



# Measuring Learning Mobility in Vocational Education and Training

A review of data sources and approaches to measurement across European Union Member States

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**Table of content**

<b>1. Introduction.....</b>	<b>7</b>
<b>2. Background and goals of the project.....</b>	<b>10</b>
<b>3. Putting IVET learning mobility in context – challenges of measurement.....</b>	<b>16</b>
3.1. Introduction.....	16
3.2. Learning from transnational experience – The specific role of IVET learning mobility.....	16
3.3. Challenges for introducing and measuring IVET learning mobility.....	19
3.3.1. The challenges of the distinctiveness and diversity of IVET.....	19
3.3.2. The challenges of the distinctiveness and diversity of IVET across countries for understanding IVET learning mobility.....	21
3.3.3. The challenges of scope – How to delimit IVET learning mobility and harmonise data collection.....	26
3.4. Construction of indicators on mobility in HE and in IVET compared.....	31
3.5. Current approaches for measuring IVET learning mobility.....	33
<b>4. Research strategy &amp; applied methodological approach.....</b>	<b>36</b>
4.1. Introduction.....	36
4.2. Proposed overall approach for clarifying the options for measuring IVET learning mobility beyond a general population survey.....	36
4.2.1. Options for achieving the graduates-based indicator on IVET learning mobility.....	39
4.2.2. Options for achieving the policy intervention indicator on IVET learning mobility.....	39
<b>5. Approaches for measuring IVET learning mobility beyond general population surveys.....</b>	<b>42</b>
5.1. Introduction.....	42
5.2. Implemented approach for the expert survey.....	42
5.2.1. Introduction.....	42
5.2.2. Selection of respondents and tailoring tasks to groups of respondents.....	42
5.2.3. Rationale for the development of the questionnaire.....	44
5.2.4. Implementation of the survey.....	44
5.3. Administrative data collection by schools on IVET learning mobilities of the universe of the students or graduates.....	47
5.3.1. Introduction.....	47
5.3.2. Examples for the approach identified.....	47
5.3.3. Resources available and obstacles for implementation reported.....	48
5.4. Administrative data collected by agencies providing financial support.....	50
5.4.1. Introduction.....	50
5.4.2. Examples for the approach identified.....	51
5.4.3. Excursion: Exploring Erasmus+ administrative data collected on IVET learning.....	51
5.4.4. Resources available and obstacles for implementation reported.....	52
5.5. Surveys on IVET learning mobility based on samples of (upcoming or recent) graduates.....	53
5.5.1. Introduction.....	53
5.5.2. Examples for the approach identified.....	54
5.5.3. Resources available and obstacles for implementation reported.....	58
5.6. Centralised, multi-methods data collection approaches.....	60
5.6.1. Introduction.....	60
5.6.2. Examples for the approach identified.....	60
5.6.3. Resources available and obstacles for implementation reported.....	65
<b>6. Approaches for measuring IVET learning mobility beyond general population surveys.....</b>	<b>66</b>
6.1. Introduction.....	66
6.2. Inviting Member States to implement National Observation Points on IVET learning mobility.....	69
6.3. Implementing an Erasmus+ Policy Intervention Indicator as a short-term measure for observing changes in the field of IVET learning mobility across the European Union.....	70
6.4. Improving the data collection on Erasmus+ participants and establishing a standard for data collection on IVET learning mobility beyond Erasmus+.....	74
6.5. Further data development: collecting comparable data on IVET learning mobility among recent or upcoming IVET learners.....	77
6.6. Overall conclusions on the future measurement of IVET learning mobility across the European Union.....	80

## Measuring Learning Mobility in Vocational Education and Training

7.	References .....	83
8.	Annex 1 Selected Survey results .....	85
9.	Annex 2 Outline for a master questionnaire .....	91
10.	Annex 3 Selected Overviews .....	102
11.	Annex 4 Selected Erasmus+ data .....	120
12.	Annex 5 Questionnaire of the expert survey .....	127

**Table of Figures**

Figure 1 Graduates (18-34) in IVET (ISCED11 3) (irrespective to their highest attainment) with an IVET related learning mobility of at least two weeks.....	10
Figure 2 Exemplary data on IVET learning mobility in the EU28 (and Norway) stemming from different sources, sorted according the results of CEDEFOP 2016 Mobility Score Board.....	12
Figure 3 Proportion of the 15 to 34-year-olds with any form of transnational experience (2018) – Countries sorted according to the proportion of the target population with any transnational experience.....	17
Figure 4 Proportion of the 15 to 34-year-olds with a previous transnational experience related to their schooling (2018) – Countries sorted according to the proportion of the target population with any transnational experience.....	17
Figure 5 Proportion of the 15 to 34-year-olds with a previous transnational experience related to higher education (2018) – Countries sorted according to the proportion of the target population with any transnational experience.....	18
Figure 6 Proportion of the 15 to 34-year-olds with a previous transnational experience related to IVET or gainful work (2018) – Countries sorted according to the proportion of the target population with any transnational experience.....	18
Figure 7 Proportion of the 15 to 34-year-olds with a previous transnational experience related to volunteering or youth work (2018) – Countries sorted according to the proportion of the target population with any transnational experience.....	18
Figure 8 Relative importance of IVET at upper secondary level and relative importance of workplace-based IVET on upper secondary level (as apprenticeships) - overview.....	22
Figure 9 Age structure of IVET students in upper secondary education (ISCED11 Level 3) - sorted according to the share of students below 20 – 2016.....	23
Figure 10 IVET Graduates on ISCED11 Level 3 and 4 – all ages (2016) – sorted according the number of graduates expressed as a proportion of the 20-year-olds (general population) .....	24
Figure 11 IVET graduates on ISCED11 Level 3 according to age 2016.....	25
Figure 12 IVET graduates on ISCED11 Level 4 according to age 2016.....	25
Figure 13 IVET graduates on ISCED11 Level 3 and 4 according to age as proportion of all IVET graduates 2016.....	26
Figure 14 Intersection of the coverage of indicators proposed.....	41
Figure 15 Duration of the transnational IVET learning mobility among VET graduates in Germany 2017.....	55
Figure 16 Representation of selected results of the French 2013 Génération survey .....	57
Figure 17 Dutch VET graduates with experience abroad, share or total .....	61
Figure 18 Selected figures on IVET learning mobility in Finland.....	64
Figure 19 Erasmus+ Policy Intervention Indicator - 2015 to 2017 (+ estimates for 2018 and 2019) .....	72

## Measuring Learning Mobility in Vocational Education and Training

Figure 20 Erasmus+ Policy Intervention Indicator - 2014 to 2017 for the EU28 (+ estimates for 2018 and 2019) .....	73
Figure 21 Host organisation of IVET learning mobility students - 2017 .....	117
Figure 22 - Q1 - At which study level were you during your mobility period abroad? - 2015 .....	121
Figure 23 – Q2 - Which year in the study level? – 2017 .....	122
Figure 24 – Q 3 - Was the mobility period abroad a mandatory part of your curriculum? – 2015 .....	123
Figure 25 – Q 4 - Is this the first time you benefit from Erasmus+ or its predecessor (LLL) programme? - 2015 .....	124
Figure 26 – Q 5 - Did you have a Learning Agreement* with defined learning outcomes drawn up before your mobility period? – 2015s .....	125
Figure 27 – Q 6 - What other source or source of funding did you receive?.....	126

### Table of Tables

Table 1 Selection of data on IVET learning mobility .....	14
Table 2 Participants in IVET in 2018 – different education levels .....	20
Table 3 Overview on types of transnational mobility regarded as VET mobility .....	28
Table 4 Classifying cases of transnational experiences according to the current IVET learning mobility indicator (selected dimensions of the indicator only) .....	30
Table 5 Comparison of the HE and the IVET learning mobility indicator .....	31
Table 6 Overview on countries where information on IVET graduates is available in registers on education achievements .....	34
Table 7 Summary from Final report of the International Student Mobility Statistics Task Force - Annex [16th of May 2011] p. 42-44.....	35
Table 8 Overview on proposed types of indicators .....	37
Table 9 Administrative sources for feeding IVET learning policy indicator .....	40
Table 10 Groups of respondents.....	43
Table 11 Overview on the survey results.....	46
Table 12 Forms of mandatory data collection on IVET learning mobilities in IVET schools.....	49
Table 13 Experts' assessment of the feasibility of introducing mandatory data collection rules for IVET schools/providers .....	50
Table 14 Expert assessment of the feasibility of mandatory reporting of all agencies providing support to IVET mobility to a central agency.....	53



## Measuring Learning Mobility in Vocational Education and Training

Table 15 Survey results on important preconditions for a sample based, school-administrated approach to measuring IVET learning mobility.....	59
Table 16 Countries with regular or occasional tracking IVET graduates on national level in regular surveys (2017).....	59
Table 17 Expert assessment of the feasibility to implement a framework for a regular (multi-purpose) sample-based, school-administrated survey.....	60
Table 18 Key approaches identified for establishing information on IVET learning mobility .....	67
Table 19 Key features of the proposed Erasmus+ Policy Intervention indicator .....	71
Table 20 Established content in the Participant Report Form and proposed addition (in italic) .....	76
Table 21 Standards proposed for surveys on IVET learning mobility .....	79
Table 22 .....	80
Table 23 Overview on indicators proposed .....	82

## Abbreviations

BEP	Brevet d'études professionnelles
BIBB	Bundesinstitut für Berufsbildung (Federal Institute for Vocational Education and Training, Germany)
CAP	Certificat d'aptitude professionnelle
Cedefop	European Centre for the Development of Vocational Training
DG EMPL	Directorate-General for Employment, Social Affairs and Inclusion
EDUFI	Finnish National Agency for Education
ESF	European Social Fund
EU	European Union
HE	Higher Education
ISCED	International Standard Classification of Education
IVET	Initial Vocational Education and Training
LFS	Labour Force Survey
MS	(EU28) Member State
Nuffic	The Dutch Organisation for Internationalisation in Education
OECD	Organisation for Economic Co-operation and Development
ROA	Research Centre for Education and the Labour Market
SBB	Maastricht University School of Business and Economics and the Foundation for Cooperation on Vocational Education, Training and Labour Market
UOE	UNESCO-OECD-Eurostat
VET	Vocational Education and Training
WBL	Work-based Learning

## Executive Summary

The following report summarises the results of the project “Measuring Learning mobility in vocational education and training” (specific contract n° VC/2019/0024 signed between DG Employment, Social affairs and Inclusion, Unit E3 and GOPA, under the Eurostat framework contract 2018.0086). The report was prepared by the subject-matter experts Günter Hefler (3s) and Eva Steinheimer (3s). Coordination and support were ensured by Florabela Carausu (GOPA Luxembourg), Ildiko Murai-Szucs (GOPA Luxembourg) and Elena Mettler (GOPA Luxembourg).

The current project has aimed at supporting DG EMPL Unit E3 - VET, Apprenticeships & adult learning in exploring ways to improve data availability on learning mobility in Vocational Education and Training (VET). The request is put forward in the context of earlier work carried out by Eurostat since the adoption of the 2011 Council conclusions on this topic. The former defines an indicator on IVET learning mobility, with a benchmark of 6% of graduates (18-34) of initial vocational education (IVET) having participated in a mobility across the EU28 to be reached by 2020.

Promoting IVET learning mobility constitutes an important goal of EU policy making in the field of IVET and education in general, with substantial and growing investments via the Erasmus+ framework. Despite considerable efforts taken, including a pilot survey targeting all 18-34 olds conducted in 2014, comparable data on IVET learning mobilities across the EU Member States has not been achieved. This limits the opportunities for monitoring progress made in this field. Administrative data collected within the Erasmus+ framework constitutes the only readily available source across Member States.

The current project has taken up the suggestion of the Progress report on a Learning Mobility Benchmark (European Commission, 2017) to look into the potential availability of administrative data sources on IVET learning mobility, in particular the data collected as part of Erasmus+ programme. For that purpose, the current project has implemented an expert survey to identify and evaluate the potential data sources. Moreover, the project looked into available national approaches for observing IVET learning mobility, mainly based on a review of the available literature and on qualitative expert interviews. Only a small number of Member States have established national approaches for achieving data on IVET learning mobility beyond data collected within the Erasmus+ framework.

Speaking of national-level administrative data sources on IVET learning mobilities readily available, the expert survey has demonstrated that, while there are rare examples for such sources in some countries, there is no administrative data source readily available across a larger number of Member States. Even data on national funding programmes supporting IVET learning mobilities are often not easily obtainable. Moreover, experts are rather cautious about the feasibility of approaches, where IVET schools would need to accept an additional burden in collecting administrative data on a regular basis or even in supporting the implementation of school-administrated sample-based surveys. While in the long run, new options for measuring learning mobility might become available as part and parcel of changing approaches in educational statistics, results of the expert survey are clear about the fact that administrative sources other than Erasmus+ will not become available in the near future.

By reviewing existing national approaches in measuring IVET learning mobilities, it can be incurred that assigning the responsibility for reporting on IVET learning mobility to one particular agency can be an important step forward. Such an agency – as demonstrated by the Finish example – is likely to constantly work towards the expansion of available data

on IVET learning mobility. A responsible agency might also seize future opportunities to expand data availability, for example, when new surveys or data collection procedures on IVET students are implemented.

As no alternative administrative data source on IVET learning mobilities is currently available, Erasmus+ data itself needs to be considered as a choice for achieving at least a proxy indicator for measuring progress in the field. It has been therefore recommended to consider an Erasmus+ Policy Intervention indicator as a readily available interim substitute to an indicator based on data covering all types of mobilities, not solely Erasmus+ funded. While the Erasmus+ data sourced indicator misses mobilities supported by other public programmes or funded mainly by employers or households, it still covers the majority of mobility spells of at least two weeks in duration across the EU Member States. Further methodological work is recommended to increase the usefulness of the proposed indicator, in particular by further improving the data used for the numerator and by better harmonising the data used for the denominator.

Among the approaches for establishing data on IVET learning mobility, surveys among upcoming (Germany) or recent IVET graduates (respectively, leavers of education; France, the Netherlands) stands out as the most accessible, given that information on IVET learning mobility can be gathered as an additional aspect in surveys addressing, for example, school- to-work transitions of former IVET participants. Given that stand-alone surveys among IVET graduates with a sole focus on IVET learning mobility might be unreasonably costly, the option of including dedicated questions within an established survey framework (as in the example of the dedicated survey on leavers of the education system in France) seems to be far more justifiable. Moreover, by including IVET learning mobility in broader frameworks of education or IVET related research activities, more in-depth analysis both on the conditions for access to IVET learning mobilities as well as on their varied outcomes for groups of participants with different socio-economic backgrounds can be carried out. However, experts of the project's survey expressed their concerns about the feasibility of creating a regular survey on IVET graduates for many countries.

To summarise, based on the outcomes presented in the current report, it is recommended

- a) to adopt an Erasmus+ data sourced IVET learning mobility indicator as an interim measure for progress made until better data sources have been developed allowing more comprehensive monitoring
- b) to consider the establishment of a network of dedicated National Observation Points responsible for reporting on IVET learning mobility based on both the currently available and the future data sources on the subject matter
- c) to involve Member States in either further developing their current approach for measuring IVET learning mobility or introducing an approach making best use of opportunities given locally (possibly within the evolving graduate tracking systems), thereby ultimately enabling more precise measurement of IVET learning mobilities.

## 1. INTRODUCTION

The following report summarises the results of the project “Measuring Learning mobility in vocational education and training” (specific contract n° VC/2019/0024 signed between DG Employment, Social affairs and Inclusion, Unit E3 and GOPA, under the Eurostat framework contract 2018.0086). The report was prepared by the subject-matter experts Günter Hefler (3s) and Eva Steinheimer (3s). Coordination and support were ensured by Florabela Carausu (GOPA Luxembourg), Ildiko Murai-Szucs (GOPA Luxembourg) and Elena Mettler (GOPA Luxembourg).

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While the pilot has achieved valid results in a number of countries, for other countries who have piloted the survey, it has been shown that a survey addressing the general population is not a fully feasible way for achieving the data required. The survey has delivered good results on the stock of IVET graduates (18-34 years of age) having attended a IVET learning mobility (at least once), based on a well-defined methodology and as an add-on to the European Labour Force Survey, which can be regarded as a highly developed survey instrument. However, the approach had not been successful in countries with small IVET populations and/or low participation rates in IVET learning mobilities. For delivering meaningful data on small populations, it would be required to extend grossly the sample implying unreasonably high costs. A particular challenge stems from the fact that initial vocational and training is organised differently across countries and that no sufficiently coherent definition of IVET has been put forward which therefore could underpin the construction of a benchmark on IVET learning mobility. While in many countries, IVET is organised mainly as a variant of upper secondary education (classified on ISCED Level 3) and in some countries, in addition, on post-secondary level (ISCED 4), IVET programmes are present also within lower secondary education (ISCED 2) and on higher levels of education (in particular classified on ISCED 5 or even 6 and 7).

In addition, further methodological problems were identified (e.g. proxy interviews, high unit-non-response figures, recall errors). Against this backdrop, the Progress report on a Learning Mobility Benchmark (European Commission, 2017) had come to the conclusion, that “it would be worth exploring the use of administrative data and review the feasibility of using such data to underpin the benchmark on IVET mobility.” (ibid.).

For steering policy making in the field of IVET learning mobility and for applying the Open Method of Coordination, it is crucial to have proper and current indicators measuring participation in IVET learning mobility across countries and time, or at least reporting on the number of mobile students, who have benefited from public support for IVET learning mobility. As general population surveys were shown to have substantial limitations, the project has aimed at identifying alternative data sources taking administrative data on IVET learning mobility as its starting point.

The project has dealt with several challenges involved in the construction of an indicator on Initial Vocational Education and Training (IVET) learning mobility. When calculating the proportion of persons who have taken part in a learning mobility during their IVET in a cross-country comparable manner, attention must be paid in defining both the numerator (“What counts for as a learning mobility?”) and the denominator (“Who belongs to the

group of educational participants, whose (non-)participation in a learning mobility should be measured?”).

The project has reviewed the possibilities to use administrative data and has developed new proposals for deriving reliable indicators on learning mobility participation rates, going beyond the piloted approach of a module within a general population survey.

For achieving the project's goals, key assumptions on the possible data sources have been outlined. These assumptions have informed the implementation of four in-depth expert interviews on identified approaches to measure IVET learning mobility in Finland, the Netherlands, Germany and France. As its key tool, the project has implemented a survey among experts which are responsible for or may hold specific knowledge about IVET learning mobility. Types of organisations targeted by the survey include Ministries of Education or other Ministries responsible for IVET, Erasmus+ Agencies, Agencies responsible for national or multinational support programmes for IVET learning mobilities, Agencies responsible for European funding lines (in particular, ESF and Interreg), which may also support IVET learning mobilities, Statistical Offices and national VET research centres.

The project design built on a number of assumptions and established facts. While so far administrative data on all participants in learning mobility might be available only for a small number of countries, practically all countries have data on public support provided for IVET learning mobility, in particular, for Erasmus+. It is therefore considered to envision an indicator measuring the changes in policy support for IVET learning mobility (Policy intervention indicator on IVET learning mobility or even an indicator solely building on Erasmus+ data for the numerator) in addition to an indicator measuring participation as such. For the Policy Intervention Indicator, it would be crucial whether or not sufficient information can be established for programmes supporting IVET learning mobility beyond Erasmus+. Agencies in the field beyond Erasmus+ were therefore addressed by the project's survey to learn about the data on beneficiaries of support for IVET learning mobility.

Available evidence suggests that IVET learning mobility spells of at least two weeks financed fully or partly by Erasmus+ represent the majority, but certainly not all mobilities in place. In some countries with well-established IVET systems where data on IVET learning mobilities are collected (such as DE, FR, FI or NL) data shows that among the mobility spells of two weeks or more, Erasmus+ funded activities make up for the majority of cases. For example, the outcomes of IVET graduate surveys in DE and FR indicate a broadly similar level of IVET learning mobility than the approach based on Erasmus+ data alone does, when only spells of two weeks or longer are considered. In FI and NL, experts responsible for the national reporting estimate that about two thirds of all mobility spells of two weeks and more receive also Erasmus+ support. Shorter mobility spells (currently excluded from the calculation of the EU IVET mobility benchmark), are however more likely to be privately financed as testified by the survey data from Germany. To conclude, while it is evident that even some longer mobility spells are organised without any public support, still, for mobilities which are at least 2 weeks in duration, the predominant source of financing seems to be public programmes, with Erasmus+ as the key source and further national or bilateral programmes complementing Erasmus+ funds.

For countries, where currently no data on IVET learning mobility are collected in schools, it has been the intention to look for information on established frameworks of school-based data collection on IVET graduates. Here, the assumption has been that one might attach the collection of information on IVET learning mobility to an established process, where other variables on upcoming graduates are collected, in particular on surveys studying school-to-work transitions (Tracking Surveys).

Finally, in some countries, there are examples for sample-based, representative surveys among upcoming or recent graduates. Sample-based surveys among upcoming or recent

graduates are considered as a fall back option in cases, where any mandatory data collection at the level of IVET schools or providers would require very high efforts, for example, in countries, where IVET is mainly governed on the level of Federal States or where it would be particularly demanding on legal grounds to justify the collection of additional data on students beyond the already established ones. Therefore, the implemented survey has investigated for existing examples for this type of survey.

The project has taken an assessment of the established indicator on mobility in higher education as its starting point, where the data (on credit-mobility in particular) are also collected mainly based on administrative information generated by the universities. Although mobility in HE and IVET diverge in many important ways, it is assumed that – as universities for mobility in HE – the IVET schools or providers might be positioned best to collect information on the learning mobilities of their upcoming or recent graduates. The survey was implemented to see in how many Member States IVET schools are already mandated to report on the learning mobility of their graduates. As it is assumed that in the majority of countries IVET schools or providers report on various aspects of their graduates to agencies responsible for educational statistics, they may include information on learning mobilities of their graduates in the future. While it is expected that it might take considerable time to establish a system where IVET schools report on IVET learning mobilities, it is further proposed to aim for an additional Policy Intervention Indicator, informing about the numbers of beneficiaries of support for IVET learning mobility of one year, expressed as a proportion of IVET graduates of the respective period. The latter Policy intervention indicator is expected to be available within a shorter time frame, given that its main content – that is data on beneficiaries of support within Erasmus+ - is already available.

This report comprises of six main sections and four annexes. After the introduction, section 2 provides a summary on the background and the goals of the project. Section 3 gives an overview on the options for and challenges of measuring Initial Vocational Education and Training (IVET) learning mobility across the EU28 Member States (MS). In section 4 the overall research strategy of this project is outlined; Section 5 introduces in the methods applied for the expert survey, summarises the results of four expert interviews and of the expert survey, structured by key approaches for measuring IVET learning mobility. Section 6 presents the conclusions with regard to the future measurement of IVET learning mobility and proposes a new proxy indicator on IVET learning mobility based on Erasmus+ data. Annex 1 provides a summary on the results of the expert survey. Annex 2 provides a draft for a master questionnaire on IVET learning mobility. In Annex 3 provides a selection of further tables and statistics supporting the main chapters. Annex 4 provides an explorative data analysis on a special extraction of Erasmus+ data on IVET learning mobilities provided for this project. Annex 5 covers the questionnaire used for the expert survey of the current project.

## 2. BACKGROUND AND GOALS OF THE PROJECT

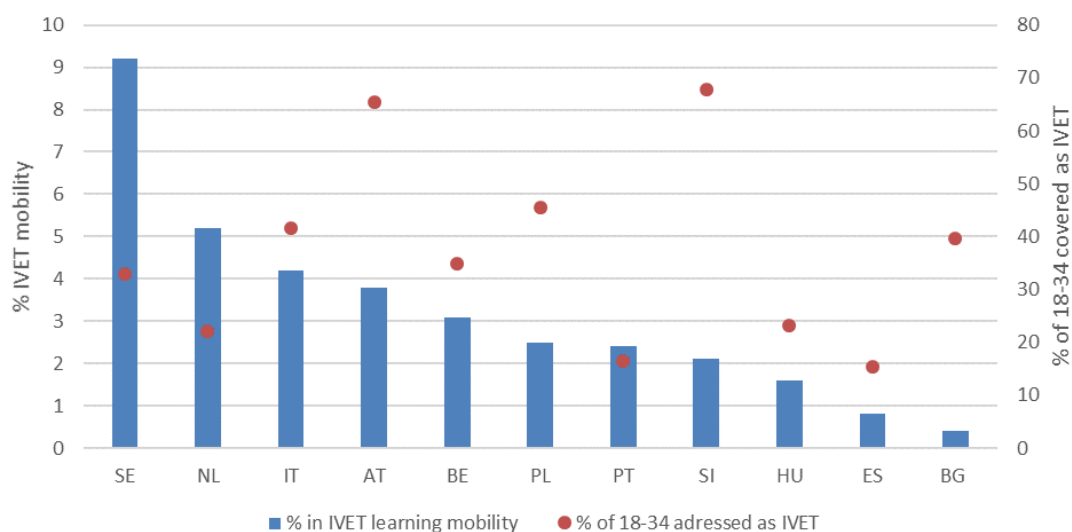
In the context of the strategic framework on “Education and Training 2020”, the European Council agreed on 29th of November 2011 on an EU benchmark for learning mobility in initial vocational education and training (IVET) (European Commission, 2015). It is stated that:<sup>1</sup>

“By 2020, an EU average of at least 6% of 18-34-year-olds with an initial vocational education and training (VET) qualification should have had an initial VET-related study or training period (including work placements) abroad lasting a minimum of 2 weeks (10 working days), or less if documented by Europass.”

By the time of adopting the benchmark, there had been no data sources available for building up the indicator, however, in the conclusions, it has been envisaged to use existing household surveys as a future source for measuring learning mobility in IVET.

For testing the feasibility of using a general household survey for collecting the required data with the needed quality, a pilot had been implemented in 16 EU Member States (MS). Some countries did not participate in the survey as they could fall back on administrative data (e.g. Finland) or expected to achieve data on IVET learning mobility based on research among recent graduates instead of the total population (e.g. Germany, France). By using a general population survey, data of sufficient quality could be achieved for eleven countries. A survey approach has failed or has even not been taken into consideration in particular in countries with a small IVET population and with (assumably) low rates of participation in IVET learning mobilities (European Commission 2015).

**Figure 1 Graduates (18-34) in IVET (ISCED11 3) (irrespective to their highest attainment) with an IVET related learning mobility of at least two weeks - 2014**



Source: European Commission 2015; Reading suggestion: In Sweden, about 9% of the 18-34 year old who have graduated in IVET (irrespective of their highest educational attainment) have participated in an IVET learning mobility; Slightly more than 30% of all 18-34 year olds have graduated in IVET (irrespective of their highest educational attainment).

<sup>1</sup> [https://www.consilium.europa.eu/uedocs/cms\\_data/docs/pressdata/en/educ/126380.pdf](https://www.consilium.europa.eu/uedocs/cms_data/docs/pressdata/en/educ/126380.pdf)



Given the difficulties involved in an approach based on a general population survey<sup>2</sup>, the conclusion has been drawn to look into alternative possibilities for achieving the required data for the desired indicator on learning mobility in IVET (European Commission, 2017). A preliminary review on available data sources had been implemented already in 2011 (European Commission and Eurostat, 2011a). For alternative sources, it has been accepted that "it is essential that efforts match outcomes and consequently that the tools chosen for monitoring provide reliable and regular data without putting undue burden and costs on the statistical system" (ibid, 8)<sup>3</sup>. With a change in the data sources used, a change in the definition of the benchmark on IVET learning mobility could also be envisioned, for achieving a better fit between the data available, the benchmark achieved and the related goal, that is, constantly monitoring the progress made in promoting IVET students participation in IVET learning mobilities, related to their current IVET programme.

Alternative data sources comprise of:

- Administrative data collected in the course of providing public support for learning mobilities in IVET; however, as not all learning mobilities in IVET involve public support, an indicator based on public support mechanisms would provide only an auxiliary indicator for the desired benchmark.
- Administrative data collected by school administrations, where IVET schools (or other IVET providers) establish information on their students' (graduates') IVET mobilities, either by taking records at the time of the activity (e.g. by giving time off the regular program) or by asking students to provide the required information. Schools might be required to report on the learning mobility of their students to the Ministry of Education or the Statistical Office in various ways, so that obtained administrative data could be used to source the IVET learning mobility benchmark. However, learning mobilities promoted by employers involved in dual VET might not appear in school records. Moreover, learning mobilities of recent graduates as part of their school to work transitions would be missed out.
- Sample-based surveys among (upcoming or recent) graduates; as an alternative to a general population survey, surveys might target recent or upcoming graduates. IVET schools or programmes might be used both for sampling (achieving a sample of classes across types of IVET programmes representative for the total) and for reaching out to students (towards the end of their programmes).

A number of comparative research exercises have recently contributed to the knowledge base on learning mobilities in IVET across the EU28 Member States<sup>4</sup>. However, the research has also pointed to the fact, that there are considerable gaps in the available data and that relevant actors in the field have not always responded to the request for information.

Figure 2 summarises data available from the 2014 Pilot survey and available national estimates on IVET learning mobility.

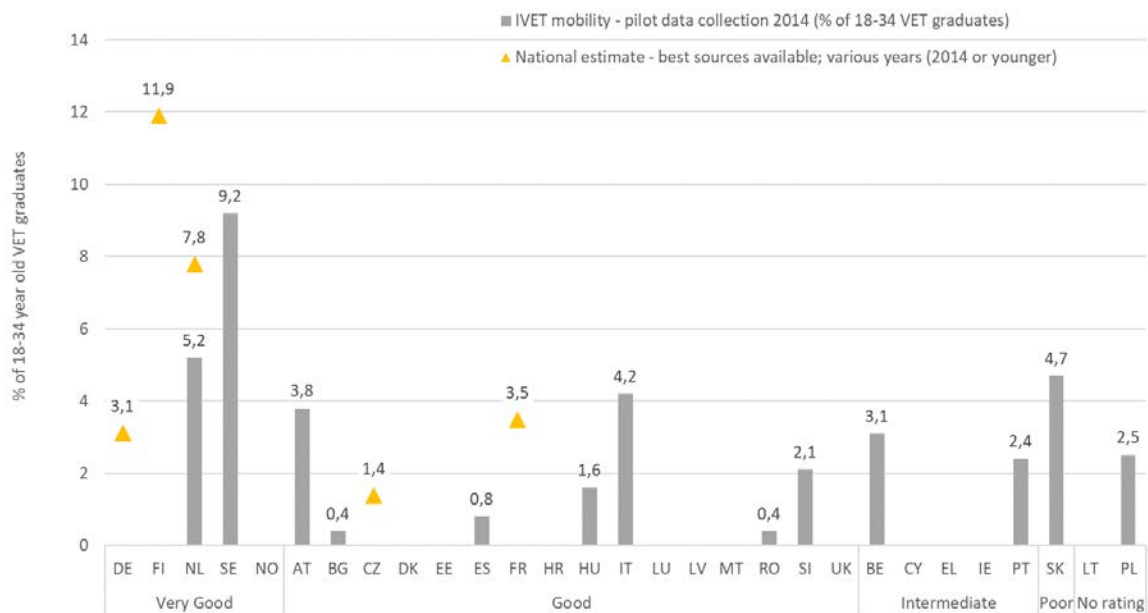
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<sup>2</sup> "The conclusion is that a household survey is not the best vehicle for capturing IVET mobility, as it would require very big samples with high costs, but with no guarantee for reliable quality data for the EU target." (European Commission (2017). *Report from the Commission to the council - Progress report on a Learning Mobility Benchmark - Brussels, 30.3.2017 COM(2017) 148 final*. p 7).

<sup>3</sup> "The SGIB consultation showed that 12 out of 15 replying countries would agree in principle with changing the data source. Two would not agree (because of a lack of availability of data or a preference for survey data) data collection through administrative sources." (ibid, p. 8)

<sup>4</sup> Projects include European Commission (2019). *Vocational mobility in Europe: analysing provision, take-up and impact. Final report*. CEDEFOP Mobility Scoreboard database (<http://www.cedefop.europa.eu/en/publications-and-resources/data-visualisations/mobility-scoreboard>), European Commission (2012). *Study on Mobility Developments in School Education, Vocational Education and Training, Adult Education and Youth exchanges*.

**Figure 2 Exemplary data on IVET learning mobility in the EU28 (and Norway) stemming from different sources, sorted according the results of CEDEFOP 2016 Mobility Score Board**



Sources: For the Grouping: CEDEFOP Mobility Scoreboard database (CEDEFOP 2016), for the Pilot Data (European Commission, 2015), Information on national estimates for one recent cohort of IVET students or graduates (only partially comparable to the results of the pilot survey): DE: Value for two week long mobilities, based on a school-administered survey(2017), see 5.5.3; CZ estimate based on administrative data for 2014, provided in European Commission 2015; FR estimate based on representative sample for school leavers of 2013 (see 5.5.2)

For all MS, where data are available, Erasmus+ beneficiaries make up for an important part of all beneficiaries of public support for IVET learning mobilities. Data on Erasmus+ is available across the EU28, including numbers of participants of IVET learning mobilities receiving grants by type of activity (learning activities in companies/vocational institutes)(European Commission, 2018a).

While previous research has identified a variety of national or regional funding sources for IVET learning mobility, as well as many bilateral, multilateral and EU-level programmes, doing the same as part of their overall activities (see Annex 3 for a summary), the same studies have also pointed to the fact that for the majority of programmes, no data on the number of beneficiaries, nor data on other important aspects of the learning mobilities, are available. Currently, only some data points are available, while the majority of information is missing.

In some countries, other sources for providing a proxy for IVET learning mobility indicator are available, which are inserted as triangles in Figure 2. However, it is important to note that the data are based on different methodologies. Moreover, they address one cohort of students or graduate and not graduates of a whole age group (18-34-year-olds), so they are not directly comparable to the results of the Pilot survey.

Some countries use administrative data from schools to source their statistics on IVET learning mobility (e.g. Finland). Details on the approach are provided in Section 5. Some countries have provided informed estimates based on administrative data (e.g. Czechia). Some countries have achieved indicators on sample-based research exercises among (recent or upcoming) IVET graduates (the Netherlands, Germany and France). Details on the various approaches are discussed in Chapter 5.

One further sources of information used in Figure 2 is the CEDEFOP Mobility Scorecard. The countries are grouped according to the pilot results of CEDEFOP's scoreboard on IVET learning mobility. The IVET mobility scoreboard<sup>5</sup> provides detailed country information on the condition for IVET learning mobility in the EU Member States and Norway. For 10 key action areas indicators show how performance is distributed across countries according to the extent of meeting the requirements of the 2011 Council recommendation "Youth on the move". The results for four indicators – that are considered substantial in connection with the aims of this project - and the total scoreboard rating are also displayed in Table 1: information and guidance on opportunities, administration and institutional issues, recognition of learning outcomes, partnerships and funding. The mobility scoreboard relies on country information provided by ReferNet<sup>6</sup> which is validated by country representatives (see Table 1). Finally, in (European Commission, 2019), an overall assessment on the perceived importance of IVET learning mobility on the national education policy agenda has been achieved, which is included in Table 1

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<sup>5</sup> <https://www.cedefop.europa.eu/en/events-and-projects/projects/mobility-scoreboard>

<sup>6</sup> ReferNet is a network of institutions created by Cedefop in 2002 to provide information on national vocational education and training (VET) systems and policies in the EU Member States, Iceland and Norway. Each national partner is a key organisation involved in VET in the country it represents. <https://www.cedefop.europa.eu/en/events-and-projects/networks/refernet>

**Table 1 Selection of data on IVET learning mobility**

	Erasmus+ IVET participants 2014 as a percentage of graduates	IVET mobility - pilot data collection 2014 (% of 18-34 VET graduates) <sup>‡</sup>	Importance of the issue on national policy level	CEDEFOP Mobility Scoreboard				Total Score-Board Rating 2016 <sup>+</sup>
				Information and guidance <sup>+</sup>	Administration and institutional issues <sup>+</sup>	Recognition of learning outcomes <sup>+</sup>	Partnerships and funding <sup>+</sup>	
AT	3,0%	3,8%	high	2	1	4	2	2
BE	2,1%	3,1%	rather low	3	4	4	3	3
BG	7,5%	0,4%	low	2	3	2	2	2
CY	26,0%		low	2	3	4	2	3
CZ	3,9%		low	3	3	3	1	2
DE	3,0%		high	1	1	1	1	1
DK	5,7%		intermediate	3	2	3	2	2
EE	10,4%		rather low	2	4	2	1	2
EL	4,3%		rather low	3	3	4	5	3
ES	2,7%	0,8%	low	2	3	3	2	2
FI	3,2%		high	1	1	2	2	1
FR	2,5%		high	1	2	3	3	2
HR	2,9%		high	3	3	4	1	2
HU	4,7%	1,6%	low	3	3	4	1	2
IE	2,1%		low	2	4	3	3	3
IT	2,4%	4,2%	intermediate	3	2	3	2	2
LT	12,3%		low	6	6	6	6	6
LU	5,2%		intermediate	1	1	3	2	2
LV	7,5%		rather low	2	1	3	2	2
MT	6,9%		low	1	2	4	2	2
NL	1,7%	5,2%	high	1	1	2	2	1
PL	3,6%	2,5%	rather high	6	6	6	6	6
PT	2,9%	2,4%	rather low	5	5	2	3	3
RO	2,5%	0,4%	rather high	3	3	3	2	2
SE	4,7%	9,2%	rather low	1	2	2	1	1
SI	6,6%	2,1%	low	3	1	3	2	2
SK	4,8%	4,7%	low	3	5	4	2	4
UK	1,7%		low	1	4	3	1	2
NO	3,2%		high	1	3	1	1	1

Sources: \*Erasmus+ Country Factsheets, <sup>+</sup>CEDEFOP Mobility Scoreboard database (CEDEFOP 2016), <sup>‡</sup> (European Commission, 2015) for the German benchmark, only mobilities of two weeks or longer has been considered; NB: 1 = best rating; 5 = weakest rating; 6 = no rating available.

