



APPLIED METHODS OF IMPACT ASSESSMENT

Final report TCA Showing and Identifying Impact
of Erasmus+ on EU and National Level
– Adult Education

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0. Abstract

This report documents the results of a TCA project to develop methods to measure the effects of Erasmus+ mobility in the field of adult education. This is based on the one hand on the questionnaires completed by the participants 2014 to 2018 in mobility and on the other hand analyses the target groups of the mobility programmes.

The model used summarizes the indicators used for the measurement in six topics: active European citizenship and internationalisation, professional development (divided in competence, employability and general professional development (consisting of the sub-indicators skills and knowledge and network), system improvement (including institutional development and cooperation) and innovation. The model is based on the participant surveys for teaching and support staff and uses a large part of the questions cited in the questionnaire. The questions were assigned to the topics and sub-topics that represent key EU policy areas. All survey questions used in the model have an identical 5-point response scale with values from 1 (strongly disagree) to 5 (strongly agree). Model results are calculated as unweighted means across these scales.

Furthermore, based on the administrative data on the mobility, the model analyses the effects of sociodemographic characteristics of the participants, the sending and receiving institutions as well as the different motivations for participation in the programme on the way participants assess the impact of the mobility programme.

The main results are:

- The impact of mobility programmes on the development of competences of participating staff and the development of sending institutions is appreciated by the participants, the overall programme score is 3.9 (out of 5).
- The score of the indicator for (Active) European citizenship and innovation is stable at 3.9 over the analysed years. This points to a rather positive impact of the mobility programme on the change of the participant's view on the European topic.
- For all years analysed, the indicator for competence is 4.4 (on a 5-part scale) in the transnational perspective. Participants stated that thanks to the mobility experience they learned from good practices abroad, gained practical skills relevant for their current job and professional development, and that they developed their social and civic competences.
- In general, the effects on the (future) employability are rated as positive by the participating staff (average across all countries and years: 3.6). They think that by participating in a mobility they have improved their career and employment opportunities.
- The average of the indicator general professional development over the years of observation is stable at 4.1; the sub-indicator for skills and knowledge is around 4.0 whereas the sub-indicator network is stable at 4.2. The participants rate the positive effect of the mobility on their further occupational activity rather high. They claim to have improved their awareness of methods for assessing and evaluating skills or competences acquired in formal and informal learning context, to have become more motivated to carry on developing their professional skills and also have improved their organisational, management and leadership skills.
- Regarding system improvement, the participants reflect a certain impact in regard to the reinforcement of cooperation between partner institutions and think that this will go on in the future. The overall score for this topic is 3.5.

- For the overall period, the indicator for innovation is almost 4.0. Participating teachers and trainers think that their participation will lead to the use of new teaching or training methods at their sending institution and to the introduction of new subjects and curricula.

The detailed analysis of causes, effects and structures entails the following recommendations:

- National Agencies should highly focus on the motivation¹ of participants. The more motivated they are the better is their satisfaction with the programme. In this context it is essential, that participants are actively involved in the application for and/or preparation of mobilities within their institutions.
- National Agencies should pay attention to the comparable low rating of participants sent by public organisations. Further investigations are needed to gain insight into the reasons for this result.
- The selectivity in age and gender proves different for the different participating countries. Therefore, the recommendations should be drawn on a national level according to the results shown. Some should promote participations of men others of females. Some should promote the younger participants other countries the older ones.
- Additionally, the low share of realised Erasmus+ adult education mobility compared to all educational and training activities of ISCO-group 235 (other teaching professionals)² has to be considered. Related to the educational-training-affinity this group proves there is a huge potential to increase this Erasmus+ programme in size. However, this is directly dependent on the budget available for adult education under Erasmus+.
- Since satisfaction of participants differs quite remarkable, depending on their country of destination we recommend National Agencies as a matter of quality assurance to elaborate on this result and monitor data, if these results form a trend over a period of time and if these results origin in the evaluation of single institutions.
- Last, but not least, the programme should not be changed fundamentally since there is evidence, that the participants in mobility found what they were looking for and what motivated them to join the programme: Those motivated in improving cooperation rate their satisfaction in the corresponding sub dimension very high. The same is true for motivation in individual development etc. In sum these results can serve as confirmation Erasmus+ AE-mobility being an action serving the expectations of it participants exemplary.

¹ This refers to the reasons that respondents give why they take part in an Erasmus+ mobility programme. These include the following specified categories of the questionnaire:

- To learn from good practice abroad
- To experiment and develop new learning practices and teaching methods
- To gain practical skills relevant for my current job and professional development
- To reinforce or extend my professional network
- To share my own knowledge and skills with learners and / or other persons
- To build cooperation with players in the labour market
- To increase my social, linguistic and / or cultural competences
- To increase my job satisfaction
- To make new contacts
- To increase my employment and career opportunities
- To reinforce the cooperation with a partner institution / organization
- To create spin-off effects for the launch or development of new educational activities

² Data available in the Labour Force Survey (LFS) concerning ISCO-group 235 "Other Teaching Professionals" has been chosen to serve as comparison group to the AE mobility participants (see chapter V, p. 40)

Database

The calculations are based on the responses of 4.600 participants for the years 2014 to 2018 from the following countries: Austria, Estonia, Finland, Hungary, Iceland, the Netherlands, Norway, Slovenia and Sweden. Data were collected based on individual mobility reports, completed by each participant after completing mobility. The organisation submitting the project must report each individual mobility to the reporting system (Mobility Tool+). Through this system, a questionnaire is automatically sent to the mobility participant, through which the participant prepares a report on his/her mobility. The participant uses a five-level scale (1 – I strongly disagree to 5 – I strongly agree) to assess the importance of mobility for his/her personal and professional development. The average response rate is over 90%. The model results show high stability and consistency both over time and in terms of geographic distribution; therefore, the model is well suited to reflect the participants' (self) assessment of the effects of adult education mobility in Erasmus+.

A comprehensive appendix documents the different framework conditions for adult education in the participating countries, and the methods and procedures used.

I. Introduction

Content of the report

An Expert group under the lead of the Austrian Institute for Vocational Education and Research (oeibf) and the Institute for Advances Studies (IHS), on behalf of the OeAD as the Austrian National Agency for Erasmus+ programme, has scientifically supported this project phase of the development of a method for measuring the effects of Erasmus+ in the field of adult education. This was done within the scope of the Transnational Cooperation Activity -TCA - Showing and Identifying Impact of Erasmus+ on transnational level with eight participating countries: Austria, Finland, Hungary, Iceland, the Netherlands, Norway, Slovenia, and Sweden³. This report documents the major model findings of the analyses for the participating countries on a transnational level. The model results are presented for an overall indicator and sub-indicators. Furthermore, the report also contains a comparative analysis with regard to selected socio-economic criteria.

Aims and objectives

The aim was to develop an impact model for Erasmus+, illustrating the effects of the programme for staff and educational institutions as well as society and economy of the European Union on the basis of quantitative and qualitative indicators.

The general objective of an impact model for Erasmus+ is to create a transparent target architecture and an instrument for impact-oriented monitoring. A good model will support results-based management and further development of the programme.

The model refers to general goals and objectives of the EU and Erasmus+ laid down in the relevant guidelines. The indicators are tools to verify the achievement of these objectives. The issues chosen to be monitored by the model are competence, employability, innovation, European citizenship and internationalisation, professional development, and system improvement.

Quality of indicators and data

The model results presented in this report are - although they are numerical values - not to be interpreted in their absolute values, but in their relative relations to each other. The overall indicator and the sub-indicators imply the level of effects (at the personal level of the participants or the participating institutions) for the years of participation in the programme examined. These indicators reflect participants' self-assessment of the issues raised and due to high response rates⁴ can be considered a reliable measure of the individually perceived or expected effects of mobilities. The added value of the model lies on the one hand in the longitudinal comparison of indicators and on the other hand in the comparison in regard to socio-economic criteria. When interpreting developments over time or comparing indicators from participating countries, (national) framework conditions of programme implementation as well as peculiarities of educational systems must be considered. Country and socioeconomic variables are not used to highlight the differences in the "performance" of the programme, but rather to clarify the different levels of satisfaction and positive assessment of mobility. The present report will seek to provide guidance on this.

³ Estonia did not take part in the TCA for AE, but as the NA of Estonia had participated in the former phases of the TCA (concerning VET) it was decided to include the data for Estonia in the analyses.

⁴ Answering the questionnaire is a prerequisite for the final handling of the funding

The database used has the following strengths:

- It is based on a big enough number of responses at the transnational level.
- The return rate relative to the number of all mobilities is high because the questionnaires are mandatory and bound to funding sources.
- The model results show high stability and consistency both over time and in terms of geographic distribution.

And the following weaknesses:

- The answers show only a small dispersion, which is due to the five-part scale. A seven-part scaling of the answer options in the questionnaire would have resulted in a greater variance.
- The long questionnaire with only obligatory questions leads to reporting fatigue which may influence the reliability of results.
- We have only limited knowledge about the implementation and administration of the survey in the participating countries⁵.

⁵ Although there are uniform requirements for participation in the Erasmus+ mobility programme, it is the responsibility of the National Agencies to determine the form in which they promote the programme, which national co-financing they use and which national institutions they work with in terms of information work and recruitment from participating institutions and persons as well as the processing.

II. The Model: concept, definitions, methodology

Concept for an impact assessment model MIA

In January 2017, the data of the Austrian National Agency on the Participation Survey 2014 were analysed in detail and their usability tested for the formation of indicators for an impact model. Subsequently, a concept for the overall model MIA was developed to measure the impact of the Erasmus+ programme in the field of vocational education and training in Key Action 1 "Mobility" and in 2019 this concept was adjusted for the field of adult education.

