enable "Required Field" Functionality in Forms:** Instructors must be able to mark specific questions as mandatory to ensure completeness of responses.

13. **Allow Editing of Published Forms:** Users should be able to make updates or corrections to a form even after publication to maintain flexibility.

14. **Provide Submission Confirmation or Notifications:** The system should confirm successful actions (e.g., "Link copied," "Form saved") through visual cues or messages.

15. **Add Mobile-Responsive Features to Web App:** The mobile version must allow full user functionality: login, form creation, editing, and export—not just static browsing.

16. **Improve Visual Appeal of Results and Charts:** Data visualization elements in the app (e.g., results tables, charts) must be presented in a more aesthetically engaging format to improve interpretability.

17. **Include Interactive Onboarding for First-Time Users:** Provide a quick-start tutorial or onboarding assistant within both the Virtual Campus and Web App to help first-time users navigate effectively.

18. **Integrate Follow-Up Mechanisms for Alumni:** Add optional fields like email address, preferred contact method, and follow-up reminders to enable longitudinal tracking of graduates.

19. **Clarify Learning Outcomes at the Start of Each VOOC:** Each VOOC unit should begin with a brief "In this unit, you will learn to…" section to guide expectations and support goal-focused learning.

20. **Provide a Ready-to-Use "Mini Simulation Kit" for Trainers to Practice End-to-End Graduate Tracking:** To bridge the gap between theory and application, future tools should offer a compact, ready-to-use simulation package where trainers can practice the entire graduate tracking process from start to finish. This kit could include: A step-by-step walkthrough (e.g., "Create form → Distribute → Collect → Export → Analyse → Report").