The current project builds on the mentioned research, and has tried to validate the previous outcomes, at least, to a certain degree, and trace recent developments. In its core, it has tried to answer the following guiding research topics and questions:

1. Availability of administrative data on IVET learning mobility: Which administrative data sources on IVET learning mobility collected in IVET schools/by IVET providers are available across the EU28 Member States? What types of data on learning mobility are collected? How are these data processed and collected? Which concepts and definitions are applied?
2. Enabling and inhibiting factors with impact on the future approach for collecting administrative data on IVET learning mobility: Which factors support or restrict a possible future approach for collecting data on IVET mobility based on administrative procedures (meaning that schools will be required to collect, store and submit information on IVET learning mobilities of their students in a standardised, harmonised way)? How are the pros and cons of such an approach assessed by various experts?
3. Availability of data on the beneficiaries of IVET learning mobility public support schemes: To what extent are administrative data on beneficiaries of public support schemes available? Is it feasible to harmonise the available data on beneficiaries and their learning mobilities so that they can feed into a monitoring of policy interventions in favour of learning mobilities?
4. Other approaches for data collection beyond general population surveys and the use of administrative sources: Which further approaches for establishing the required data for a benchmark on IVET learning mobility can be identified? Which are the pros and cons of the approaches implemented in the Member States?

### **3. PUTTING IVET LEARNING MOBILITY IN CONTEXT – CHALLENGES OF MEASUREMENT**

#### **3.1. Introduction**

The following chapter summarises the results of the desk research on the options for and challenges ahead with measuring learning mobility in IVET across the EU28 in a consistent and comparable way.

The documents consulted include (Directorate-General for Communication, 2018; European Commission, 2015; European Commission, 2018b; European Commission. Eurostat, 2015; European Court of Auditors, 2018; Flisi and Sánchez-Barrioluengo, 2018; Friedrich and Körbel, 2011; Klimmer, 2009; Melin, Terrell and Henningsson, 2015; Nationale Agentur Bildung für Europa beim Bundesinstitut für Berufsbildung (NA beim BIBB), 2018; Sánchez Barrioluengo and Flisi, 2017; Tirati, 2018; Tran and Dempsey, 2017; Wordelmann, 2010).

In addition, country fact-sheets provided by the various National Statistical Institutes (NSIs) and other institutions at a national level (e.g. ministries, national VET research institutes, Erasmus+ agencies and selected programmes in various countries), have been consulted, including Erasmus+ fact sheets (2017) and information on the countries selected as examples for different approaches to measure IVET mobility (see Chapter 5).

#### **3.2. Learning from transnational experience – The specific role of IVET learning mobility**

The periods of living abroad and spells of participation in either an educational programme or a work placement abroad allow for particular learning experience. Transnational experience thereby contributes to personal development and may add to an individual's skills and competences, both related to a specific occupation and to transversal 'soft skills'. For young people), time spent abroad may constitute a particular driver for personal growth, as during the stay, they need to adjust to unfamiliar environments by themselves.

Periods of living abroad are understood as an important source of human capital formation, with skills available exclusively from these transnational experiences. So called 'transnational human capital' is valued in the labour market, as many employers tend to prefer candidates with said experiences, either due to nature of the future work assignments or due to assumed personality traits attached to transnational experiences acquired. (Friedrich, et al., 2013; Gerhards, et al., 2016). Young EU citizens' experiences abroad tend to strengthen young people's citizenship behaviour and promote positive attitudes towards the European Integration project.

Mobility related to IVET represents a key transnational experience among others. At EU level, there is no all-encompassing source available, measuring European citizens' transnational experience. However, various waves of the Eurobarometer provide indicative information on the reasons for moving temporarily abroad and the differences in the likelihood of a person's transnational experience across the EU28 Member States.<sup>7</sup>

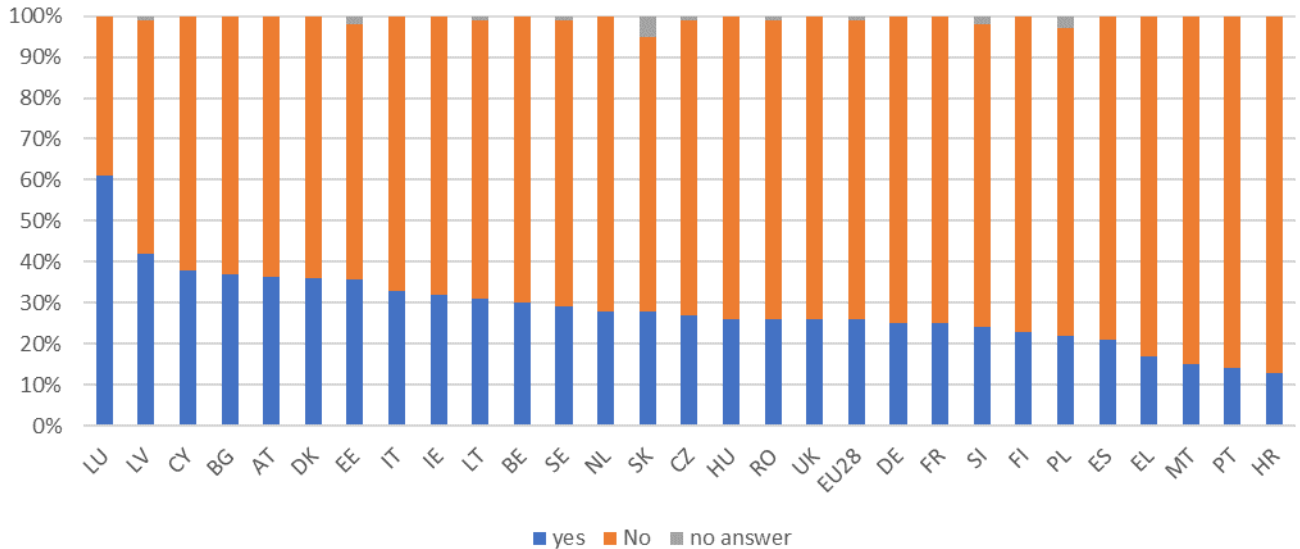
According to the data provided by the 2018 Eurobarometer on the European Educational Area (Directorate-General for Communication, 2018), IVET constitutes a quantitatively relevant area for making transnational experience for the 15 to 34-year-olds. Although the small sample size (300 respondents per country) calls for a cautious interpretation of the findings, the data indicates significant cross-country differences in young people's transnational experiences. The data shows that IVET learning mobility is of rather different importance across countries. Some forms of activities (e.g. working abroad at an early

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<sup>7</sup> <http://data.europa.eu/euodp/en/data/dataset?tags=flash+eurobarometer>

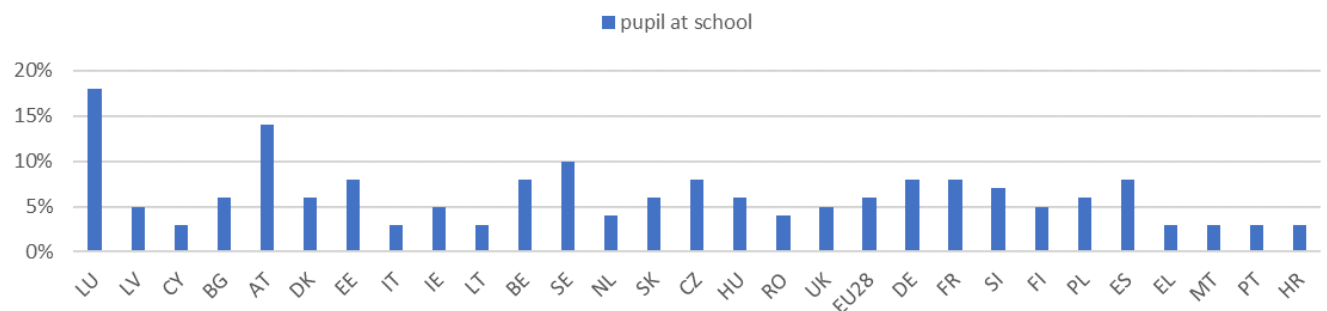
career stage; participation in the context of youth work) seem to be much more significant in some countries than in others. The latter suggests that there could be particular traditions and patterns leading to a clear preference for one framework for organising transnational experiences over another.

**Figure 3 Proportion of the 15 to 34-year-olds with any form of transnational experience (2018) – Countries sorted according to the proportion of the target population with any transnational experience**



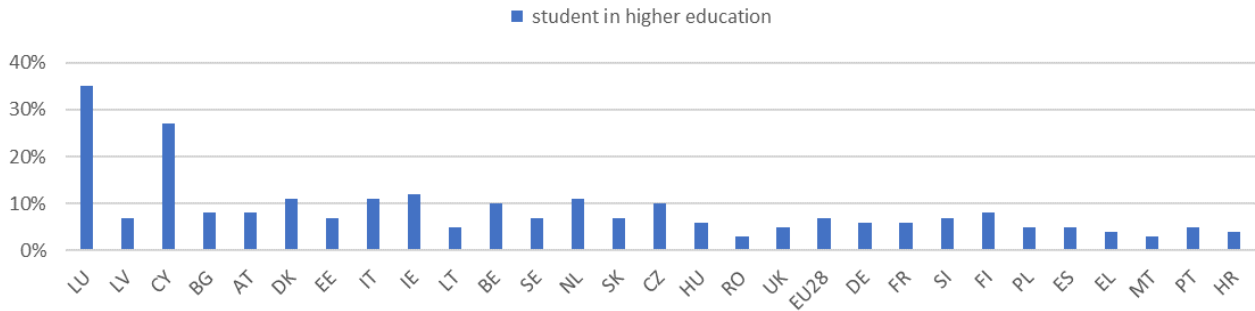
Source: Eurobarometer 466 – Sample Size: 300 per country

**Figure 4 Proportion of the 15 to 34-year-olds with a previous transnational experience related to their schooling (2018) – Countries sorted according to the proportion of the target population with any transnational experience**



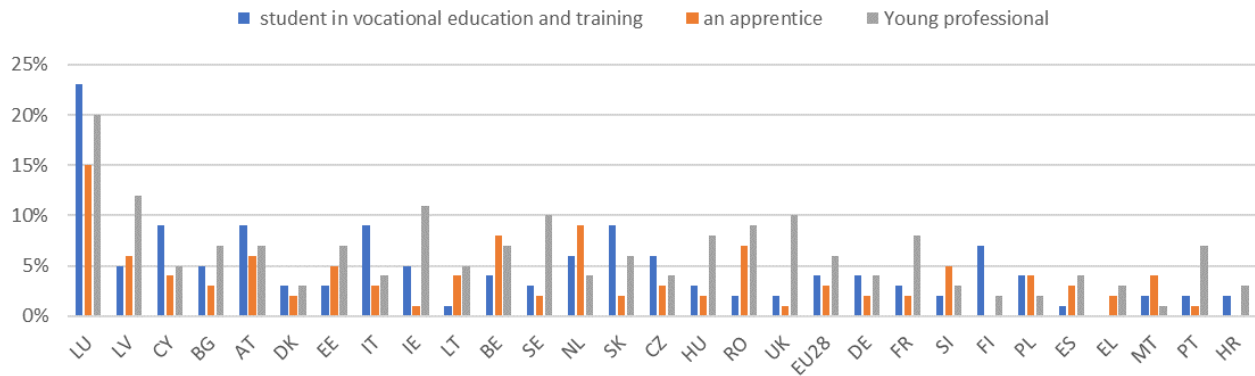
Source: Eurobarometer 466 – Sample Size: 300 per country

**Figure 5 Proportion of the 15 to 34-year-olds with a previous transnational experience related to higher education (2018) – Countries sorted according to the proportion of the target population with any transnational experience**



Source: Eurobarometer 466 – Sample Size: 300 per country

**Figure 6 Proportion of the 15 to 34-year-olds with a previous transnational experience related to IVET or gainful work (2018) – Countries sorted according to the proportion of the target population with any transnational experience**



Source: Eurobarometer 466 – Sample Size: 300 per country

**Figure 7 Proportion of the 15 to 34-year-olds with a previous transnational experience related to volunteering or youth work (2018) – Countries sorted according to the proportion of the target population with any transnational experience**



Source: Eurobarometer 466 – Sample Size: 300 per country



Key perspectives on IVET learning mobility include:

- **IVET system perspective:** IVET learning mobility is understood as a feature of IVET systems, expressing their degree of internationalisation. Indicators on IVET learning mobility expresses the extent of transnational experience and the particular skills made available by international exchange and cooperation. Only transnational experience with a clear link to IVET is of interest, notwithstanding the fact, that IVET students may profit also from other non-specific frameworks (e.g. in youth work or generic language exchange programmes).
- **Equity perspective/Parity of esteem between general (academic) and vocational programmes on upper secondary level:** Given the value of any form of transnational experience, the question here is if participants in IVET are at a disadvantage when compared to their 'academic' peers' experiences abroad. An IVET student might have an advantage or a disadvantage accessing transnational experience (e.g. the likeliness of experiencing a work placement abroad vs the likeliness of attending a credit-mobility abroad) vis-à-vis an 'academic' reference group.
- **Internationalisation of the economy:** As the number of firms with transnational activities increases, the value of graduates' transnational experiences increases too. Firms with international operations active in IVET provision (apprenticeships in particular) tend to contribute significantly to IVET learning mobility.
- **Labour migration:** Migrants are using IVET for gaining access to the labour markets in their host countries. Moreover, in some countries, young people follow an established pattern of working abroad for a deliberately unspecified number of years with no definitive intention of staying<sup>8</sup>.

As it will be discussed in detail in section 4, the IVET system perspective is the most relevant for the Education and Training 2020 indicator on IVET learning mobility. Therefore, in the current report, particular attention is paid to gathering information on learning mobilities of IVET students related to their completed IVET programmes, respectively, IVET learning mobility activities, which can be traced back to a particular IVET programme and its curriculum. The IVET learning mobility indicator should express the degree of internationalisation of the IVET system.

### 3.3. Challenges for introducing and measuring IVET learning mobility

#### 3.3.1. *The challenges of the distinctiveness and diversity of IVET*

IVET students face on average more limitations for entering a learning mobility compared to HE students. However, the composition of IVET learner populations out of subgroups with greater or lesser difficulties in accessing mobilities varies widely across EU Member States.

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<sup>8</sup> In higher education, the concept of "degree mobility" is well established referring to students leaving for entering HE and returning upon graduation. HE mobility statistics can differentiate between students with a foreign citizenship having entered the country to study ("degree mobility") and non-national students who need to be seen as its permanent residents and who have actually spent their whole school career in the country (not mobile students). In IVET, the option of moving to another country to enter a VET programme ("IVET degree mobility") is typically not considered specifically despite having small groups of students engaged in such an IVET mobility pattern. There are no approaches distinguishing between 'IVET degree mobile' students and those, who have been established in the country prior to entering the IVET program and cannot be considered as mobile students. Consequently, students who pursue their whole IVET programme abroad aren't counted as mobile.

## Measuring Learning Mobility in Vocational Education and Training

Studying the composition of IVET populations out of different groups is recommended when interpreting the outcomes for IVET learning mobility indicators across countries.

IVET programmes are diversified in length, curricula, selectivity and dropout rates and the composition of their students and graduates. Compared to HE students, IVET students are a more heterogeneous group with regard to their age, their previous educational achievements, their future plans within education and their employment status.

**Table 2 Participants in IVET in 2018 on different levels of education**

	Lower secondary education - vocational	Upper secondary education - vocational	Postsecondary education - vocational	Short-cycle tertiary education - school and work-based vocational programmes	Short-cycle tertiary education - vocational/ professional	Bachelor's or equivalent level - professional
EU27 (from 2020 onwards)	474 470	8 537 937	(d)	63829 (d)	1174967 (d)	(d)
EU28	877 982	10 096 493	(d)	158455 (d)	1315799 (d)	(d)
BE	83 573	426 537	57 181	0	22720 (d)	236 364
BG	10 822	153 023	1 092	(z)	(z)	8 527
CZ	2 353	277 013	5 856	(z)	979	19 883
DK	(z)	109 573	(z)	(z)	35 572	117 655
DE	207 069	1 126 502	718 727	(z)	349	181 926
EE	1 012	17 957	4 723	(z)	(z)	(d)
IE	39 768	91 001	24 559	:	(d)	(d)
EE	4 812	98 447	82 860	(z)	(z)	233 477
ES	22 195	611 772	25 399	12 993	414 386	(d)
FR	(z)	1 072 405	16 027	(z)	505 057	299 579
HR	18 329	109 303	(z)	(z)	51	40 144
IT	(z)	1 530 356 (d)	(d)	0	13 378	(d)
CY	(z)	4 711	(z)	653	4 648	(z)
LV	301	23 646	4 581	14 919	14 919	29 558
LT	3 466	18 398	18 543	(z)	(z)	35 805
LU	(z)	16 195	689	(z)	766	1 348
HU	584	158 318	76 403	12 236	12 236	(d)
MT	297	5 181	(z)	241	869	(d)
NL	49 930	560 509	(z)	(z)	25 029	(d)
AT	(z)	236 857	17 398	(z)	75 217	(d)
PL	(z)	672 025	235 365	(z)	234	(d)
PT	23 909	159 254	4 741	(z)	12 777	(d)
RO	(z)	409 419	91 889	(z)	(z)	(d)
SI	(z)	65 536	(z)	(z)	10 353	19 331
SK	6 050	127 302	13 699	(z)	2 640	(d)
FI	(z)	261 248	25 443	(z)	(z)	(d)
SE	(z)	195 448	17 934	22 787	22 787	(z)
UK	403 511	1 558 556	(z)	94 626 (d)	140 832 (d)	(d)

Sources: Eurostat dissemination data base - educ\_uoe\_enrs02, educ\_uoe\_enrs05, educ\_uoe\_enrs07; educ\_uoe\_enrt01; NB: (z) not applicable (e.g. do not exist); (d) defined differently than in the manual

Limiting factors affecting IVET students (particularly at upper-secondary level) access to learning mobilities include:

- **Significant proportions of IVET students are (still) minors and in compulsory education:** learning mobility activities need therefore to respond to minors' needs and comply with the legal requirements of mandatory schooling and mandatory supervision of minors.
- **Some dominant forms of how to organise teaching within IVET programmes on upper secondary level are limited in flexibility:** Despite recent reforms towards more flexible frameworks of provision, large proportions of IVET students partake in still rather inflexible programmes with little room to manoeuvre compared to modularised course systems in HE. IVET schools need to take a proactive role for making any learning mobility possible.
- **Some IVET programmes represent only transition points within the educational pathway of their students:** Although direct access from IVET to the labour market is a frequent pattern, IVET programmes (on upper secondary level) have broadly ceased to prepare exclusively for direct access to the labour market, yet, prepare for further steps within the education system, either for moving on to a VET programme on a higher level or for entering higher education. IVET mobilities are often available only in a selection of staged IVET programmes, however, as significant proportions of students move on from programmes without options for learning mobilities to programmes, where options for learning mobility are in place, over their career, they might be invited to take part at least once.
- **At least in some countries, many IVET participants are apprentices who hold an employment contract and are bound to deliver productive work:** Any learning mobility of apprentices with a status of a paid employee requires adjustment to the needs of the employers as well. Some employers promote learning mobilities, while others may not be prepared to cover the direct and indirect (foregone productivity) costs of an apprentice's learning mobility.

Any benchmark on learning mobility in IVET is strongly influenced by the composition of groups of IVET participants facing stronger or weaker limitations upon entering a mobility. EU policies have taken this into account by choosing a benchmark asking for a comparably low proportion of mobile IVET graduates (6%) compared to the much more ambitious target for students in higher education (20%). However, cross-country differences in the composition of IVET need to be addressed too as shown in the remainder of the section.

### *3.3.2. The challenges of the distinctiveness and diversity of IVET across countries for understanding IVET learning mobility*

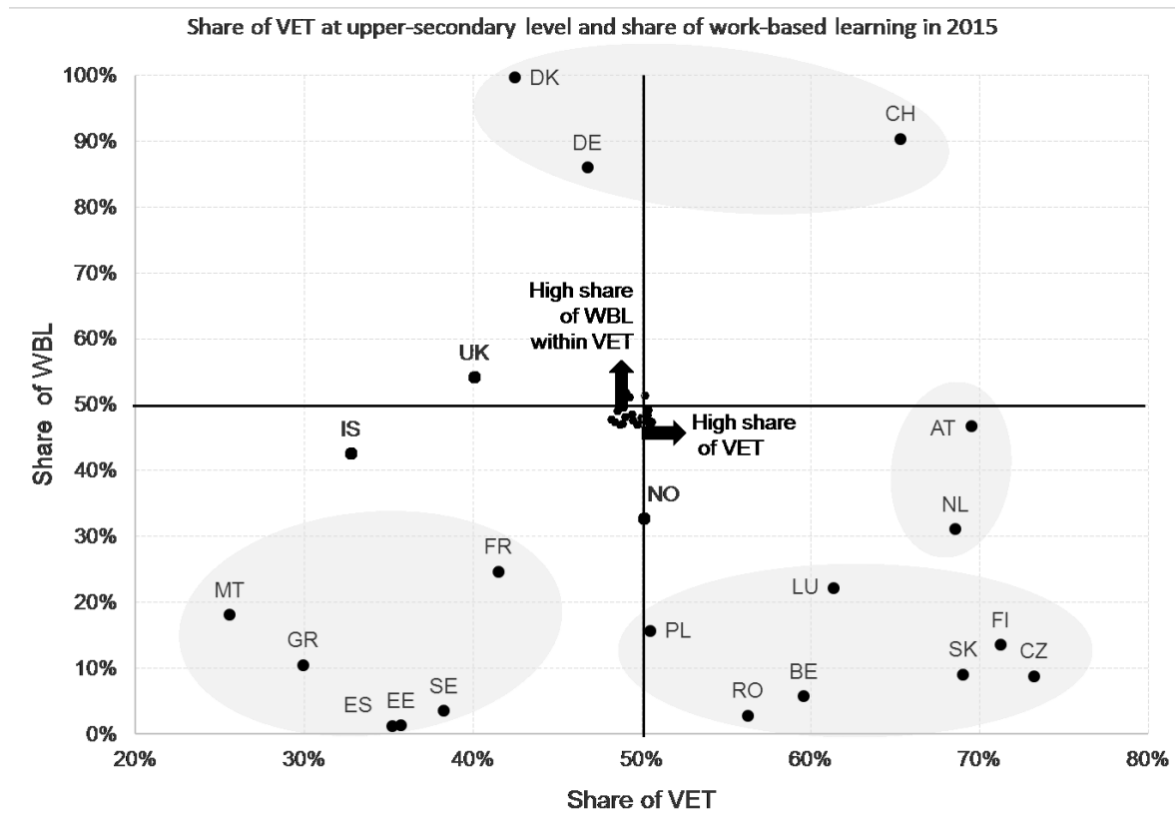
The provision of IVET shows a much higher level of diversity than, for example, HE across the EU28 Member States with an only modest trend towards higher levels of similarity over the past two decades (Cedefop, 2020). This diversity of IVET poses a particular challenge for crafting a meaningful benchmark on learning mobility and for collecting the required data as discussed below.

To begin with, there are many countries where IVET occupies only a small share of students on upper secondary level – Latvia, Lithuania and Ireland in particular. In contrast, IVET students on upper secondary level make up for the majority of students on this level, with about 70% in Austria, the Netherlands, Slovakia, Czechia and Finland. (Cedefop, 2020)

For IVET learning mobility, it is of further importance, if IVET has a strong work-based component. When the work-based component is weak, learning mobilities in form of work-placements might be particularly attractive. In countries where enterprises play an important role as providers of IVET, this can limit or enlarge the uptake of learning

mobilities as employers' reasons for refusing or allowing participation come into play. With regard to the component of work-based learning (WBL), IVET systems differ strongly (see Figure 7), with high proportions of WBL in IVET in some countries (often labelled as "apprenticeship systems" like Denmark, Germany or Austria) and low in others (e.g. Spain, Estonia, Romania or Sweden).

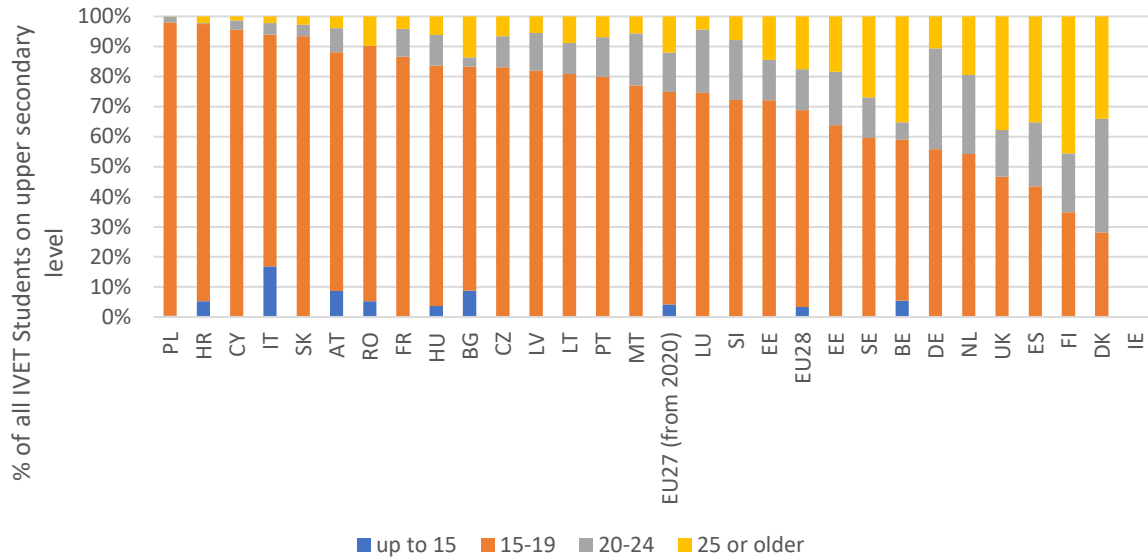
**Figure 8 Relative importance of IVET at upper secondary level and relative importance of workplace-based IVET on upper secondary level (as apprenticeships) - overview**



Source: (Markowitsch and Hefler, 2019)

EU Member States differ strongly with regard to the proportion of IVET students still in compulsory education and/or being minors. As shown in Figure 9, the proportion of IVET students on ISCED 11 3 Level, who are 20 years or older are particularly low (less than 20%) in Poland, Croatia, Cyprus, Italy, Slovakia, Austria, Romania, France, Hungary, Czechia, Slovenia and Lithuania. By contrast, more than 40% of IVET students on ISCED11 level 3 are 20 years or older in Sweden, Belgium, Germany, the Netherlands, the UK, Spain, Finland and Denmark (Ireland does not have vocational education on upper secondary level.)

**Figure 9 Age structure of IVET students in upper secondary education (ISCED11 Level 3) - sorted according to the share of students below 20 – 2016**

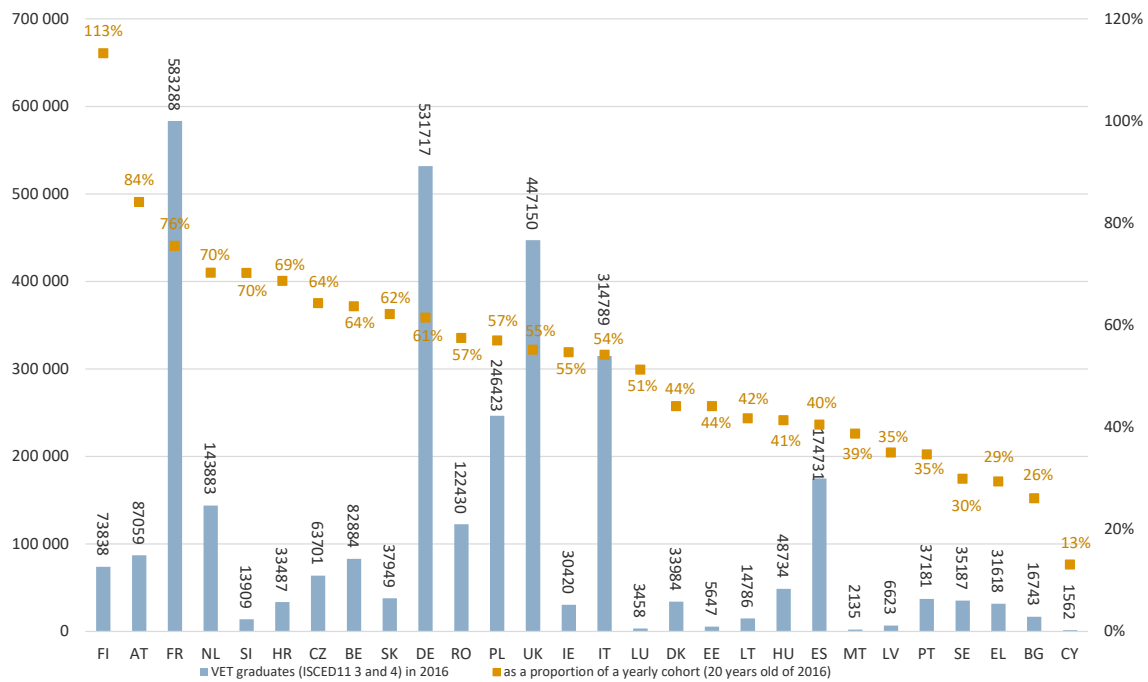


Source: Eurostat [educ\_uoe\_enrs05] – NB: 25 years and older include “unknown”

When selecting an appropriate measurement strategy for IVET learning mobility, the total size of the VET population matters. The smaller the absolute numbers of IVET students, the more challenging any approach using a general population survey is. As the current benchmark on IVET learning mobilities refers to the universe of IVET graduates (18-34-year olds), it is of further importance to observe the size and composition of the population of IVET graduates.

Figure 10 provides an overview on the absolute number of graduates in IVET. It shows that the population of IVET graduates is particular small in small countries with a minor IVET systems as it is the case, for example, in Estonia, Latvia, Cyprus or Malta. It also points to the fact, that the population of IVET graduates of one year can represent a rather different share of one age cohort, pointing to the fact, that IVET can be scattered throughout adult life (see below) and that adults may earn more than one VET qualification over their life course. It is therefore required to choose carefully the age bracket for constructing the denominator of any IVET learning mobility indicator.

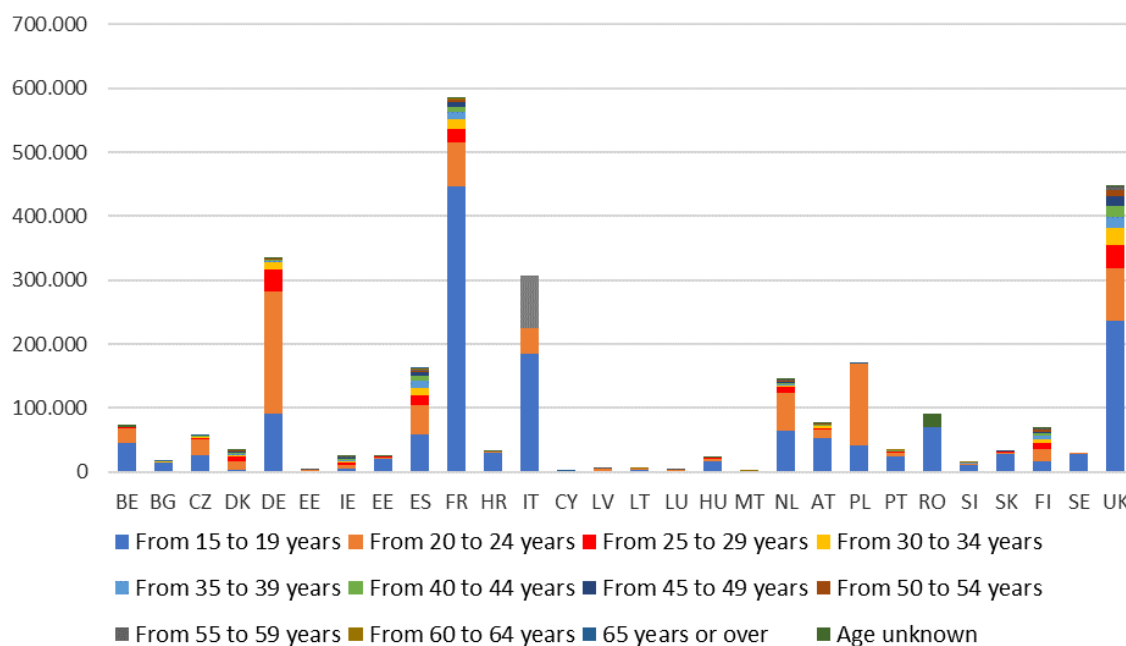
**Figure 10 IVET graduates on ISCED11 Level 3 and 4 – all ages (2016) – sorted according the number of graduates expressed as a proportion of the 20-year-olds (general population)**



Source: Eurostat – educ\_uoe\_grad01, own calculations; NB: the left axis relates the IVET graduates (irrespective to age) to the size of the 2016 cohort of 20-year-olds; e.g. 1562 IVET graduates (of all ages) correspond to 13% of all 20-year olds in Cyprus.

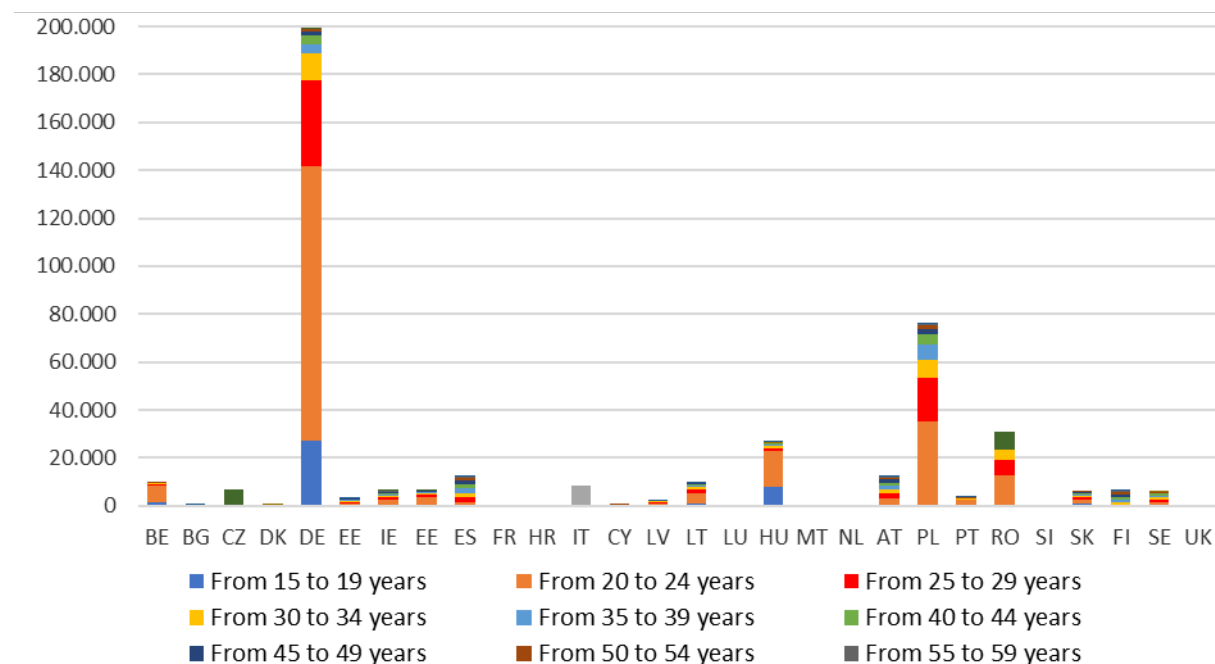
Among graduates in IVET on ISCED11 level 3 adolescents below the age of 20 make up for the vast majority of graduates (70% and more) in a broad set of countries (BG, EE, ES, FR, IT, CY, LT, HU, MT, AT, PT, RO, SI, SK, SE). In other countries, at least 50% of graduates are 20 years and older (CZ, DK, DE, IE, LV, LU, NL, FI). Among IVET graduates on post-secondary level, adults 20 years and older make up for the (vast) majority in practically all countries, however, IVET on post-secondary level is of a highly diverse significance across countries and fully absent in some EU Member States.