The Impact Assessment looks at the following themes:

- (Active) European citizenship and internationalisation
- Professional development, including
 - Competence
 - Employability
 - General professional development
- System improvement, including
 - Institutional development
 - Cooperation
- Innovation.

An impact assessment model for Erasmus+ programmes should include indicators to the following fields:

- Empirical indicators on the development of numbers and shares of projects.
- Empirical indicators on the development and share of project promoters or organisations.
- Empirical indicators on the quality of project proposals and finalized projects.
- Empirical indicators on the development of numbers and shares of participants.
- Empirical indicators on the development and share of participating target groups.
- Qualitative Indicators on the impact of the programmes on certain issues.

Regarding the methodological approach to a model for measuring the effectiveness of the Erasmus+ programme, it is appropriate to use a methodology that:

- is based on data readily available in all participating countries of the programme,
- provides reliable results,
- can be transferred to all educational areas and action lines,
- is easy to handle and
- is easily expandable.

In addition, the model should also be able to deliver results for individual subgroups within the target groups of the programme. Up to now, one part of the model MIA, MIA-Q, was developed and is described in this report. MIA-Q measures the effects of the programme on key objectives and builds on the interviews of the participants.

The sub-model MIA-Q

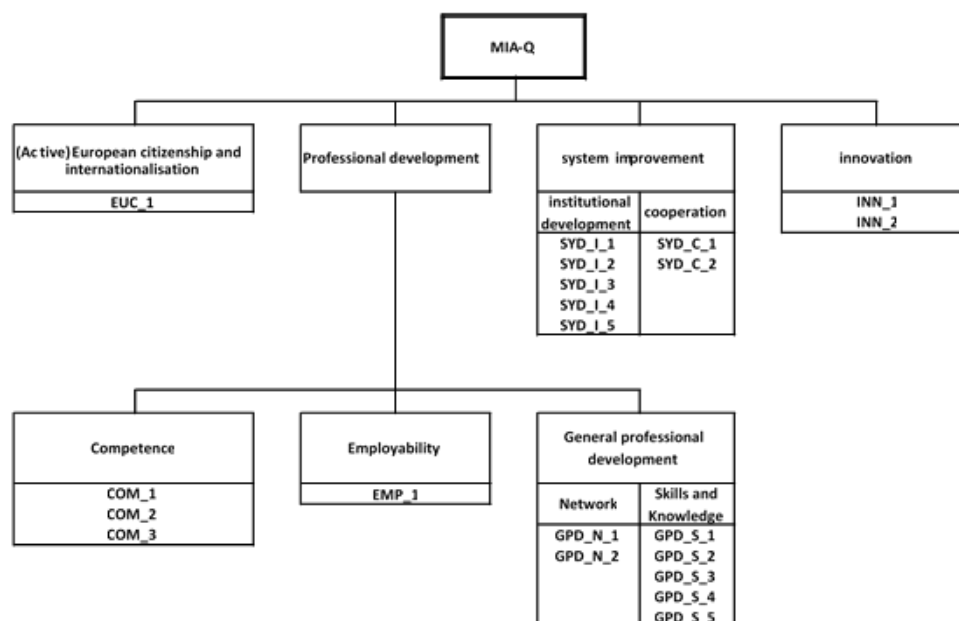
The MIA-Q sub-model, which was originally developed for VET, is based on the participant surveys for learners and staff and uses a large part of the questions cited in the questionnaire. For adult education this model had to be revised because only staff mobility takes place in this field of education. Therefore, the topics for which the indicators were developed on basis of the questionnaires had to be rearranged. The topics “competence” and “employability” were allocated as sub-topics to “professional development” and completed by the sub-topic “general professional development”. The topics “(Active) European citizenship and internationalisation”, “innovation” and “system improvement” complete the topics. “General professional development” was split into the components “network” and “skills and knowledge”. The first component deals with the aspect of cooperation on an individual level, “skills and knowledge” summarizes aspects of the development of skills and knowledge at the level of the sending institution. The topic “system improvement” was divided into the components “institutional development” and “cooperation”. The first component illustrates the positive effects of the mobility on the sending institution and the educational system and the latter deals with the aspect of cooperation at institutional level. No suitable questions could be found in the questionnaire for inclusion. Therefore, this topic is not included in this model.

Most questions have five fixed answer categories. The scales are:

- "Strongly agree, rather agree, neither agree nor disagree, rather disagree, strongly disagree".

The individual questions were then assigned to one of the six thematic areas. To make the model feasible for adult education, the structure of the issues had to be rearranged in the following way:

Figure 1: General scheme of the sub-model MIA-Q for Adult Education



Definitions of topics and selection of indicators

(Active) European Citizenship and Internationalisation

As the Erasmus+ mobility programmes are open not only for learners and staff of EU countries but also for people of EEA countries, it was decided to broaden the concept of the topic towards a general European perspective and thus focus on the following questions:

- Does the mobility enhance the awareness of social and political concepts like democracy, justice, equality, citizenship, and civil rights?
- Does the mobility support the interest in European topics?
- Does the mobility promote an affiliation to Europe as a cultural, political and economic region?
- Does the mobility enhance the internationalisation of the institutions involved in the programme?

Only few questions of the questionnaire for adult education fit to these topics. After an analysis of the questions regarding content and statistical reliability it was decided to use only the following question for the model:

- I believe my participation Erasmus+ had or will have the following impact on my sending institution: Strengthening my sending institution's effort to internationalise its activities.

The fact that this indicator is based on only one question in the questionnaire is a weakness of the model. However, since this topic touches upon the core of the EU's objectives, this weakness was consciously accepted, also to be able to compare it with the model for vocational education and training. The authors suggest that this topic should be given greater weight (in the form of several evaluable questions) in a future revision of the questionnaire.

Professional development

In the basic model originally developed for the area of vocational education and training, the topics for "competence" and "employability" were assigned to the (numerically much more represented) learners; for teaching and administrative staff, these topics were subsumed under the topic "professional development". Since in adult education only teaching and administrative staff can apply for funding for mobility, the topics "competence" and "employability" were integrated as sub-topics in the topic "Professional development" and a third sub-topic "general professional development". This sub-topic should reflect aspects of personal skills and the development of and exchange on new teaching methods as well as the management and organisational skills of teachers. Therefore, this sub-topic was split into the components "skills and knowledge" (focussing on the personal skills and new teaching methods) and "network" (focussing on managerial and organisational skills).

According to the aims and objectives of Erasmus+, the New Skills Agenda for Europa and the overall key strategies of the EU 2020 the following core questions can be derived:

For Competence:

- Does the participation in KA1 mobilities enhance key competences and to what extent?
- Is there a relevant increase in language skills due to KA1 mobilities?
- Which social and personal skills and competences are increased by KA1 projects?
- Are there relevant increases in professional skills and competences brought upon by KA1 mobilities? In which sectors and professional fields?

For Employability:

- From the point of view of teachers/staff: Does the active work in KA1 mobility enhance the employability of the staff? How resp. in which fields employability is increased? To which extent is employability increased?
- From the point of view of project organisations: What is the effect of the project in regard to the employability of individuals and staff? How resp. in which field employability is increased? To which extent is employability increased? Has the project reached its own goals in regard to employability resp. to which extent?
- From the point of view the programme: Is there a measurable impact of Erasmus+ mobilities for the employability of the target groups? How does the programme affect the employment (and unemployment) of sending and receiving countries?

For General Professional development:

For the component “skills and knowledge”

- Does the participation in a KA1 mobility action
 - provide staff with opportunities to enhance their personal skills?
 - provide staff with opportunities to develop and share innovative ways of teaching across Europe by improving their pedagogical competences?

For “network”

- Does the participation in a KA1 mobility action improve professional development by enhancing managerial and organisational skills of trainers/teachers/staff?

The questions selected for these sub-topics are:

For Competence:

- As a consequence of my mobility period, I have ... learned from good practices abroad
- As a consequence of my mobility period, I have ... gained practical skills relevant for my current job and professional development
- By participating in this Erasmus+ activity I believe I have developed the following competences: social and civic competences

For Employability:

- As a consequence of my mobility period, I have ... improved my career and employment opportunities

For General professional development:

For “network”:

- As a consequence of my mobility period abroad, I have ... shared my own knowledge and skills with learners and peers
- As a consequence of my mobility period abroad, I have ... built up new contacts/expand my professional network

For “skills and knowledge”

- As a consequence of my mobility period abroad, I have ... improved my awareness of methods for assessing and giving credit for skills or competences acquired in formal and informal learning context
- As a consequence of my mobility period abroad, I have ... become better aware of European funding mechanisms for projects in my field of education
- As a consequence of my mobility period abroad, I have ... become more motivated to carry on developing my professional skills
- Thanks to this mobility, I have also improved my: organisational/management/ leadership skills.

System improvement

Here the issue is whether participation in EU mobility actions increases the quality of structure in the educational systems in the local, regional, or national context of the participating educational institutions.

That is, why this topic is rather difficult to describe and evaluate via responses of the participant's survey. Relevant questions to be answered:

- Does the participation in a KA1 mobility action provide teachers and staff with
 - tools or competences to enhance the mobility system in the sending countries
 - tools or competences to enhance the national systems of adult education
 - tools or competences to affect the local regional or national education system
- Does the mobility action provide educational institutions with ideas, tools, and procedures to improve its system?
- Does the mobility provide opportunities to reflect upon and enhance educational system aspects?

There is a lot of information available in the dataset. However, it concerns mostly the system of mobility itself. The focus is on the facilitation and support structures within the mobility action. Only in a few items answered by staff some attention is paid to how the mobility action affects the organisation of the educational institutions. These questions address two sub-topics: cooperation and general institutional development. Therefore, the topic system improvement was split in institutional development and cooperation.