**Figure 11 IVET graduates on ISCED11 Level 3 according to age 2016<sup>9</sup>**



Source: Eurostat [educ\_uoe\_grad01]

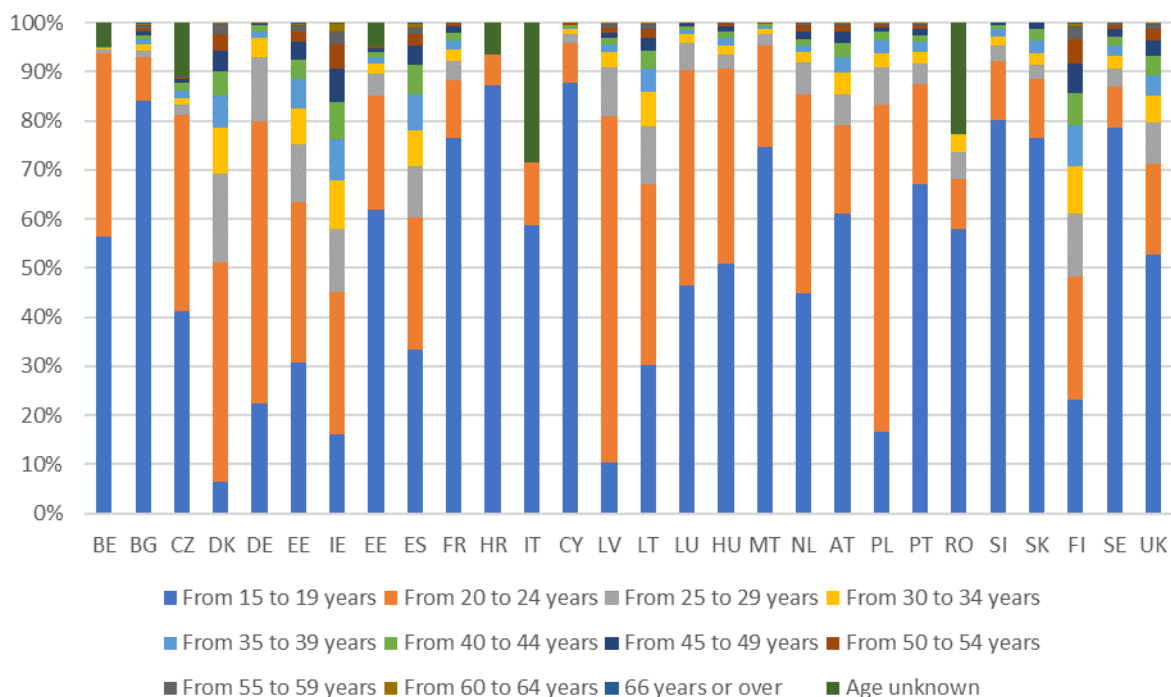
**Figure 12 IVET graduates on ISCED11 Level 4 according to age 2016**



Source: Eurostat [educ\_uoe\_grad01]

<sup>9</sup> For detailed figures see tables in Annex 3

**Figure 13 IVET graduates on ISCED11 Level 3 and 4 according to age as proportion of all IVET graduates 2016**



Source: Eurostat [educ\_uoe\_grad01] – own calculations

### 3.3.3. The challenges of scope – How to delimit IVET learning mobility and harmonise data collection

Learning mobilities related to IVET programmes – or transnational mobility of IVET students as such – are highly diverse in their organisational forms, purposes, length, outcomes, costs and funding arrangements. For measuring IVET learning mobility, it is therefore crucial to clearly specify which types of mobility should be counted and which types not. Moreover, it is important to reflect on the question in which type of data or by which data collection approach, it would be possible to detect particular types of activities. With any approach taken, a compromise needs to be made, as each approach misses particular types of learning activities, while failing to exclude some activities which do not meet the criteria chosen.

The measurement of IVET learning mobility poses more challenges than the measurement of mobility in HE. In the following, the key challenges are discussed.

- Safeguarding the criteria of an interrelation between the stay abroad and the educational programme taken:** For the IVET learning mobility indicator, it is more demanding to measure spells abroad only in cases, where there is a clear link between the mobility and the IVET programme. In the case of HE (credit mobility), the mobility refers to the fact that a student is admitted for a period of time to continue his/her study started in his/her home institution. When IVET learning mobility takes place within an exchange programme between schools, it is also straight-forward to count it. However, the same is not true for work placement and the participation in a broad variety of other activities abroad, where it is unclear whether they are related to the IVET programme of a participant.
- Applying the duration threshold:** For the IVET learning mobility indicator, a threshold is set so that only mobility spells of at least two weeks (or 10 working



days) should be considered, while shorter ones should not be considered. However, while the threshold seems to be straightforward, it becomes somewhat ambivalent, when the question is raised whether or not an IVET graduate has participated in “stays abroad for learning purposes for at least two weeks” during their attendance of a programme, as it remains unclear whether a series of shorter stays abroad – summing up to two weeks or more – would satisfy the criteria used in the threshold.

- **Applying the certification criteria:** For the IVET learning mobility indicator, any mobility documented by the Europass Mobility certificate, should be considered, even when the mobility was shorter than two weeks. Even when the majority of mobilities documented by Europass might be in line with the two weeks threshold, certainly, the Europass criteria makes the application of the duration threshold less straightforward.
- **Ambiguity of counting mobilities taking place after graduation (work insertion phase):** The IVET learning mobility indicator does not specify explicitly, whether – for being counted – the learning mobility has to take place prior to graduation. Learning mobilities – in particular work placements – having taken place immediately after graduation within a kind of job insertion phase and before taking on a permanent position, might equally be covered by the indicator. Public support schemes might explicitly support the learning mobility of recent graduates and they may represent a larger share of all beneficiaries. When ‘graduate mobility’ is covered by the IVET learning mobility indicator, however, this creates various methodological challenges, as these types of mobility would not be covered by surveys among (upcoming) graduates in schools nor by any administrative data collected by schools up to the day of graduation<sup>10</sup>.
- **Enterprises involved in dual forms of IVET as ‘sending’ organisations:** In IVET and in forms of dual VET and various forms of apprenticeships in particular, enterprises as VET providers come into the picture. Not only IVET schools, but also the companies employing the apprentices perform as ‘sending organisations’, thereby potentially initiating a significant number of IVET mobilities. While a part of the mobilities initiated by companies is clearly related to IVET, another part is without any link to educational purposes, requiring an approach to distinguish the former from the latter.

### A typology of IVET learning mobilities

For keeping an overview about learning mobilities related to the IVET system – and not only any transnational experiences of IVET students or graduates –, a simple typology is proposed. As its first dimension, in the typology the question is used whether or not a transnational learning activity is observed that relates to and has a clear purpose within an ongoing IVET programme (including an insertion phase after graduation). As a second dimension, in the typology, the sending institutions, understood as the organisations initiating or supporting a learning mobility are cross tabulated with the receiving institutions (another VET school or educational provider or another enterprises/organisation offering a work placement). The following types are identified:

- (A) **School-to-School IVET learning mobility:** Educational organisations cooperate so that students can move temporarily from their home institution to a host institution, receiving a meaningful educational offer there (either organised for them

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<sup>10</sup> According to Erasmus+ data (see Annex 4), the proportion of graduates is below 10% of all students, who have answered the relevant question in the majority of countries. It is between 10% and 20 % in BE, HU, IE, IT and PT. It is the highest in Spain (32%).

on purpose or by partaking in an ongoing local programme). In IVET, the school-to-school mobility is expected to make up only for a smaller fraction of activities.

- (B) **School-to-Work placement mobility:** IVET providers support their students in entering a work placement abroad, understood as a (occasionally even mandatory) part of the educational programme. Work placements during the studies are expected to make up for the majority of IVET mobilities. (Supporting recent graduates to take a learning mobility in their insertion phase to the labour market can be regarded as particular form of this type).
- (C) **Enterprise (in Dual VET schemes) to school mobility:** Enterprises may promote the mobility of their apprentices to an IVET organisation abroad. One typical case would be the participation of apprentices in a course offered by a training centre of the parent company abroad. In countries where dual VET plays a significant role, this type of mobility is expected to be of some significance too.
- (D) **Enterprise (in Dual VET schemes) to work placement:** Enterprises may promote work placements of their apprentices abroad, sending them to an affiliated organisation or any other suitable organisation. Enterprises may receive even public subsidies compensating for the productivity loss during the apprentices' spells abroad. Beyond work placements, they may deliberately include apprentices in missions abroad, allowing them to work within their teams in an international context. In countries, where dual VET plays a significant role, this type of mobility is likely to make up for considerable parts of the mobility.

In practice, types may even appear in combination, for example, when two VET schools cooperate and provide some courses (e.g. language courses) to incoming students, however, the key part of the learning mobility consists of by a work-placement, the receiving school has helped to organise for the incoming students.

**Table 3 Overview on types of transnational mobility regarded as VET mobility**  
Receiving institutions

IVET related institutions	- Sending	IVET school/provider <i>school placement</i>	Enterprise <i>work placement</i>
IVET school/provider		(A) School-to-School mobility	(B) School-to-Work placement mobility
Enterprises in Dual VET schemes		(C) Enterprise (Dual VET) to school mobility	(D) Enterprise (Dual VET) to work placement mobility

These four types of IVET mobilities need to be distinguished from forms of transnational experiences, which are not linked to a particular IVET programme and which therefore should not be counted by the nominator of the IVET learning mobility benchmark:

- (E) **Individual initiatives for any form of transnational experience not related to IVET:** IVET students may engage in many forms of transnational experiences, in particular in their leisure time. More importantly, they may engage in learning activities abroad, however, not linked to their IVET programme. However, for quite many learning activities (e.g. language courses, volunteering, youth work), it would be already difficult to state whether there is a link to IVET. When individuals are

asked, they may emphasize a relationship between an activity abroad and their IVET programme, even when this link would not be identified by a neutral observer.

- (F) **Enterprise (in Dual VET) support students in transnational experiences not related to IVET:** Enterprises may engage their apprentices in activities, which take place abroad, however, which allow practically no acquisition of transnational skills and are provided without any intention to foster learning. Forms of cross-border service provision, where work teams commute daily, however, where team members work mainly on their own with limited contact to other people or the local population would constitute an example. Travel opportunities given as an incentive to (former) apprentices would be another one.

### **Classifying transnational experiences as IVET learning mobility**

Any definition of learning mobility in IVET knows its significant challenges. Moreover, data sources might hold only insufficient information to identify all targeted cases and exclude cases out of scope from being counted as learning mobility. In any survey, the respondent's own understanding of a learning mobility is coming into the picture.

Table 4 provides examples of transnational experiences and states whether they should be classified as IVET learning mobility according to the current benchmark.

**Table 4 Classifying cases of transnational experiences according to the current IVET learning mobility indicator (selected dimensions of the indicator only)**

Examples of transnational experiences by IVET students	Type	Formal criteria	Scoping	In Scope	Likelihood of being recorded by	of	being	
		IVET-related	Either one	of	School survey	Graduate	Data	
			Length (two weeks)	Europass Mobility				
One-week exchange programme between two IVET schools in different countries; costs paid solely by schools and parents	<b>A</b>	Yes	No	Yes	Yes	Yes	Yes	No
Working as a bay watcher abroad for four weeks during holidays (No relation with the IVET programme taken)	<b>E</b>	No	Yes	No	No	No	No <sup>11</sup>	No
Entering a one-year student exchange programme for language learning organised by a for-profit provider; taking a break from the IVET programme; paid by the parents	<b>E</b>	Bord. <sup>12</sup>	Yes	Bor.	Bord.	Bord.	Yes	No
An IVET programme in tourism foresees mandatory work placements (eight weeks) within the hospitality sector abroad; preparation is supported by the school; costs are covered fully by schools and parents	<b>B</b>	Yes	Yes	Yes	Yes	Yes	Yes	No
Enterprise in Dual VET sends an apprentice deliberately to a company site abroad as part of a work team for six weeks to strengthen his/her transnational skills during summertime (where VET school pauses)	<b>D</b>	Yes	Yes	No	Yes	No	Yes	No
An enterprise in Dual VET includes an apprentice in a work team working on a construction site abroad for some weeks; however, there is no contact with any person outside the own team, the team commutes daily and transnational experience is not intended	<b>E</b>	No	Yes	No	No	No	Bord.	No
Enterprise in Dual VET sends all its apprentices to a series of one-week workshops (four within two years) at a training centre abroad run by the mother company; training in particular applications	<b>C</b>	Yes	Bord.	No	Bord	No	Yes	No
A group of students of a VET school is invited to participate in a one-week educational project on the functioning of the EU institutions, taking place in Brussels, organised within the national Youth programme; taking place towards the end of school year (yet not during vacations)	<b>A</b>	Bord. <sup>13</sup>	No	Yes	Bord.	Bord.	Yes	Yes
An IVET programme requires four weeks of work placement during summer vacations, however, with no preference for placements abroad; a student deliberately chooses an enterprise in another country	<b>B</b>	Yes	Yes	No	Yes	Bord.	Yes	No

Source: Authors' description; NB: Bord. for borderline case

<sup>11</sup> Borderline case

<sup>12</sup> Language learning

<sup>13</sup> Civic education

### 3.4. Construction of indicators on mobility in HE and in IVET compared

Form the definitions and data sources for monitoring mobility in tertiary education, much can be learnt about IVET learning mobility. The general definition used in the methodological manual<sup>14</sup> on learning mobility in tertiary education defines learning mobility as “the physical crossing of national borders between a country of origin and a country of destination and subsequent participation in activities relevant to tertiary education (in the country of destination)” (European Commission. Eurostat, 2015).

**Table 5 Comparison of the HE and the IVET learning mobility indicator**

	<b>HE-mobility</b>	<b>IVET-mobility</b>
Age range of participants	Adults only (18+)	Minors (15-18/19) AND adults (18+); minors constitute a large share of IVET learners
Legal requirements	No compulsory education; in case of credit mobility: on leave in the home university	Often: for minors: compulsory education is suspended for the time of the exchange (exemption); particular rules apply for minors
Threshold (current)	3 months/15 ECTS	At least 10 workdays OR reported by Europass Mobility
Work placements	Are counted (also for recent graduates), however, make not up for a large proportion of cases	Are included, make up for most cases
Degree Mobility	Part of the mobility indicator	Excluded from the learning mobility indicator
Credit Mobility	Part of the mobility indicator	Included; however, the larger part of mobility spells is too short for gaining any credits
Typical way of data collection/generation	Degree Mobility: Data collected by universities of the host country by the time of enrolment; submitted within (register-based) educational statistics; criteria of having acquired the HE entrance qualification abroad for establishing ‘international students’ (not: citizenship) Information provided by the destination countries (Eurostat (EU-countries (not FR) + IS, NO, CH, MK, RS, TR) + OECD (set of non-European destinations)	(not visible/counted – taken as part of (labour) migration)
	Credit Mobility: Data collected typically by the university in the country of origin, either based on administrative information produced via exchange programmes (Erasmus+) OR based on a questionnaire administered to students by the time graduation - Data collected at the level of country of origin <sup>15</sup> (Eurostat (EU-countries (not BE, EE, IE) + CH, MK, NO, RS)	No rule established; various sources; in many countries, no information available

Source: Authors’ description

The country of origin is thereby defined as the country of prior education (i.e. country where upper secondary diploma was obtained). Whereas the overall definition of learning mobility also could address learning mobility in IVET, the country of origin in the case of

<sup>14</sup> European Commission. Eurostat (2015). *Methodological manual on learning mobility in tertiary education*

<sup>15</sup> Defined as the country where the graduates are regularly enrolled/obtain their diploma

IVET learning mobility needs to be defined in another way considering that an entrance qualification as required for tertiary education is not in place.

The EU benchmark on learning mobility in HE includes two types of mobility: degree mobility and credit mobility. Degree mobility is defined as the enrolment in a degree programme at tertiary level in another country than the country of prior education. This kind of mobility is not included in the IVET learning mobility indicator. Credit mobility in HE is defined as “temporary tertiary education or/and study-related traineeship abroad within the framework of enrolment in a tertiary education programme at a ‘home institution’ (usually) for the purpose of gaining academic credit (i.e. credit that will be recognised in that home institution)” (European Commission. Eurostat, 2015). This kind of temporary mobility is considered as a part of an IVET learning mobility indicator, although the achievement of credits plays a minor role in IVET learning mobility as the duration of stays is typically short.

Data collection on credit mobility in higher education takes place at the level of the country of origin (i.e. the country where the graduates are regularly enrolled). This kind of data is currently available for 25 EU countries. Applied to IVET learning mobility this would imply the need to collect data on participation in learning mobility activities during their IVET programme for all IVET graduates. Data on IVET graduates is available in registers on educational achievements; in 25 EU countries (all but BG, DE and MT) these registers contain information on each individual learner.

While data coverage concerning credit mobility in tertiary education is relatively good, there are still some obstacles faced in regard of gaps in the data collection due to derogations, missing data or missing disaggregation (Flisi and Sánchez-Barrioluengo, 2018).

### 3.5. Current approaches for measuring IVET learning mobility

Three possible sources for data on IVET learning mobility have been identified:

- Administrative data, either collected by IVET schools or by agencies in charge of supporting IVET learning mobilities
- General population surveys, where a module on IVET learning mobilities is one topic among others or the only topic
- Surveys among upcoming or recent IVET graduates, carried out with the support of schools or as part of another established framework allowing for targeting a representative sample of IVET graduates.

About administrative data, the following differentiation needs to be made. Data can be generated either by IVET schools (including the school-based part of dual VET) or by agencies in charge of supporting IVET learning mobilities. The latter will clearly underestimate the number of mobilities, as they will hold no information on mobilities taken place without any additional public support.

For administrative data collected by schools, the following differentiation can be made: Data can be either generated as part of the processes required for making a learning mobility happen (e.g. given permission to time of/an interruption of a current program etc.). In case schools hold registers on time missed by students (e.g. for sick leave) and they report separately on "mobility abroad", this register might be used to provide information on mobilities within certain limitations (e.g. mobilities during school holidays). Alternatively, schools themselves can administer a mandatory survey among their students towards the end of their programmes, asking for a full breakdown of transnational experiences, thereby covering all mobilities up to the time of the survey. Only learning mobilities related to school-to-work transitions of the graduates are not covered by this type of data.

For administrative data, it is also crucial to know about the form in which school-based data are submitted to the agency responsible for setting up the overall statistics. Schools might either provide only summary tables, holding several break downs for various socio-economic groups (e.g. gender, age etc.). Alternatively, as in approaches for registers on educational achievement, they might provide micro data sets, where each student is represented individually with a large number of variables, including a unique statistical identify (as the social security number). In countries, where registers on educational achievements have been established and schools are required to deliver the required micro-data sets, it might be possible to include information on learning mobilities in IVET in the established data collection approach (see Table 6 for information on the existence of registers on educational achievements).

Research based surveys among a representative sample of IVET graduates provide an alternative to both approaches based on administrative data and approaches based on a general population survey. While these surveys know their own challenges (e.g. achieving a balanced sample of IVET schools; achieving an unbiased response rates), they might provide better results at lower costs than a survey based on the general population. However, compared to administrative data, they will be less precise. Moreover, it is unlikely to implement this type of survey every year, given the efforts required to implement the studies.

**Table 6 Overview on countries where information on IVET graduates is available in registers on education achievements**

Country	Information on IVET graduates available in register on education achievements	Country	Information on IVET graduates available in register on education achievements
AT	✓	IE	✓
BE-F	✓	IT	✓
BE-W	✓	LT	✓
BG	✓	LU	✓
CY	✓	LV	✓
CZ	✓	MT	✓
DE	✓	NL	✓
DK	✓	PL	✓
EE	✓	PT	✓
EL	✓	RO	✓
ES	✓	SE	✓
FI	✓	SI	✓
FR	✓	SK	✓
HR	✓	UK	✓
HU	✓		

Source: Survey on tracking IVET graduates (European Commission, 2018b)

The only identified review on the availability of a specific data set on IVET learning mobility had been undertaken in preparation of final recommendation of the Task Force on student mobility in 2011<sup>16</sup>. (European Commission and Eurostat, 2011a, b). EU Member States had been invited to report on the availability of data sources on IVET learning mobility by answering a small subsection of a questionnaire, exploring various dimensions of Learning Mobility Statistics, with mobility in HE as the main topic. Table 7 summarises the positive answers provided by the Statistical Offices of the Member States for which information had been gathered. By 2011, the reported availability of data on (outgoing) students had been limited only, apart from data stemming from the EU programme.

Another question concerns whether countries hold information on incoming IVET students, entering the country for participating in IVET for earning credits or for achieving a degree. For no Member State the existence of data allowing to identify incoming IVET students had been reported, leading up to the decision to disrupt a related table in the UOE data collection

<sup>16</sup> For a representation of the table, see UNESCO, et al. (2013). *UOE data collection on education systems - Volume 2 - 2013 UOE questionnaires and instructions for their completion and submission*. [https://circabc.europa.eu/sd/a/e94faeef-ff13-465d-94f9-c2fb243ded57/UOE2013manual\\_volume\\_2\\_FINAL.pdf](https://circabc.europa.eu/sd/a/e94faeef-ff13-465d-94f9-c2fb243ded57/UOE2013manual_volume_2_FINAL.pdf).105



**Table 7 Summary from Final report of the International Student Mobility Statistics Task Force - Annex [16th of May 2011] p. 42-44**

	Data on IVET mobility available	Knowledge about data on Leonardo da Vinci	Data on national mobility programmes	Data on institutions' bilateral agreements	Data on other mobility
BE_FR		yes	yes		
BE_NL	yes	yes	yes		
BG					
CZ					
DE		yes			
EE		yes			
ES		yes			
FI	yes	yes	yes		
FR		yes	yes	yes	yes
HU		yes	yes		
IE					
IT		yes			
LT	yes	yes			
LU		yes		yes	
LV	yes				
MT					
NL					
PT					
SE			yes	yes	
SI		yes			
<b>Positive answers among EU28</b>	<b>4</b>	<b>11</b>	<b>5</b>	<b>3</b>	<b>1</b>

Source, DRAFT - Final report of the International Student Mobility Statistics Task Force - Annex [16th of May 2011] p. 42-44

## 4. RESEARCH STRATEGY & APPLIED METHODOLOGICAL APPROACH

### 4.1. Introduction

In the following section, the goals pursued, and the research approach applied is described.

The study has intended to clarify the practicability and the attached advantages and disadvantages of approaches to source an indicator on IVET learning mobility.

The approaches under considerations include:

- Developing a **Policy Intervention Indicator** based on administrative data on beneficiaries on IVET learning mobilities or building a similar indicator on Erasmus+ data alone.
- Sourcing an **indicator on IVET learning mobility** either based on administrative data or collected by a sample-based survey among (upcoming) IVET graduates
- **Systematically collecting administrative data** on IVET learning mobility based on administrative procedures established by schools, most preferably provided as micro-level data for each individual learner with a broad set of further socio-economic variables.

For expanding the information basis required for working towards these goals, the following tasks have been performed:

- Implementing four in-depth expert interviews with experts involved in one out of four identified implemented approaches to measure IVET learning mobility (Finland, The Netherlands, Germany, France)
- Implementing a stakeholder survey related to the current or the future measurement of IVET learning mobility based on administrative data collected by schools or agencies supporting IVET learning mobilities or on surveys on upcoming or recent graduates of IVET schools or providers

### 4.2. Proposed overall approach for clarifying the options for measuring IVET learning mobility beyond a general population survey

The current research exercise has studied the feasibility of developing one or more policy indicators on IVET learning mobility based mainly on administrative data (i.e. data on beneficiaries of support schemes; data collected by school administrations), and respectively on data collected through surveys among (upcoming or recent) IVET graduates, using VET providers as a platform for approaching graduates and for sampling.

Although constructed differently, the newly defined indicator(s) should observe mainly the same object of interest as the established benchmark on IVET learning mobility, that is the proportion of IVET graduates who have participated in a learning mobility of a certain duration while the learning mobility has been linked to their VET programme.

In a nutshell, it has been proposed to assess the feasibility of collecting data for two types of indicators:

- The **Policy Intervention Indicator on IVET Learning Mobility**: as an auxiliary indicator for policy making and monitoring, it is proposed to construct an indicator, expressing the number of supported learning mobilities in IVET as a proportion of the IVET graduates of a given year of reference. The rationale for this indicator is, that administrative data covering at least the most important policy instruments established for supporting IVET learning mobility are expected to be available in practically all EU Member States.

- A new (graduate-data-based) **IVET Learning Mobility Indicator** based mainly on information on whether (upcoming or recent) graduates have participated in an IVET learning mobility during their studies. Measurement should take place towards the end of a programme (most preferably, by the time of graduation), reporting whether a graduate has participated in one (or more) learning mobilities during the current programme.

**Table 8 Overview on proposed types of indicators**

	<b>Established IVET benchmark (linked to a general population survey approach)</b>	<b>IVET learning mobility indicator on current IVET graduates</b>	<b>Policy intervention indicator (on learning mobility in IVET)</b>
<b>Numerator</b>			
Threshold	At least two weeks OR documented by Europass	At least two weeks OR required by the curriculum OR expressed by Europass	All eligible mobilities as defined by the programmes
ISCED11 level	Only mobilities linked to ISCED11 Level 3	Mobilities linked to ISCED11-P Level 3 (excluding programmes with only partial level completion); Level 4 (and in the future Level 5)	Mobilities linked to ISCED11-P Level 3 (excluding programmes with only partial level completion); Level 4 (and in the future Level 5)
Forms and criteria	School-based or work placement; related to IVET programme (part of the curriculum)	School-based or work placement; related to IVET programme (part of the curriculum)	School-based or work placement; related to IVET programme (part of the curriculum)
Population	IVET graduates between 18-34 with a mobility	IVET graduates with a mobility irrespective of age OR 18-34-year olds only	Beneficiaries of support for learning mobility irrespective of age OR 18-34-year olds only
Sources	Ad-hoc module in a general population survey (as ELFS)	Administrative data OR a sample-based school-administrated survey among graduates OR a sample-based survey on recent graduates (e.g. as part of work-to-school transition studies)	Pooled administrative data from funding agencies
<b>Denominator</b>			
	ALL 18-34-year-old IVET graduates (irrespective of other educational achievements)	IVET graduates of one year (irrespective of age) OR VET graduates of one year within the age range of 18 to 34 (further options: number of new entrants in a programme OR average number of participants per grade)	IVET graduates of one year (irrespective of age) OR VET graduates of one year within the age range of 18 to 34 (further options: number of new entrants in a programme OR average number of participants per grade)
Sources	General Population Survey (e.g. EU-LFS)	UOE-Statistics on graduates	UOE-Statistics on graduates
<b>Benchmark aspired</b>			
	6%	To be specified (yet, more likely, higher than 6% to match the previous benchmark)	To be specified (yet, more likely, higher than 6% to match the previous benchmark)
<b>Visibility of recent changes in IVET learning mobility uptake</b>			
	Delayed (for the 18- to 34-year-olds)	Near-term (for recent IVET graduate cohorts)	Near-term (for recent IVET graduate cohorts)

Source: the authors

For both types of indicators, beyond the data on Erasmus+, data has been identified only in some countries, while in the majority of countries additional efforts would be required for collecting the required data. It has been understood as the key topic of the feasibility study to clarify, whether or not it seems possible to collect the required data. Furthermore, it should be clarified how much additional efforts on Member State level would be required to collect the desired data. Finally, the challenges to be overcome in order to achieve a data set of sufficient quality allowing for comparing results across time and across countries should be identified.

Speaking of the denominator for the two new indicators, it is suggested to basically follow the given convention to use the number of graduates (of a given year; within a given age range). Recent graduates or beneficiaries of all ages might be included in the indicator, alternatively, only graduates or beneficiaries within an age range (18-34) might be included both for the nominator and the denominator. For the policy intervention indicator, the suggested choice implies that the indicator expresses the number of current beneficiaries of support (who are mainly current IVET students at various stages of their programme) as a proportion of the current graduates. Alternatively, the same basic idea would be expressed by using the number of new entrants of a given year as the denominator. The same would be true for using the average number of students in one grade of a particular VET programme as the denominator. To use the total population of IVET students as the denominator for the Policy Indicator would – although it would allow for a better fit between the groups addressed by the nominator and the denominator – imply a break with the current convention and the benchmark achieved would need to be interpreted differently than all benchmarks referring to the graduates<sup>17</sup>.

Available evidence (see Annex 3) shows that the learning mobility in IVET – even when limiting the approach to activities directly linked to an IVET programme – can exceed the number of places by the Erasmus+ programme or all schemes providing public support for IVET learning mobility. While an indicator on the policy support for IVET learning mobility cannot be taken as a valid representation of IVET learning mobility as such, it would already allow to monitor the progress made with regard to a particularly important part of the overall IVET learning mobility framework. Moreover, it is expected that data collection for the policy support indicator will require less extensive investments than for the IVET mobility indicator. In consequence, it is anticipated, that the policy support indicator could be available within a comparable short time frame (+/- two years) within the majority of EU Member States, while for the IVET participation indicator, similar achievements will take

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<sup>17</sup> In principle, when constructing indicators, it is good practice that nominator and denominator refer to the same population (in the case of the Policy Intervention Indicator, this would be the total IVET student population for the denominator). However, if there are good reasons, it is possible to deviate from this principle and express the nominator as a proportion of a (slightly) different population, as suggested here. The key argument in favour of the suggested solution is that IVET students typically participate only once and at a defined point of time (e.g. in the third out of four years) in a learning mobility within their IVET programmes. By using the total number of students (e.g. of a three-year programme) as the denominator, where in practice only students of one year could participate, would change the meaning (the 'scale') of the achieved indicator. Even in a system with mandatory participation in an IVET learning mobility, for a three year programme, where everyone has to take a learning mobility exactly once and everyone receives public support for this activity, one would receive a Policy Intervention Indicator of 33,3%, when using the number of students in the programme – and not the number of graduates or participants in one grade – as a denominator – the graduate-based indicator, however, would be 100% for the same constellation. When using the IVET student population as the denominator, the length of programmes would therefore significantly impact the meaning of the indicator. For safeguarding the option to use the Policy Intervention Indicator alongside the Graduate-data-based IVET Learning Mobility Indicator (or the indicator established based on the general population survey), it seems therefore justified to use the number of graduates (or of new entrants) as the denominator. Alternatively, when using the number of students as the denominator, for the Policy Intervention Indicator, a specific – and much lower – benchmark would be required to be defined (e.g. 2% instead of 6%, assuming that the average duration of IVET programmes is three years). All in all, by using "graduates" as a denominator for the Policy Intervention Indicator, the benchmark would stay more in line with the original benchmark targeting graduates with/without a learning mobility.

certainly more time. The policy support indicator could therefore be used as an independent benchmark to monitor progress in the policy field of IVET learning mobility.

In the following, the possible options and their related specific tasks and challenges for achieving the two indicators are discussed.

### *4.2.1. Options for achieving the graduates-based indicator on IVET learning mobility*

As schools collect various information on their students and their graduates in particular, either based on process-generated data or by the help of forms their students are required to fill in, it has been expected, that schools might be in the position to add a request on information on learning mobilities to the set of variables collected.

By the help of the survey among institutions, it has been therefore intended to clarify:

- Which information on IVET learning mobility is currently recorded in IVET schools and provided to agencies in charge of data collection?
- Which procedures for collecting information on IVET students are in place and which could be used to add information on IVET learning mobilities?

### *4.2.2. Options for achieving the policy intervention indicator on IVET learning mobility*

For constructing a policy intervention indicator, it would be required to collect information on supported learning mobilities in IVET across different programmes and levels of policy implementation in a comprehensive and standardised way, in order to ensure comparability over time and across countries of the data collected.

Available evidence suggests that at least in most countries, support stemming from the Erasmus+ programme makes up for a significant share of the public support provided for the uptake of IVET learning mobility. In numerous countries (see Annex 3), Erasmus+ seems to be the only quantitatively relevant scheme. With the planned future increase of Erasmus+ funding for IVET learning mobility, the relative importance of the Erasmus+ programme compared to other public support programmes might even further increase. However, there is also the option that with IVET learning mobility gaining additional policy attention, national programmes and other EU-funding lines might also be expanded in the years to come.

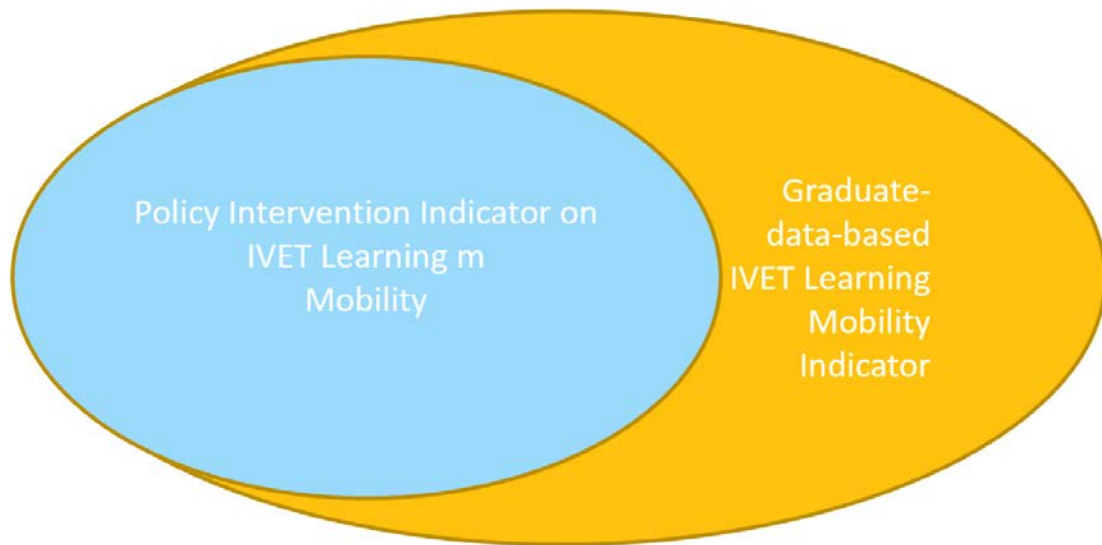
Erasmus+ agencies have been addressed by the intended survey with a twofold aim: Firstly, information should have been collected on how the information collected by the help of the Participant Report Form is processed. The latter is the only administrative source known to be available across the EU28 and it is also the base for the available statistics on beneficiaries of support for IVET learning mobility by Erasmus+. Secondly, information should have been collected on potentially available administrative data stemming from processing applications and submitting financial support.

**Table 9 Administrative sources for feeding an IVET Learning Policy Indicator**

Level of policy making	Programme	Quantitative significance (number of beneficiaries)	Availability of data (expectations)	Challenges (expectations)
EU	Erasmus+	Significant in all countries	Robust set of data with various breakdowns as reported within the program; some agencies publish more comprehensive data sets on their own	Level of harmonisation could be improved; no information on the related IVET programmes (ISCED level); needs to accommodate Erasmus+ funding for IVET learning mobilities to national circumstances lead to distortion in the comparability of data
	ESF	Minor source	Given for clearly identifiable calls/projects related to IVET learning mobility	IVET learning mobilities might be difficult to identify and spread across various programme lines
	EU regional /structural programmes	Minor source	For particular regions, regional programmes might fund IVET learning mobility in a significant and clearly visible way (e.g. school networks within INTEREG)	Difficulties to identify IVET learning mobility programmes within the overall activities
	Youth	Minor source	The youth programme might be used occasionally for IVET learning mobilities (as a substitute for Erasmus+)	Difficulties to differ between co-funded learning mobilities with/without a link to an IVET programme
Multinational, bi-lateral		Varying in importance	Large variation in the availability of data	Limited options for any harmonisation of data
National	Various types of programmes	Varying in importance; negligible in many countries	Large variation in the availability of data	Limited options for any harmonisation of data
Regional (e.g. federal states)	Various types of programmes	Varying in importance; negligible in many countries	Large variation in the availability of data	Limited options for any harmonisation of data

Source: the authors

**Figure 14 Intersection of the coverage of indicators proposed**



*Source: Authors' description*

## **5. APPROACHES FOR MEASURING IVET LEARNING MOBILITY BEYOND GENERAL POPULATION SURVEYS**

### **5.1. Introduction**

In the following section, key results from the expert survey and from four qualitative expert interviews are presented. The discussion is structured according to selected approaches for measuring IVET learning mobility, respectively, the support provided for IVET learning mobility as an auxiliary policy indicator. For each approach, illustrative examples are presented, stemming either from the survey or from the expert interviews. Next, survey results on the availability of resources, which might facilitate the adoption of an approach and experts' ratings about the feasibility of an approach in one particular country are summarised.

In section 5.2, the approach for the implemented expert survey is presented in detail.

In section 5.3, approaches are discussed where schools are mandated to collect data on their students' or upcoming graduates' participation in IVET learning mobilities.

Section 5.4 discusses options of pooling administrative data from agencies providing support for IVET learning mobilities and investigates the use of Erasmus+ data in particular.

Section 5.5 investigates approaches for sample based, school administered surveys inviting upcoming graduates to report on their IVET learning mobilities and approaches, where existing sample-based surveys on recent graduates are used to collect data on IVET learning mobilities.

Section 5.6 presents examples for mixed-method approaches, where one agency has taken the responsibility for reporting on IVET learning mobilities and is using different data sources to achieve this goal.

### **5.2. Implemented approach for the expert survey**

#### *5.2.1. Introduction*

The expert survey had been designed and implemented via an on-line survey tool of the European Commission, allowing a modular approach. The survey has been implemented between late August 2019 and 31<sup>st</sup> of October 2019.

For the design of the survey a modular questionnaire has been developed and distributed among a set of organisations in all (by that time) EU28 Member States (including UK). When designing the questionnaire, the available information on data sources has been considered. As the availability of administrative data in education is currently strongly evolving across EU Member States, the survey has also included questions on upcoming developments as for example the possibility of inclusion of information on IVET learning mobility data within the registers of educational achievements. In the following, the approach taken for the survey will be explained by giving an account on the selection of respondents, the tailoring of modules of the questionnaire towards different groups of respondents, the rationale for the development of the questionnaire and the steps of implementation of the survey.

#### *5.2.2. Selection of respondents and tailoring tasks to groups of respondents*

The expert survey was sent out to eight groups of respondents. The questionnaire had been organised in a modular form allowing to formulate questions tailored to the specific responsibilities of each respondent group. This has been done in order to reduce the



response burden, and to ensure the richness of information provided by the different groups of respondents. (For an overview on the groups of respondents see Table 10).

Two groups of respondents have been invited to complete the majority of modules, namely the Federal ministries in charge of IVET learning mobility (mainly the Ministries of Education) and national VET research institutes.

For all EU Member States, the NSIs have been invited to participate in the survey. The questionnaire has been addressed to either the education statistics departments or the departments in charge of administrative data. Furthermore, in each EU Member State the questionnaire has been distributed to at least one national agency responsible for Erasmus+. Moreover, national agencies in charge of the European Social Fund, the implementation of EU regional programme at national level, and national youth programmes have been invited to participate in the survey and report on their access to data on support for IVET learning mobilities.

In addition, for each EU Member State, the agencies responsible for public IVET learning mobility programmes have been identified. Agencies have been identified mainly based on established research. Nevertheless, only those schemes with significant importance, i.e. more than 500 participants for small countries, 1000 participants for large countries, have been invited to contribute to the survey. An overview of the mobility programmes identified in previous research exercises is provided in Annex 3.

**Table 10 Groups of respondents**

Group	Included numbers
Ministries in charge (Education; others (where applicable))	At least one respondent by country; more in cases a) responsibilities are shared between ministries b) IVET is mainly a topic of the regions
National VET Research Institute	The national (e.g. the Bundesinstitut für Berufsbildungsforschung (BIBB) for Germany) or a leading IVET research institute (e.g. Institut für Berufsbildungsforschung der Wirtschaft (IBW) in Austria)
NSIs	Departments responsible for education and/or for administrative data
Erasmus+ Agencies	One per country
National ESF Agencies	One per country
National Agencies for EU Regional Programmes	At least one per country
National Youth Programme Agency	At least one per country
Public IVET learning mobility programmes with more than 500 (small countries)/1000 (large countries) participants	Varying numbers; in case there are many substantial schemes, up to three per country

### 5.2.3. *Rationale for the development of the questionnaire*

The approach to develop the questionnaire has built on the results of prior research in order to achieve additional information. Therefore, the information gathered from the desk research task on the availability of data on IVET learning mobility, for each targeted country, has been included in the introduction of the relevant modules of the questionnaire, in order to emphasise that the survey shall complement the information already known.

Aware of the fact that there is only a limited number of countries with established procedures for collecting and processing data on IVET learning mobility, one key focus of the questionnaire has been to explore the possibilities to use educational achievement register-based data and to assess the options for research-based surveys, as well, as an option to collect information via school records. The possibilities to implement new modes of data collection in different types of organisations in the future has been assessed thoroughly in terms of feasibility of implementation, but also considering the willingness of relevant (policy) actors to promote such new approaches have been drawn.

The survey has focused on the following data sources and options for further developments:

- a) Administrative data gathered by IVET schools/providers, that would be collected based on mandatory reporting obligations or that are process generated
- b) Data gathered by funding agencies (usually process generated)
- c) Other sample-based surveys beyond general population surveys covering IVET graduates (e.g. surveys on the transition from school to work)

For cases a) and b) the questionnaire has presented questions on the procedures of data collection, involved actors, characteristics of available data and their further processing. If there are no school based data or data from funding agencies, alternative modes for data collection have been explored.

### 5.2.4. *Implementation of the survey*

For all the groups of respondents as described in Section 4.3.2., the targeted institutions (and departments, whenever possible) have been identified and informed about the aims of the ongoing project by e-mail accompanied by an introductory letter signed by DG EMPL. The link to the online questionnaire has been provided with the invitation to nominate the one most knowledgeable person in the organisation to fill in the questionnaire; alternatively, the questionnaire could be filled in by more than one person, corresponding to their area of expertise.

The survey was launched in the end of August 2019 with the following approaches used for different groups of respondents:

- The ministries responsible for VET were contacted through the group of Directors-general for vocational education and training (DGVT) in cooperation with DG EMPL.
- Eurostat circulated the invitation to the survey among all statistical agencies represented in the Education and Training Statistics working group on request of DG EMPL.
- The Erasmus+ agencies were invited by DG EAC (Directorate General for Education and Culture) in cooperation with DG EMPL.
- Agencies responsible only for other programmes, agencies responsible for other EU funding programmes and for national VET research centres were contacted by Gopa.

## Measuring Learning Mobility in Vocational Education and Training

The incoming answers were observed continuously and in the second half of September, it was decided to send reminders to selected respondents of all groups in order to accomplish a sample representing at least one response for each country.

Organisations in Austria had been invited to provide feedback on a draft version of the questionnaire, including follow up-phone calls, resulting in an above-average number of responses.

50 answers to the survey have been received by 31st of October. Details on the distribution of responses are given in Table 10. Among the EU Member States, for the following countries, no information has been established: Czech Republic, Romania, Slovenia, Slovakia, and the UK.

The overall low response rate needs to be seen against the backdrop of the specificity of the topic, including:

- Responsibility for and expertise on questions related to statistics on IVET learning mobility is often concentrated in one single expert or a very small number of experts; it has been difficult in various countries to identify the key experts knowledgeable in the field
- Where addressed experts in a country share a vision of who is the most appropriate expert to invite to answer the survey, they might have refrained from participating in the survey (e.g. most experts in Austria have unanimously referred to one Austrian expert holding key insight in the field of IVET learning mobility)
- Some experts have reached out to other knowledgeable people within and across organisations to provide answers; in other cases, one expert practically covers more than one type of organisation (e.g. the key expert in Germany formally belongs to the agency responsible for Erasmus+, however, the latter is attached to the national IVET research institute)

Experts in organisations with only a minor role in IVET learning mobility refrain from answering the survey, as the questions were extremely specific and often beyond their own field of practice

Knowledge on some very specific questions related to other options to collect the required data on IVET (e.g. the existence of continuously implemented school-to-work transition surveys or on schools' obligations to report information for educational statistics) seems to be held by a different set of experts than those selected for the survey, taking IVET learning mobility as the starting point

The very low response rate among organisations responsible for other EU funding streams (ESF, Interreg, Youth) might be taken as a sign that experts working on behalf of these organisations see IVET learning mobility as beyond their area of expertise and/or see little leeway to contribute (e.g. as no information about supported IVET learning mobilities as part of projects implemented under a different heading is available)

The low response rate among VET research organisations point to the fact that research on IVET learning mobility is either absent or done only by a small number of experts, who might not be attached to the national VET institute.

## Measuring Learning Mobility in Vocational Education and Training

**Table 11 Overview on the survey results**

	<b>35                      52                      28</b>							
	Number of answers received	Statistical Offices	Ministries of Education (or Ministries responsible for IVET)	Agencies responsible for Erasmus+	Agencies responsible for Erasmus+ AND national/multinational programmes	Agencies responsible only for other programmes	Other EU funding framework (Youth; ESF, Interreg)	VET research centres
BE (Flanders)	1		1					
BE (Wallonia)	1		1					
BG	1	1						
CZ	0							
DK	1				1			
DE	2		1		1			
EE	4	1	2	1				
IE	2		2					
EE	1			1				
ES	1		1					
FR	2		2					
HR	3	1		1				1
IT	2	1	1					
CY	1			1				
LV	1							1
LT	1				1			
LU	1		1					
HU	2	1		1				
MT	2	1	1					
NL	3	1	1		1			
AT	6	1		1	1		1	2
PL	1	1						
PT	2	1	1					
RO	0							
SI	0							
SK	0							
FI	2	1			1			
SE	5	1			1	3		
UK	0							
LI	1		1					
CH	1	1						
<b>Total</b>	<b>50</b>	<b>13</b>	<b>16</b>	<b>6</b>	<b>7</b>	<b>3</b>	<b>1</b>	<b>4</b>

*NB: In some cases, answers of more than one organisation have been submitted in one statement, namely, one response of the French ministry of education also include the statements of the Ministère de l'enseignement supérieur, de la recherche et de l'innovation; one statement of the German Ministry of Education includes the statement of the German Statistical Office; the response of the Ministry of Education in Spain contains a statement of the Spanish Statistical Office*

<sup>18</sup> Statistical offices, Ministries and Erasmus+ agencies were contacted by DG Empl. Final numbers of institutions contacted to be completed.

### **5.3. Administrative data collection by schools on IVET learning mobilities of the universe of the students or graduates**

#### *5.3.1. Introduction*

IVET schools or IVET providers can be mandated to collect data on their students' or upcoming graduates' participation in IVET learning mobility. They can be mandated by formal regulation or be only invited by informal approaches, which, as in the example of Finland (see below), may also result in a sufficiently high level of compliance. Information established by IVET schools and providers are sent to a central unit which is responsible for analysing and reporting the results. Alternatively, the information is stored within a data warehouse on educational outcomes for multiple forms of use by competent parties.

In principle, two key forms of data collection are available:

- Schools can require students or upcoming graduates to self-report whether they have participated in an IVET learning mobility in a given year or during their IVET programme as a whole.
- Schools can use process-generated administrative data for establishing whether a student or a graduate has participated in a learning mobility (e.g. drawing on applications for financial support for learning mobilities, on procedures granting the permission to be absent due to IVET learning mobility; on procedures acknowledging or recognising the learning outcome of an IVET learning mobility)

Schools may combine forms of data collection for establishing the required information on the participation in a learning mobility and the features of a student's learning mobility.

If schools are required to report only on IVET learning mobilities supported by any dedicated programme, their data mirrors the information available within the data sets of the funding agencies, however, they might be more comprehensive across funding lines. Certainly, they do not cover forms of IVET learning mobilities accomplished without public support (e.g. a work placement abroad).

For its future uses, it is also important how the information on IVET learning mobilities is stored and processed. Schools may provide just summaries on the IVET learning mobilities taken (e.g. by reporting the numbers of students with an IVET learning mobility and some breakdowns, e.g. according to age and sex). Alternatively, they may provide the information individually for each student, so that the micro data can be analysed in detail. When a unique identifier is included, data can even be added to administrative registers on education achievements.

#### *5.3.2. Examples for the approach identified*

##### *Approaches where schools collect information among students/graduates*

Schools may be required to invite their students or graduates to report whether they have participated in a learning mobility. Alternatively, they may be invited to report learning mobilities, so that their efforts can be formally acknowledged. In both cases, a full record on IVET learning mobilities is established, representing both mobilities supported and not supported by co-funding arrangements. Beyond records generated from students' self-reports (e.g. included in a form to be filled in as part of the administrative preparation of graduation), schools may in addition use (or be mandated to use) process-generated data from the various support schemes for IVET learning mobility available.

The expert on behalf of Statistics Finland reports on a newly introduced approach (covering data from 2018 onwards), where schools report on IVET learning mobilities as part of the information collected for the national data warehouse on participation in education/educational achievements (KOSKI data). The data warehouse is administered by

the Ministry of Education and Culture and the Finnish National Agency for Education; Statistics Finland can draw on this micro-data set. Based on this data, for students and graduates in IVET from 2018 onwards, detailed information on IVET learning mobility can be established, with detailed breakdowns on various other dimensions collected in the data warehouse.

Furthermore, detailed information on each learning mobility (e.g. its duration; the year of the IVET programme where the mobility had taken place; the destination) is stored, allowing for an in-depth analysis. In the future, it will be possible to collect agreed-on EU indicators based on the stored information on IVET learning mobilities, submitted by IVET schools and included in the data warehouse (based on Expert Contribution 23). Currently, no information on potential challenges and pitfalls of the approach is available. It is noteworthy that schools are also mandated to submit detailed information based on process-generated data on supported IVET learning mobility (see the section on Finland in 5.5.2).

*Approaches where schools report based on process-generated data stemming from the use of funding programmes/other administrative tasks*

Schools can be mandated to centrally report their students' participation in IVET learning mobilities supported by any European or national programme to one dedicated unit (e.g. a unit of the Ministry of Education, an agency). Alternatively, they may be required to report on other administrative steps related to IVET learning mobility, e.g. when acknowledging learning outcomes related to a mobility. The dedicated unit receiving the reports may then develop reports covering all IVET learning mobilities identified as part of the related processes.

According to the detailed account provided on behalf of the French Ministry of Education, IVET schools (alongside academic schools) in France are mandated to provide detailed accounts on their students' participation in any European Union initiated programme on a yearly basis. The survey among schools is administrated by Délégation aux relations européennes et internationales. Its principle goal is to provide an account of the degree of Europeanisation/internationalisation of French schooling, however, without special reference to IVET. Results are reported on a yearly basis<sup>19</sup> and made available online. Information on individual mobilities and mobilities of whole school classes are established. While the data collected can provide information for sourcing an IVET learning mobility indicator, this has not been established so far. (Based on Expert Contribution 38). For France, it has also been reported, that schools take records on the location of the firms where IVET students attend their work placement. In principle, this source would allow the identification of all work placements taking part abroad, however, the administrative data has not been used for the analysis of IVET mobility so far (Expert interview).

An example where the collection of administrative data generated by schools is combined with the collection of other sources, is described in detail for Finland in section 5.5.2.

### *5.3.3. Resources available and obstacles for implementation reported*

In the survey, several experts report that schools are already mandated to collect information and to report IVET learning mobility when submitting data on educational achievements (beyond Finland, such an obligation has been reported for Portugal). For other countries, namely for Austria, Estonia and Malta, experts have stated that, in principle, it would be feasible to include a variable on participation in IVET learning mobility in the set of variables each school has to report on each student or each graduate for sourcing the register-based education statistics. In many cases (e.g. where apprenticeships play a role), this information can be taken from self-reports by students only.

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<sup>19</sup> For example, [https://cache.media.eduscol.education.fr/file/Europe\\_et\\_international/01/8/chiffres-detaillés\\_2017-2018\\_finale\\_1143018.pdf](https://cache.media.eduscol.education.fr/file/Europe_et_international/01/8/chiffres-detaillés_2017-2018_finale_1143018.pdf)

## Measuring Learning Mobility in Vocational Education and Training

In a larger number of countries, IVET schools are obliged to report on IVET learning mobilities based on process-generated data from applications to funding programmes, Erasmus+ in particular.

Table 12 summarises the information established by the survey on the forms of mandatory data collection on IVET learning mobilities in IVET schools and among IVET providers. Among the EU28, it has been established that in Belgium, Estonia, France, Croatia, Italy, Latvia, Malta, Portugal and Finland, IVET schools and providers are required to report on IVET learning mobilities based on administrative data. In Denmark, Germany, Spain, the Netherlands, Austria and Sweden, as well as in Switzerland and Liechtenstein, there is no obligation of schools to report on IVET learning mobilities. For the remaining countries, the information is not provided.

**Table 12 Forms of mandatory data collection on IVET learning mobilities in IVET schools**

	<b>Mandatory reporting of schools on IVET learning mobilities – administrative data from funding schemes (Erasmus+, others)</b>	<b>Self-reports by students/graduates</b>
yes	8 countries	3 countries
no	9 countries	12 countries
No answer, not established	8 countries	10 countries

*50 answers received across 25 countries; no contribution received from five countries; not established = no respondent in a country has provided an answer to the related question(s)*

While mandating all schools to ask for the students' self-reports on their participation in a learning mobility and to include this data in the overall data set submitted to educational registers would provide a very strong data base for measuring IVET learning mobility, the approach would also imply a response burden to students and an additional administrative burden to schools. When process-generated data is used, schools face an additional administrative burden, when they are mandated to report on any supported learning mobility to a unit responsible for data collection.

The expert ratings of the likeliness of introducing an approach where schools accept the obligation to report on IVET learning mobility differ across countries and often even within countries, reflecting the varied presence of a number of challenges connected to the approach. The latter include

- Absence of a register-based approach to data on educational achievements, to which information on IVET can be added to
- Distribution of competence for IVET across levels of government (central state, regional state) or areas of government
- The significance of private VET providers or enterprises providing apprenticeships, as it might be difficult to formally oblige them to report the data required.
- Overall, more restrictive legal traditions, when it comes to establishing a mandatory survey and its response burden for individuals or schools, requiring the passing of formal laws on different levels of government

**Table 13 Experts' assessment of the feasibility of introducing mandatory data collection rules for IVET schools/providers**

<i>Would it be feasible in your country to set as mandatory for schools/IVET providers the collection of information and the reporting on their graduates' IVET learning mobilities during their participation in the programme on a regular basis (e.g. every year or every second year)?</i>	
Fully feasible	9 experts / 6 countries
Feasible, however some restrictions apply	10 experts / 10 countries
Partially feasible, however with important shortcomings	10 experts / 9 countries
Not feasible	5 experts / 4 countries
Cannot assess	1 expert / 1 country

For Austria, Estonia, Finland, Latvia, Lithuania and Portugal, one or more experts see it as fully feasible to mandate IVET schools/providers to collect and report data on their graduates' participation in IVET learning mobility; in Finland and Portugal, such an approach is already in place. In the case of Austria, the positive assessment is mainly based on an assessment of the technical option (within an existing reporting system), with other experts being much less optimistic with regard to the feasibility of such an approach, however, the less optimistic assessments focus on the difficulties involved in agreeing on the required amendments of the underlying laws on educational statistics.

At least one expert in Austria, Belgium, Bulgaria, Cyprus, Estonia, Greece, Hungary, Ireland, Liechtenstein and Malta rate such an approach as feasible, however, with some restriction to be considered.

One or more experts report considerable restriction for such an approach in their country in Belgium, Croatia, France, Germany, Hungary, Ireland, Luxembourg, the Netherlands and Spain.

One or more experts see such an approach as fully unfeasible in Austria, Croatia, the Netherlands and Switzerland.

## **5.4. Administrative data collected by agencies providing financial support**

### *5.4.1. Introduction*

Agencies providing financial support for IVET learning mobility may hold rich administrative data on the students supported and the features of the mobilities (e.g. forms of mobility, duration, destination, timing). Moreover, it should be possible to extract data on a yearly base in a timely way, so that changes in policies (e.g. increasing or decreasing budgets) and changes in the uptake of the programme by schools or individual learners should become visible without any significant delay. However, as a significant part of all learning mobilities may be implemented without the support of any public co-funding programme, as discussed



in detail in Section 4.2, any reporting based on funding data alone can provide only an auxiliary indicator for the sought-after indicator on participation in IVET learning mobility.

Funding for IVET learning mobility made available within the Erasmus+ framework seems to be – according to the accessible information – by far the most important public funding source across the EU28. Data collected within the administration of the Erasmus+ funding framework would thereby be a natural starting point for achieving an auxiliary policy indicator. The richness of data collected within the administration of Erasmus+ should also allow to draw a more nuanced picture on IVET learning mobility across countries.

IVET learning mobility might be funded also by other frameworks, including the Youth programme, the European Social Fund (ESF) or the Interreg framework. However, as outlined in section 4, hardly any organisation in the mentioned fields has participated in the survey on data on IVET learning mobility, which can be taken as a hint, that IVET learning mobility is a too limited object of observation and would be difficult to identify within the mentioned large-scale programmes.

National and bi- and multinational programmes provide also funding for IVET learning mobility; programmes are partly administrated by the same agencies also responsible for the Erasmus+ programme. As mentioned in section 4, hardly any of the organisations responsible for national programmes have participated in the survey.

### *5.4.2. Examples for the approach identified*

Neither desk research nor the survey have identified an approach in any EU28 Member States, where funding agencies are mandated to submit their data to a central agency reporting on supported mobilities across funding frameworks.

However, in some countries, the agencies reporting on IVET learning mobility have developed where they invite co-funding agencies to submit information, so that the latter can be used to complement reporting, which is based also on alternative sources. Examples for that approach in the Netherlands and in Finland are discussed in the following section 5.4. Moreover, in the preparation of the sample-based, school administrated surveys on IVET learning mobility in Germany, the authors aimed at bringing together available information on provided funding by the various agencies in place, so that they can compare these administrative sources with the answers given by the upcoming graduates surveyed.

### *5.4.3. Excursion: Exploring Erasmus+ administrative data collected on IVET learning*

The administration of the Erasmus+ data generates high amounts of data; however, the latter are analysed only to a limited degree on European Union level and are used for a more nuanced reporting on IVET learning mobility only by some Member States.

Data are generated by

- the administration processes required of the project applications by schools,
- the information collected from participants by the participant report form; responses are available for the vast majority of participants across countries<sup>20</sup>, and
- administrative data generated when payments are made to schools/individual beneficiaries

Only for a small group of countries, it has been reported that they use Erasmus+ data in a more elaborated way to report on IVET learning mobilities. Beyond the examples of the

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<sup>20</sup> Information has been provided for twelve EU member states. Response rates are higher than 90% in Austria, Croatia, Cyprus, Denmark, Estonia, Finland, Germany, Greece, Hungary, Lithuania, and the Netherlands. Only for Sweden, a response rate between 70 and 90% has been reported.

Netherlands and Finland discussed in detail in section 5.4, an extensive Erasmus+-data based reporting is established in France<sup>21</sup>. For Estonia, it is highlighted that information is processed for sourcing CEDEFOP's scoreboard on IVET learning mobility. For Austria, an internal report informing a working group on internationalisation of the Austrian apprenticeship system has been mentioned. All in all, and in the light of the relatively limited information gathered by the survey, the use made of Erasmus+ data for reporting on a national base on IVET learning mobility seems to be rather limited with the identified exceptions of Finland, Denmark and France.

Various comments provided by the experts suggest that stronger guidance (e.g. with regard to the classifications to be used) and technical support on European Union level and the provision of meaningful samples how to exploit the information would be helpful in better exploiting the available information. This point is taken up in Section 6.4 again.

Some Erasmus+ agencies also report that they store micro data of beneficiaries or enrich data collected on beneficiaries (e.g. with information on their schools) for future analyses. One country reported that they use a unique identify, so that the data could be used in a project on tracking the long-term outcomes of the mobilities. However, no expert responding to the survey has reported on an already executed research project based on the collected micro-data.

#### *5.4.4. Resources available and obstacles for implementation reported*

The survey and the expert interviews have established only one example – that of Finland, presented in the next section – where data from various agencies providing support for IVET learning mobility are systematically collated each year, however, mainly based on a 'gentleman agreement'. For Portugal, it is mentioned that organisations providing support are expected to report to the designated unit of the Ministry of Education. All in all, more regular and systematic attempts to bring together administrative data from various funding providers seem to be rather exceptional.

The meaningfulness of an approach, where all organisations supporting IVET learning mobilities report data to one central agency responsible for reporting, depends certainly on the significance of support provided outside the Erasmus+ framework. The latter is substantial in some, however, seems to be insignificant in other countries (see chapter 2 and the related annex).

For achieving a full picture, it would be also desirable to learn about learning mobilities funded by other European programmes than Erasmus+, as ESF or Interreg. However, no conclusive information has been established on the question whether or not other European programmes support IVET learning mobilities in any significant numbers or whether these supported mobilities could be extracted from the available information.

Among the experts responding to the questions,

- Experts from Austria, Cyprus, Finland, Luxembourg and Portugal rate an approach where administrative data are collected across funding agencies on a mandatory base as fully feasible
- Further nine experts from Belgium, Hungary, Ireland, Liechtenstein, Malta, Netherlands, Portugal and Sweden rate such an approach as possible, however, with some restrictions to be considered.
- Eight experts rate a centralised approach to collect administrative data from funding agencies as only partially feasible with important shortcomings, reporting on Austria, Bulgaria, Croatia, Greece, Hungary, Italy, the Netherlands and Spain.

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<sup>21</sup>[https://cache.media.eduscol.education.fr/file/Lycees\\_pro\\_2018/46/3/VM\\_Mobilitees\\_internationales\\_et\\_europees\\_nnes\\_1128463.pdf](https://cache.media.eduscol.education.fr/file/Lycees_pro_2018/46/3/VM_Mobilitees_internationales_et_europees_nnes_1128463.pdf)

- At least one expert has rated such a data collation approach as not feasible for Austria, Croatia, Estonia, Germany, Ireland and Lithuania.

**Table 14 Expert assessment of the feasibility of mandatory reporting of all agencies providing support to IVET mobility to a central agency**

<i>Would it be feasible to set as mandatory for all agencies (including agencies administrating EU-funded programmes) the reporting on beneficiaries of support for IVET learning mobility to a central unit according to defined standards on a regular basis?</i>	
Fully feasible	5 experts / 5 countries
Feasible, however some restrictions apply	8 experts / 8 countries
Partially feasible, however with important shortcomings	8 experts / 8 countries
Not feasible	7 experts / 6 countries

*Answers from 28 experts in 20 countries*

## **5.5. Surveys on IVET learning mobility based on samples of (upcoming or recent) graduates**

### *5.5.1. Introduction*

Sample-based, school-administrated surveys among (upcoming) graduates (in the months prior to graduation) represent an alternative approach to achieving indicators on IVET learning mobility to surveys targeting the general population. Within studies on students, it is a common approach to sample not individual students (from registers, where available), but to study clusters of students, visiting one school or one particular class in school. Within the framework of PISA in particular, methodological progress for this approach had been achieved in a large number of countries. For studying IVET populations, the existing infrastructure for implementing surveys on IVET schools or particular classes is typically less well developed, which may make a school-based survey a less straightforward exercise (for an example of a cross-country comparative school-based IVET survey see (Pavlin, et al., 2010)) For achieving good results, it is crucial that a representative sample of IVET schools and providers can be achieved, so that in each school and by the help of the school administration, students in their final year can be invited to participate in the survey. For achieving a balanced sample of schools, a comprehensive register of IVET schools and providers is required. The advantage of a stand-alone, sample based, school-administrated survey approach is clearly, that rather comprehensive information on IVET learning mobility can be collected and differentiated information (e.g. by type of IVET programme or by region) can be achieved. Beyond the comparatively high costs of a stand-alone survey on IVET learning mobility, there might be other drawbacks of a stand-alone approach, as will be discussed later.

Alternatively, questions on IVET learning mobility can be included in established representative, sample-based surveys on recent graduates, for example, in panel studies following cohorts of graduates over their first years after graduation. Surveys may include all types of education; however, they might allow to select graduates from IVET organisations for establishing the required information on IVET learning mobility. The cost-

advantage of including questions in an established survey approach is obvious, however, in multi-purpose surveys on graduates, the number of questions devoted to IVET learning mobility need to be limited. Furthermore, the sample size might not allow a de-segregation according to various types of IVET programmes.

### *5.5.2. Examples for the approach identified*

Stand-alone sample-based, school-administrated surveys on IVET learning mobility – an example from Germany<sup>22</sup>

For sourcing an indicator on IVET learning mobility, in Germany, a survey framework targeting upcoming IVET graduates has been implemented two times so far, with reports published in 2011 and 2018 (see below).

Mirroring the exceptional policy attention for IVET and the dual system of vocational education in general, IVET learning mobility has received recently considerable attention by policy makers in Germany. In 2013, a decision of the German Parliament requested the implementation of a national benchmark for learning mobility in IVET, requiring that 10% of IVET graduates (in the dual system) should have any type of transnational experience until 2020. The proposed benchmark had been perceived as a new endeavour and rated as ambitious by experts in the field. Attention for IVET learning mobility has been strengthened and the goal of achieving the indicator has received broad attention by practitioners in the VET field, even though it seems unlikely that the target could be reached by 2020.

A pilot survey had shown that between 2007 and 2009 an average of 3% of IVET students went abroad as part of their IVET programmes (Friedrich and Körbel, 2011). In 2017, a follow-up survey was implemented by the National Agency “Education for Europe” at the Federal Institute for Vocational Education and Training (BIBB) in order to assess the mobility rate of IVET students. Moreover, the survey should allow for gaining in-depth information on characteristics of IVET learning mobilities and the (perceived) impact of transnational IVET learning mobility.

One key objective of the survey was to collect data on IVET learning mobility of upcoming graduates (both in dual VET and in school-based VET) in their last year of education. VET students were approached via their vocational schools. A representative sample of schools and programmes has been established, and respondents have been clustered within the selected schools, taking school classes as the unit for sampling. The sample was defined to be representative both on national level and on the level of the 16 federal states. In the schools selected, all students of classes in the final year of a programme were selected and invited to participate in an online survey, administrated by one of their teachers. The goal was to reach a sample of at least 1000 cases, where a respondent has taken part in a form of IVET learning mobility; for achieving this goal, it was estimated that the survey needed to reach out to approx. 24.000 students in 1100 schools. In fact, 1134 schools were contacted of which 242 participated in the survey. Of the 14536 students who were invited to participate in the online survey, 5642 (39%) completed the survey. 5394 answers could be included in the final analysis. The online survey tool has been chosen for the opportunity to excessively use filters, so that the questionnaire could be tailored to the various subgroups investigated.

The survey presented a broad set of questions covering a range of transnational experiences going beyond experiences related to IVET. Regarding mobility in IVET, the survey focused on the following topics: sources of funding of the mobility, destinations of the mobility,

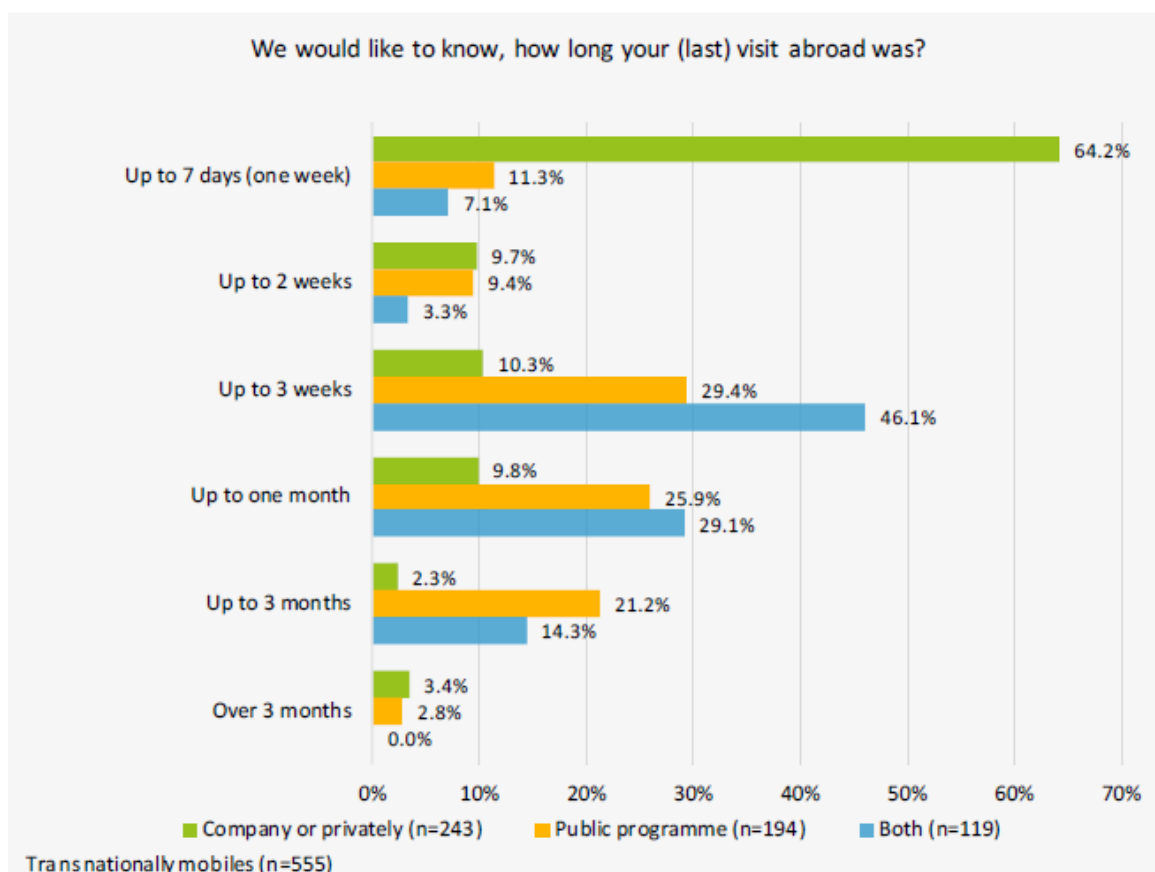
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<sup>22</sup> The following section is based on an expert interview with Berthold Hübers (Division Mobility and Internationalisation in VET at National Agency at Federal Institute for VET (NA-BIBB)), conducted on 5 July 2019 via phone.

duration of the mobility, forms of documentation of learning outcomes, and the perceived impact of the mobility.

The survey collected data on a broad variety of learning mobilities. Respondents were invited to report also on short mobilities of up to two weeks. The results show that 42,6% of the mobilities reported were shorter than two weeks (see Figure 14). While 5,3% of graduates were reported to have any mobility, only 3,1% of graduates had a mobility running over at least two weeks.

**Figure 15 Duration of the transnational IVET learning mobility among VET graduates in Germany 2017**



Source: (National Agency Education for Europe at the German Federal Institute for Vocational Education and Training (NA at BIBB), 2018)

The German experiences with VET graduate surveys on IVET learning mobilities show that this type of survey knows its particular challenges, e.g. with regard to receiving permission by local Ministries of Education, safeguarding participation of schools and achieving a non-biased sample of students, given that students with a learning mobility might be more interested in taking part in the survey than students without any learning mobility. (Nationale Agentur Bildung für Europa beim Bundesinstitut für Berufsbildung (NA beim BIBB), 2018)

According to the responsible expert, key advantages of the survey approach include:

- The survey allows to cover all types of IVET learning mobilities, including activities funded by the employers of the apprentices or the private households; learning mobilities funded solely based on private sources make up for a significant part of all learning mobilities and must not therefore be omitted.

## Measuring Learning Mobility in Vocational Education and Training

- As a stand-alone survey on IVET learning mobility, the survey allows to cover a large number of questions on the activities implemented, speaking of timing, length and costs, however, also on the experiences of individual learners and their perceived (learning) outcomes.
- The survey design allows for covering both detailed information on mobile students as well as on non-mobile students.

Identified challenges of the approaches include

- As there is no central school register across the 16 federal states, considerable efforts are required to compile the information base for sampling from various local sources.
- For implementing the survey, permission needs to be gained by competent authorities in the 16 federal states, which is experienced as a demanding and time-consuming process with the potential to delay the implementation of the survey
- Response rate of the addressed schools is low (2017: 21,3%), requiring high efforts to motivate school leaders to support the implementation of the survey.
- The survey might be affected by a self-selection bias, as students with a learning mobility might be more motivated than others to participate; to limited this bias, the survey invite to report on a broad set of experiences abroad, so that students who have not participated in a IVET related mobility remain interested in the survey as well.

Given the distributions of competences for IVET across federal states, a sample-based survey is considered the only feasible solution for achieving the required information, as the achievement of an inter-governmental agreement on implementing other forms of regular reporting would require too large an effort.

Inclusion of questions on IVET learning mobility in an established survey on (recent) graduates in *France*<sup>23</sup>

In France, an existing survey framework on recent education system leavers, graduated, or not is used for achieving the required information on IVET learning mobility (as well as mobility in HE). A special module on transnational experiences had been implemented for the first time in 2013 within an established panel survey among young people who left the education system in the year 2010.

In France, the French Centre for Research on Education, Training and Employment (Céreq) had implemented – so far in two editions of the survey framework - a module on learning mobility in the so-called *Génération* survey (see Bene 2019), which studies the transition from school to work, allowing to provide estimates for the EU benchmarks on learning mobility in IVET and HE (Calmand and Robert, 2019b).

The special module on transnational experience had been initiated and funded by the French Ministry of Education (Statistical Unit), the French Erasmus+ Agency and (for 2013) the Youth Agency (INJEP). It has already been agreed to implement another, even more extended module on transnational experience into the “*Generation 2017*” survey (in 2020).

In this panel study a sample of 19500 young people who left the education system in metropolitan France and the overseas departments for the first time in 2013 were surveyed in 2016 on a broad range of topics, among them their former experiences in transnational learning mobility.

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<sup>23</sup> The following section is based on an expert interview with Julien Calmand and Alexie Robert (Study authors, French Centre for Research on Education, Training and Employment - Céreq)

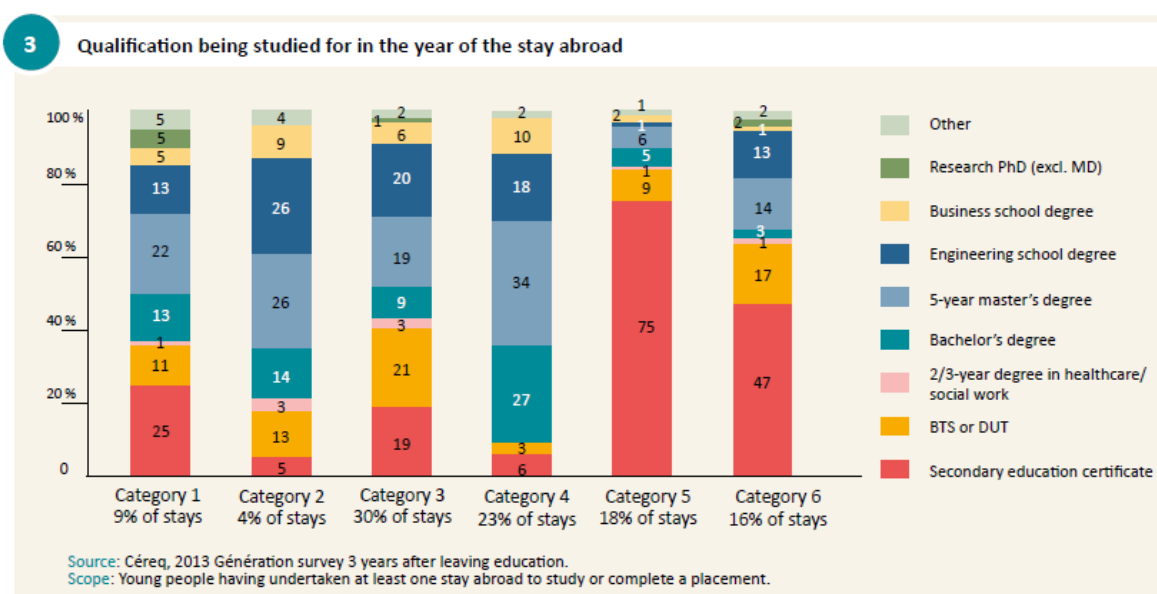
## Measuring Learning Mobility in Vocational Education and Training

Information on an IVET learning mobility has been established by combining the answers from three questions:

- Asking whether a reported course activity abroad or a reported work placement abroad has been linked to the recently completed educational programme
- Establishing whether the latest programme has been classified as IVET (VET schools, professional bac.)
- Applying a filter question, whether the activity took two weeks or longer

Based on this approach, approx. 3,5% of young people who completed secondary vocational education courses (CAP, BEP and vocational baccalaureate) in 2013 reported that they spent at least two weeks abroad as part of their course. Based on the survey, various further analysis and typologies had been provided (see Figure 16)

**Figure 16 Representation of selected results of the French 2013 Génération survey**



Source: (Calmand and Robert, 2019b)<sup>24</sup>

Including a special module into an established survey framework on recent graduates has both advantages and disadvantages.