The following questions of the teachers' survey were selected and tested:

For institutional development:

- I believe my participation in Erasmus+ had or will have the following impact on my sending institution: Creating opportunities for me to share the knowledge acquired through my mobility activity with colleagues
- I believe my participation in Erasmus+ had or will have the following impact on my sending institution: Improving the organisation and management at my sending institution
- I believe my participation in Erasmus+ had or will have the following impact on my sending institution: Creating opportunities for the launch or development of new educational activities such as curriculum development, development of joint courses or modules, academic networks, etc.
- I believe my participation in Erasmus+ had or will have the following impact on my sending institution: Reinforcing a positive attitude of my sending institution towards sending more staff on teaching assignments, job shadowing or training abroad
- I believe my participation in Erasmus+ had or will have the following impact on my sending institution: Strengthening the cooperation with the partner organisations in this project.

For cooperation:

- I believe my participation in Erasmus+ had or will have the following impact on my sending institution: Strengthening my sending institution's cooperation with players in the labour market
- I believe my participation in Erasmus+ had or will have the following impact on my sending institution: Strengthening my sending institution's cooperation with players in the civil society.

Innovation

Innovation is a key word in EU strategies. Mostly, it is related to research and development in the context of the competitiveness of the economy. In the European 2020 strategy the EU addresses education and training as important for equipping citizens with the skills and competences which the European economy and European society need in order to remain competitive and innovative, but also by helping to promote social cohesion and inclusion.

Considering the objectives of European strategies and the Erasmus+ key objectives the following questions are relevant for analysing a possible impact of Erasmus+ programmes:

- Does the Erasmus+ programme contribute to foster innovation in the fields of education and training? To which extent?
- Can innovative approaches for improving national and transnational training systems be identified in Erasmus+ KA1 projects?
- Are there any new teaching and learning methods being used in the context of KA1 mobilities and if so, how are they judged by the participants and the support staff?

- Is there an exchange of innovative approaches in the context of KA1 projects between educational institutions in the country of origin and the destination country?
- Do the conditions of the KA1 projects also allow innovations that are not related to teaching or learning?

The focus for this topic is on new teaching/training methods, approaches and subjects at the sending institutions. In the questionnaire only the following questions fit to this concept (and deliver reliable results):

- I believe my participation in Erasmus+ had or will have the following impact on my sending institution: Introduction of new subjects or curricula at my sending institution
- I believe my participation in Erasmus+ had or will have the following impact on my sending institution: using new teaching/training methods, approaches and good practices at my sending institution.

III. Model results on a transnational level

1. General remarks

The model is based on the fact that answers of the participant questionnaire are transformed into quantifiable values. For those questions that have been assigned to a topic, first an average value is determined for each year, and an average value for the respective topic area is then calculated from the average values of the individual questions. The value of the overall indicator is the mean of the values for the individual topics.

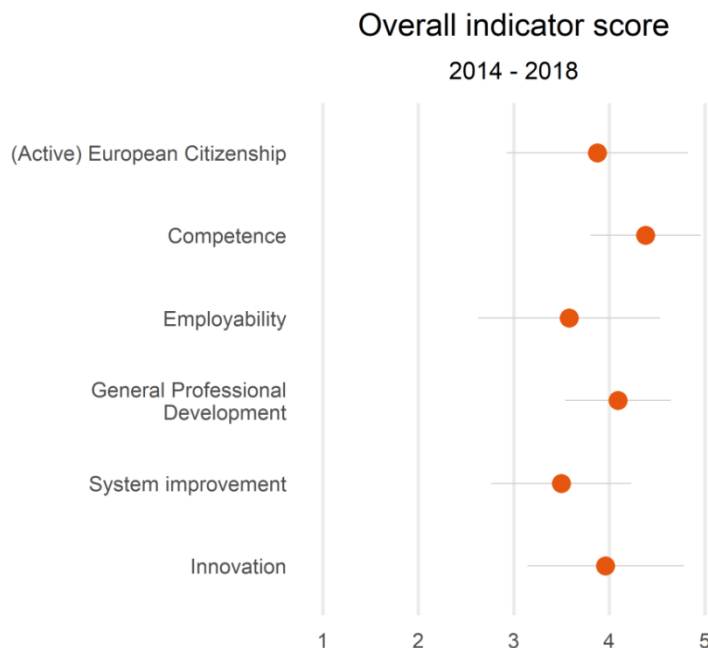
A five-part rating scale was available for all questions (from "strongly agree" to "strongly disagree"). A value of "3" means a rather indifferent attitude (neither agree nor disagree), all values above "3" convey a positive assessment of the effects of mobility on the respective subject area, values below "3" mean that the effects of mobility on the respective topic is considered minor by the participants. The higher the value above "3", the stronger the (positive) effects of mobility on the subject area are assessed.

The overall indicator should reflect the overall assessment of the participants regarding the effects of mobility on their own development and that of the sending institution.

2. Overall indicator

The calculations are based on the responses of 4.600 participants. The overall indicator of MIA-Q for the participating countries, based on the participants' surveys of staff for the years 2014 to 2018 is 3.90. The range of underlying sub-indicators for the six selected topics ranges from 3.58 (Employability) to 4.38 (Competence).

Figure 2: Programme score and indicator score, all participating countries (2014-2018)



Source: Database "MIA-Q", Status of the model: May 2020

Thus, both the overall indicator and the sub-indicators are clearly above the middle scale value and reflect satisfaction among the participants and (in their estimation) an above-average positive effect of the mobilities on the mentioned topics. The impact of mobilities on the participants' own development and the development of the sending institutions is highly appreciated.

The effect is particularly high in the area of the participants' competences, and above all in the field of personal and social skills (Competence: 4.38) and of professional development (general professional development networking: 4.23).

The indicators in adult education tend to have slightly lower scores than those of VET. This may have several causes: Firstly, the teaching and support staff seem to reflect more critically on the mobilities and the resulting effects, and secondly, they can draw on a wealth of experience. Learners (which are the main respondents in VET), usually young people up to 19 years of age often may be abroad on their own for the first time and rate this exceptional event as more positive. In addition, the (expected) effects on their further education and employment career are greater.

For an interpretation of these results various facts must be considered:

- Compared to other areas of the programme, the number of participants in mobility in adult education is rather low. Numbers are restricted due to lower funding at EU level. In addition to that only teaching and administrative staff can use mobility in adult education. Institutions that send people on mobility are often SMEs and can therefore only make this mobility possible for a few people.
- The absolute number of participants: the smaller the number of underlying answers, the more likely "outliers" play a role in the overall result. The larger the number of participants, the lower the influence of deviant answers.
- The socio-demographic composition of the participants: the gender proportions, the age structure, but also the participation of foreigners in the mobility actions may influence the results.
- General response to surveys: People from different countries may have different attitudes in interviews. In some countries, respondents may be more reluctant to make very positive assessments. Categories like "very satisfied", "very good", "strongly agree" are used less often, while in other countries respondents may be more likely to avoid very negative answers.
- Representativeness of the participants in terms of the potential population: the results depend on which part of the potential people eligible to participate actually participate in mobility programmes. The willingness of the sending institutions to allow teaching staff to participate in mobility actions also plays a crucial role. In addition, institutional framework conditions also influence the extent of participation. These questions are dealt with in a separate module of this project.
- System inherent factors (e.g. the duration of mobilities) can only be analysed at national level. Due to the insufficient number of cases at national level, an analysis at the level of the participating countries was not carried out.

3. Results for main topics

The MIA Q model aims to demonstrate the impact of Erasmus+ mobility in adult education. The model measures the effects at the level of thematic areas. The following are some key findings for the six main topics.

(Active) European Citizenship and Internationalisation

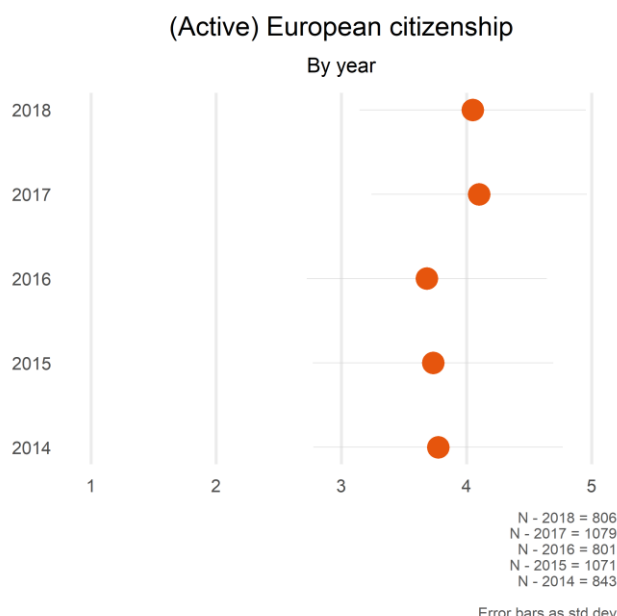
Educational programmes in the EU in general have the implicit goal of strengthening European thought, raising European awareness, and thus contributing to a stronger identification with Europe. In the impact model, this topic is indirectly represented by questions on the interest in European topics, awareness of democratic values and the internationalisation of institutions.

Over the whole period, the indicator is 3.9 (on a 5-part scale). Respondents think that their participation in Erasmus+ is (or will be) strengthening their sending institution's effort to internationalise its activities.

However, the positive assessment of the effects of Erasmus+ mobility increases over the observation years (2014: 3.8; 2018: 4.1).

In terms of the individual age groups, there are no differences in the assessment of the effects of mobility on "European awareness" or internationalisation: In all age groups, the average values oscillate closely around 3.9.