According to the interviewed, involved experts, advantages include

- Opportunity to work with a large and representative sample in a well-controlled, professionally implemented survey framework (n=19.500)
- Availability of very detailed information on the social background, the educational pathway and the overall transition history from school to work; unequal opportunities in access to learning mobilities according to social background can be analysed (Calmand and Robert, 2019a)

<sup>24</sup> Further information on the graph: Category 1 encompasses stays funded by grants awarded within the education system (funding from an educational establishment or research institute, grant awarded on social criteria, etc.). Category 2 encompasses placements funded by both a placement allowance and a grant awarded under the terms of an external public programme for supporting young people spending education-related time abroad : Category 3 includes placements that relied at most on just one of these two funding sources. : Category 4 includes long stays involving a course of study leading to a qualification and financed by a family support grant and/or a grant awarded under the terms of an external public support programme. Category 5 encompasses short study visits not leading to the award of a qualification (95% of cases). Category 6 encompasses study trips with no financial assistance of any kind. See (Calmand and Robert 2019b).

## Measuring Learning Mobility in Vocational Education and Training

- Learning mobilities can be observed during the IVET programme; after leaving education, at least particular work transitions in the three years after graduation can be observed (e.g. work placement abroad)
- Opportunities to study the impact of a IVET learning mobility on later transitions to work or to other types of education (Calmand and Robert, 2019a)
- IVET learning mobility can be studied against the backdrop of the overall transnational experiences made by recent graduates
- Cost-effectiveness compared to a stand-alone survey

However, by adding a module to an established survey framework, particular limitations need to be considered, including

- Given the overall number of questions in an established framework, additional modules typically cannot include a large number of questions; e.g. for the “Generation 2013”, information could be collected only on the most recent/most important spell abroad, so some IVET mobilities might be missed out as they are overshadowed by more recent or more significant other transnational experiences.
- Not all forms of IVET programmes can be identified, for examples, forms of apprenticeships, which can be combined with a broad set of educational programmes in France, are often not accessible with the established data. Moreover, learning mobilities of former IVET students, who have continued in higher education, cannot be studied within the framework.
- Some overall limitations of a survey framework might be even more important for the attempt to measure IVET learning mobility, e.g. in the case of the Generation survey, only graduates living in France three years after graduation are surveyed, however, a larger proportion of graduates with an IVET learning mobility might have chosen to go abroad (at least for a longer stretch of time).

In the light of the limitations, the established benchmark of 3,5% should be considered only as a proxy for the European Union benchmark on IVET learning mobility. However, it is expected that further methodological improvements prepared for the upcoming “Generation 2017” survey will significantly improve the quality of measurement. For the 2020 survey, a more powerful sub-questionnaire on learning mobility has been developed, which will allow to measure IVET learning mobility of VET students, who have continued their studies on HE level. The inclusion of a special module in the Generation survey series – potentially even supported by questions in the core questionnaire – has the potential to provide information on IVET learning mobility in the long run. However, while the funding of the special module on IVET learning mobility is secured for the 2020 survey, no long-term funding agreement has been achieved so far.

### *5.5.3. Resources available and obstacles for implementation reported*

In the dedicated expert survey of the current project, experts were invited to report on the resources available and obstacles observed for implementing a sample-based, school-administrated approach to measuring IVET learning Table 15 summarises the answers provided.

For drawing a sample, a register of IVET schools is available in Austria, Belgium, Croatia, Estonia, Finland, France, Hungary, Ireland, Italy, Latvia, Luxembourg, Malta, Netherlands, Poland, and Portugal. A register is missing in Germany and Liechtenstein, however, as shown in the case of Germany, the lack of a register can be made up by a systematic collation of existing sources. No information is available for the remaining countries (Not participated: CZ, RO, SK, SI; no answer to the specific question: ES, UK, BG, CY, DK, EE, LT, SE, CH).



## Measuring Learning Mobility in Vocational Education and Training

Regarding an established regular survey on recent graduates, which are used for measuring IVET learning mobility in France and the Netherlands, similar surveys are reported for Croatia and Estonia. For nine countries, experts reported that to their knowledge no regular sample based survey exists in their country (AT, BE, DE, IE, LI, LU, MT, PT, CH), partly also, as administrative data are available for graduate tracking, so that there is no need for a sample-based observation of the school-to-work transition. Experts have not answered to the question in eleven countries (BG; CY; DK; FI; EE; HU; IT; LV; LT; PL; SE).

**Table 15 Survey results on important preconditions for a sample based, school-administrated approach to measuring IVET learning mobility**

	Register of IVET schools/classes available	IVET areas not fully covered	Regular survey covering recent IVET graduates identified
yes	15 countries	4 of 15 countries	4 countries
no	2 countries		9 countries
not established	7 countries		11 countries
(-)	6 countries		6 countries

It is important to note that the field of tracking studies on IVET graduates and related ones is very broad and under constant development. The answers collected in the current survey have only partly covered a field, which has been explored by dedicated studies. Table x summarise the existence of national VET graduate tracking studies, either based on the total population using administrative statistics or a sample of IVET graduates (European Commission, 2018b). A current study has shown, there further initiatives has developed in the past years, however, also that some frameworks have not been continued (ICF, et al., 2020 - under review)

**Table 16 Countries with regular or occasional tracking IVET graduates on national level in regular surveys (2017)**

<b>Total population (administrative data)</b>	AT, BE <sup>nl</sup> , BE <sup>fr</sup> , DK, FI, IE, LT, LU, MT, NL, SE, SK
<b>Based on a sample of IVET students</b>	AT, DE, FR, HU, IE, IT, NL, PT, RO, SI, UK

**Table 17 Expert assessment of the feasibility to implement a framework for a regular (multi-purpose) sample-based, school-administrated survey**

<i>Would it be feasible to agree on a framework for a regular sample-based survey administrated with the help of IVET schools on a regular basis?</i>	
Fully feasible	7 experts / 5 countries
Feasible, however some restrictions apply	8 experts / 8 countries
Partially feasible, however with important shortcomings	12 experts / 10 countries
Not feasible	5 experts / 4 countries

## 5.6. Centralised, multi-methods data collection approaches

### 5.6.1. Introduction

Countries may assign the task of reporting on IVET learning mobility, although in combination with other related topics (e.g. internationalisation of education or HE; transnational experience of young people) to one agency or unit of the administration, which, in turn, is continuously working towards improving the data base for their reporting activity, by drawing on different data sources (e.g. graduate surveys) and negotiating access to data with organisation that have something to offer. While some of the reporting might be based on formal regulations, in other cases, the dedicated units may achieve informal agreements with other organisations to deliver the required data on a regular base.

By reporting over longer stretches of time, the responsible agencies try to minimise data gaps and to ameliorate inconsistencies in the data. By publishing reports or webpages on IVET learning mobility, they may introduce a common interest of all involved organisations (e.g. schools, funding agencies, enterprises) to see their own contributions to learning mobilities presented in a meaningful way. Therefore, they might become open to improve their own reporting approaches, even in absence of any formal obligation.

A multi-methods data collection approaches has been developed over the past decade in the Netherlands and in Finland, which are presented below.

### 5.6.2. Examples for the approach identified

#### *Multi-methods approach applied in the Netherlands*

In the Netherlands, a regularly implemented, special module on learning mobilities in an established survey framework on recent graduates forms one key source for reporting on IVET learning mobility by the responsible agency, that is the Dutch organization for internationalization in education – NUFFIC<sup>25</sup>. NUFFIC is responsible for internationalization

<sup>25</sup> Based on an expert interview with a representative of The Dutch Organization for Internationalization in Education – Nuffic.

of education in the Netherlands, including Erasmus+ for HE and schools, but not for IVET, which CINOP (<https://www.cinop.nl/>) is responsible for; however, NUFFIC is responsible for reporting and analysing mobility across all fields of education, including IVET.

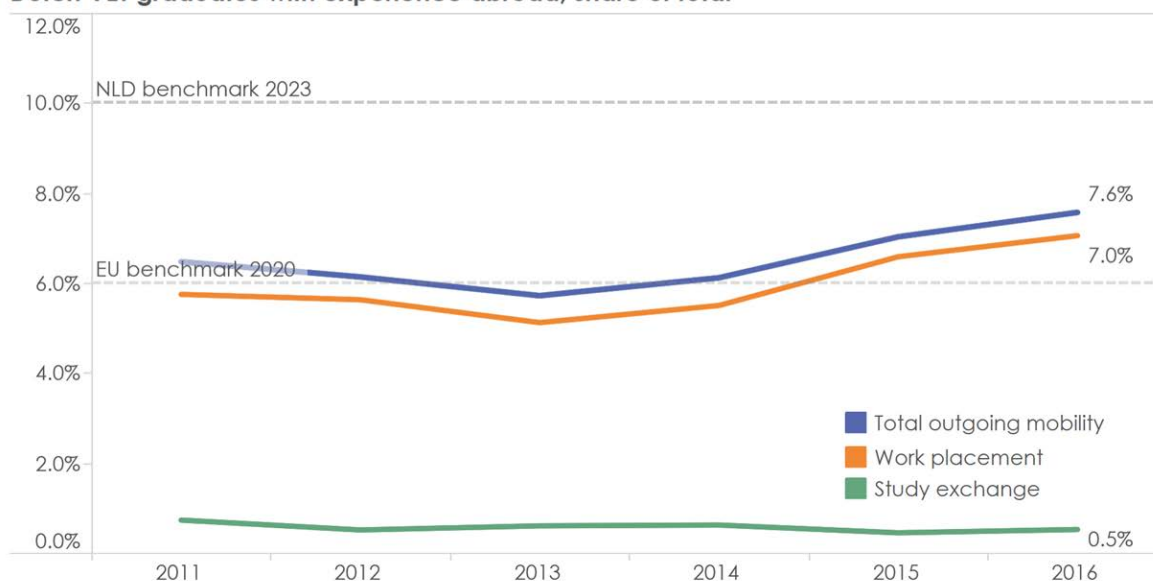
In the Netherlands the topic of international mobility in IVET is taken seriously as part of a dedicated internationalisation agenda for the whole education system, including HE. Taking IVET learning mobility seriously is regarded as a matter of equality and inclusion, as IVET students should not be excluded from international experiences.

Strategic governmental documents set a target of 10% for the participation rate in IVET learning mobility of graduates in IVET, however, without further specifying how the benchmark should be operationalised. NUFFIC has decided to apply the same criteria for the national benchmark as for the ET2020 benchmark (e.g. by applying the threshold of a minimum duration of two weeks). With the recently increasing policy interest in IVET learning mobility, more resources for projects aiming at improving the data base on IVET learning mobility has been made available.

The Dutch organisation for the internationalisation in education, Nuffic, publishes data on IVET learning mobility of Dutch VET graduates, including information on total numbers of participants, the proportion of IVET graduates with a mobility experience, a break down for forms of mobility (work placement vs. school placement), as well as information on the duration of mobilities. Among the VET graduates of 2016, 7,6% (8800 in total) had taken part in a learning mobility, the vast majority of them had participated in a work placement. Various breakdowns according to socio-economic variables are available including breakdowns according to age, gender and ISCED levels of the programmes attended.

**Figure 17 Dutch VET graduates with experience abroad, share of total**

Dutch VET graduates with experience abroad, share of total



Source: Nuffic<sup>26</sup>

The presented data are provided by a number of data providers, including the Statistics Netherlands<sup>27</sup>, the Research Centre for Education and the Labour Market (ROA), a research

<sup>26</sup> <https://www.nuffic.nl/en/subjects/vet-students-abroad/>

<sup>27</sup> <https://www.cbs.nl/en-gb>

## Measuring Learning Mobility in Vocational Education and Training

institute of the Maastricht University School of Business and Economics<sup>28</sup> and the Foundation for Cooperation on Vocational Education, Training and Labour Market (SBB)<sup>29</sup>.

Nuffic's reporting on IVET learning mobility is based on three key data sources:

- A yearly survey among recent (IVET) graduates, implemented for a representative sample 18 months after leaving school
- The administrative data on support provided by Erasmus+
- Administrative data provided by all IVET schools on mandatory internships during IVET programmes, where internships abroad are counted.

Data can be used to answer different questions related to IVET learning mobility, however, they differ in many respects, so that results can be brought together only by applying estimation procedures or simplifications.

### *Yearly Survey:*

The key source for constructing the IVET learning mobility indicator is a yearly survey on recent school leavers, aiming at studying the transition from school to work. The survey is available for the graduates of one school year (Oct to Sept). Graduates are invited to participate 18 months after finishing their programme. Two questions on IVET learning mobility are included in the questionnaire:

1. Whether or not a mobility (course, placement) had taken place during the IVET programme?
2. How long the mobility has been? The latter question provides the information for applying the threshold of a minimum duration of two weeks.

Given that learning mobility is only one minor topic with the transition survey, the number of questions on the topic is limited; for reporting on many other important aspects of IVET learning mobilities (e.g. the destination of mobility, the funding arrangements) other sources are used.

It is important to note that the graduate survey is following a 'tracking approach' and includes an identifier – respondents can be followed up within register data (in particular, employment record) – it is possible to measure employment outcomes (and other outcomes) of learning mobilities, however, the required research has not been implemented so far.

### *Erasmus+ Data:*

Data are systematically explored, in particular, for reporting on the destination of learning mobilities. There is no data set allowing for a direct observation on the share of Erasmus+ beneficiaries as a percentage of all participants in IVET learning mobilities; based on the alternative data set, it is estimated that about 80% of all learning mobilities are support by Erasmus+ sources.

There is little information on the other schemes supporting IVET learning mobilities. While it is known that schools have small budgets on their own for supporting learning activities, there is little information about the significance of these means.

All in all, support schemes for IVET learning mobilities (beyond Erasmus+) are perceived as rather negligible, speaking of the total number of beneficiaries, however, there is clearly a lack of information to fully support this observation.

### *Administrative data on placements:*

Schools take records on the completion of mandatory work placements; typically, only certified employers qualify as a place for an internship and detailed records on the

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<sup>28</sup> <http://roa.sbe.maastrichtuniversity.nl/>

<sup>29</sup> <https://www.s-bb.nl/en>

placements are stored. Based on the information on the firms offering internship, it can be established whether or not they are firms abroad.

While the register covers the whole universe of IVET students, there are other limitations for the use of the data; currently, it is not possible to analyse the data for particular years of the programme; as students participate in internships at different moments during their programmes (two, three and four year programmes) and some students participate more than once, there is no straight forward way to interpret the data.

Data are regarded as “sensitive” by IVET schools, as “internationalization” is taken rather seriously; there is criticism, that internships are measured, but other (shorter) activities (e.g. excursions of whole classes abroad, e.g. for language learning) are not equally considered as an important contribution to “internationalization”; data are therefore published only in an aggregated form, so that single schools (types of schools) cannot be identified

### *General outlook*

While internationalization of education is taken rather seriously, IVET learning mobility is still kind of a “step child” and – while there is an overall growing interest – resources for monitoring and research on the topic are far from guaranteed beyond project based funding – there is still a constant need for “fighting for continuity” in data collection (e.g. the questions on “learning mobility” was already proposed for being deleted from the survey programme).

Administrative data on IVET learning mobility might be further developed, given the overall strong development of register-based approaches in educational statistics; however, difficulties of various kinds (methodological; “political”) in exploring the data collected should not be underestimated.

### *Multi-methods approach applied in Finland*

In Finland<sup>30</sup>, the Finnish National Agency for Education (EDUFI) has taken on the responsibility of reporting on IVET learning mobility by drawing on multiple sources and by improving access to and comparability of data over the years.

IVET learning mobility is strongly emphasised in the Finish policy context in line with the European ET2020 targets. As part of the aim to strengthen the internationalisation of the Finish Education system, the goal has been specified to double participation rates in IVET and HE learning mobility up to 2030.

Schools do not only provide data on IVET learning mobilities on a yearly base (see below), they receive also support and counselling on how to improve the numbers of mobile students. As mobility rates are published for each single school, the latter experiences both an incentive and high symbolic pressure to increase their performance in the field of mobilities.

Results are published both on the web and in a yearly report (the latter is available only in Finish language, see (Korkala, 2018))<sup>31</sup>.

The key source for reporting on IVET learning mobility is a yearly survey run by EDUFI covering all approx. 300 IVET providers in Finland. Schools are invited to submit detailed information on the participants in IVET learning mobility projects. Although participation in the survey is not mandatory, over the years, schools’ response rates have increased to close 90% (with mainly very small institutions failing to participate). While unit-non-response is no big issues, there is a constant need for data clearing to overcome clerical error. Schools

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<sup>30</sup> Summary based on an expert interview with Siru Korkala at Finish National Agency for Education, conducted on 7 August 2019.

<sup>31</sup> See:

[https://www.oph.fi/sites/default/files/documents/kansainvalinen\\_liikkuvuus\\_ammattillisessa\\_koulutuksessa\\_2018.pdf](https://www.oph.fi/sites/default/files/documents/kansainvalinen_liikkuvuus_ammattillisessa_koulutuksessa_2018.pdf)

## Measuring Learning Mobility in Vocational Education and Training

submit micro-level data, where each individual participant is represented as one case, however, the data do (currently) not include a unique identify (in contrast to the newly started approach reported for Finland in section 5.2.2.1). As breakdowns of data for each individual school are published, schools take the reporting rather seriously. Information is collected both on outgoing and on ingoing students.

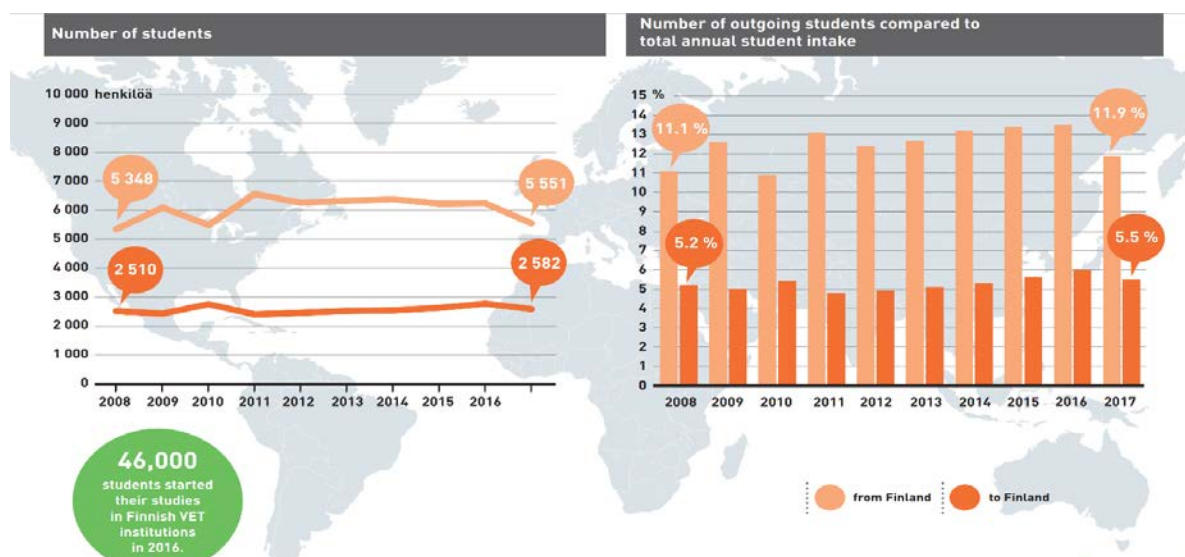
Schools can decide on the most proper way to achieve the required data, with some schools even relying on external service providers. Many schools make use of data collected when applying for funding for IVET learning mobility projects. It is important to note that only mobilities accomplished as part of school projects or required by the curriculum are counted, however, individual mobilities (e.g. an internship of an IVET student during school holidays) are not covered by the data.

Schools are required to include funding information for each reported mobility. Based on the data submitted, it can be estimated that about 70% of all mobilities had received support by Erasmus+.

For calculating a national IVET learning mobility indicator, it has been decided to divide the number of outgoing students by the number of first year IVET students of the same year<sup>32</sup>.

In 2017, outgoing students make up for 11,9% of the number of the yearly IVET entrants cohort entering the IVET system. In 2017, approx. 70% of the outgoing students were beneficiaries of Erasmus+ funding. Further information presented include information about the destinations of outgoing IVET students and a breakdown of students according to the region of their school. Additional break downs are available, e.g. according to gender and the type of IVET program.

**Figure 18 Selected figures on IVET learning mobility in Finland**



Source: EDUFI<sup>33</sup>

Beyond the survey among IVET schools, EDUFI collects and exploits data from other agencies involved in the support of IVET learning mobility, in particular Erasmus+, Nordic+ and means provided by EDUFI itself. As learning projects are funded (with hardly an exception) by one programme framework, it is possible to add-up the participants across programmes.

<sup>32</sup> Alternatively, it has been considered to use the total number of IVET students as the base for the indicator.

<sup>33</sup> [http://www.cimo.fi/services/statistics\\_on\\_internationalisation/vocational\\_institutions](http://www.cimo.fi/services/statistics_on_internationalisation/vocational_institutions)

EDUFI conducts and commissions research related to IVET learning mobility, however, the projects have been mainly focussed on qualitative approaches, with primary data collection. The secondary analysis of micro-data sets had played only a marginal role. Things might be changed based on the new approach of including also the information on IVET learning mobility within the educational registers (see above 5.2.2.1.)

### *5.6.3. Resources available and obstacles for implementation reported*

For centralised, multimethod data collection approaches, the key requirement seems to be to give the mandate and sufficient resources to one organisation to report regularly on IVET learning mobility – as a stand-alone topic or as part of a broader framework as for example, the internationalisation on education or the transnational experience of young adults. Units in ministries (e.g. working on internationalisation) or agencies working on the internationalisation seem to be likely candidates to take on this responsibility, typically, by expanding the reporting on their own activities with regard to IVET learning mobility by information gathered from other sources or agencies. Although this has not been a particular topic of the survey, it can be assumed that in all EU member states, there are organisational units or agencies, which might accept the task of collating any available information on IVET learning mobility and to steer the process of introducing new sources of information. The idea is further discussed in the section 6.2

For each single method potentially applied, similar enabling and restricting factors are likely to apply as studied in the previous sections. However, as the examples have shown, dedicated agencies might develop informal, yet, effective ways to reach out to schools, funding agencies, statistical offices or research centres (with regard to existing sample-based surveys) in order to elicit the required information. By taking the route of voluntary cooperation, it might be possible to overcome the difficulties of a formal approach, e.g. routed in the change of laws on educational statistics or similar demanding fields of law marking.

## **6. APPROACHES FOR MEASURING IVET LEARNING MOBILITY BEYOND GENERAL POPULATION SURVEYS**

### **6.1. Introduction**

In the following chapter, a strategy is proposed to overcome the existing limitations for observing progress made in promoting learning mobilities in IVET across the EU Member States. The strategy responds to the suggestion of the “Progress report on a Learning Mobility Benchmark” (European Commission, 2017) to look into alternative sources for an IVET learning mobility indicator, in particular using available administrative data.

The proposal is developed against the backdrop of the experiences in Finland, France, Germany and the Netherlands that have been studied in this report and the results of the implemented expert survey. Moreover, the insights on measuring IVET learning mobility from the available literature and reports on IVET have been taken into consideration.

The goals of indicators on IVET learning mobility are understood as follows:

- Observing cross-country differences in the level of uptake of (outgoing) IVET learning mobility
- Observing progress made in increasing the proportion of IVET students who had access to learning mobility, reporting on short-term changes (e.g. on a yearly basis) and developments over longer stretches of time (e.g. every five years).

For specific reporting objectives, different indicators can be adopted. As for policy indicators in general, possible unintended negative effects should be carefully evaluated, thereby avoiding unintended shifts in public support and funding, which might occur when some learning mobilities are easier to measure than others. Triangulation of data coming from different data sources can mitigate such undesired consequences.

With the help of the literature review, the expert interviews and the expert survey, four key approaches for measuring IVET learning mobility and observing changes over time have been established, as summarised in Table 18.



**Table 18 Key approaches identified for establishing information on IVET learning mobility**

Type	Subtype	Examples identified	Goal in focus/particular strengths	Weaknesses of the approach
Administrative data from funding arrangements	Erasmus+	Reporting on features of Learning mobility in the Netherlands	<ul style="list-style-type: none"> <li>- Observe short term developments</li> <li>- Explore patterns of IVET learning mobility in detail</li> <li>- Readily available data for all EU MS</li> </ul>	Missing out on all mobilities beyond Erasmus+
	Aggregating data from different agencies	Approach used in Finland and the Netherlands	<ul style="list-style-type: none"> <li>- Explore patterns of IVET learning mobility in detail</li> </ul>	Missing out on all mobilities realised without support by any public program
Administrative data collected in schools	Self-reported by students/upcoming graduates	Educational data warehouse Finland	<ul style="list-style-type: none"> <li>- Observe short-time developments</li> <li>- observe outcomes</li> </ul>	Response burden of individuals, administrative burden of schools Non-coverage of mobilities after graduation
	Process-generated	INEP approach Finland	<ul style="list-style-type: none"> <li>- Observe short-term developments</li> <li>- Observe outcomes</li> </ul>	Administrative burden of schools Typically, only programmes administrated by schools included (not of employers in Dual VET)
Sample-based surveys among upcoming/recent graduates	Dedicated (stand-alone) surveys	German Survey on IVET learning mobility (2011, 2017)	<ul style="list-style-type: none"> <li>- Observing system characteristics over time</li> <li>- Exploring details of IVET learning mobilities</li> </ul>	High unit/item non-response rates are possible Comparatively high costs involved
	Inclusion within an established regular survey on graduates	Study based on the Generation survey in France Measuring IVET learning participation in a school-to-work framework in the Netherlands	<ul style="list-style-type: none"> <li>- Observing system characteristics over time</li> <li>- Observing short-term outcomes</li> </ul>	Limitations for asking for a particular aspect (due to the restrictions of the overall survey instrument)
General population surveys	ELFS	Pilot Survey 2014	<ul style="list-style-type: none"> <li>- Observing stocks within a well-defined methodological framework</li> <li>- Observing IVET participation in a broader topic (internationalisation of education/transnational experiences)</li> </ul>	Limited accuracy in countries with small IVET populations/low levels of IVET mobility High costs (in case an extension of the samples would be required for covering rare phenomena)

Source: the authors

Administrative data had been expected to provide an alternative source of data on IVET learning mobilities beyond surveys. Such data might have been readily available as a by-product of already implemented administrative procedures (for examples, when schools are required to hold records on work placements). Alternatively, their collection might be

requested as an additional requirement as part of a larger process, as for example, the preparation of the individual level data on graduates which schools are required to report when sourcing a register on educational achievements.

The results of the implemented expert study indicate that the only administrative data source available universally across all EU Member States concerns data collected within the administration of the Erasmus+ programme. Beyond Erasmus+ data, several countries have developed their own solutions with no clear dominant approach across countries. Experts in many countries are rather sceptical about the feasibility of approaches, which would imply an additional administrative burden for schools and ask for additional contributions in collecting IVET learning mobility data (either as part of regular administrative procedures or by implemented school-administrated sample-based surveys).

The gathered statements on potential future information sources on IVET learning mobility remain inconclusive across Member States. However, additional opportunities for reporting on IVET learning mobility might appear as a by-product through reforms of (educational) statistics. Provided that a need for establishing relevant data is accepted by the Member States, various new options for achieving this goal by expanding already existing or currently ongoing reporting systems may indeed become visible.

Accordingly, the proposal for improving availability of data on IVET learning includes the following main directions:

- Involving Member States to implement National observation points for regularly reporting on IVET learning mobility for their countries, thereby working towards the improvement of available data (stemming from various sources) over time.
- Implementing an Erasmus+ Policy Intervention Indicator, expressing the number of Erasmus+ beneficiaries with IVET learning mobility as a percentage of IVET graduates of a given year, based on existing data, as a readily available benchmark on short-term changes in IVET learning mobilities. Member States may be encouraged to provide complementary data to source a more encompassing Policy intervention indicator, covering both beneficiaries of Erasmus+ support and support from other public support schemes.
- Inviting Member States to integrate dedicated variables on IVET learning mobility into existing or upcoming graduate tracking surveys.
- Involving Member States to make use of or establish data collections on the IVET learning mobility of upcoming or recent graduates in IVET (beyond tracking surveys). The data source should allow more comprehensive observation of IVET learning mobilities beyond those supported by Erasmus+ and data should be available at least every five years. While all Member States should establish at least one data source complying with defined minimum standards for the data collection, they should freely choose the data source deemed to be the most advantageous one. Member States might be encouraged to change sources in case less burdensome ways of data collection present themselves.

The remainder of the chapter is structured as follows. Section 6.2 discusses the proposal of *National Observation Points* on IVET learning mobility. In Section 6.3, the possibility for an *Erasmus+ Policy Intervention Indicator* is outlined, sample data is presented, requirements for improving the quality of Erasmus+ data are stated, strength and weakness of the approach are discussed and further conclusions for the use of the indicator are drawn. Section 6.4 proposes a flexible approach in measuring IVET learning mobility including proposed minimum criteria for collecting data across countries. Finally, Section 6.5 outlines a set of possible benchmarks on IVET learning mobility. The final Section 6.6 summarises the conclusions drawn.

## **6.2. Inviting Member States to implement *National Observation Points* on IVET learning mobility**

EU Member States should be involved in assigning one organisation with the task of annual reporting on IVET learning mobility and taking the responsibility of working towards the improvement of the sources for the reporting on the topic over time.

This proposal is made against the backdrop of the encouraging experiences made in Finland and the Netherlands. In both countries, one organisation has assumed the responsibility for reporting on IVET learning mobility and has worked over a multi-year process towards expanding the available data sets, improving their quality and working towards a better harmonisation of data provided (see section 5.5.2).

Organisations or administrative units which are taking on the function of *National Observation Points* might be already responsible in one way or another for IVET learning mobility or a related field. Candidates would include units of ministries responsible for the internationalisation of education, agencies responsible for Erasmus+ or national research centres on VET.

The organisation assigned to be the *National Observation Point* on IVET learning mobility should assume the following responsibilities:

- Working towards the collection of readily available information on IVET learning mobility from national sources of all kinds, for example, from agencies supporting IVET learning mobility (beyond Erasmus+). Moreover, it should negotiate with providers of such information on ways to improve the quality of data and expand options for joint analysis.
- Identifying new options for data collection and integrating collection of data on IVET learning mobility into various ongoing projects in the field of educational statistics (e.g. the implementation of a tracking survey on IVET students, the updates of data collection procedures in schools on educational statistics, and so forth).
- Receiving the financial resources and taking the responsibility to either run or commission sample-based dedicated surveys on IVET learning mobility (where such surveys are missing).
- Reporting regularly to both an expert and a general audience on IVET learning mobility. Beyond reports on the web or short stand-alone reports, dedicated sections might be featured in more comprehensive reporting systems (e.g. reports on the internationalisation of education or on the IVET sector).
- Cooperating within an EU-wide network of National Observation Points on the topic of measuring and reporting on IVET learning mobility and achieving more comparable data sets across the EU.

By taking responsibility for reporting on IVET learning mobility over longer stretches of time, *National Observation Points* are expected to benefit from experiences gained over time and to ensure the required level of continuity in the approaches.

To assume their function, *National Observation Points* will require a dedicated budget from national sources. The European Commission may contribute to the costs of setting up *National Observation Points* across countries, following procedures taken in related fields (see for example the *National Support Services* for EPAL<sup>34</sup>).

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<sup>34</sup> <https://epale.ec.europa.eu/en/nss>

### **6.3. Implementing an *Erasmus+ Policy Intervention Indicator* as a short-term measure for observing changes in the field of IVET learning mobility across the European Union**

It is proposed to implement an indicator on IVET learning mobility expressing the number of IVET learners benefiting from an Erasmus+ funded learning activity as a percentage of the IVET graduates of a given year. This proxy indicator for IVET learning mobility will enable observation of short-term changes in the policy field over time and to establish future benchmarks.

Erasmus+ data on beneficiaries – stemming either from the Participant Report Form or from sources produced as part of the funding administration (MOB TOOL+) – constitutes the only identified administrative source readily available with yearly measurement points across both the EU Member States and the further countries participating in Erasmus+. The programme has developed into the most significant public funding source across the Member States and funds a significant proportion of all IVET learning mobility support in line with key defining criteria (such as being related to the curriculum of an IVET program, having a minimum duration of two weeks (10 working days) or being acknowledged by Europass documentation). Available evidence suggests that Erasmus+ covers the majority of IVET learning mobilities in line with the threshold set. Simultaneously, there are certain drawbacks of Erasmus+ data, i.e. omission of a varying proportion of learning mobilities, which should be minimised by triangulating the data with other data sources, collected at a Member State level.

In the absence of a better alternative, the use of Erasmus+ participant data seems therefore to be justified to source a complementary proxy indicator. However, as the indicator covers only a part of IVET learning mobility support, information should be complemented by sources covering the whole range of learning mobilities. Such additional data could be available with a lower periodicity (e.g. every five years), allowing the estimation of the relative importance of substantial other sources of financing beyond Erasmus. (Friedrich and Körbel, 2011).

Erasmus+ data fails to cover learning mobilities funded through other public programmes, local schools, employers of IVET participants (in case of dual VET in particular) or households. Available evidence shows that while Erasmus+ data covers the majority of learning mobilities of two weeks and more in many countries and occasions – at least in some countries and for some points of observation – a part of mobilities might not be funded by Erasmus+. In many countries, however, the non-covered part is likely to be small. Another current limitation, which can be mitigated in the future, concerns the level of details (i.e. breakdowns by socio-demographic characteristics or type of education) and a perceived need in further investing in harmonising the collection of Erasmus+ data, in particular by further improving the *Participant Report Form*. With the decision to use the Erasmus+ data for achieving an indicator on progress on IVET learning mobility policy, further steps in improving the data quality should be envisioned (see the proposal below).

**Table 19 Key features of the proposed Erasmus+ Policy Intervention indicator**

<b>Numerator</b>	
Threshold for the learning activity to be counted	At least two weeks OR required by the curriculum OR expressed by Europass (In practice: All eligible mobilities as defined by Erasmus+)
ISCED11 Level	Mobilities linked to vocational programmes on ISCED11 Level 3; Level 4 [to be expanded by IVET on higher levels, when the data availability has been improved]
Forms and criteria	School-based or work placement; related to IVET programme
Population	IVET learning mobility participants or recent graduates with mobility support (no age restrictions); Year in correspondence with the latest available data on IVET graduates
Sources	Erasmus+ data on beneficiaries (learners) (all)
<b>Denominator</b>	
Population	IVET graduates of one year (no age restrictions); latest available year
Sources	UOE-Statistics on graduates educ_uoe_grad01
ISCED11 Level	Graduates of vocational programmes on ISCED11 Level 3; Level 4 [to be expanded by IVET on higher levels, when the data availability has been improved]
<b>Benchmark (target proposed)</b>	
Value proposed	10% (EU27 – without UK) – to be defined after more methodological work
Frequency	Yearly
Visibility of changes in policy in the data	Near -term (for recent IVET graduate cohorts)

Source: the authors

It is proposed that the proposed new proxy indicator builds mainly on the criteria and definitions used for the benchmark proposed in 2015 (see chapter 2; European Commission 2015). The threshold for a learning mobility is kept constant (two weeks/ten working days; or documented by Europass), however, the assumption is that all supported participants have taken part in a mobility complying with the set threshold contrary to the established framework, it is proposed to include both mobilities related to an ISCED11 level 3 programme and activities related to a level 4 programme<sup>35</sup>.

It is proposed to cover the mobilities of all participants irrespective of age – this is mainly in line with the indicator proposed in 2015<sup>36</sup>.

For the denominator, the IVET graduates on ISCED11 Level 3 or 4, irrespective of age, are proposed, again mostly in line with the previous approach.<sup>37</sup>

<sup>35</sup> As soon as data for IVET programmes on ISCED11 level 5 has become available for the vast majority of countries, IVET on this level might be included both in the numerator and in the denominator.

<sup>36</sup> Activities of respondents 18 to 34 which had taken place prior to the 18th birthday had been considered. The change is only that the mobility of adult participants in IVET older than 34 are also considered.