Figure 3: (Active) European citizenship and internationalisation score, all participating countries by year



Source: Database "MIA-Q", Status of the model: May 2020

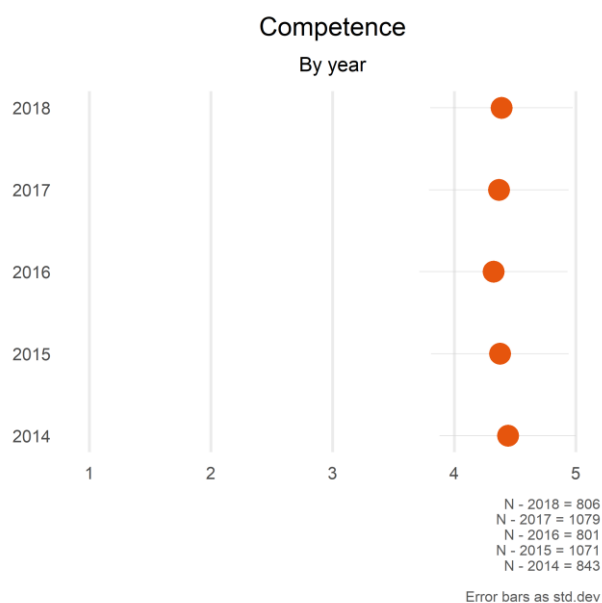
Professional development

Competence

One of the core goals of European strategies (and thus Erasmus+) is the further development of the competences of the European population. In the model MIA Q, the topic “competence” summarises aspects of the effects of mobilities on the linguistic, analytical, social and personal competencies of the participants.

For all analysed years, the indicator for competence is 4.4 (on a 5-part scale) in the transnational perspective and points to a positive impact of the mobility programmes on the self-assessment of the participant's own competence development. The results are very stable throughout the years of observation.

Figure 4: Competence score, all participating countries by year



Source: Database “MIA-Q”, Status of the model: May 2020

Participants stated that thanks to the mobility experience they learned from good practices abroad, gained practical skills relevant for their current job and professional development, and that they developed their social and civic competences. This applies equally to women and men as well as to younger and older participants.

For younger participants (up to 49), the assessment of the positive effect of the stay abroad on the development of their competences is higher than for older ones.

In summary, participants in mobility actions in all years and across borders can see tangible added value in the development of their competence profiles, especially in areas of key competences (social and personal skills).

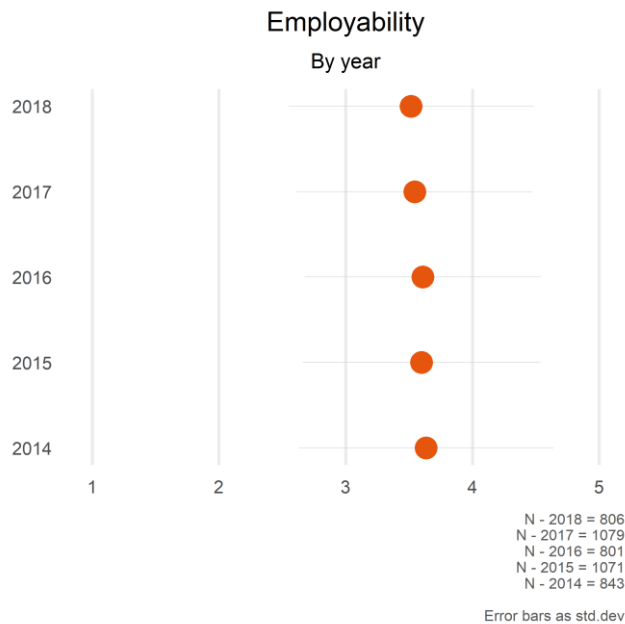
Employability

Erasmus+ also aims at increasing the employability of participants. Therefore, the impact analysis devotes a separate thematic area to this goal. It examines participants' view on

future employment opportunities at home and abroad, the areas of activity and career prospects.

In general, the effects on the (future) employability are rated positively by the participating staff (average across all countries and years: 3.6). They think that by participating in a mobility they have improved their career and employment opportunities. The results are very stable throughout the years observed.

Figure 5: Employability score, all participating countries by year



Source: Database "MIA-Q", Status of the model: May 2020

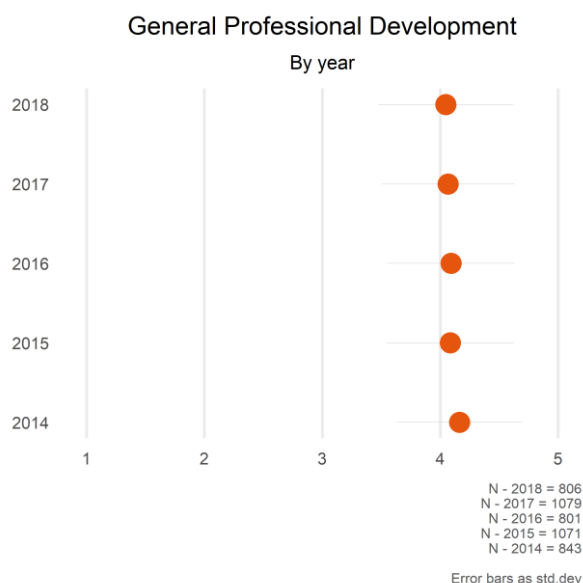
These assessments are shared by participants of all age groups. However, younger participants rate the impact of mobility on their employability as being significantly higher than those who have only a few years left before retirement. Whereas the average score of participants up to the age of 29 is about 3,8, with participants who have already exceeded the age of 59, the average score is about 3,2.

General professional development

Mobility of staff aims to increase professional skills and thus contribute to improving education systems. The questions underlying the model therefore also relate to the participants' assessment of the development of their analytical, practical, emotional, social and personal skills, as well as to leadership and management skills, work-related knowledge and skills, linguistic and intercultural skills and their professional network. In order to get results for both aspects (skills and knowledge and network) this indicator was split up into two components.

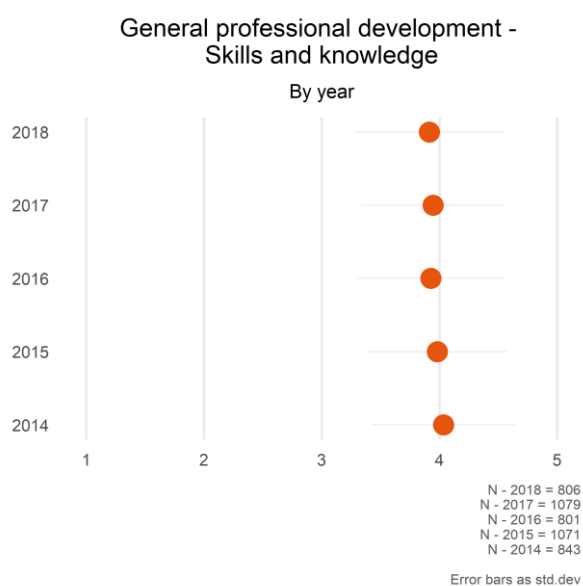
The average of the indicator over the years of observation is stable at 4.1; the sub-indicator for skills and knowledge is around 4.0 whereas the sub-indicator on network is stable at 4.2.

Figure 6: General professional development score, all participating countries by year



Source: Database "MIA-Q", Status of the model: May 2020

Figure 7: General professional development – skills and knowledge score, all participating countries by year

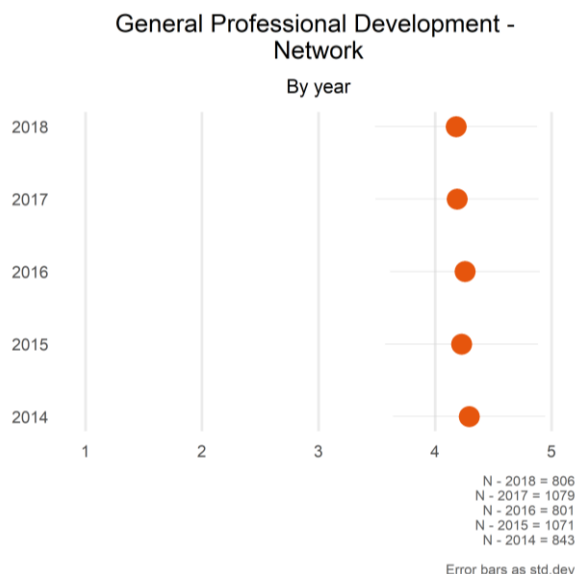


Source: Database "MIA-Q", Status of the model: May 2020

The participants rate the positive effect of the mobility on their further occupational activity rather high. They claim to have improved their awareness of methods for assessing and giving credit for skills or competences acquired in formal and informal learning context, to have become more motivated to carry on developing their professional skills and also have improved their organisational, management and leadership skills. Furthermore, they have improved their knowledge of the subject taught/of their professional area.

This applies to participants of all ages.

Figure 8: General professional development – network score, all participating countries by year

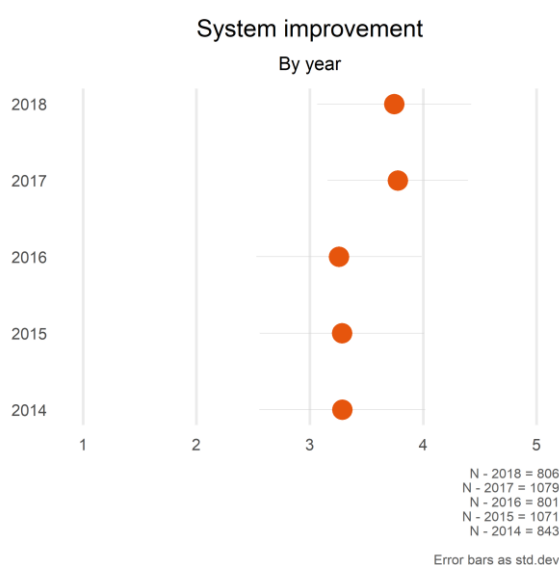


Source: Database "MIA-Q", Status of the model: May 2020

System improvement

In order to sustainably raise the level of education, the European Union and the member states are making efforts to further develop and optimise education systems. One element in this context is an increased cooperation between different educational institutions and between the educational system and the labour market. In the model these aspects are examined in the participant's survey of teachers and trainers. In order to be able to map both aspects (institutional development and cooperation with other actors) in the model, the system improvement indicator was split into these sub-indicators.

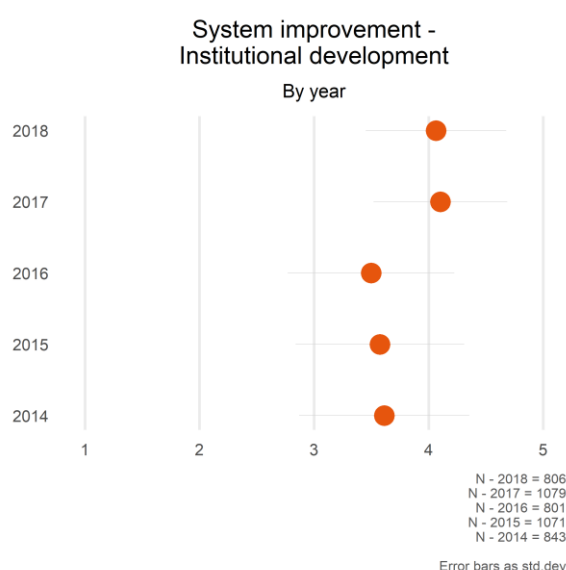
Figure 9: System improvement score, all participating countries by year



Source: Database "MIA-Q", Status of the model: May 2020

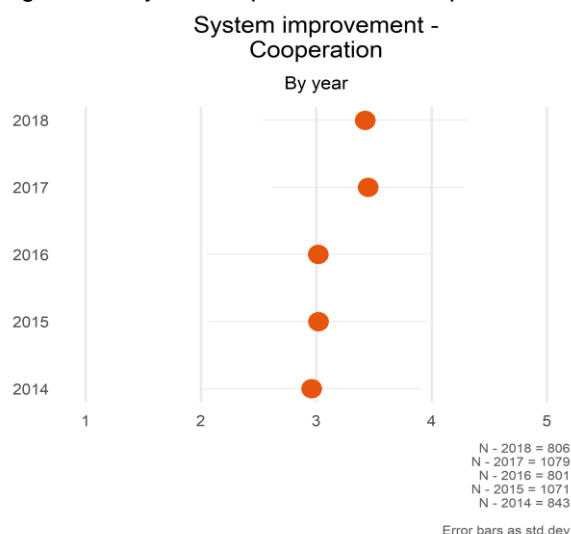
Over the whole period, the indicator is 3.5, which is slightly below the average of the other indicators. Nevertheless, the participants reflect an impact regarding the reinforcement of cooperation between partner institutions and think that this will continue in the future. Regarding cooperation with players in the labour market their estimation is more reluctant. The impact on system improvement (like with innovation) is strongly connected to the sending institutions and depends on the position of the participants within the institution. This indicates that the institutional setting of education systems which differs quite a lot throughout Europe influences the results as well as the individual position of the participants within their institution. In the last two years of the observation period, the average value increases to around 3.8.

Figure 10: System improvement– institutional development score, all participating countries by year



Source: Database "MIA-Q", Status of the model: May 2020

Figure 11: System improvement – cooperation score, all participating countries by year



Source: Database "MIA-Q", Status of the model: May 2020

Over the entire observation period, the values for the sub-indicator "institutional development" exceeded those of the sub-indicator "cooperation". The opportunity to share the knowledge acquired through mobility within one's own institution and to be able to implement new teaching methods and training approaches is particularly valued.

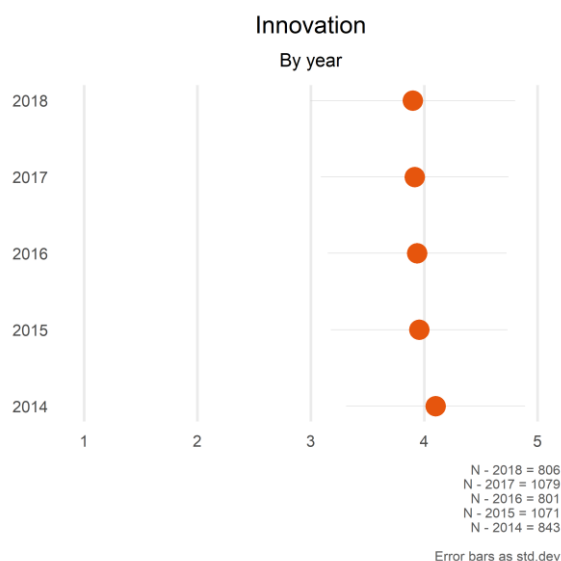
Innovation

Innovation is considered as a major driver of the positive development of the European economy. Therefore, a number of measures are devoted to this objective in European strategies. Hence, this model also examines the participants' assessments of this issue in regard to aspects of the (further) development of teaching and learning methods and the change of personal innovation potential.

Over the whole period, the indicator is almost 4.0. Altogether, the indicator of innovation shows a high stability and points to a positive impact of the mobility programmes on the participant's view of their own innovative development as well as the sending institution's. Participating staff believe that their participation will lead to the use of new teaching or training methods at their sending institution and to the introduction of new subjects or curricula.

The results are stable over the years observed, although the average score is slightly decreasing (from 4.1 in 2014 to 3.9 in 2018).

Figure 12: Innovation score, all participating countries by year



Source: Database "MIA-Q", Status of the model: May 2020

Overall, participation in mobility is considered to be conducive to innovation (both in terms of own skills and in the functioning of the sending institutions). However, the extent of the assessment of this positive effect depends on the institutions themselves (both the sending and the receiving) and their already achieved level of innovation.

Younger participants tend to estimate the impact of mobility on the institution regarding innovation slightly higher than elder participants.

IV. Causes and Effect Analysis

In the analysis so far, we have seen lots of differences in participants' satisfaction or perceived profit from their mobility. In this chapter we want to explore the reasons for and the structures behind these observations. This will be done using two different concepts of analysis:

- In the first stage we will conduct a descriptive extreme-group-analysis. The purpose of this is to identify the most satisfied and the most critical group of respondents representing those who profit the most or the least from their Erasmus+ mobility.
- In the second stage we will build and test regression models. The purpose of this analysis is to identify those variables influencing respondents' opinion or judgement on their Erasmus+ mobility most.

All these analyses build upon the variables available in the extended dataset for all participating countries in this TCA. The variables selected can be structured using three dimensions (participant, organisation, mobility) shown in the table below:

Figure 13: Variables by dimensions

Participant	Organisation	Mobility
Sending country (Nationality)	Sending: Public organisation	Year of mobility
Age	Sending: Non-profit organisation	Duration of mobility
Gender	Sending: Number of employees below 250 ⁶	Amount of grant
Migration background	Receiving: Public organisation	Distance
Special needs	Receiving: Non-profit organisation	Receiving country
Recurring participation	Receiving: Number of employees below 250	Type of certificate
Main motivation		Type of activity

In the first stage we will descriptively analyse variance in satisfaction with/profit from the Erasmus+ mobility according to these variables. By doing so, we will repeat some results shown before (age, year of mobility) which seems feasible in order to generate a holistic picture of results. In the second stage these variables will help to explain the differences in overall satisfaction as well as its components (competence, employability, general professional development-network, general professional development-skills, (Active) European citizenship, innovation, system improvement-institutional development, and system improvement-cooperation).

⁶ According to National Agencies the data concerning the number of employees of sending and receiving organisation miss reliability. Therefore, they are dropped and not included in the results.

1. Extreme-Group-Analysis

The extreme-group analysis to some extent is a preparation of building regression models. It focusses on the description of differences concerning the overall satisfaction of participants with their Erasmus+ mobility according to the variables shown in the table above. The mean score of satisfaction equals 3,874 within a range from 1 (strongly disagree) to 5 (strongly agree) which means that overall we can observe a highly positive judgement of the programme. In the table below, we can observe mentionable variations concerning the sending country, frequency of participation and motivation of participants.

Figure 14: Satisfaction with Erasmus+ mobility according to participant variables

	mean satisfaction- sum	n	%
Sending country: Austria	3,912	596	13,0%
Sending country: Estonia	4,068	338	7,3%
Sending country: Finland	3,765	1 164	25,3%
Sending country: Hungary	4,084	539	11,7%
Sending country: Iceland	3,852	146	3,2%
Sending country: Netherlands	3,845	491	10,7%
Sending country: Norway	3,859	236	5,1%
Sending country: Sweden	3,702	716	15,6%
Sending country: Slovenia	4,067	374	8,1%
Age: below 35	3,917	1 006	21,9%
Age: 55 and above	3,776	958	22,2%
Gender: female	3,887	3 461	76,9%
Gender: male	3,854	1 040	22,6%
Migration background: yes	3,968	213	4,6%
Special needs: yes	3,810	57	1,2%
Frequency participation: first	3,836	3 218	70,0%
Frequency participation: 2-5	3,951	1 262	27,4%
Frequency participation: 6-9	4,052	89	1,9%
Frequency participation: 11+	4,198	31	0,7%
Motivation high: competence development	3,980	2 165	47,1%
Motivation high: individual development	4,286	457	9,9%
Motivation high: cooperation	4,345	228	5,0%
Motivation high: institutional innovation	4,142	747	16,2%
Average satisfaction	3,874	4 600	100,0%

Source: Erasmus+ Data

- A satisfaction clearly above average (>4,0) we can observe in Estonia, Hungary and Slovenia. A comparably critical opinion is represented by the Swedish and Finnish participants.
- A rather linear development in satisfaction can be observed concerning the frequency of participation in Erasmus+: The more often people participated the more satisfied they were. This by sure is influenced by a selection process where the more satisfied take part repeatedly whereas the more critical stop taking part in mobility programmes.
- We observe by far the highest rates of satisfaction in the context of motivation. If (whatever kind of) motivation is high the participants rate their Erasmus+ mobility very positive. For example: Participants who are motivated in improving cooperation rate their satisfaction with their Erasmus+ mobility 4,35 on a scale of 5, which is 0,47 above average. The high satisfaction of participants with high motivation also means that the expectations of them could be met. They had high motivations and have not been disappointed.