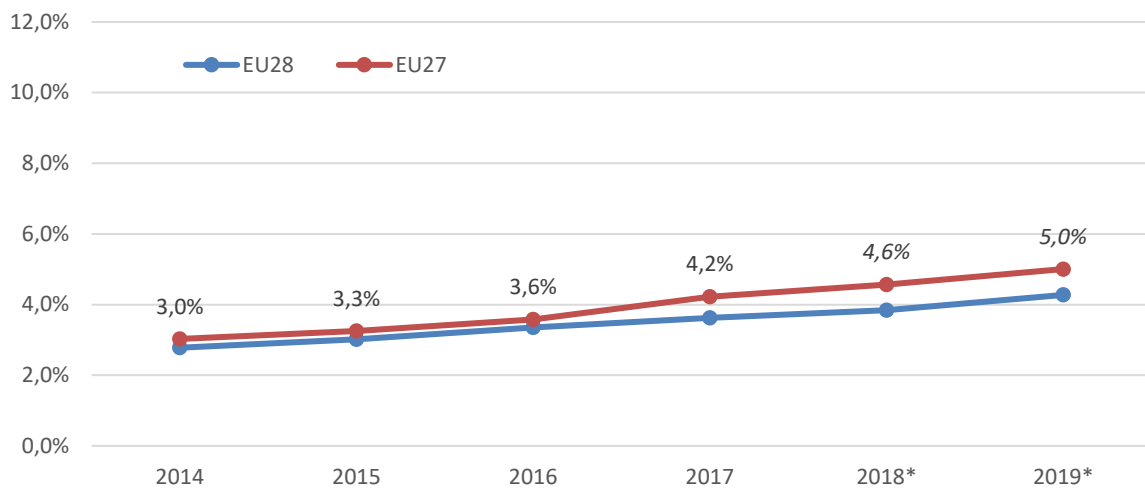
<sup>37</sup> It needs to be noted that one individual may appear several times among the graduates within their IVET learning pathway in cases, where an IVET system foresees particular steps, where passing each step is counted as a qualification. For example, by completing one five-year program, a participant might be counted several times within the graduate statistics, as he or she earned qualifications on several sub-levels. However, he or she might have gotten the offer to participate in a learning mobility only once within the five-year program. For a given year, the statistics on graduates represents the true value, however, the sum of the graduates of a multi-year period is higher than the number of all individuals having completed an IVET programme at least once. Compared to the operationalisation of the denominator in the 2014 IVET learning mobility survey, therefore, the denominator based on graduate statistics has therefore a by comparison higher value, making a set benchmark more difficult to achieve. See also Footnote 38.

## Measuring Learning Mobility in Vocational Education and Training

For expressing a level of policy commitment broadly in line with the previous indicator, for the Erasmus+ Policy Intervention Indicator, a benchmark of 10% might be considered for the EU27 (without UK).

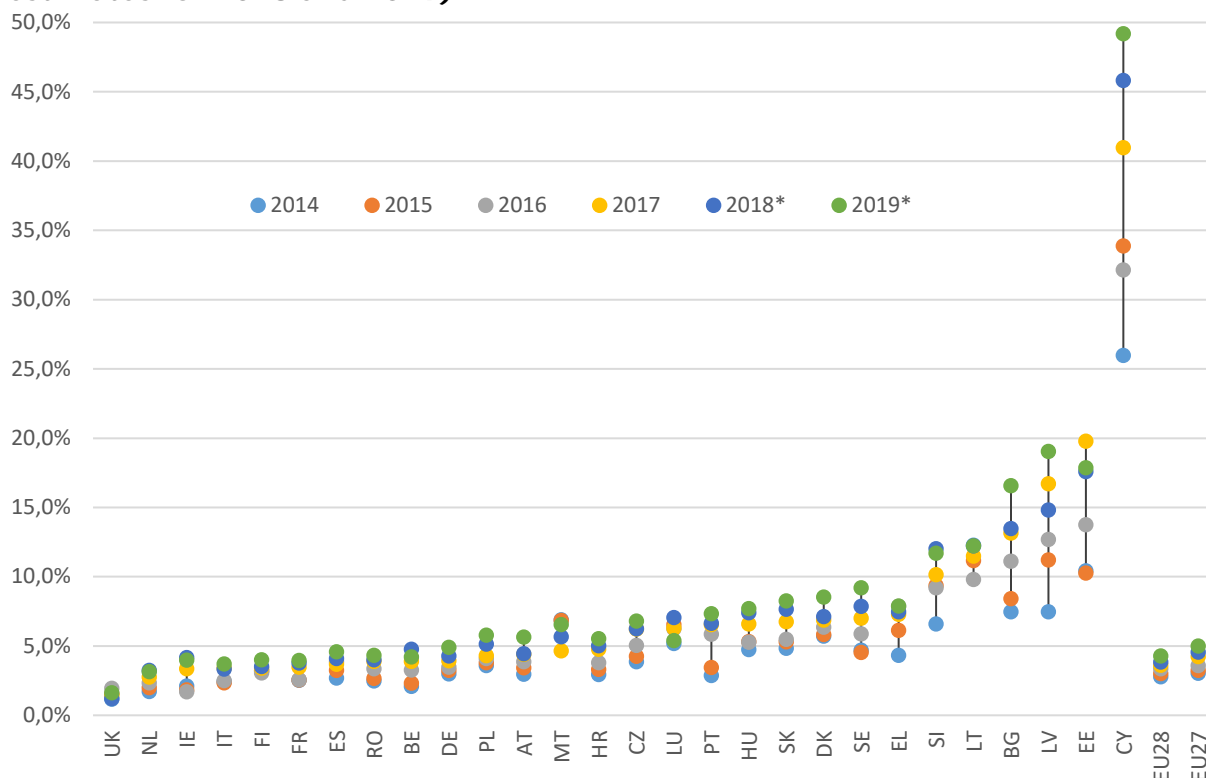
Figure 19 shows the outcome of the indicator based on the available data on IVET learners supported by Erasmus+ across the EU28 and respectively, for the EU27 (weighted average). In the year 2017, the proposed benchmark had reached 4,2 % across the EU27 and the benchmark had further increased in the years up to 2019 (based on an estimate, using the graduate data for 2017). Based on the considerable increase in EU funds made available for supporting IVET learning mobility in the recent years, the value for the Erasmus+ Policy Intervention Indicator has changed accordingly.

**Figure 19 Erasmus+ Policy Intervention Indicator - 2015 to 2017 (+ estimates for 2018 and 2019)**



*Source: educ\_uae\_grad01 (2014-2017): Summary of ERASMUS+ VET KA1 mobility learners CONTRACTED, by Year and SENDING country; for 2018 and 2019, graduate data for 2017 had been used (2018, 19 data had been not available; for the UK, for 2014 and 2015, graduate data for 2016 had been used. (Weighted average (sum of all beneficiaries in all EU member states divided by the sum of all graduates of all EU member states).*

**Figure 20 Erasmus+ Policy Intervention Indicator - 2014 to 2017 for the EU28 (+ estimates for 2018 and 2019)**



Source: educ\_uoe\_grad01 (2014-2017); Summary of ERASMUS+ VET KA1 mobility learners CONTRACTED, by Year and SENDING country; for 2018 and 2019, graduate data for 2017 had been used (2018, 19 data had been not available; for the UK, for 2014 and 2015, graduate data for 2016 had been used. Weighted average (sum of all beneficiaries in all EU member states divided by the sum of all graduates of all EU member states).

Figure 20 presents the results for the Erasmus+ Policy Intervention Indicator across countries. In 2017, fourteen countries had values of below 5% (United Kingdom, Netherlands, Ireland, Italy, Finland, France, Spain, Romania, Belgium, Germany, Poland, Austria, Malta, and Croatia). In eleven countries, the value for the indicator is between 5 and 15 % (Czechia, Luxembourg, Portugal, Hungary, Slovakia, Denmark, Sweden, Greece, Slovenia, Lithuania, and Bulgaria). In Latvia, Estonia and Cyprus, the value for the indicator is above 15% with the value of the indicator being particular high in Cyprus, almost reaching at estimated level of 50%.

At the current stage, the proposed indicator has some weaknesses in adjusting for cross-country specifics in the IVET system, which might be overcome in the future:

- For the numerator, it would be possible to include some correction account for participants with more than one learning mobility as well as beneficiaries taking part after graduation.
- For the denominator, it might be considered to correct for the fact, that in some systems, young adults acquire more than one vocational qualification within a considerably short period (being counted separately) while following their IVET programmes. A VET graduates might appear (although in different years) more than once in the graduate statistics, however, would be counted only once in an approach,

where all 18-34-year-old IVET graduates would be addressed (as in the Pilot survey on IVET learning mobility)<sup>38</sup>.

It is recommended to further study the outcomes of the proposed Erasmus+ Policy Intervention indicator against the backdrop of the available other sources and to discuss the potential limitations and pitfalls.

For example, countries putting considerable emphasis on IVET learning mobility as the Netherlands or Finland, are ranked at the bottom end of the distribution of countries by the Erasmus+ Policy Intervention Indicator. This has various reasons. The various data used for the policy intervention indicator differ considerably from the data for the numerator and denominator used in the national reporting approach<sup>39</sup> of the two countries, resulting into (much) lower participation rates. Countries with small IVET populations have relatively high values for the proposed indicator. It needs to be assumed that Erasmus+ budgets for IVET learning mobility are allocated mainly in line with other criteria than the actual size of the IVET system, implying that in some countries more budget for funding IVET learning mobilities IVET per student is available than in others. This calls for an in-depth analysis of the proposed indicator before any interpretations or conclusions are made.

#### **6.4. Improving the data collection on Erasmus+ participants and establishing a standard for data collection on IVET learning mobility beyond Erasmus+**

For sourcing a Policy Intervention Indicator based on the Erasmus+ data, further improvement of the data quality and a further harmonisation of data collection procedures would be recommended. By strengthening the methodological basis and by providing an elaborated analysis of the achieved data sets, the European Commission could also provide a sample of good practice, supporting Member States in making better use of this data source. Moreover, to further improve the quality of Erasmus+ data collection, common standards could be developed.

Data collected on Erasmus+ supported participants are stemming from two key sources, namely

- Administrative data created in the process of administrating the Erasmus+ funds
- Data collected by the Participant Report Form (PRF).

Given the potential sensitivity of the administrative data created for allocating the funds, it is recommended to mainly focus on improving the data quality of data collected by the help of the PRF. The information collected via the Erasmus+ Participant Report Form is a key

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<sup>38</sup> One option for taking into account different patterns of multiple graduations within IVET would be to restrict the denominator to first-time IVET graduates only. For the project, a special data extraction for the relevant UOE indicator has been prepared. The results are provided in Annex 3, Figure 22. Data are available for 19 countries, however, in four countries, all IVET graduates had been labelled as first-time graduates. While in a number of countries, the proportion of first-time graduates of all graduates is over 90%, in others, it is much lower. Countries with lower proportion of first-time graduates include Belgium (36%), Finland (55%), Denmark (60%), Malta (68%), Spain (77%), Romania (81%), Lithuania (84%), Hungary (85%) and Austria (85%).

<sup>39</sup> In Finland, for 2017, the used national approach counted 53% more cases of IVET learning mobilities than cases represented in the Erasmus+ statistics, mainly due to the inclusion of mobilities supported by other programmes (schools' own resources in particular) and by including also shorter spells of mobility (shorter than two weeks). The term used for the denominator (First year students of IVET programmes targeting mainly young people) is more than 60% smaller than the total number of IVET graduates of the given year used for the Policy Intervention Indicator, as the latter includes a large proportion of adult learners or learners who have already completed an IVET programme at an earlier stage. For the Netherlands, comparable differences for the numerator and the denominator can be stated.



## Measuring Learning Mobility in Vocational Education and Training

source of information. Also, according to the available information from the expert survey, response rates by students are relatively high, indicating reliability of the survey.

For better describing the groups of learners supported, for spotting cross-country differences, and for better harmonizing the information used for sourcing the numerator of the "Erasmus+ Policy Intervention Benchmark" it is suggested to add/expand the Erasmus+ Participant Report Form; the expanded form should be promoted as a point of reference for national data collection on IVET learning mobilities. The questions currently used should be complemented by a number of equally important questions (see Table 20). An outline for a master questionnaire based on this table is provided in Annex 2. However, the outline should be updated in the future in response to upcoming new guidelines European Union social surveys.

For the purpose of generating cross-country comparative data, it would be of importance to further harmonise the translations used of the PTF, including careful considerations about the examples provided and the country specific clarifications given (e.g. with regard to funding arrangements).

**Table 20 Established content in the Participant Report Form and proposed addition (in italic)**

<b>Information required by all data collection approaches</b>	<b>Minimum information for sourcing the indicator/combining sources of information</b>	<b>Information required to analyse data/observe cross-country differences in composition</b>
Sex/Gender	<i>Male/female/[other]</i>	
Age [when starting the learning mobility]	<i>Below 18 - 18-19 - 20-24 - 25-34, 35-44, 45-54, 55 and older</i>	
Main social position (self-definition) [during the learning mobility]	<i>Student/pupil Apprentice (holding an apprentice contract with an employer) Employee/worker Unemployed Other [please provide]</i>	
Prior to the IVET program: Highest level of educational attainment	<i>ISCED11 0-2 ISCED11 3-4 ISCED11 5-8</i>	
Level of the (relevant) IVET Program [related to the IVET program]	<i>Upper- secondary education Post-secondary education ISCED11 5-8 [Recommendation: Countries should be invited to use the detailed questions on programmes according to the ISCED Mappings as used within the national questionnaires for the Adult Education Survey; data can then be reclassified according to the mapping] of the detailed national ISECED Mapping for IVET programmes</i>	
Form of relevant IVET provision (current programme)	<i>School-based Dual (apprenticeship with a school part and an enterprise part)<sup>40</sup> Enterprise only</i>	
Year of the study program	<i>Year 1 – Year 2 – Year3 – Year 4 – Year 5 – Already graduated/post-graduation program</i>	
Type of receiving institution	<i>VET school/institute a company a mix/both (alternate)</i>	
Duration of the mobility	<i>up to 7 days (5 workdays) 6 to 13 days (9 workdays) 14 days to one month More than one month up to three months More than three months up to one year More than one year</i>	
Mobility mandatory part of the program	<i>Yes – No – Not applicable</i>	
Recognition of learning outcomes	<i>Where the learning outcomes form your mobility period recognized? Yes No If yes, how ECVET credits Europass Attendance certificate Recognition on national level Recognition on regional level Recognition by home institution Work certificate Other</i>	
Frequency of mobilities	<i>First mobility [supported from Erasmus+]: yes/no If not, please indicate the number of former mobilities</i>	
Sources of funding (beyond the own household)	<i>Erasmus+ funds Other state/regional grant [if yes, please state the source] Own employer Own/family sources</i>	

Source: Participant Report form; the authors

<sup>40</sup> Currently, the term „Apprentice“ used in the Participant Report Form as a level of education, however, the term is understood differently across countries and marks on the one hand a defined form of IVET (“Dual VET” as in DK, AT, DE) on either upper secondary or post-secondary level or a mode of delivery, respectively, a type of part-time program, which can be found on any ISCED level (e.g. UK, FR). The term should therefore be not used for identifying the level of education.

A preliminary analysis of selected variables of the data generated by the Erasmus+ data points to the fact, that some questions in the form might have been understood differently across countries, requiring identifying the reasons behind particular answer patterns. Moreover, more information on the reasons for cross-country differences in unit non-response and item-non-response would be desirable (For an analysis of the selected data from stemming from the Participant Response Form see Annex 4).

For better harmonising data collection across countries, it is proposed the following:

Where applicable, making use of the related questions in AES master questionnaire and the related national translations of the questionnaire (available at CIRCABC<sup>41</sup>).

Establishing a set of checking rules, in particular, to avoid double answers (where not foreseen) and make effort to reduce the number of item non-response.

### **6.5. Further data development: collecting comparable data on IVET learning mobility among recent or upcoming IVET learners**

For observing the overall development, it would be of importance to establish information on the uptake of IVET learning mobilities in general, and not only on supported mobilities. However, it might be sufficient have such a measure available with a limited frequency, for example, every fifth year.

For observing participation in IVET learning mobilities not covered by Erasmus+ (or another programmes, making data on beneficiaries available), and beyond the use of general population surveys, different approaches are currently in use across the EU Member States, including

- Making use of administrative data collected by schools on their students/upcoming graduates' participation in IVET learning mobilities (e.g. FI)
- Including question on IVET learning mobilities in surveys on recent graduates (e.g. for tracking purposes) (e.g. NL, FR) or setting up a particular survey on IVET Learning mobilities among upcoming graduates (e.g. DE)

Examples in Finland, France, Germany, the Netherlands discussed in Section 5 have shown that all the relevant approaches are able to deliver relevant data for calculating a IVET learning mobility indicator, which considers also mobilities not supported by public programmes.

Countries with large IVET populations and relatively high numbers of mobile IVET students, where the 2014 Pilot have worked in as satisfactory manner (e.g. BE, IT, HU, NL, AT, SE) may be encouraged to re-use the framework in the future as a further source of information<sup>42</sup>, given that in those cases a general population survey is a suitable approach available. By including a question on the source of funding (whether Erasmus+ funding had been used in particular), it may be possible to establish estimates for IVET learning mobilities outside the Erasmus+ framework.

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<sup>41</sup> See CIRCABC : Library > Public > 5. Adult learning statistics > 1. Adult Education Survey (AES) > AES 2016; <https://circabc.europa.eu/w/browse/285fa0f6-7ad7-4640-afb2-595f5b88c960>

<sup>42</sup> Information on the 18-34-year-old IVET population, however, would not be directly comparable to the information for a cohort of IVET graduates of a given year.

## Measuring Learning Mobility in Vocational Education and Training

Reflecting the differences in the availability or suitability of possible approaches, it is proposed, that

- Member states would consider establishing (at least) one source of data on IVET learning mobility, covering also mobilities “beyond Erasmus+” over a defined period (e.g. up to 2022).
- Member states would be invited to introduce such data collection, following common standards on:
  - the variables to be collected; the latter should be comparable to the variables collected on mobilities within the Erasmus+ framework (see above and Table 20 in particular).
  - Measurement should take place at least every fifth year; recommendations on preferred (common) years of reference can be made (e.g. 2025, 2030).
  - the criteria for reliability and robustness for data achieved, so that the indicators calculated can be compared at least within some limitations and a comprehensive estimate on IVET learning mobility for the (than) EU27 can be achieved.
  - Countries are invited to agree to partake in a form of cooperation with the goal to further harmonise data collection on IVET learning mobility over time.

For data achieved on sample-based surveys, quality standards should broadly follow the approach taken for the 2014 pilot survey, which has taken the quality framework of the Adult Education Survey as a guideline. For administrative data, which usually covers the whole target population, special attention needs to be given to systemic failures in coverage, for example, when data collection excluded specific parts of the IVET system. However, with the exemption of sampling issues, other dimensions of data quality are as critical for administrative data as for sample-based data (e.g. item-non-response) (Brancato, 2014). In Table 21 summarise the proposed principles.

**Table 21 Standards proposed for surveys on IVET learning mobility**

	<b>Administrative Data</b>	<b>Survey data</b>
Expectations of accuracy	(-)	Coefficient Confidence intervals (95%) as for AES2 (depending on country size) <sup>43</sup>
Sample size	(not applicable)	About 10% of the population (to achieve meaningful estimates for approx. 5% of participants in IVET learning mobility)
Coverage error	Non-coverage should not exceed 10% of the relevant IVET population (graduates) Less than 10%	
Unit non-response		Below 10%
Item non-response	Below 10%	Below 10%
Frequency	At least every fifth year; however, yearly measurement would be desirable	At least every fifth year

The standards proposed might be taken as a common guideline; in case, that some criteria cannot be met, procedures for correcting the expected bias might be considered as acceptable, in particular, for the early iterations of an approach taken. For example, in Germany, a correction procedure has been implemented for overcoming the effects of high levels of unit and item on-responses (5.4.2.1).

While any of the described approaches allow to achieve satisfactory results, it is expected that ongoing developments will make it possible to use one out of two approaches deemed most appropriate for acquiring a comprehensive measure off IVET learning mobility, including those of very short duration and privately financed.

Given the vibrant developments in educational statistics, the use of register-based data and the introduction of graduate tracking approaches in particular (ICF, et al., 2020 - under review), it is expected that in various countries, new opportunities for measuring IVET learning mobility may appear in the new future, particularly when there is an explicit agreement that the measurement of IVET learning mobility is an important issue. From a technical standpoint, including information on IVET learning mobility in a framework established for other, more significant purposes is often a minor, straightforward endeavour, although in reality, it might be required to overcome considerable obstacles. Table ... summarise two scenarios which are a reality or are likely to evolve in a large number of countries. Both scenarios would allow to achieve a stable and reliable source for collecting information on IVET learning mobility. Over time, it is expected that in the majority of countries, one (or even both) of the mentioned options will arrive to source an IVET learning mobility indicator. Backed up by a shared understanding, that each country should provide relevant data at least based on one source, it is recommended that countries take advantage of upcoming opportunity to include questions on IVET learning mobility in one of the described frameworks, as this might effectively decrease the burden of achieving the required information in the long run.

<sup>43</sup> According to the Annex to Regulation (EC) No 452/2008, the sample size of the Second Adult Education Survey shall be established on the basis of precision requirements that shall not require effective national sample sizes to be no larger than 5 000 individuals, calculated on the assumption of simple random sampling ; The absolute margin of error for the indicator mentioned in point 3 shall not exceed the threshold stipulated in point 3, unless this requires an effective national sample size larger than 5 000 individuals. In the latter case, the size of the required effective national sample shall be 5 000 individuals. ; The Second Adult Education Survey should be designed in such a way that the estimate of the absolute margin of error does not exceed 1,4 percentage points for the estimated participation rate in non-formal education and training for the total reference population aged 25 to 64. ; - The same requirement is relaxed to a threshold of 1,7 percentage points for countries with a population aged 25 to 64 of one million to three and a half million. ; The same requirement is relaxed to a threshold of 2,0 percentage points for countries with a population aged 25 to 64 of less than one million.

**Table 22 Options for achieving new data**

<b>Constellation</b>	<b>Action proposed</b>	<b>Pros and cons</b>
Existence of educational registers, making use (among other approaches) of a questionnaire targeting upcoming graduates (as part of the administrative processes of graduation) for updating information on various topics	Include at least one/a set of questions on IVET learning mobility <sup>44</sup> in the form filled in by the upcoming graduate	Pros: comprehensive yearly data; rich set of breakdowns (from the register); options for follow-up research Cons: Post-graduation mobilities remain uncovered; Requirements of quality assurance of data (completeness; accuracy); (minor) extension of the respondent burden/administrative burden on behalf of schools; missing information on selected sub-segments of the IVET system (not covered by admin. Statistics).
Existence of sample based (regular) survey on recent cohorts of school leavers/graduates ("graduate tracking")	Include at least one/a set of questions on IVET learning mobility in the form filled in by the upcoming graduate	Pros: small additional efforts, rich breakdowns, options for follow up research, coverage of post-graduation mobilities Cons: Limitation due to sample size and unit/item non-response; (potentially) missing graduates who have migrated to another country

Source: the authors

## **6.6. Overall conclusions on the future measurement of IVET learning mobility across the European Union**

Promoting IVET learning mobility constitutes an important goal of EU policy making in the field of IVET and education in general, with substantial and growing investments via the Erasmus+ framework. Despite considerable efforts taken, including a pilot survey targeting all 18-34 olds conducted in 2014, comparable data on IVET learning mobilities across the EU Member States has not been achieved. This limits the opportunities for monitoring progress made in this field. Administrative data collected within the Erasmus+ framework constitutes the only readily available source across Member States.

The current project has taken up the suggestion of the Progress report on a Learning Mobility Benchmark (European Commission, 2017) to look into the potential availability of administrative data sources on IVET learning mobility, in particular the data collected as part of Erasmus+ programme. For that purpose, the current project has implemented an expert survey to identify and evaluate the potential data sources. Moreover, the project looked into available national approaches for observing IVET learning mobility, mainly based on a review of the available literature and on qualitative expert interviews. Only a small number of Member States have established national approaches for achieving data on IVET learning mobility beyond data collected within the Erasmus+ framework.

Speaking of national-level administrative data sources on IVET learning mobilities readily available, the expert survey has demonstrated that, while there are rare examples for such sources in some countries, there is no administrative data source readily available across a larger number of Members States. Even data on national funding programmes supporting

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<sup>44</sup> Minimum: Whether or not a graduate has participated in a relevant learning mobility of at least two weeks/ten workdays; preferably questions on the type of mobility (work placement, school placement); the duration of the mobility; the form of certification, sources of public funding)

## Measuring Learning Mobility in Vocational Education and Training

IVET learning mobilities are often not easily obtainable. Moreover, experts are rather cautious about the feasibility of approaches, where IVET schools would need to accept an additional burden in collecting administrative data on a regular basis or even in supporting the implementation of school-administrated sample-based surveys. While in the long run, new options for measuring learning mobility might become available as part and parcel of changing approaches in educational statistics, results of the expert survey are clear about the fact that administrative sources other than Erasmus+ will not become available in the near future.

By reviewing existing national approaches in measuring IVET learning mobilities, it can be incurred that assigning the responsibility for reporting on IVET learning mobility to one agency can be an important step forward. Such an agency – as demonstrated by the Finish example – is likely to constantly work towards the expansion of available data on IVET learning mobility. A responsible agency might also seize future opportunities to expand data availability, for example, when new surveys or data collection procedures on IVET students are implemented.

As no alternative administrative data source on IVET learning mobilities is currently available, Erasmus+ data itself needs to be considered as a choice for achieving at least a proxy indicator for measuring progress in the field. It has been therefore recommended to consider an Erasmus+ Policy Intervention indicator as a readily available interim substitute to an indicator based on data covering all types of mobilities, not solely Erasmus+ funded. While the Erasmus+ data sourced indicator misses mobilities supported by other public programmes or funded mainly by employers or households, it still covers most mobility spells of at least two weeks in duration across the EU Member States. Further methodological work is recommended to increase the usefulness of the proposed indicator, by further improving the data used for the numerator and by better harmonising the data used for the denominator.

Among the approaches for establishing data on IVET learning mobility, surveys among upcoming (Germany) or recent IVET graduates (respectively, leavers of education; France, the Netherlands) stands out as the most accessible, given that information on IVET learning mobility can be gathered as an additional aspect in surveys addressing, for example, school-to-work transitions of former IVET participants. Given that stand-alone surveys among IVET graduates with a sole focus on IVET learning mobility might be unreasonably costly, the option of including dedicated questions within an established survey framework (as in the example of the dedicated survey on leavers of the education system in France) seems to be far more justifiable. Moreover, by including IVET learning mobility in broader frameworks of education or IVET related research activities, more in-depth analysis both on the conditions for access to IVET learning mobilities as on their varied outcomes for groups of participants with different socio-economic backgrounds can be carried out. However, experts of the project's survey expressed their concerns about the feasibility of creating a regular survey on IVET graduates for many countries.

To summarise, based on the outcomes presented in the current report, it is recommended

- a) to adopt an Erasmus+ data sourced IVET learning mobility indicator as an interim measure for progress made until better data sources have been developed allowing more comprehensive monitoring
- b) to consider the establishment of a network of dedicated National Observation Points responsible for reporting on IVET learning mobility based on both the currently available and the future data sources on the subject matter
- c) to involve Member States in either further developing their current approach for measuring IVET learning mobility or introducing an approach making best use of opportunities given locally (possibly within the evolving graduate tracking systems), thereby ultimately enabling more precise measurement of IVET learning mobilities.

## Measuring Learning Mobility in Vocational Education and Training

**Table 23 Overview on indicators proposed**

	<b>Established IVET benchmark</b>	<b>Graduate based IVET learning mobility indicator</b>	<b>Erasmus+ Policy Intervention indicator</b>	<b>Policy intervention indicator</b>
<b>Numerator</b>				
Threshold	At least two weeks OR documented by Europass	At least two weeks OR required by the curriculum OR expressed by Europass	At least two weeks OR required by the curriculum OR expressed by Europass	At least two weeks OR required by the curriculum OR expressed by Europass
ISCED11 level	Only mobilities linked to ISCED11 Level 3 (= only former graduates of IVET on ISCED 3 level are considered)	Mobilities linked to ISCED11 Level 3; Level 4	Mobilities linked to ISCED11 Level 3; Level 4	Mobilities linked to ISCED11 Level 3; Level 4
Forms and criteria	School-based or work placement; related to IVET programme	School-based or work placement; related to IVET programme	School-based or work placement; related to IVET programme	School-based or work placement; related to IVET programme
Population	IVET graduates between 18-34 with a mobility	IVET graduates with a mobility irrespective of age	IVET graduates with a mobility irrespective of age	IVET graduates with a mobility irrespective of age
Sources	Ad-hoc module in a general population survey (as ELFS); Stand-alone surveys	Administrative data OR sample-based school-administrated survey among graduates OR a sample-based survey on recent graduates	Erasmus+ data on beneficiaries (all)	Pooled administrative data from funding agencies (to be achieved by National Observatory*)
<b>Denominator</b>				
	ALL 18-34-year-old IVET graduates	IVET graduates of one year (irrespective of age)	IVET graduates of one year (irrespective of age)	IVET graduates of one year (irrespective of age)
Sources	General Population Survey (e.g. EU-LFS)	UOE-Statistics on graduates educ_uae_grad01 OR Graduates in line with the used data source	UOE-Statistics on graduates educ_uae_grad01	UOE-Statistics on graduates educ_uae_grad01
<b>Benchmark aspired</b>				
Current/ equivalent	6%	Higher than 6% (e.g. 8%) – to be defined after achieving the data base	[not meaningfully comparable]	[not meaningfully comparable]
Suggestion for 2020 onwards			Proposal: 8-10% - to be defined after further methodological work	Proposal: 8-10% - to be defined after further methodological work
<b>Frequency of measurement - Visibility of recent changes in IVET learning mobility uptake</b>				
	At least every five years	At least every five years	Yearly	Yearly
	Delayed (for the 18 to 34-year-olds)	Near-term (for recent IVET graduate cohorts)	Near-term (for recent IVET graduate cohorts)	Near-term (for recent IVET graduate cohorts)



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**8. ANNEX 1 SELECTED SURVEY RESULTS**

## Measuring Learning Mobility in Vocational Education and Training

**Table 24 Forms of mandatory data collection on IVET learning mobilities in IVET schools**

	<b>Number of answers received</b>	<b>Mandatory reporting of schools on IVET learning mobilities – administrative data from funding schemes</b>	<b>Self-reports by students/graduates</b>
BE wal.	– 1	not established	not established
BE fla.	– 1	no	no
BG	1	not established	not established
CZ	0	(-)	(-)
DK	1	no	not established
DE	2	no	no
EE	4	yes	yes
IE	2	not established	not established
EE	1	not established	not established
ES	1	no	no
FR	2	yes	no
HR	3	yes	no
IT	2	yes	no
CY	1	not established	not established
LV	1	yes	not established
LT	1	not established	not established
LU	1	not established	not established
HU	2	not established	not established
MT	2	yes	no
NL	3	no	no
AT	6	no	no
PL	1	not established	not established
PT	2	yes	yes
RO	0	(-)	(-)
SI	0	(-)	(-)
SK	0	(-)	(-)
FI	2	yes	yes
SE	5	no	no
UK	0	(-)	(-)
LI	1	no	no
CH	1	no	no

(-) no contribution received; not established = no respondent in a country has provided an answer to the related question(s)

Sources: Online survey

## Measuring Learning Mobility in Vocational Education and Training

**Table 25 Experts' assessment of the feasibility of introducing mandatory data collection rules for IVET schools/providers**

Country	Would it be feasible in your country to set as mandatory for schools/IVET providers the collection of information and the reporting on their graduates' IVET learning mobilities during their participation in the programme on a regular basis (e.g. every year or every second year)?	Is it likely that this initiative (i.e. set as mandatory for schools/IVET providers the collection of information and the reporting on their graduates' of IVET learning mobilities during their participation in the programme on a regular basis) would have the necessary support from the relevant stakeholders?
AT1	Not feasible	Support might be difficult to be gained, as substantial reservations might be in place
AT2	Not feasible	Cannot assess
AT3	Feasible, however some restrictions apply	Support might be difficult to be gained, as substantial reservations might be in place
AT4	Fully feasible	Sufficient support can be gained, with difficulties to be overcome
BE1	Feasible, however some restrictions apply	Support might be difficult to be gained, as substantial reservations might be in place
BE2	Partially feasible, however with important shortcomings	Sufficient support is very unlikely to be mastered
BG	Feasible, however some restrictions apply	Cannot assess
HR1	Partially feasible, however with important shortcomings	Support might be difficult to be gained, as substantial reservations might be in place
HR2	Partially feasible, however with important shortcomings	Sufficient support can be gained, with difficulties to be overcome
HR3	Not feasible	Sufficient support is very unlikely to be mastered
CY	Feasible, however some restrictions apply	Sufficient support can be gained, with difficulties to be overcome
DK	Cannot assess	Support might be difficult to be gained, as substantial reservations might be in place
EE1	Feasible, however some restrictions apply	Sufficient support can be gained, with difficulties to be overcome
EE2	Fully feasible	Sufficient support can be gained, with difficulties to be overcome
EE3	Fully feasible	Cannot assess
FI1	Fully feasible	Sufficient support is likely to be gained
FI2	Fully feasible	Sufficient support is likely to be gained
FR	Partially feasible, however with important shortcomings	Cannot assess
DE	Partially feasible, however with important shortcomings	Support might be difficult to be gained, as substantial reservations might be in place
EL	Feasible, however some restrictions apply	Sufficient support can be gained, with difficulties to be overcome
HU1	Partially feasible, however with important shortcomings	Support might be difficult to be gained, as substantial reservations might be in place
HU2	Feasible, however some restrictions apply	Sufficient support can be gained, with difficulties to be overcome
IE1	Feasible, however some restrictions apply	Sufficient support can be gained, with difficulties to be overcome
IE2	Partially feasible, however with important shortcomings	Cannot assess

## Measuring Learning Mobility in Vocational Education and Training

LV	Fully feasible	Sufficient support is likely to be gained
LI	Feasible, however some restrictions apply	Support might be difficult to be gained, as substantial reservations might be in place
LT	Fully feasible	Support might be difficult to be gained, as substantial reservations might be in place
LU	Partially feasible, however with important shortcomings	Cannot assess
MT	Feasible, however some restrictions apply	Sufficient support can be gained, with difficulties to be overcome
NL1	Not feasible	Support might be difficult to be gained, as substantial reservations might be in place
NL2	Partially feasible, however with important shortcomings	Support might be difficult to be gained, as substantial reservations might be in place
PT1	Fully feasible	Sufficient support is likely to be gained
PT2	Fully feasible	Sufficient support can be gained, with difficulties to be overcome
ES	Partially feasible, however with important shortcomings	Support might be difficult to be gained, as substantial reservations might be in place
CH	Not feasible	Sufficient support is very unlikely to be mastered

*Source: Online survey*

**Table 26 Expert assessment of the feasibility of mandatory reporting of all agencies providing support to IVET mobility to a central agency**

Country	Would it be feasible to set as mandatory for all agencies (including agencies administrating EU-funded programmes) the reporting on beneficiaries of support for IVET learning mobility to a central unit according to defined standards on a regular basis?	Is it likely that this initiative (i.e. to set as mandatory for all agencies to report on beneficiaries of support for IVET learning mobility to a central unit according to defined standards on a regular basis) would have the necessary support from the relevant stakeholders?
AT1	Partially feasible, however with important shortcomings	Support might be difficult to be gained, as substantial reservations might be in place
AT2	Not feasible	Sufficient support is very unlikely to be mastered
AT3	Fully feasible	Sufficient support can be gained, with some difficulties to be overcome
BE	Feasible, however some restrictions apply	Support might be difficult to be gained, as substantial reservations might be in place
BG	Partially feasible, however with important shortcomings	Cannot assess
HR1	Not feasible	Sufficient support is very unlikely to be mastered
HR2	Partially feasible, however with important shortcomings	Sufficient support can be gained, with some difficulties to be overcome
CY	Fully feasible	Sufficient support can be gained, with some difficulties to be overcome
EE1	Not feasible	Cannot assess
EE2	Not feasible	Cannot assess
FI	Fully feasible	Sufficient support is likely to be gained
DE	Not feasible	Support might be difficult to be gained, as substantial reservations might be in place
EL	Partially feasible, however with important shortcomings	Support might be difficult to be gained, as substantial reservations might be in place
HU1	Feasible, however some restrictions apply	Sufficient support can be gained, with some difficulties to be overcome
HU2	Partially feasible, however with important shortcomings	Sufficient support can be gained, with some difficulties to be overcome
IE1	Feasible, however some restrictions apply	Sufficient support can be gained, with some difficulties to be overcome
IE2	Not feasible	Cannot assess
IT	Partially feasible, however with important shortcomings	Cannot assess
LI	Feasible, however some restrictions apply	Cannot assess
LT	Not feasible	Support might be difficult to be gained, as substantial reservations might be in place
LU	Fully feasible	Sufficient support can be gained, with some difficulties to be overcome
MT	Feasible, however some restrictions apply	Sufficient support can be gained, with some difficulties to be overcome
NL1	Feasible, however some restrictions apply	Sufficient support can be gained, with some difficulties to be overcome
NL2	Partially feasible, however with important shortcomings	Sufficient support can be gained, with some difficulties to be overcome
PT1	Fully feasible	Sufficient support is likely to be gained

## Measuring Learning Mobility in Vocational Education and Training

PT2	Feasible, however some restrictions apply	Cannot assess
ES	Partially feasible, however with important shortcomings	Support might be difficult to be gained, as substantial reservations might be in place
SE	Feasible, however some restrictions apply	Cannot assess

Source: Online survey

**Table 27 Survey results on important preconditions for a sample based, school-administrated approach to measuring IVET learning mobility**

Country	Country short	No. of answers	Register of schools/classes available	IVET areas not fully covered	Regular survey covering recent IVET graduates identified
Austria	AT	6	yes	agriculture, health	no
Belgium	BE	2	yes	no	No
Bulgaria	BG	1	not established		not established
Croatia	HR	3	yes	no	yes
Cyprus	CY	1	not established		not established
Czechia	CZ	0	(-)		(-)
Denmark	DK	1	not established		not established
Estonia	EE	4	yes	no	yes
Finland	FI	2	yes	no	not established
France	FR	2	yes	no	Yes (and used)
Germany	DE	2	no		No
Greece	EE	1	not established		not established
Hungary	HU	2	yes	no	not established
Ireland	IE	2	yes	private VET organisations	No
Italy	IT	2	yes	no	not established
Latvia	LV	1	yes	no	not established
Liechtenstein	LI	1	no		No
Lithuania	LT	1	not established		not established
Luxembourg	LU	1	yes	no	No
Malta	MT	2	yes	information on students is missing	No
Netherlands	NL	3	yes	No link between schools and students; private providers are excluded	Yes (and used)
Poland	PL	1	yes	no	not established
Portugal	PT	2	yes	no	No
Romania	RO	0	(-)		(-)
Slovakia	SK	0	(-)		(-)
Slovenia	SI	0	(-)		(-)
Spain	ES	1	(-)		(-)
Sweden	SE	5	not established		not established
Switzerland	CH	1	not established		no
United Kingdom	UK	0	(-)		(-)

Source: Online survey



**9. ANNEX 2 OUTLINE FOR A MASTER QUESTIONNAIRE**

## Measuring Learning Mobility in Vocational Education and Training

**Table 28 Overview – proposed questionnaire**

Information required by all data collection approaches	Minimum information for sourcing the indicator/combining sources of information	Information required to analyse data/observe cross-country differences in composition
[1] Sex/Gender	<i>Male/female/[other]</i>	
[2] [when starting learning mobility]	Age the <i>Below 15</i> <i>15-17</i> <i>18-19</i> <i>20-24</i> <i>25-34</i> <i>35-44</i> <i>45-54</i> <i>55 and older</i>	
[3] Status of the respondent (self-definition) [during the learning mobility]	<i>Pupil (lower or upper secondary education)</i> <i>Student (post-secondary or higher education)</i> <i>Apprentice (holding an apprentice contract with an employer)</i> <i>Employee/worker</i> <i>Unemployed</i> <i>Other [please provide]</i>	
[4] Prior to the IVET program: Highest level of educational attainment (ISCED-A)	<i>ISCED11 0-2</i> <i>ISCED11 3-4</i> <i>ISCED11 5-8</i>	
[5] Level of the (relevant) IVET program attained during the learning mobility (ISCED-P)	<i>ISCED11 0-2</i> <i>ISCED11 3-4</i> <i>ISCED11 5-8</i>  <i>[Recommendation: Countries should be invited to use the detailed questions on programmes according to the ISCED Mappings as used within the national questionnaires for the Adult Education Survey; data can then be reclassified according to the mapping]</i>	
[6] Form of relevant IVET provision (current programme)	<i>School-based</i> <i>Dual (apprenticeship with a school part and an enterprise part)</i> <i>Enterprise only</i>	
[7] Year of the study program	<i>1</i> <i>2</i> <i>3</i> <i>4</i> <i>5</i> <i>Already graduated/post-graduation</i>	
[8] Type of Host VET organisation	<i>A general/academic school/educational provider</i> <i>VET school/institute</i> <i>a company (work placement)</i> <i>a mix of school and work placement (alternate)</i>	

## Measuring Learning Mobility in Vocational Education and Training

[9] Duration of the mobility	<p><i>Up to one week (at least 5 workdays<sup>45</sup>)</i></p> <p><i>More than one week, less than two weeks (between 6 and 9 workdays)</i></p> <p><i>Two weeks up to one month (at least 10 workdays)</i></p> <p><i>More than one month up to three months</i></p> <p><i>More than three months up to one year</i></p> <p><i>More than one year</i></p>
[10] Relationship between the mobility and the attended program	<p><i>The learning mobility is mandatory according to the curriculum</i></p> <p><i>The learning mobility is recommended by or linked to the curriculum</i></p> <p><i>[in case of apprentices] The learning mobility is not linked to the IVET curriculum, yet, linked to the skill needs of a current employer</i></p> <p><i>The learning mobility has no link to the curriculum/attended IVET programme or a current employer</i></p>
[11] Recognition of learning outcomes	<p><i>Were the learning outcomes from your mobility period recognized?</i></p> <p><i>Yes</i></p> <p><i>No</i></p> <p><i>If yes, how</i></p> <p><i>ECVET credits</i></p> <p><i>Europass</i></p> <p><i>Attendance certificate</i></p> <p><i>Recognition on national level</i></p> <p><i>Recognition on regional level</i></p> <p><i>Recognition by home institution</i></p> <p><i>Work certificate</i></p> <p><i>Other</i></p>
[12] Previous mobility experience [supported from Erasmus+]	<p><i>First mobility [supported from Erasmus+]: yes/no</i></p> <p><i>If not, please indicate</i></p> <ul style="list-style-type: none"> <li>- <i>the number of former mobilities (supported by Erasmus+)</i></li> <li>- <i>the total duration of previous mobilities (supported by Erasmus+)</i></li> </ul>
[13] Sources of funding (beyond the own household)	<p><i>Erasmus+ funds</i></p> <p><i>Other state/regional grant [if yes, please state the source]</i></p> <p><i>Host company (abroad)</i></p> <p><i>Student's employer</i></p> <p><i>Own/family sources</i></p>

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<sup>45</sup> The reference to both weeks and workdays is made in line with the current definition of the IVET mobility indicator, requiring a duration of at least two weeks OR ten workdays.

## Measuring Learning Mobility in Vocational Education and Training

### Questionnaire

#### [1] Sex

[Taken from the AES3 Code book, with modifications]

[Sex]	SEX	Coding	Filter
	Male	01	None
	Female	02	
	No statement should be made	88	
	Item non-response	99	

#### Short description

Sex of the respondent – it is respected that some respondents are not willing or able to declare their sex

#### Standard question

Are you a man or women?

#### Definition

Reference period No specific reference period

Concept Sex of the person

- Sex refers to the biological sex of the person. According to WHO, “sex” refers to the biological and physiological characteristics that define men and women while “gender” refers to the socially constructed roles, behaviours, activities, and attributes that a given society considers appropriate for men and women. Following this description, WHO considers that “male” and “female” are sex categories, while “masculine” and “feminine” are gender categories.

#### Rationale

The need for adequate information on the situation of women and men in all policy areas it is generally recognised. By studying the gender differences and inequalities it is possible to understand them, and on this basis, make plans, formulate and monitor policies in all spheres of society. Hence, the importance of the variable ‘Sex’, being cross-classified with other characteristics of the population, provides the basis for evaluating progress towards the complete elimination of still existing gender- based stereotypes.

#### [2] Age (broad category) by the time of beginning the IVET learning mobility

[Own description, following the AES3 Code book]

[Age]	Age [range]	Coding	Filter
	Below 18	01	None
	18-19	02	
	20-24	03	
	25-34	04	
	35-44	05	
	45-54	06	
	55 and older	07	
	Item-non response	99	

#### Short description

Age when starting the IVET learning mobility – broad age ranges; age ranges are used to reduce the risk of disclosure of a respondent’s identity; age ranges, however, are required to match data on beneficiaries with data from other sources of educational statistics

#### Standard question

How old have you been when starting your [Erasmus+ supported] IVET learning mobility?

## Measuring Learning Mobility in Vocational Education and Training

### Definition

Concept Age of persons (counted as fully completed years of life by the time of starting the IVET learning mobility in question)

### Rationale

Variable is required for a) observing cross-country and cross-period differences in the composition of participants in IVET learning mobility and matching mobile students with the number of students or graduates of the same age (as presented in other sources of educational statistics).

Alternatively, to the asking for age ranges by the time of entering the mobility, it could be asked for the year of birth and the month of birth, following the approach taken in AES3; age ranges would be calculated based on the information provided.

### [3] Main labour status (self-definition) [during the learning mobility]

[Based on the Labour Force Survey, Explanatory notes; adapted versions in country questionnaires]

[Social position]	Social position	Coding	Filter
	Carries out a job or profession, including unpaid work for a family business or holding, including an apprenticeship or paid traineeship, etc	01	None
	Unemployed	02	
	3 Pupil, student, further training, unpaid work experience	03	
	In retirement or early retirement or has given up business	04	
	Permanently disabled	05	
	In compulsory military service	06	
	Fulfilling domestic tasks	07	
	Taking parental leave*	08	
	Other	09	
	Item-non response	99	

NB: \* based on LFS adaption for Austrian Microcensus

### Short description

Main social position

### Standard question

If asked to categorise yourself, to which of the following groups would you predominantly consider yourself to belong?

### Rationale

The "main activity status" gives each person's self-perception regarding his/her activity status; for instance, students with small jobs will in general present themselves as students.

### [4] Prior to the IVET programme: Highest level of educational attainment [HATLEVEL]

[Based on AES3 Manuel]

HATLEVEL	Highest level of educational attainment prior to IVET programme	Coding	Filter
	No formal education or below ISCED 1	000	None
	ISCED 1	100	
	ISCED 2 (including ISCED 3 programmes of a duration which is less than 2 years)	200	
	ISCED 3 programme duration of 2 years and more, sequential (i.e. access to next ISCED 3 programme only)	302	

## Measuring Learning Mobility in Vocational Education and Training

ISCED 3 programme duration of 2 years and more, terminal or access to ISCED 4 only	303
ISCED 3 with access to ISCED 5, 6 or 7	304
ISCED 3 programme duration of 2 years and more, without possible distinction of access to other ISCED levels	300
ISCED 4	400
ISCED 5	500
ISCED 6 - 8	600
No answer	99

### Short description

The respondent's highest level of education or training successfully completed

### Standard question

What was your highest level of education or training successfully completed prior to the start of the relevant VET program [the mobility is linked to]?

### Coding

Classification used International Standard Classification of Education (ISCED) 2011

### Definition

Filter None

Reference period Prior to the start of the relevant IVET learning programme

Concept Highest level of education/training successfully completed prior to the relevant IVET programme

Technical issues The educational attainment level of an individual is the highest ISCED level successfully completed, the successful completion of an educational programme being validated by a recognised qualification, i.e. a qualification officially recognised by the relevant national education authorities or recognised as equivalent to another qualification of formal education.

In countries where education programmes, in particular those belonging to ISCED levels 1 and 2, do not lead to a qualification the criterion of full attendance of the programme and normally gaining access to a higher level of education may have to be used instead.

When determining the highest level, both general and vocational education should be taken into consideration. The educational attainment level is coded according to the International Standard Classification of Education (ISCED 2011). (For more information please see UNESCO site:

<http://www.uis.unesco.org/Education/Pages/international-standard-classification-of-education.aspx>)

- The "ISCED 2011 Operational manual", the "Joint Eurostat-OECD guidelines on the measurement of educational attainment in household surveys" as well as the ISCED mappings are available [here](#). Coding should be based on the ISCED integrated mapping which is elaborated in each country. It is a table including information of national educational programmes and qualifications - their main characteristics and coding in ISCED. One column of this table provides coding of the qualification (educational attainment) to be used in the EU-LFS, the same coding applies to AES.
- All questions about implementation of ISCED may be addressed to the national ISCED coordinator who was nominated in each country to ensure coherence of the variable "Educational attainment level" in different sources.
- When determining the highest educational level, both general and vocational education should be taken into consideration. In case of double qualifications obtained at the same highest educational level (and concerning especially ISCED level 3), the most recent qualification should be reported (see also guidelines for HATVOC).
- Persons who have not successfully completed their studies should be coded according to the highest level they have completed before and should not be coded with no answer.
- Code 300 should only be used for those cases where a distinction of different ISCED level 3 programmes giving (or not giving) access to other levels is not possible.
- Qualifications from old educational programmes (not existing anymore) should be classified on the basis of their characteristics at the time of completion.

### Rationale

The importance of the educational attainment level of people for their social position is largely recognised. A higher level of education generally creates more favourable employment prospects and consequently opens up the possibility for better living conditions. For the young people, educational attainment plays an important role in their start in adult life because of nowadays' economy exigencies for skills which become higher and higher. Educational attainment level of 30-34 years old and percentage of early leavers from education and training are [Europe 2020 indicators](#). Many national and European programmes try to give more opportunities to the people to improve their knowledge and skills by raising the level of initial education and by promoting participation in lifelong learning.

## Measuring Learning Mobility in Vocational Education and Training

### [5] Level of the (relevant) IVET programme [related to the IVET programme] [Based on AES3 Manuel]

[Programme level]	Level of (relevant) IVET programme	Coding	Filter
	ISCED 2 (including ISCED 3 programmes of a duration which is less than 2 years)	200	
	ISCED 3 programme duration of 2 years and more, sequential (i.e. access to next ISCED 3 programme only)	302	
	ISCED 3 programme duration of 2 years and more, terminal or access to ISCED 4 only	303	
	ISCED 3 with access to ISCED 5, 6 or 7	304	
	ISCED 3 programme duration of 2 years and more, without possible distinction of access to other ISCED levels	300	
	ISCED 4	400	
	ISCED 5	500	
	ISCED 6 - 8	600	
	No answer	99	

#### Short description

Level of the IVET programme the mobility in question is related to

#### Standard question

What is the level of education or training of the IVET programme the mobility is linked to?

#### Definition

Filter	None
Reference period	Prior to the start of the relevant IVET learning programme
Concept	Level of education/training of the relevant IVET programme
Technical issues	For general remarks see Question [5] <ul style="list-style-type: none"> <li>For the country questionnaires options translating the ISCED11 classification into national forms of IVET programmes must be developed based on national ISCED mappings. It is recommended to use AES3 as guideline.</li> </ul>

### [6] Form of relevant IVET provision (current programme)

#### [Own description]

[Programme form]	Form of relevant IVET programme	Coding	Filter
	School-based	01	None
	Dual (apprenticeship with a school part and an enterprise part)	02	
	Enterprise-based only	03	
	No answer	99	

#### Short description

Form of the IVET programme the mobility is related to

#### Standard question

Is the IVET programme the mobility is related to...

#### Definition

Filter	None
Concept	Form of the IVET programme related to the mobility
Technical issues	Tailoring of the question is needed according to the countries' VET system. The respondent's IVET programme can be school-based, enterprise based or a mix of both in cases of programmes of the dual system (combining a school and an enterprise part, e.g. in AT, DE, DK).

#### Rationale

## Measuring Learning Mobility in Vocational Education and Training

The forms of IVET programmes are expected to enhance or limit the options for taking up a mobility in different ways. Not only IVET schools, but also enterprises employing apprentices perform as 'sending organisations', thereby potentially initiating a significant number of IVET mobilities. While some employers might strongly promote learning mobilities, others might not be prepared to cover any of the direct and indirect (foregone productivity) costs of a learning mobility of their apprentices.

### [7] Year of the study programme

[based on the Participant Report Form; with modifications]

[Programme year]	Year of the IVET programme	Coding	Filter
	year 1	01	
	year 2	02	
	year 3	03	
	year 4	04	
	year 5	05	
	Already graduated/post-graduation	06	

#### Short description

The educational year of the relevant IVET programme when the respondent started their mobility.

#### Standard question

At which year in the IVET programme did you start your mobility?

#### Definition

Filter None  
 Reference period Time of the start of the mobility  
 Concept Study year of the IVET programme

### [8] Type of receiving institution

[taken from the Participant Report Form]

[Receiving institution]	Type of receiving institution	Coding	Filter
	a VET school/institute	01	
	a company	02	
	a mix between VET school/institute and company	03	

#### Short description

The educational year of the relevant IVET programme, when the respondent started their mobility.

#### Standard question

Your receiving institution was...?

#### Definition

Filter None  
 Reference period Time of the mobility  
 Concept Type of the receiving organisation: VET school or VET institute, a company or a blended form of both



## Measuring Learning Mobility in Vocational Education and Training

### [9] Duration of the mobility

#### [Own description]

[Duration]	Duration of the mobility	Coding	Filter
	up to 7 days (5 work days)	01	
	8 to 13 days (9 work days)	02	
	14 days to one month	03	
	More than one month up to three months	04	
	More than three months up to one year	05	
	More than one year	06	

#### Short description

Duration of the mobility activity

#### Standard question

How long was your mobility period abroad?

#### Definition

Filter None

Reference period Mobility period abroad

Concept Duration of the mobility period abroad

Technical issues The period spent abroad for activities related to the IVET programme and in some cases linguistic support in the receiving country. Not including private travelling activities prior or after the organised mobility period.

#### Rationale

The time ranges proposed allow for a comprehensive analysis of the data and can be applied for differently defined indicators.

### [10] Mobility mandatory part of the programme

#### [Taken from the Participant Report Form]

[Mandatory]	Mobility as mandatory part of the programme attended	Coding	Filter
	Yes, the mobility abroad has been mandatory according to the curriculum	01	None
	Yes, the activity itself has been mandatory (however, it could have also taken place within the own country/educational organisation)	02	
	No, participation has been voluntary	03	
	Taken place after graduation - Not applicable	04	
	Item non-response	99	

#### Short description

Describe whether or not the activity had been mandatory. It differentiates between cases, where the curriculum requires one stay abroad and mobilities, which are part of the mandatory activities, however, which could have been organised also within one country

#### Standard question

Was the mobility period abroad a mandatory part of your curriculum?

#### Definition

Filter None

Concept Mandatory/voluntary mobility activity

#### Rationale

For countries where a considerable number of IVET programmes include mandatory participation in mobility activities, e.g. internships, there can be implications for the composition of an indicator measuring IVET mobility.

## Measuring Learning Mobility in Vocational Education and Training

### [11] Recognition of learning outcomes

[Taken from the Participant Report Form]

[Recognition]	Recognition of learning outcomes part 1	Coding	Filter
	Yes	01	
	No	02	
	Item non-response	99	
[Recognition specific]	Recognition of learning outcomes part 2 – Specifying form of recognition	Coding	Filter
	ECVET credits	01	
	Europass	02	
	Attendance certificate by host institution	03	
	Recognition at national level	04	
	Recognition at regional level	05	
	Recognition by home institution	06	
	Work certificate	07	
	Other	08	
	Item non-response	99	

#### Short description

Describe whether or not the learning outcomes of the mobility activity have been formally recognised and if yes, in what form.

#### Standard question

Were the learning outcomes from your mobility period recognized?

If yes, follow-up question: How?

#### Definition

Filter                      None

Concept Formal recognition of learning outcomes, including all the learning outcomes/credits earned during the mobility period as specified in the Learning Agreement and counting towards the respondent's education by the sending institution without the need to take any further courses or exams.

#### Rationale

The formal recognition of learning outcomes can be relevant for the composition of an indicator measuring IVET mobility.

### [12] Previous mobility experience

[based on the Participant Report Form; with modifications]

[Frequency]	Frequency of the mobility part 1	Coding	Filter
	Yes	01	
	No	02	
	Item non-response	99	
[Frequency specific]	Frequency of the mobility part 2 – specification of number of mobilities	Coding	Filter
	2 digits of the times of a mobility	2 digits	[Frequency]=01
	Item non-response	99	

#### Short description

Frequency of participation in an Erasmus+ funded mobility prior to the relevant mobility

#### Standard question

Is this the first time you benefit from Erasmus+ or its predecessor (LifeLong Learning) Programme?

If yes, follow-up question: How many times?

## Measuring Learning Mobility in Vocational Education and Training

### Definition

Filter [Frequency specific] if [Frequency]=01  
 Reference period Prior to the start of the recent mobility  
 Concept Frequency of participation in Erasmus+ and its predecessor programme

### Rationale

For some countries it is expected that repeated participation is more frequent due to specific characteristics of their VET system and the availability of funding for mobility. The results of this question are supposed to get an insight to what extent repeated mobility activities contribute to the overall number of mobilities.

### [13] Sources of funding (beyond the own household)

[Taken from the Participant Report Form; with modifications]

[Funding]	Sources of funding part 1 – Other sources of funding than Erasmus+	Coding	Filter
	Yes	01	
	No	02	
	Item non-response	99	

[Funding sources]	Sources of funding part 2 – Other sources of funding than Erasmus+	Coding	Filter
	Other state and/or regional grant, namely	01	[Funding]=01
	Grant from your sending institution	02	
	Contribution from host organisation	03	
	Own/family sources	04	
	Own employer	05	
	Item non-response	99	

### Short description

The first part describes whether the mobility activity had been funded by Erasmus+ only or by other sources as well. In a follow-up question the funding by public sources beyond Erasmus+ and the employer are differentiated.

### Standard question

Did you have other sources of funding?

If yes, follow-up question: What other source or sources of funding did you receive?

### Definition

Filter [Funding source] if [Funding]=01  
 Reference period Mobility period  
 Concept Funding sources for the mobility  
 Technical issues Adaption of part 2 [Funding source] in the country questionnaires to include available funding sources as options to chose for the respondent.

### Rationale

It is proposed to separate the current question in the Participant Report into two separate questions, one on the public sources for funding the mobility (with the addition of the employer as a further non-family source of funding), a second on the private sources for funding the remaining part of costs, not covered by any family source.

**10. ANNEX 3 SELECTED OVERVIEWS**

## Measuring Learning Mobility in Vocational Education and Training

**Table 29 Overview on available data on VET mobility beyond Erasmus+ and funding programmes/schemes available in the EU28**

	Beyond Erasmus+ : Are data on VET mobility publicly available?*	Characteristics of available data <sup>+</sup>	IVET mobility - pilot data collection 2014 (% of 18-34 VET graduates) <sup>✧</sup>	Are there any programmes/schemes currently or recently implemented which have supported VET mobility?*	Indicative number of beneficiaries per year <sup>+</sup>	EU programs with funding of IVET mobility*				
						INTERREG	ESF	Youth Guarantee	Erasmus Young Entrepreneur	Your First Eures Job
<b>AT</b>	IFA statistics		3,8	WKO Begabtenförderung Lehrlingsmobilität		✓	✓	✓	✓	✓
				Begabtenförderung für Mobilitätsprojekte, IFA (International Young Workers Exchange)	approx. 600/year					
				Let's Walz (WKO)						
				Integration durch Austausch (IdA) - Chance Europa (multilateral)(ESF)	e.g. 8 (2012)					
<b>BE</b>	no data available		3,1	Buurklassen		✓	✓	✓	✓	✓
				West vlaanderen uitwisselingsprojecten voor scholen (West Flanders exchange projects for schools)						
				Programme Québec: Cursus Québec						
				Programme Québec: Curriculum Québec						
				Tremplin Job						
				Entrechok - Esprit d'entreprendre : soutien à la mobilité internationale des projets jeunes						
				Artichok - Programme de mobilité des jeunes artistes						
				The European Traineeships Programmes - Actiris International						
				IFAPME programmes						

## Measuring Learning Mobility in Vocational Education and Training

	Beyond Erasmus+: Are data on VET mobility publicly available?*	Characteristics of available data <sup>+</sup>	IVET mobility - pilot data collection 2014 (% of 18-34 VET graduates) <sup>‡</sup>	Are there any programmes/schemes currently or recently implemented which have supported VET mobility?*	Indicative number of beneficiaries per year <sup>+</sup>	EU programs with funding of IVET mobility*				
						INTERREG	ESF	Youth Guarantee	Erasmus Young Entrepreneur	Your First Job
<b>BE</b>				Eurodyssey (multilateral) <sup>46</sup>						
<b>BG</b>	no data available		0,4			✓	✓	✓	✓	
<b>CY</b>	no data available					✓	✓	✓	✓	
<b>CZ</b>	no data available			Bridge to employment		✓	✓	✓	✓	
				High School Teacher Programme						
				International School partnership						
				Apprenticeships Programmes						
				International cooperation						
<b>DE</b>	data by BiBB	2017: 5,3% (approx. 30785 participants)		Begabtenförderung	2009: approx.. 1900 participants in projects funded by the Ministry of Education	✓	✓	✓	✓	
		48,6% Erasmus+ (i.e. 87% of all public funding) 33,7% company 39% privat financing		Baden-Württemberg- STIPENDIUM						
				College Council – Work & Travel, Fachpraktika und Ausbildung im englischsprachigen Ausland						
				Mobilitätsfonds - Ausbildung in Europa (Auslandspraktika) Niedersachsen						
				PASCH, Schools: Partners for the Future						
				DFJW - Scholarship for VET mobility (bilateral)						

<sup>46</sup> All participating regions approx. 600 (2010)

## Measuring Learning Mobility in Vocational Education and Training

Beyond Erasmus+: Are data on VET mobility publicly available?*	Characteristics of available data <sup>+</sup>	IVET mobility - pilot data collection 2014 (% of 18-34 VET graduates) <sup>‡</sup>	Are there any programmes/schemes currently or recently implemented which have supported VET mobility?*	Indicative number of beneficiaries per year <sup>+</sup>	EU programs with funding of IVET mobility*				
					INTERREG	ESF	Youth Guarantee	Erasmus Young Entrepreneur	Your First EURES Job
DE			Deutsch Französisches Jugendwerk Austausch mit Auszubildenden der beruflichen Schulen (bilateral)	208 (2009)					
			Grenzüberschreitende Berufsbildung zwischen Saarland und Lothringen (bilateral)						
			Deutsch Japanisches Austauschprogramm für junge Berufstätige und Auszubildende Internationales Austauschprogramm, Ausbildungsprojekt (bilateral)	11 (2009)					
			Cross-border apprenticeship (bilateral)						
			Deutsch-Polnisches Jugendwerk (bilateral)	600 (2009)					
			Training bridges - Austausch von Auszubildenden und Ausbildern mit Großbritannien (bilateral)						
			Deutsch Amerikanisches Austauschprogramm für Auszubildende Internationales Austauschprogramm, Ausbildungsprojekt (bilateral)	41 (2009)					
			ProTandem Exchanges: Échanges franco-allemands en formation professionnelle (bilateral)						
			Praxes: stages hors cursus (bilateral)						
		Bourse pour stage pratique pendant la formation professionnelle / technologique (BTS) (bilateral)							
		Programme Voltaire (bilateral)							

## Measuring Learning Mobility in Vocational Education and Training

	Beyond Erasmus+: Are data on VET mobility publicly available?*	Characteristics of available data <sup>+</sup>	IVET mobility - pilot data collection 2014 (% of 18-34 VET graduates) <sup>‡</sup>	Are there any programmes/schemes currently or recently implemented which have supported VET mobility?*	Indicative number of beneficiaries per year <sup>+</sup>	EU programs with funding of IVET mobility*				
						INTERREG	ESF	Youth Guarantee	Erasmus Young Entrepre- neur	Your First EURES Job
DE				Borsa di Scambio per scuole professionali italiane e tedesche (bilateral)						
				Gjør Det! (Do It!) (bilateral)						
				Polish-German Youth Cooperation (PNWM) (bilateral)						
				Euregio Zertifikat (multilateral)	266 (2009)					
				TLN Mobility (multilateral)						
				Integration durch Austausch (IdA) - CHANCE EUROPA (multilateral)						
DK	Data from the national schemes (PIU, DK-USA) as well as Nordic schemes (Nordplus Junior and Nordplus Adult)	general information on the funding programs available on the website of the national agency; midterm evaluation on Erasmus+		PIU – Praktik I Udlandet (Practical Placement Abroad)	1600 participants (2017)	✓	✓	✓	✓	✓
				Nordplus Junior						
				Nordplus Adult						
				Denmark-USA programme						
EE	no data available; some general ERASMUS+ statistics			Nordplus Junior						
				Nordplus Adult						
EL	no data available					✓	✓	✓	✓	
ES	no data available		0,8	Galeuropa		✓	✓	✓	✓	
	implementation of VET mobility programmes on regional level is not documented in the survey			Gazteak Atzerrian, Global Training						
				IdA (multilateral)	approx. 100/year (2012-14)					



## Measuring Learning Mobility in Vocational Education and Training

	Beyond Erasmus+: Are data on VET mobility publicly available?*	Characteristics of available data <sup>+</sup>	IVET mobility - pilot data collection 2014 (% of 18-34 VET graduates) <sup>✧</sup>	Are there any programmes/schemes currently or recently implemented which have supported VET mobility?*	Indicative number of beneficiaries per year <sup>+</sup>	EU programs with funding of IVET mobility*				
						INTERREG	ESF	Youth Guarantee	Erasmus Young Entrepreneur	Your First EURES Job
ES				Eurodysey (multilateral)						
FI	Statistics are provided by EDUFI (previously CIMO)	2017: 11,9% (compared to annual intake) data on incoming/outgoing, regions (in Finland), partner countries, continents; gender, educational sector, mobility programme		EDUFI support to internationalisation (before 1.1.2017 Ammatillisen koulutuksen kansainvälistyminen/State grant of Finnish National Board of Education to support Internationalisation and mobility)		✓	✓	✓	✓	✓
				Pohjola-Norden						
				Future Leaders						
				Nuorisovaihto /Alliansi Youth Exchange						
				Nordplus Junior (multilateral)						
				Nordplus Adult (multilateral)						
FR	statistics on ERASMUS+ related mobility; some information on other programmes/schemes on various websites			Dynastage Apprentis		✓	✓	✓	✓	✓
				Zellidja - Bourses de Voyage						
				Compagnons du Devoir et du Tour de France Programmes						
				Mobilité individuelle: le stage professionnalisant						
				Bourse Région Mobilité Internationale Etudiants						
				ProTandem Exchanges : Échanges franco-allemands en formation professionnelle (bilateral)						
				Praxes: stages hors cursus (bilateral)						

## Measuring Learning Mobility in Vocational Education and Training

	Beyond Erasmus+: Are data on VET mobility publicly available?*	Characteristics of available data <sup>+</sup>	IVET mobility - pilot data collection 2014 (% of 18-34 VET graduates) <sup>‡</sup>	Are there any programmes/schemes currently or recently implemented which have supported VET mobility?*	Indicative number of beneficiaries per year <sup>+</sup>	EU programs with funding of IVET mobility*				
						INTERREG	ESF	Youth Guarantee	Erasmus Young Entrepreneur	Your First Job
FR				Bourse pour stage pratique pendant la formation professionnelle / technologique (BTS) (bilateral)						
				Programme Voltaire (bilateral)						
				DFJW - Scholarship for VET mobility (bilateral)						
				Deutsch Französisches Jugendwerk Austausch mit Auszubildenden der beruflichen Schulen (bilateral)						
				Grenzueberschreitende Berufsbildung zwischen Saarland und Lothringen (bilateral)						
				Bourses d'etudes "Entente Cordiale" (bilateral)						
				Charles de Gaulle Trust partnerships (bilateral)						
				Eurodyssey (multilateral)						
			Euregio Zertifikat (multilateral)							
HR	no database, relevant information in the VET System Development Programme			Eurodyssey				ü	ü	
HU	no data available		1,6		✓	✓	✓	✓	✓	
IE	no data available				✓	✓	✓	✓	✓	
IT	no data available; some general statistics on ERASMUS+		4,2	Torno Subito	✓	✓	✓	✓	✓	
				Giovani Sì – Tirocini non curricolari						
				Progetti di mobilità transnazionale						
				Borse di studio Ivano Becchi						

## Measuring Learning Mobility in Vocational Education and Training

	Beyond Erasmus+: Are data on VET mobility publicly available?*	Characteristics of available data <sup>+</sup>	IVET mobility - pilot data collection 2014 (% of 18-34 VET graduates) <sup>✧</sup>	Are there any programmes/schemes currently or recently implemented which have supported VET mobility?*	Indicative number of beneficiaries per year <sup>+</sup>	EU programs with funding of IVET mobility*				
						INTERREG	ESF	Youth Guarantee	Erasmus Young Entrepreneur	Your First EURES Job
<b>IT</b>				Percorsi di mobilità professionale transnazionale e interregionale						
				Borsa di scambio per scuole professionali italiane e tedesche (bilateral)						
				Eurodisney (multilateral)						
				TLN Mobility (multilateral)						
				Integration durch Austausch (IdA) - CHANCE EUROPA (multilateral)						
<b>LT</b>	no data available			Nordplus Junior(multilateral)	✓	✓	✓	✓	✓	
				Nordplus Adult (multilateral)						
				Polish-Lithuanian Youth Exchange Fund						
<b>LU</b>	no data available			Apprentissage Transfrontalier	✓	✓	✓	✓	✓	
<b>LV</b>	no data available			Nordplus Junior	✓	✓	✓	✓	✓	
				Nordplus Adult						
<b>MT</b>	no data available			International Internship Trade Practice (IITP)	✓	✓	✓	✓	✓	
<b>NL</b>	data published by Nuffic (Dutch and English)	2016: 7.6% (7% work placement, 0,5% study exchange) or 8800 participants figures on duration, age, gender, ISCED level	5,2	Learning Euregion: "The learning Euregion does it" and; "Learning without borders"	✓	✓	✓	✓	✓	
<b>PL</b>	no data available		2,5	Polish-German Youth Cooperation (PNWM) (bilateral)	✓	✓	✓	✓	✓	
				TLN Mobility (multilateral)						
				Visegrad Fund (multilateral)						
				Institutional Collaboration for Scholarship and Training Fund in Poland - Współpraca						

## Measuring Learning Mobility in Vocational Education and Training

	Beyond Erasmus+: Are data on VET mobility publicly available?*	Characteristics of available data <sup>+</sup>	IVET mobility - pilot data collection 2014 (% of 18-34 VET graduates) <sup>‡</sup>	Are there any programmes/schemes currently or recently implemented which have supported VET mobility?*	Indicative number of beneficiaries per year <sup>+</sup>	EU programs with funding of IVET mobility*				
						INTERREG	ESF	Youth Guarantee	Erasmus Young Entrepre- neur	Your First EURES Job
				Institutionalna FSS (multilateral)						
<b>PL</b>				Polish-Lithuanian Youth Exchange Fund						
				Polish-Ukrainian Youth Exchange Council						
<b>PT</b>	some data on ERASMUS+		2,4	INOV Contacto		✓	✓	✓	✓	✓
				Eurodyssey (multilateral)						
<b>RO</b>	some data on ERASMUS+		0,4	Eurodyssey (multilateral)		✓	✓	✓	✓	✓
<b>SE</b>	available from Statistical Bureau of Sweden (not very detailed)	2014: 9% (general information on gender, age, duration, migration background in the report not in the public data base)	9,2	Athena utbyten		✓	✓	✓	✓	✓
				Atlas praktik	340 (2018)					
				Praktikantprogrammet	280 (2018)					
				TLN Mobility (multilateral)						
				Nordplus Junior (multilateral)						
				Nordplus Adult (multilateral)						
<b>SI</b>	some data on ERASMUS+		2,1	ESC2YOUNG		✓	✓	✓	✓	✓
				TLN Mobility (multilateral)						
<b>SK</b>	no data available		4,7	Exalliev's scholarship		✓	✓	✓	✓	✓
				The Duke of Edinburgh's international award						
				Visegrad Fund (multilateral)						
<b>UK</b>	no data available; some data on individual schemes (on their websites)			International Exchange Programme UK		✓	✓	✓	✓	✓
				Leadership Exchange Programme						

## Measuring Learning Mobility in Vocational Education and Training

	Beyond Erasmus+: Are data on VET mobility publicly available?*	Characteristics of available data <sup>+</sup>	IVET mobility - pilot data collection 2014 (% of 18-34 VET graduates) <sup>‡</sup>	Are there any programmes/schemes currently or recently implemented which have supported VET mobility?*	Indicative number of beneficiaries per year <sup>+</sup>	EU programs with funding of IVET mobility*				
						INTERREG	ESF	Youth Guarantee	Erasmus Young Entrepreneur	Your First Eures Job
<b>UK</b>				JIB Apprenticeship Exchange Programme						
				Cultural Exchange Scheme						
				Technical Apprenticeship Scheme - Horizon Nuclear						
				RHS and GCA Interchange Fellowship: Internship at Longwood Gardens (bilateral)						
				Generation UK- China Internships (bilateral)						
				Cultural Exchange Program (bilateral)						
				Training bridges - Austausch von Auszubildenden und Ausbildern mit Großbritannien (bilateral)						
				Scholarships "Entente Cordiale" (bilateral)						
				Charles de Gaulle Trust partnerships (bilateral)						
				Agricultural Apprenticeships Programs (multilateral)						
<b>MK (FYROM)</b>	no data available									
<b>IS</b>	no data available			Nordplus Junior (multilateral)				✓	✓	
				Nordplus Adult (multilateral)						
				Institutional Collaboration for Scholarship and Training Fund in Poland - Współpraca Instytucjonalna FSS (multilateral)						
<b>LI</b>	no data available			Visite						
				Institutional Collaboration for Scholarship and Training Fund in Poland - Współpraca						

## Measuring Learning Mobility in Vocational Education and Training

	Beyond Erasmus+: Are data on VET mobility publicly available?*	Characteristics of available data <sup>+</sup>	IVET mobility - pilot data collection 2014 (% of 18-34 VET graduates) <sup>‡</sup>	Are there any programmes/schemes currently or recently implemented which have supported VET mobility?*	Indicative number of beneficiaries per year <sup>+</sup>	EU programs with funding of IVET mobility*				
						INTERREG	ESF	Youth Guarantee	Erasmus Young Entrepreneur	Your First Eures Job
				Institutional Collaboration for Scholarship and Training Fund in Poland - Współpraca Instytucjonalna FSS (multilateral)						
<b>N</b>	available from Norwegian Centre for the Internationalisation of Education and Training			Statens Lånekasse						✓
				Gjør Det! (Do It!) (bilateral)						
				Institutional Collaboration for Scholarship and Training Fund in Poland - Współpraca Instytucjonalna FSS (multilateral)						
				Nordplus Junior(multilateral)						
				Nordplus Adult (multilateral)						
				EEA grants						
<b>TR</b>	no data available			AFS Intercultural Programmes (individual mobility)					✓	