Motivation is included in the questionnaire/data split into 12 different variables.⁷ We structured them by clustering the variables according to (newly introduced) subtopics. These subtopics are competence development, individual development, cooperation, and institutional innovation.⁸

Figure 15: Satisfaction with Erasmus+ mobility according to organisational variables

	mean satisfaction- sum	n	%
Sending: public organisation	3,787	2 109	45,8%
Sending: non-profit organisation	3,868	3 635	79,0%
Receiving: public organisation	3,875	1 109	24,1%
Receiving: non-profit organisation	3,893	2 591	56,3%
Average satisfaction	3,874	4 600	100,0%

Source: Erasmus+ Data

Compared to the differences observed concerning participant variables influencing satisfaction with AE-mobility those observed concerning organisational variables of the sending and receiving institution are rather low. The only result worthwhile mentioning is that participants coming from a public organisation are rather critical.

⁷ This refers to the reasons that respondents give why they take part in an Erasmus+ mobility programme. These include the following specified categories of the questionnaire:

- To learn from good practice abroad (Q86_1)
- To experiment and develop new learning practices and teaching methods (Q86_2)
- To gain practical skills relevant for my current job and professional development (Q86_3)
- To reinforce or extend my professional network (Q86_4)
- To share my own knowledge and skills with learners and / or other persons (Q86_5)
- To build cooperation with players in the labour market (Q86_6)
- To increase my social, linguistic and / or cultural competences (Q86_7)
- To increase my job satisfaction (Q86_8)
- To make new contacts (Q86_9)
- To increase my employment and career opportunities (Q86_10)
- To reinforce the cooperation with a partner institution / organization (Q86_11)
- To create spin-off effects for the launch or development of new educational activities (Q86_12)

⁸ Q86_1 + Q86_7 form competence-development / Q86_3 + Q86_4 + Q86_8 + Q86_10 form individual-development / Q86_6 + Q86_9 + Q86_11 form cooperation / Q86_2 + Q86_12 form institutional innovation.

Considerable difference in satisfaction we can observe according to **mobility variables** shown in the table below. According to that the country of destination, the duration and distance of mobility as well as the type of certificate mark differences worth mentioning:

- The longer the mobility lasts and the shorter the distance of mobility is the more satisfied the participants are.
- Satisfaction of participants differs quite remarkable, depending on their country of destination. In data we find a range from 3,68 (lowest) to 4,21 (highest rating). These differences observed here are indicated as differences among destination countries according to the database available. Probably these results are not true for a whole country but they can be broken down to receiving institutions. Therefore, National Agencies in the process of quality assurance should more elaborate on this result and monitor data, if these results form a trend over a period of time and if these results origin in the evaluation of single or several institutions.
- Last, but not least, those receiving a “Europass” Mobility certificate are considerably more satisfied than those receiving other types of certificate.

Figure 16: Satisfaction with Erasmus+ mobility according to mobility variables⁹

	mean satisfaction- sum	n	%
Year of mobility: 2016 (min)	3,781	801	17,4%
Year of mobility: 2017 (max)	3,952	1 079	23,5%
Duration of mobility: up to 2 days	3,823	1 354	29,4%
Duration of mobility: 7+ days	4,019	551	12,0%
Budget: below € 635	3,838	444	9,7%
Budget: above € 1.785	3,966	466	10,1%
Distance: 0- 500 km	3,900	611	13,3%
Distance: above 3.000 km	3,701	226	4,9%
Destination country: lowest rating	3,683	112	2,4%
Destination country: highest rating	4,214	46	1,0%
Certificate type: course none	3,850	2 155	46,8%
Certificate type: course specific	3,848	1 575	34,2%
Certificate type: Europass mobility	4,012	694	15,1%
Certificate type: other	3,869	176	3,8%
Type of activity: training assignment (max)	3,961	205	4,5%
Type of activity: job shadowing (min)	3,863	1 642	35,7%
Average satisfaction	3,874	4 600	100,0%

Source: Erasmus+ Data

⁹ In order to keep the table clear some of the variables are displayed only by their minimum/maximum values.

To sum it up:

- From the countries participating in this research the most satisfied participants come from Estonia, Hungary, or Slovenia. Most satisfied persons are those who participated in mobility several times yet, participants who are highly motivated, and those who stayed more than 7 days.
- The least satisfied participants are those who come from Sweden and Finland, those whose sending organisation is a public body and who are travelling a long distance.
- Last, but not least, we observe enormous differences in satisfaction depending on destination country. Since those differences are among the highest it is worthwhile to further elaborate on them in the context of quality assurance.

2. Regression Model

Target of this analysis is to identify and statistically test those variables with significant influence on satisfaction (judgement on profit drawn from the programme) of participants in Erasmus+ mobility. This chapter will focus on the overall satisfaction first and discuss all three dimensions of influencing factors (personal, organisational, mobility-related). The second part of this chapter is oriented toward the single dimensions of satisfaction (from competence to system improvement: institutional). All eight dimensions of satisfaction will be discussed separately which variables influence them. Detailed data concerning this analysis of single dimensions of satisfaction can be found in the annex.

The method used is a regression analysis testing all the variables that have been discussed before. Descriptions of variance conducted before cannot detect correlations and intervening variables. In contrast to that we can calculate the “pure” influence by a single variable by using the method of regression analysis.

In this chapter results of analyses will be shown in tables structured identically. These tables will show the influencing variables and their impact on satisfaction. By interpreting the results of analysis, we will focus on variables having significant impact (indicated with * or ** or *** depending on their significance level). The intensity of influence by single variables is best indicated by the standardised coefficient (Beta). If Beta is a positive number the influence is “positive” (the higher the Beta-value of an influencing factor the higher satisfaction becomes), if it is a “negative” number the influence is negative (the higher the Beta-value of an influencing factor the lower satisfaction becomes). If we see a Beta-value of e.g. 0,2 this means satisfaction rises by 0,2 if the influencing factor rises by 1. If we find a Beta-score of -0,2 this means satisfaction declines by 0,2 if the influencing variable rises by 1. Beta is a standardised score. This means values represent the same scale, irrespective of possible variance the influencing variable might have. It is obvious that the variable “age” can vary on a higher range (roughly from 25 to 65) than the variable “gender” is able to vary. Beta takes this into account by standardising all variables, the B-value shown in the tables does not but indicates the “pure” influence.

R^2 and F at the bottom of the tables indicate the quality of the model showing the amount of total variance explained and the significance of the whole calculation. If R^2 e.g. equals 0,196 (which is true in the following table / Figure 13) this means that the model is able to explain 19,6% of total variance.

Overall satisfaction/profit

The first round of analyses shown in the tables below is oriented towards explaining the overall satisfaction of participants in Erasmus+. This is done for the participant, the organisational and the mobility-variables separately before all of them at once are included in a regression model. By doing this we can identify the most influential variables within the single dimensions (participant, institution, mobility) and the most influential variables at all.

Figure 17: Contribution to mobility satisfaction by participant variables

	Influence on overall satisfaction/profit		
	B (unstand. coeff.)	Beta (stand. coeff.)	Std. Error
(Constant)	3,387***		0,051
Sending Country Austria	0,058*	0,037*	0,025
Sending Country Estonia	0,151***	0,074***	0,031
Sending country Finland (+)	0,000	0,000	0,000
Sending Country Hungary	0,258***	0,156***	0,026
Sending Country Iceland	0,062	0,020	0,043
Sending Country Netherlands	0,067*	0,039*	0,027
Sending Country Norway	0,082*	0,034*	0,035
Sending Country Sweden	-0,052*	-0,033*	0,024
Sending Country Slovenia	0,186***	0,096***	0,029
Age of participants	-0,002*	-0,035*	0,001
Gender	0,022	0,018	0,017
Migration background	0,060	0,023	0,035
Special needs	-0,128	-0,026	0,067
Motivation: competence developm.	0,024*	0,029*	0,012
Motivation: individual development	0,069***	0,150***	0,007
Motivation: cooperation	0,112***	0,180***	0,010
Motivation: institutional innovation	0,117***	0,151***	0,011
Frequency_mobility	0,057***	0,058***	0,013
R ²	0,196		
R ² (adjusted)	0,193		
F (df=17; 4.478)	64,174***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data

(+) Excluded variable because of multicollinearity

Concerning **participant variables**, we can find a significant influence on overall satisfaction by several sending countries (Austria, Estonia, Hungary, Netherlands, Norway, Sweden, Slovenia), by age, by all four different types of motivation (competence & individual development, cooperation, institutional innovation) and by frequency of mobility. Except for age and sending country Sweden the influence of all these significant variables is a “positive” one. E.g. the more motivated participants are the more satisfied they are with the programme. By growing age satisfaction declines (Beta -0,035). Also, participants from the sending country Sweden prove less satisfied again. The strongest significant effects we find in the context of motivation (Beta 0,18 for motivation in cooperation). In total all these participant variables explain 19,6% of variance ($R^2 = 0,196$) we find concerning satisfaction with AE-mobility.

When it comes to **organisational variables**, we find significant influence by the variables of sending organisation being public and non-profit, concerning receiving organisation their non-profit status is influential. Participants sent by public or non-profit-organisations are among the more critical ones. In sum these variables cannot explain high proportions of variance (indicated by a rather small $R^2 = 0,029$ which means that the organisational variables can explain 2,9% of total variance).