Sources: <sup>‡</sup> European Commission (2015). Pilot data collection 2014 on IVET learning mobility and general youth learning mobility. Item 6.1. Luxembourg; \* European Commission (forthcoming). Vocational mobility in Europe: analysing provision, take-up and impact. Final report. Luxembourg; <sup>+</sup>Online available on national websites

## Measuring Learning Mobility in Vocational Education and Training

**Table 30 Overview on results on learning mobility of the Eurobarometer 466**

Have you studied, trained or worked in another country? (MULTIPLE ANSWERS POSSIBLE)	Yes, as a pupil at school	Yes, as a student in higher education	Yes, as a student in vocational education and training	Yes, as an apprentice	Yes, as a volunteer	Yes, as a youth worker or through a youth exchange programme	Yes, as a young professional	No	DK/NA (SPONTANEOUS)	Total 'Yes'
AT	14%	8%	9%	6%	6%	1%	7%	63%	0%	36%
BE	8%	10%	4%	8%	7%	5%	7%	70%	-	30%
BG	6%	8%	5%	3%	6%	13%	7%	63%	0%	37%
CY	3%	27%	9%	4%	2%	5%	5%	62%	-	38%
CZ	8%	10%	6%	3%	8%	10%	4%	72%	1%	27%
DE	8%	6%	4%	2%	6%	2%	4%	75%	-	25%
DK	6%	11%	3%	2%	7%	10%	3%	64%	0%	36%
EE	8%	7%	3%	5%	5%	6%	7%	63%	2%	36%
EL	3%	4%	0%	2%	4%	4%	3%	83%	-	17%
ES	8%	5%	1%	3%	2%	4%	4%	79%	-	21%
FI	5%	8%	7%	0%	1%	4%	2%	77%	-	23%
FR	8%	6%	3%	2%	3%	5%	8%	75%	-	25%
HR	3%	4%	2%	0%	3%	2%	3%	87%	-	13%
HU	6%	6%	3%	2%	3%	5%	8%	74%	-	26%
IE	5%	12%	5%	1%	3%	6%	11%	68%	-	32%
IT	3%	11%	9%	3%	2%	5%	4%	67%	0%	33%
LT	3%	5%	1%	4%	4%	13%	5%	68%	1%	31%
LU	18%	35%	23%	15%	15%	9%	20%	39%	-	61%
LV	5%	7%	5%	6%	7%	14%	12%	57%	1%	42%
MT	3%	3%	2%	4%	1%	1%	1%	85%	-	15%
NL	4%	11%	6%	9%	2%	5%	4%	72%	-	28%
PL	6%	5%	4%	4%	1%	2%	2%	75%	3%	22%
PT	3%	5%	2%	1%	1%	2%	7%	86%	0%	14%
RO	4%	3%	2%	7%	1%	1%	9%	73%	1%	26%
SE	10%	7%	3%	2%	3%	4%	10%	70%	1%	29%
SI	7%	7%	2%	5%	7%	3%	3%	74%	2%	24%
SK	6%	7%	9%	2%	9%	3%	6%	67%	5%	28%
UK	5%	5%	2%	1%	5%	4%	10%	74%	-	26%

Source: Eurobarometer

## Measuring Learning Mobility in Vocational Education and Training

**Table 31 IVET graduates on ISCED11 3 level according to age [educ\_uoe\_grad01]**

	15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-49 years	50-54 years	55-59 years	60-64 years	65 years or over	Age unknown
BE	45275	23718	197	14	9	6	2	0	0	0	0	4168
BG	14058	1315	129	106	89	74	76	60	58	33	16	0
CZ	26233	25480	1415	798	934	1105	458	207	64	16	5	0
DK	2189	15104	6125	3148	2107	1697	1356	1141	676	90	11	1
DE	91666	190559	34781	10082	2966	2076	409	302	0	0	0	41
EE	1691	718	64	11	10	5	0	0	1	0	0	0
IE	4738	6506	2621	2307	2066	1799	1681	1265	746	347	24	67
EE	19582	3487	531	172	0	0	0	0	0	0	0	1502
ES	58281	45442	16322	11191	10573	8889	5260	2887	1782	1252	451	0
FR	446358	69115	21598	13990	11183	9108	6826	3709	1212	158	27	4
HR	29209	2095	0	0	0	0	0	0	0	0	0	2183
IT	184572	40613	0	0	0	0	0	0	0	0	0	81133
CY	1320	32	9	4	2	2	0	3	0	0	1	0
LV	651	3539	107	40	16	16	10	7	5	0	0	0
LT	3614	986	128	108	117	50	11	6	3	1	0	0
LU	1604	1489	130	42	20	18	13	8	1	0	0	0
HU	16987	4168	207	207	214	217	163	87	46	12	5	6
MT	1595	438	43	22	11	6	4	3	0	1	0	0
NL	64664	58315	9225	3098	1938	1923	2153	1656	774	127	9	1
AT	52588	13172	3277	2182	1456	987	769	400	119	18	10	42
PL	40503	129597	74	16	10	5	1	1	1	0	1	0
PT	24518	5658	1107	632	573	446	378	251	159	53	0	0
RO	70901											20610
SI	11154	1671	448	242	200	120	58	13	2	1	0	0
SK	28068	2761	324	282	333	422	167	0	0	0	0	0
FI	17055	18553	8769	6462	4904	3896	3371	2725	1492	263	30	70
SE	27298	1866	0	0	0	0	0	0	0	0	0	0
UK	235882	82219	37638	25131	18075	17300	15120	9767	4541	1252	222	3

Source: Eurostat



## Measuring Learning Mobility in Vocational Education and Training

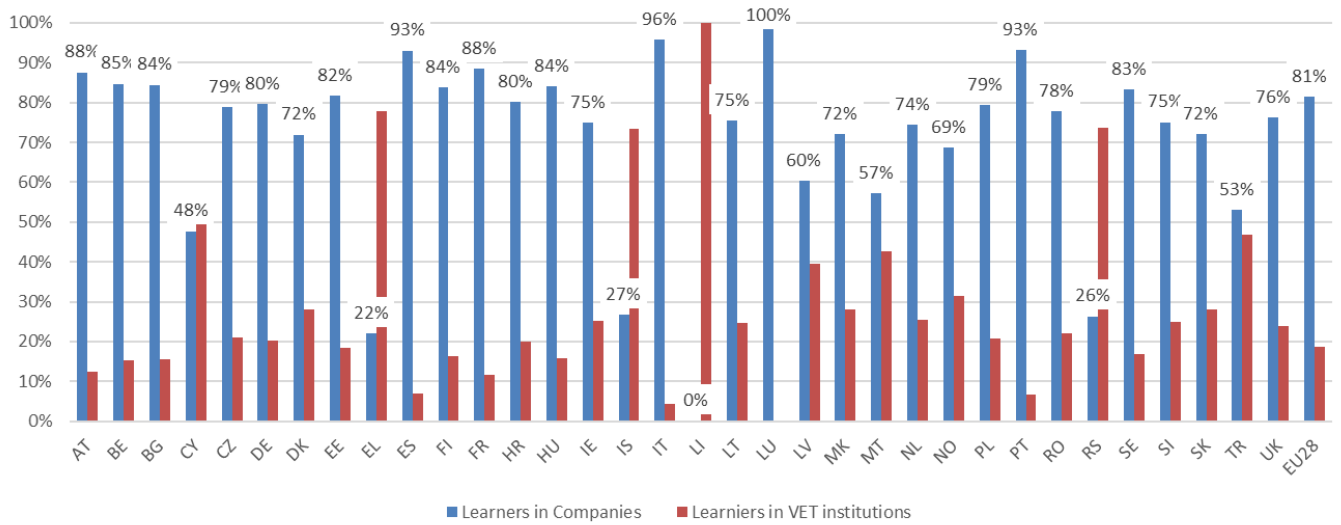
**Table 32 IVET graduates on ISCED11 4 level according to age [educ\_uoe\_grad01]**

	15-19 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45-49 years	50-54 years	55-59 years	60-64 years	65 years or over	Age unkno wn
BE	1519	7154	547	135	83	34	18	5	0	0	0	0
BG	0	184	106	92	76	66	59	49	49	34	14	0
CZ	0											6986
DK	1	50	71	58	52	41	27	28	10	1	0	0
DE	27116	114796	35602	11045	3970	3879	1455	967	0	0	0	5
EE	43	1129	596	407	322	224	204	116	70	26	10	0
IE	181	2314	1259	684	550	471	349	243	126	60	13	3
EE	0	3868	830	541	382	300	242	95	26	4	0	56
ES	230	1458	1824	1755	2026	1918	1575	1066	468	79	2	0
FR	0											0
HR	0											0
IT	0											8471
CY	50	94	22	9	5	4	1	4	0	0	0	0
LV	30	1138	559	170	75	74	54	69	49	12	2	0
LT	873	4446	604	944	582	496	378	249	143	32	15	0
LU	0	30	57	24	12	4	3	2	1	0	0	0
HU	7807	15159	1218	664	557	502	308	127	49	19	5	0
MT	0	3	6	1	1	1	0	0	0	0	0	0
NL	0											0
AT	496	2704	2064	1675	1423	1348	1249	728	279	61	16	-4
PL	427	34566	18448	7524	6452	4068	2449	1337	551	202	190	0
PT	421	1941	473	205	160	94	74	26	11	0	1	0
RO	98	12540	6521	4510								7250
SI	0											0
SK	962	1754	785	651	648	457	313	22	0	0	0	0
FI	1	101	526	851	1098	1078	1016	872	543	150	12	0
SE	356	1089	1264	915	725	658	516	354	131	15	0	0
UK												0

Source: Eurostat

**Annex 4**

**Figure 21 Host organisation of IVET learning mobility students - 2017**



Sources: Erasmus+ Annual Report 2017, own calculation

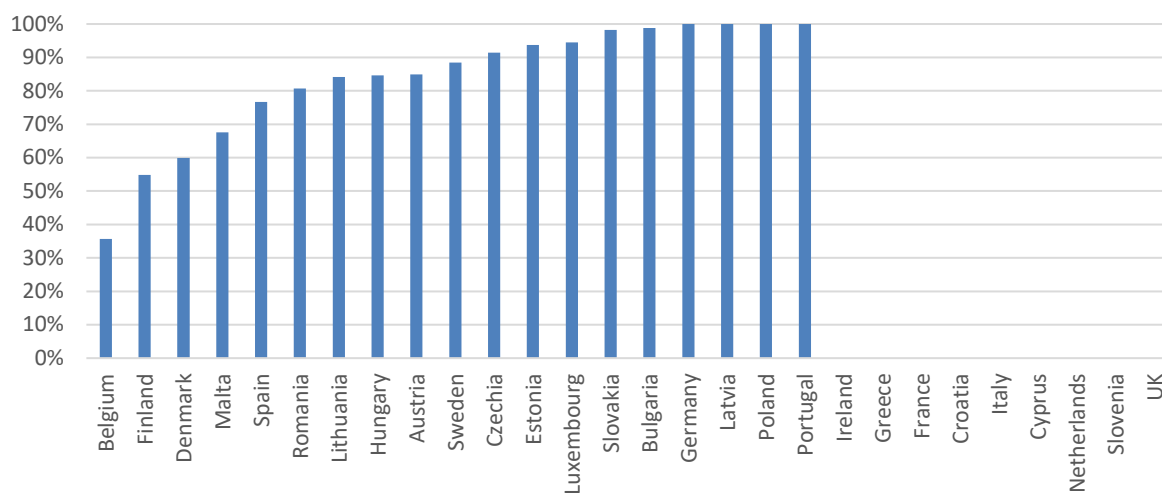
## Measuring Learning Mobility in Vocational Education and Training

**Table 33 Estimate of missing variables - 2015**

Country short	Q1 - At which study level were you during your mobility period abroad?	Q 2 - Which year in the study level?	Q 3 - Was the mobility period abroad a mandatory part of your curriculum?	Q 4 - Is this the first time you benefit from Erasmus+ or its predecessor (LLL) programme?	Q 5 - Did you have a Learning Agreement* with defined learning outcomes drawn up before your mobility period?*
AT	3%	11%	3%	3%	46%
BE	25%	36%	25%	25%	46%
BG	10%	14%	10%	10%	62%
CY	28%	13%	28%	28%	81%
CZ	3%	9%	3%	3%	62%
DE	10%	18%	10%	10%	28%
DK	21%	13%	21%	21%	53%
EE	5%	6%	5%	5%	67%
EL	13%	25%	13%	13%	34%
ES	9%	39%	9%	9%	65%
FI	3%	17%	3%	3%	74%
FR	5%	16%	5%	5%	44%
HR	10%	14%	10%	10%	68%
HU	9%	25%	9%	9%	46%
IE	15%	27%	15%	15%	50%
IS	14%	19%	14%	14%	52%
IT	5%	27%	5%	5%	54%
LI	25%	42%	25%	25%	60%
LT	6%	19%	6%	6%	73%
LU	19%	21%	19%	19%	51%
LV	5%	12%	5%	5%	56%
MK	13%	23%	13%	13%	37%
MT	12%	(-7%)	12%	12%	89%
NL	(-76%)	(-84%)	(-76%)	(-76%)	7%
NO	24%	21%	24%	24%	70%
PL	9%	11%	9%	9%	75%
PT	(-1%)	19%	(-1%)	(-1%)	62%
RO	8%	10%	8%	8%	65%
SE	22%	36%	22%	22%	60%
SI	2%	13%	2%	2%	71%
SK	12%	12%	12%	12%	71%
TR	12%	20%	12%	12%	86%
UK	33%	35%	33%	33%	47%

Source: Special data extraction provided; figures in ( ) indicate unsolved data issues for MT, NL and PT. Data for Q2 2017. \* Data for Q5 in 2015 indicate unexpectedly high share of missing values.

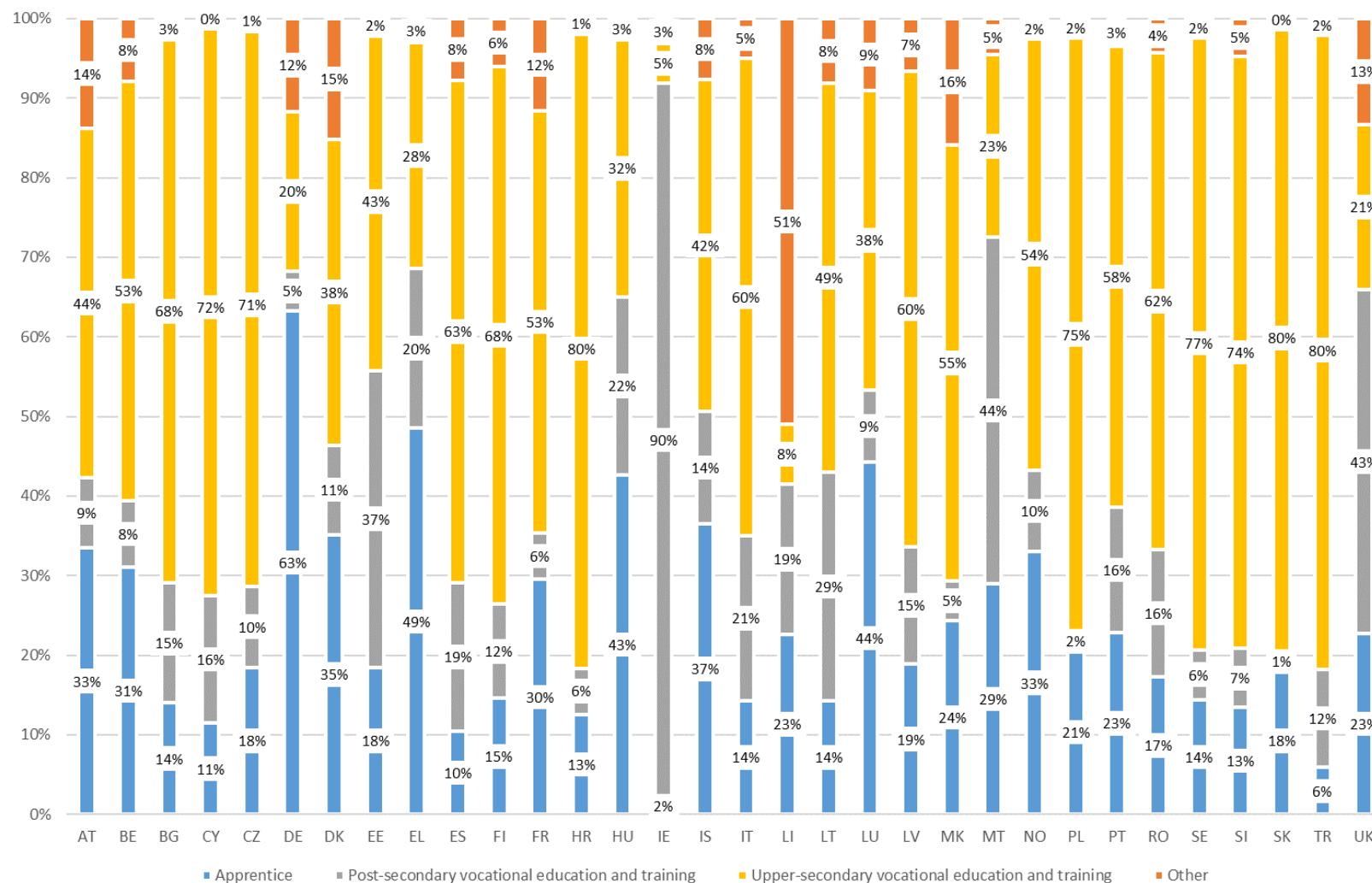
**Figure 22 – First Time IVET Graduates (ISCED11 3 or 4) as a proportion of all IVET graduates of 2017**



Source: Eurostat - Special data extraction

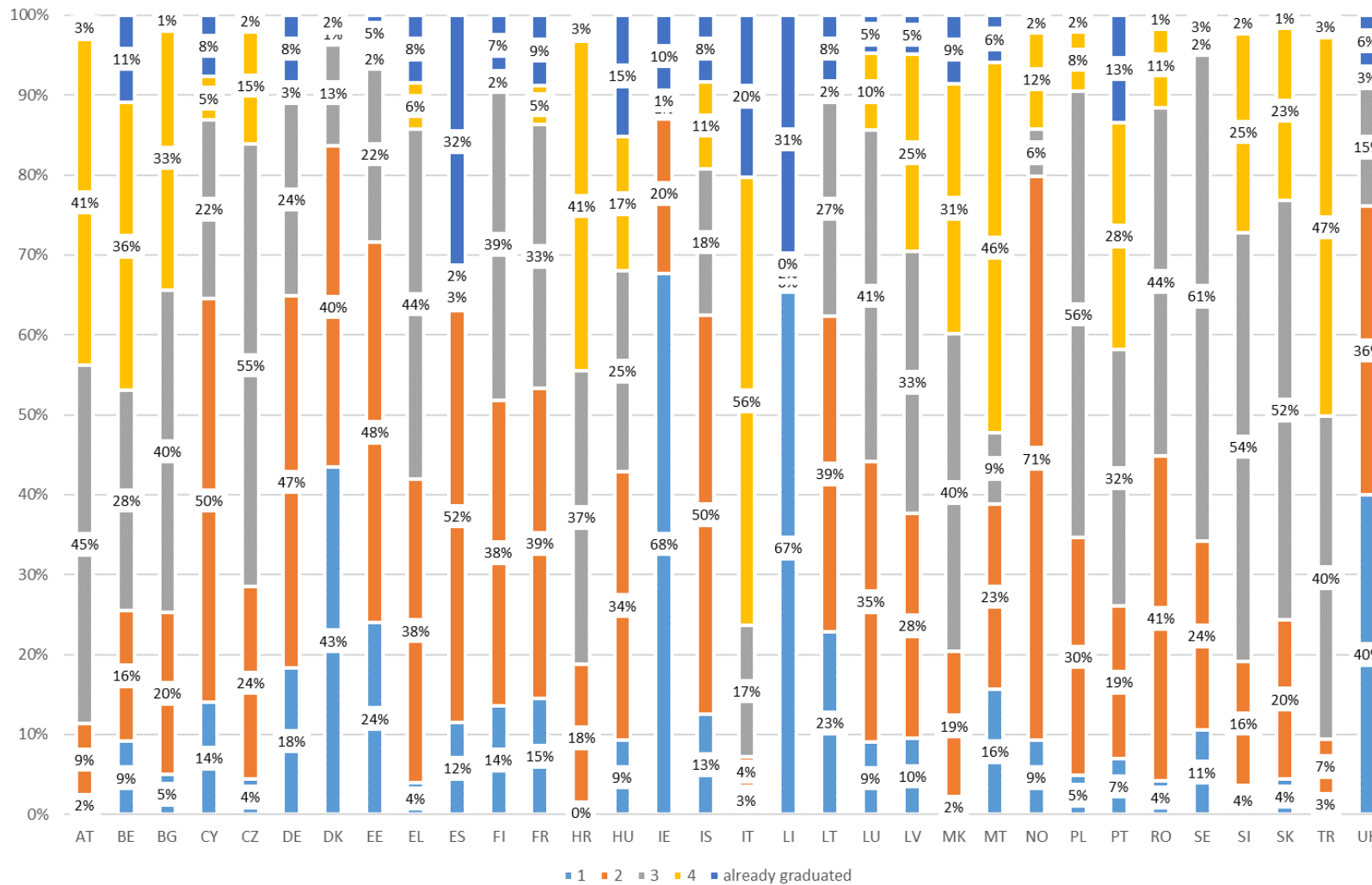
**11. ANNEX 4 SELECTED ERASMUS+ DATA**

Figure 23 - Q1 - At which study level were you during your mobility period abroad? - 2015



Source: Special data extraction provided; NL excluded due to unsolved data issues

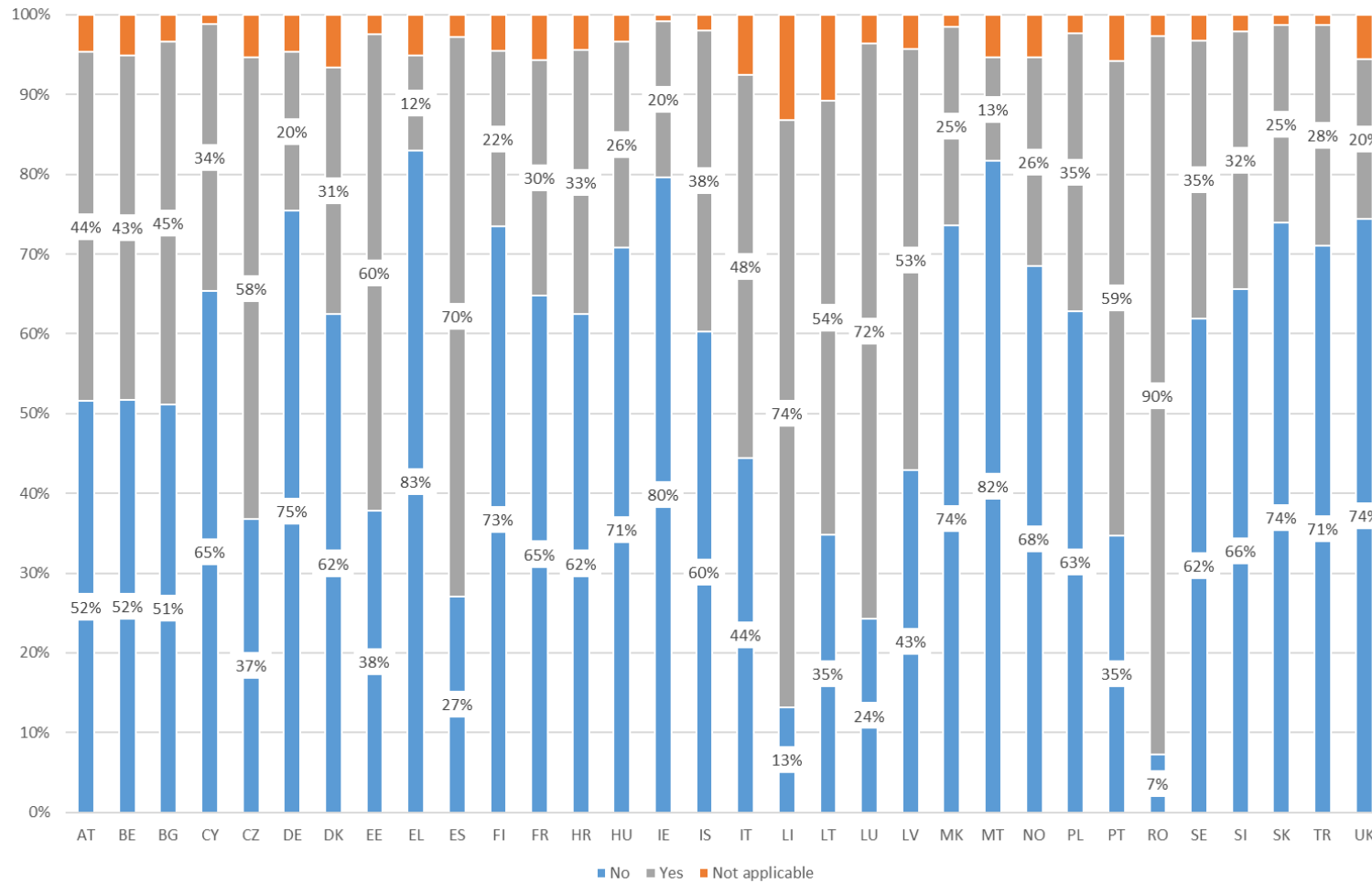
Figure 24 – Q2 - Which year in the study level? – 2017



Source: Special data extraction provided; NL excluded due to unsolved data issues

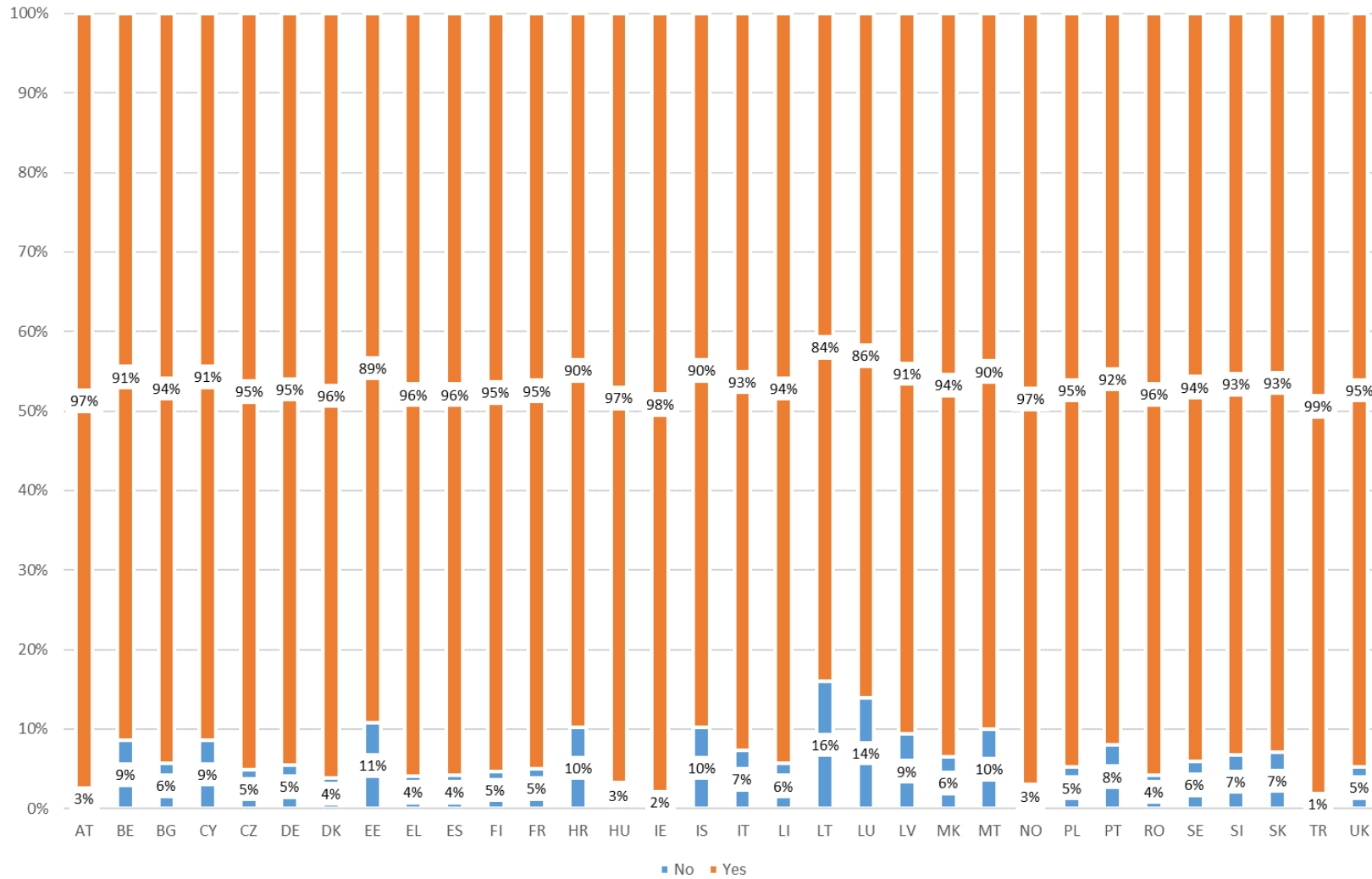


Figure 25 – Q 3 - Was the mobility period abroad a mandatory part of your curriculum? – 2015



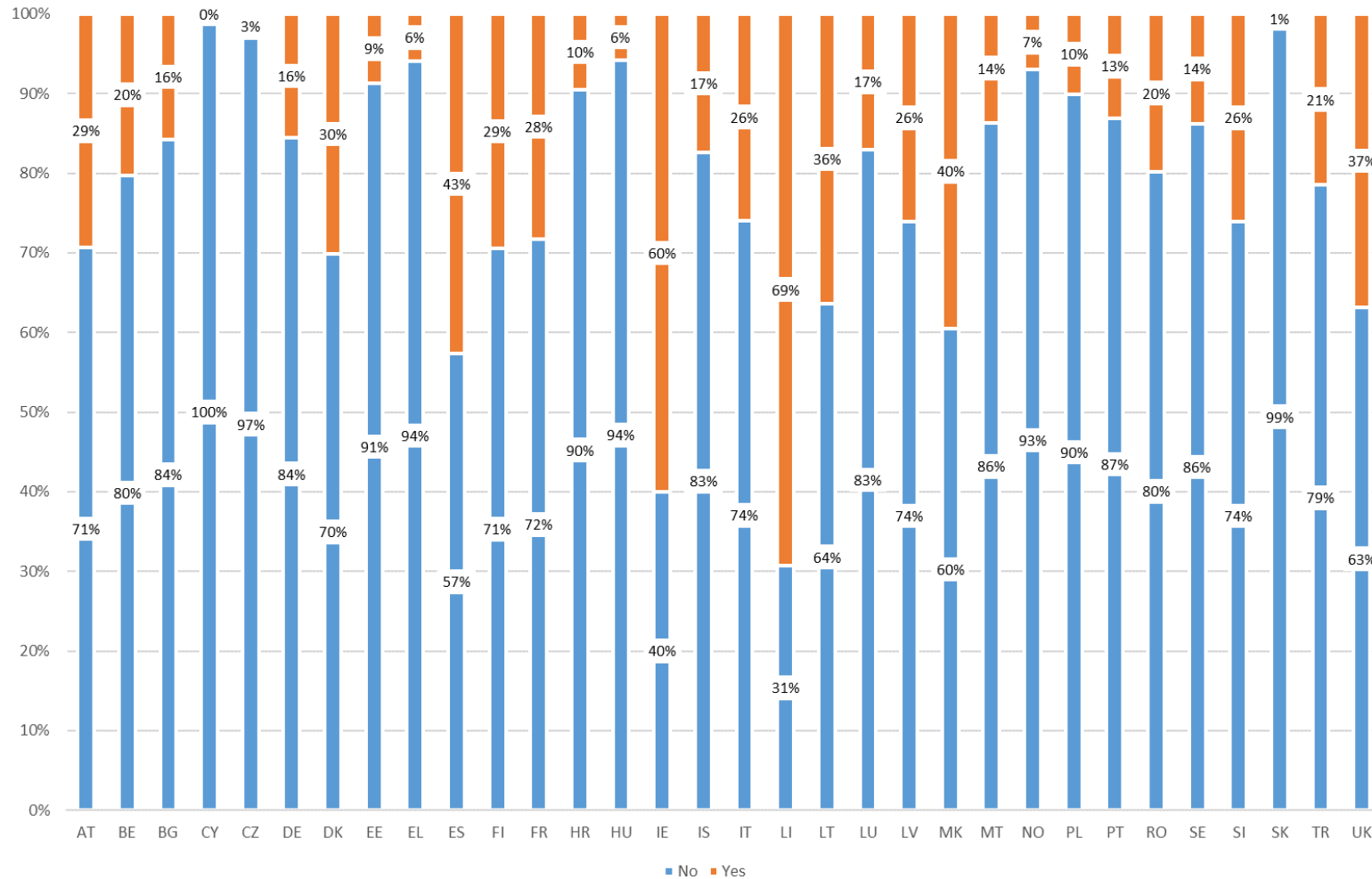
Source: Special data extraction provided; NL excluded due to unsolved data issues

Figure 26 – Q 4 - Is this the first time you benefit from Erasmus+ or its predecessor (LLL) programme? - 2015



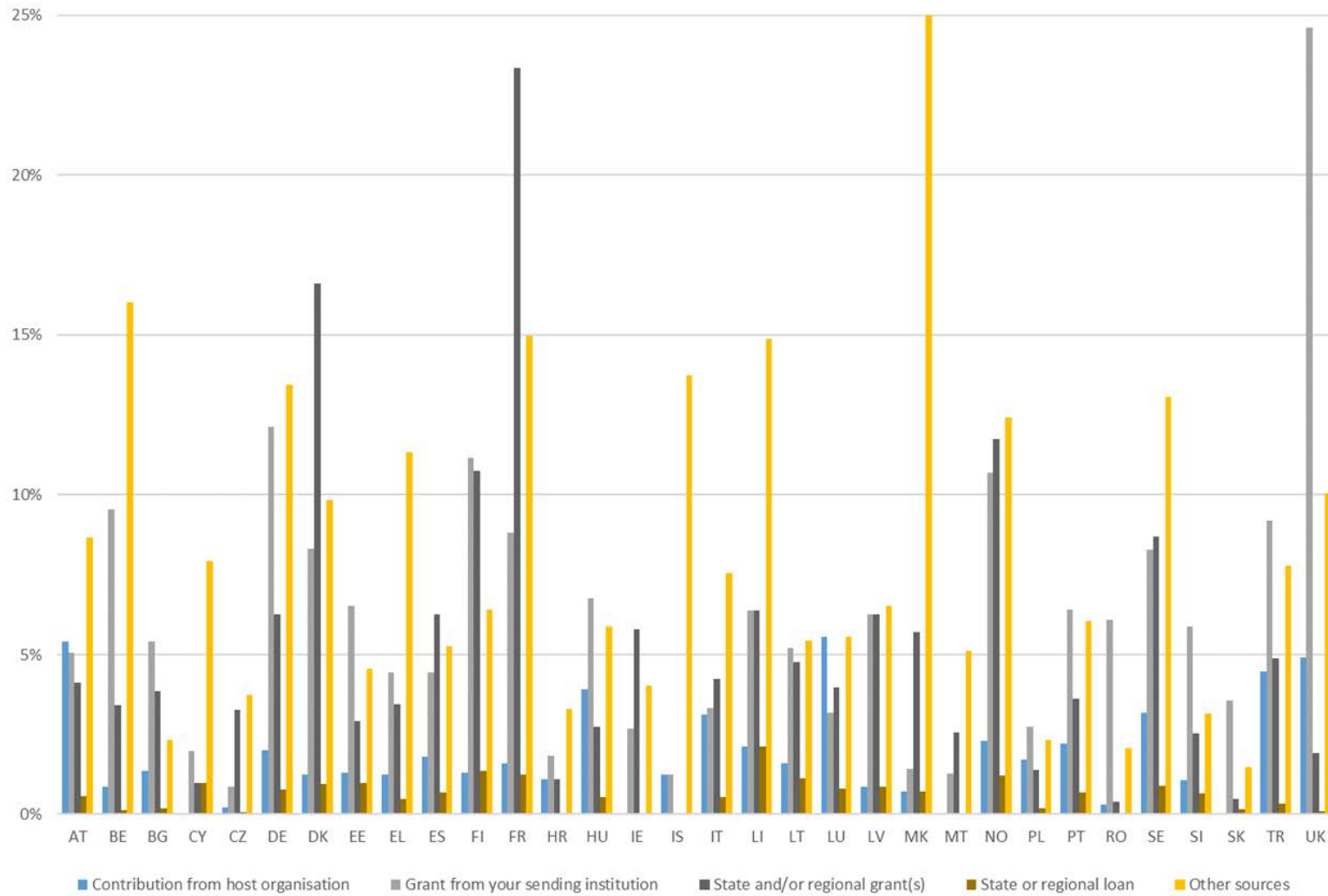
Source: Special data extraction provided; NL excluded due to unsolved data issues

**Figure 27 – Q 5 - Did you have a Learning Agreement\* with defined learning outcomes drawn up before your mobility period? – 2015s**



Source: Special data extraction provided; NL excluded due to unsolved data issues; Data for Q5 in 2015 indicate unexpectedly high share of missing values.

Figure 28 – Q 6 - What other source or source of funding did you receive?



Source: Special data extraction provided; NL excluded due to unsolved data issues;

**12. ANNEX 5 QUESTIONNAIRE OF THE EXPERT SURVEY**

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