Figure 18: Contribution to mobility satisfaction by organisational variables

	Influence on overall satisfaction/profit		
	B (unstand. coeff.)	Beta (stand. coeff.)	Std. Error
(Constant)	3,972***		0,024
Receiving: Public organisation	0,040	0,032	0,021
Receiving: Non-profit organisation	0,043*	0,038*	0,019
Sending: Public organisation	-0,167***	-0,152***	0,019
Sending: Non-profit organisation	-0,069**	-0,050**	0,023
R^2	0,029		
R^2 (adjusted)	0,028		
F (df=5; 3.514)	20,954***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data

Among the **mobility variables** the year of mobility, the distance of mobility and the type of certificate: “Europass” prove influential. Concerning the years of mobility, we find high negative effects on satisfaction among those persons participating in 2014-2016.¹⁰ Also, the influence of distance of mobility is a negative one: the higher the distance of mobility is the less satisfied participants are.

¹⁰ The participants in 2017 are among the most satisfied. Compared to the overall very high satisfaction of those participants the participants in the years 2014-2016 rated their mobility less positive.

Figure 19: Contribution to mobility satisfaction by mobility variables¹¹

	Influence on overall satisfaction/profit		
	B (unstand. coeff.)	Beta (stand. coeff.)	Std. Error
(Constant)	3,976		0,043
Year_2014	-0,128***	-0,091***	0,026
Year_2015	-0,125***	-0,098***	0,024
Year_2016	-0,176***	-0,124***	0,026
Year_2017 (+)	0,000	0,000	0,000
Year_2018	-0,036	-0,025	0,025
Duration of mobility	0,006	0,047	0,003
Amount of grant	0,000	0,046	0,000
Distance of mobility	-0,044***	-0,061***	0,011
Certificate: course-specific	0,012	0,010	0,021
Certificate: Europass	0,156***	0,103***	0,024
Certificate: other	0,059	0,021	0,042
Certificate_non (+)	0,000	0,000	0,000
Activity_structured course (+)	0,000	0,000	0,000
Activity: job shadowing	0,011	0,009	0,023
Activity: training event	0,046	0,034	0,024
Activity: teaching assignment	0,064	0,022	0,044
Activity: Teaching training assignment	0,009	0,003	0,041
R ²	0,034		
R ² (adjusted)	0,032		
F (df=14; 4.585)	11,689***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data

(+) Excluded variable because of multicollinearity

Compared to participant variables not only those of organisation but also those of mobility contribute less in explaining variance (indicated by R²).

If we build a model including all variables from all three dimensions at once some of the variables indicated as influential before can lose their significance since they now could be dominated by even stronger ones. Therefore, to build a wider model is the strategy to identify the most reliable influencing variables.

¹¹ Although e.g. duration of mobility and amount of grant are related to each other the strength of regression analysis is to explore the influence of each single variable separately.

Figure 20: Contribution of all variables together on overall satisfaction with AE-mobility

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	3,508		0,081
Sending Country Austria	-0,036	-0,022	0,034
Sending Country Estonia	0,086*	0,042*	0,038
Sending country Finland (+)	0,000	0,000	0,000
Sending Country Hungary	0,157***	0,099***	0,034
Sending Country Iceland	0,020	0,007	0,049
Sending Country Netherlands	0,018	0,011	0,033
Sending Country Norway	0,101*	0,042*	0,041
Sending Country Sweden	-0,078*	-0,049*	0,031
Sending Country Slovenia	0,167***	0,088***	0,036
Age of participants	-0,002*	-0,034*	0,001
Gender	0,027	0,021	0,019
Migration background	0,046	0,018	0,040
Special needs	-0,088	-0,021	0,071
Motivation: competence developm.	0,013	0,016	0,014
Motivation: individual development	0,073***	0,158***	0,008
Motivation: cooperation	0,117***	0,187***	0,011
Motivation: institutional innovation	0,106***	0,137***	0,012
Frequency_mobility	0,044**	0,046**	0,015
Receiving: Public organisation	0,035	0,029	0,020
Receiving: Non-profit organisation	0,025	0,023	0,019
Sending: Public organisation	-0,111***	-0,102***	0,020
Sending: Non-profit organisation	-0,024	-0,018	0,022
Year_2014	-0,126***	-0,090***	0,027
Year_2015	-0,094***	-0,067***	0,027
Year_2016	-0,133***	-0,093***	0,027
Year_2017 (+)	0,000	0,000	0,000
Year_2018	-0,038	-0,029	0,024
Duration of mobility	0,006	0,044	0,004
Amount of grant	0,000	0,006	0,000
Distance of mobility	0,002	0,003	0,013
Certificate: course-specific	0,020	0,017	0,022
Certificate: Europass	0,068***	0,046***	0,026
Certificate: other	0,022	0,008	0,046
Certificate_non (+)	0,000	0,000	0,000
Activity: structured course	-0,008	-0,007	0,025
Activity: job shadowing (+)	0,000	0,000	0,000
Activity: training event	-0,010	-0,007	0,025
Activity: teaching assignment	0,017	0,006	0,049
Activity: Teaching training assignment	0,011	0,005	0,041
R ²	0,225		
R ² (adjusted)	0,217		
F (df=36; 3.385)	27,335***		

* p<0,05; ** p<0,01; *** p<0,001

Source: Erasmus+ Data

(+) Excluded variable because of multicollinearity

In the table above, we summarise the results of this far reaching regression model indicating the following variables with significant influence on the overall satisfaction of Erasmus+ participants. The list of significant influencing variables starts with those of several sending countries indicating participants from Estonia, Hungary, Norway and Slovenia more and those from Sweden less satisfied. The other significant influencing factors are age, motivation in individual development, motivation in cooperation and institutional innovation, the frequency of mobility, sending organisation is public, year of mobility and type of certificate: Europass. Except for age, several years of participation and sending organisation is public all these influences are “positive”. For the negative influence this means the younger the participants are, the more satisfied they are. In the case of “sending organisation is public” the negative influence can be shown as a consequence of codification. Since “no” is coded 0 and “yes” is coded 1 (which is also true for most other variables) this means that satisfaction of participants whose sending organisation is public are less satisfied with the programme. In contrast to that the influence of “Certificate is a Europass” is a positive one: If respondents agree to that (clicking yes) we are more likely that this participant is more satisfied. Also, the influence of motivation is a positive one: the more motivated participants are, the more satisfied they are with their mobility they had.

Dimensions of satisfaction/profit

As explained earlier we separated eight different sub-dimensions of satisfaction by factor analyses ranging from individual competence development to system improvement – institutional. For all these sub-dimensions we calculated a separate regression model in order to identify if influencing variables change by analysing different aspects of satisfaction. In this section here we will describe the results, the corresponding tables for regression analyses can be found in the annex (pages 63-70).

(Active) European citizenship

- The regression-model on European citizenship is significant but cannot explain a high proportion of variance (R^2). Therefore, we have to conclude that many other variables, which have not been observed and included in the monitoring system influence this sub-dimension of participant satisfaction. Nevertheless, we can point out that well-known variables like motivation, sending country, year of mobility etc. also influence progress in European citizenship. The highest effect on active European citizenship we find concerning the influencing variable “motivation: cooperation” (Beta 0,168). We also should mention that this is the only sub-dimension “migration background” has a significant (positive) effect on although it is a rather small one.

Competence:

- Concerning the sub-dimension of competence development, we find several well-known influencing variables significant: sending country, age, the different forms of motivation and the sending organisation is a public one. The highest effect on competence development we find concerning the influencing variable “motivation: individual development” (Beta 0,17). But there are also some new ones, which have not been significant so far: amount of grant, distance of mobility and type of activity (structured course). Except for the sending countries the Netherlands and

Sweden, age, distance, and type of activity the influence of the variables is a positive one.

Employability:

- When it comes to employability, we find one of the highest influences of all calculations done: It is the influence of “motivation in individual development“, on the satisfaction-sub-dimension of employability, scoring 0,273 (Beta). Besides that, and the other forms of motivation we also find the sending country: Austria, age, sending organisation is public body and the amount of grant influential.

General professional development: network

- The sub-dimension of “general professional development: network” is influenced by three out of four motivation categories, by sending country Estonia, by the year of mobility, by type of activity is a structured course or training event, by sending and receiving organisations are public ones and additional by sending organisation is non-profit. As we have seen before also in the case of this sub-dimension of satisfaction, we find a very high influence of a certain kind of motivation: A motivation in cooperation has a very high impact on satisfaction concerning general professional development-network (Beta 0,289). This is consistent and indicates participants receiving what they have been looking for.

General professional development: skills

- When it comes to the sub-dimension “general professional development-skills” one result in the calculation of the regression model is remarkable: here we find “participant with special needs” with a slightly negative effect on satisfaction. Most of the other variables (like sending organisation is public and motivation) return expected results seen in the dimensions discussed before. The highest effect on “general professional development: skills” we find concerning the influencing variable “motivation: institutional innovation” (Beta 0,15).

System improvement: institutional development

- The last sub-dimension of satisfaction to be discussed here is “system improvement: institutional development”. This model at the same time is the most powerful one, concerning the amount of variance explained ($R^2=0,269$). This is the result of many highly significant variables contributing to it: Three out of four motivation variables, the frequency of mobility, receiving and sending organisation being public ones, sending is also non-profit and also the year of mobility prove their significant influence like type of activity and several sending countries do.

System improvement: cooperation

- Again, we observe consistency when it comes to “system improvement-cooperation”, which is the eighth sub-dimension of satisfaction to be discussed here. This dimension is highly influenced by a motivation oriented towards cooperation (Beta 0,182). Other dimensions of motivation do not prove significantly influential in this regression model like motivation in individual development, which has been among the most influential variables so far in other models. The performance of most other variables is not strikingly different but like expected in the context of all other results.

Innovation

- Innovation is another sub-dimension of satisfaction. It heavily depends on the motivation in institutional innovation (Beta 0,232), which is plausible but also underlines again, that these Erasmus+ participants found support according to their expectations. One might interpret this as a considerably high degree of user orientation in the Erasmus+ mobility programme. Many other variables show results we expected on the basis of results reported here so far.

Figure 21: Overview on significant variables on overall satisfaction and all its sub dimensions

Variable	Com- petence developm.	Employ- ability	General prof. develop.: network	General prof. develop.: skills	European citizenship	Inno- vation	System develop.: cooperat.	System develop.: institutional	Satisfac- tion-sum
Sending-country	X	X	X	X	X	X	X	X	X
Age	X	X							X
Gender									
Migrant background					X				
Special Needs				X					
Motivation: competence develop.	X	X							
Motivation: individual development	X	X	X	X	X	X		X	X
Motivation: cooperation	X	X	X	X	X	X	X	X	X
Motivation: institutional innovation	X	X	X	X	X	X	X	X	X
Frequency-mobility					X	X		X	X
Receiving: public organisation			X					X	
Receiving: non-profit organisation									
Sending: public organisation	X	X	X	X	X	X	X	X	X
Sending: non-profit organisation			X	X		X		X	
Year of mobility			X	X	X	X	X	X	X
Duration of mobility							X		
Amount of grant	X	X		X			X		
Distance	X				X				X
Type of certificate					X		X		X
Type of activity	X		X	X	X	X		X	

Source: Erasmus+ Data

Since we so far had a rather vertical discussion of results focusing on the sub-dimensions of satisfaction, we now should change perspective and discuss the results horizontally focusing on the (single) influencing variables. The table above (figure 21) allows to change perspective by indicating the significant influence variables have on the sub-dimensions of satisfaction (indicated by X).

If we look at the results, we can differentiate four groups of variables:

- The highly influential ones (influence on 7-9 dimensions): Motivation: individual development, motivation: cooperation, motivation: institutional innovation, the sending organisation is a public one, the year of mobility and the sending country.
- A group of medium influential variables (influence on 4-6 dimensions): frequency of mobility, sending organisation is non-profit, budget of mobility and type of activity.
- Partially influential variables (influence on 1-3 dimensions): age, migration background and special needs of participants, motivation in individual competence development, receiving organisation is a public one, duration of mobility, distance of mobility and certificate type.
- Last, but not least, we find non-influential variables like gender and receiving organisation is non-profit.

On the basis of these results we can recommend to highly focus on motivation of participants. The more motivated they are, the better their satisfaction with the programme is. An essential part of motivation derives from involvement and participation in planning the mobility. Probably these prerequisites not in all cases are met, when participants in mobility are sent by public organisations since they rate their satisfaction in mobility comparably low.

V. Target Group Comparison

Whereas in the module of causes and effect analysis all the calculations were made within the Erasmus+ data we will go beyond that when it comes to target group comparison. The purpose is to compare the structure and composition of Erasmus+ participants with the whole adult education teaching and administrative staff which is the target group of the mobility-programme. We do this in order to answer the question, who is likely to participate in Erasmus+ and who is not? This helps us to identify selective structures at the entrance of the programme.

The success of this module heavily depends on the availability of data describing the structure of the target group in participating countries. Finding suitable external control data is not a simple task since the prerequisites for control data is that it is comparable between participating countries (e.g. concerning definitions used) and that it is matching the variables in the Erasmus+ survey (like age and gender).

The best option for control data is the European “Labour Force Survey” (LFS). The LFS is a joint statistical programme of all European Member States under supervision of EUROSTAT. In each country a sample of approx. 1% of the population is included and asked questions mainly concerning occupational and educational questions every quarter of the year. The LFS serves as a source for several important indicators which are permanently monitored. So the LFS e.g. is the source for the calculation of all the unemployment rates communicated by member states and EUROSTAT.

The advantages of the LFS are, that:

- it has a strong focus on labour market, employment, occupation and continuing education,
- it includes 8 out of 9 participating countries (data is not available for Slovenia in all details needed),
- it comprises shared definitions, therefore it supplies comparable data for all countries. One example for shared definitions resulting in comparable data can be found in the ISCO-international standard classification of occupations. On the basis of ISCO all occupations are structured and grouped according to codes where the same rules apply throughout the whole European Union.
- It includes a remarkable number of participants (approx. 250.000 AE teaching staff) in the 8 countries.

The disadvantage of the LFS is just one:

- AE teaching staff is not an explicit sub-group of the ISCO-international standard classification of occupation per se. Instead AE teaching staff is included in other subgroups where they are part of. Therefore, we have to identify and decide which subgroup shown in the table below comes closest to the target group of interest here.

Figure 22: ISCO codes for selection

ISCO-International Standard Classification of Occupations		
CODE	Description	Examples
23	Teaching Professionals	
231	University & Higher Edu.	Professor, University lecturer, ...
232	Vocational Education Teachers	Teaching VET in AE & to senior students in secondary schools and colleges
233	Secondary Edu. Teachers	Secondary & high school teaches
234	Primary & Early Child Edu.	Primary school teachers, early childhood educators
235	Other Teaching Professionals	Special needs, language for migrants, music, arts, IT, other outside the mainstream education system

The occupation “teaching professionals” the AE-teachers belong to is divided into 5 subgroups we find data for in the LFS.

These are:

- University & Higher Education teachers
- Vocational Education Teachers
- Secondary Education Teachers
- Primary & Early Childhood Education teachers and
- Other Teaching Professionals

The subgroup “Other Teaching Professionals” comprises teachers for special needs, language for migrants, music, arts, IT and other professionals **outside the mainstream education system**. All National Agencies involved decided to choose ISCO-subgroup 235 as a comparison group since it comes closest to the participant group in the adult education mobility programme.

The persons employed in ISCO-235-group sum up to 250.000 representing 15,4% off all teaching staff and 0,9% of all employed persons in those 8 countries data is available for.

Figure 23: Employees in adult education, per country

	employed in ISCO 235	%-all-teach- staff	%-all employed
Austria	40 906	19,3%	1,0%
Estonia	5 890	16,6%	0,9%
Finland	32 753	22,4%	1,3%
Hungary	29 744	14,7%	0,7%
Iceland	4 355	25,9%	2,4%
Netherlands	81 726	19,7%	1,0%
Norway	19 348	9,4%	0,7%
Sweden	35 265	10,6%	0,7%
Slovenia	n/a	n/a	n/a
all	249 987	15,4%	0,9%

Source: LFS-2015

1. Educational activities of “other teaching professionals” (ISCO 235)

As mentioned before the labour force survey besides occupational variables also focusses on educational activities. This offers the opportunity to analyse educational activities of employees in ISCO-group 235 on a macro level, where Erasmus+ mobility plays an insignificant part.

A rather high amount of one third of all employees in this occupational group participated in education or training, more than 20% have done this in form of a non-formal learning activity. Differences across participating countries are considerably high ranging from Sweden (40%-50%) to Hungary (8%-10%).

The purpose for participating in non-formal learning (figure 21) in most cases was to receive initial training to get skills for a job (77%). Only a small proportion participated for the purpose of continuing vocational training (23%). Austria and Hungary mark the “extreme” points of a continuum, where Austria indicates the highest proportion of continuing training (43%) and Hungary the lowest (7%).

In average the participants spent 12 hours on these learning activities in non-formal learning, ranging from 9 hours in Sweden and Iceland to nearly 19 hours in Estonia.

All these results of calculations are shown in the tables below.

Figure 24: Participation in learning activities

	total number of employees	participation in education or training*	participation in non-formal learning*
AT	40 906	34,3%	22,6%
EE	5 890	25,7%	20,3%
FI	32 753	42,5%	38,6%
HU	29 744	10,4%	8,4%
IS	4 355	42,1%	28,2%
NL	81 726	31,9%	12,9%
NO	19 348	38,4%	24,6%
SE	35 265	48,0%	39,2%
SI	n/a	n/a	n/a
total	249 987	33,9%	22,4%

Source: LFS-2015

* Question in LFS focuses on a short period (last four weeks)

Figure 25: Purpose for participation and hours spent in non-formal learning

	initial training to get skills for a job	continuing vocational training	hours spent
AT	57,0%	43,0%	13,8
EE	60,6%	39,4%	18,5
FI	78,1%	21,9%	10,0
HU	93,3%	6,7%	10,3
IS	78,3%	21,7%	9,2
NL	91,4%	8,6%	15,8
NO	n/a	n/a	11,7
SE	n/a	n/a	9,0
SI	n/a	n/a	n/a
Total	77,1%	22,9%	11,9

Source: LFS-2015

All these data available allows to calculate shares of Erasmus+ on all formal and informal learning activities of those people employed in ISCO-group 235 (other teaching professionals). This is done by comparing the number of Erasmus+ participants in 2015 with the corresponding employees in the labour force survey. By doing that we find a 1,2%-share of Erasmus+ on all participations in education and training and a share of 1,8% of all participations in non-formal learning. These results indicate a high potential of additional participants in Erasmus+ mobility and, also, the potential to widen the programme. This conclusion finds support in the rather short period (4 weeks prior to the survey) the LFS covers. Therefor we can consider the number of participants of ISCO-group 235 in learning activities even higher, if we focus on a whole year.

Figure 26: Share of Erasmus+ on all learning activities of ISCO 235

	Erasmus+ share on all participations in edu. or training	Erasmus+ share on all participations in non-formal learning
AT	0,9%	1,4%
EE	7,8%	9,8%
FI	1,9%	2,1%
HU	3,4%	4,2%
IS	1,4%	2,0%
NL	0,4%	0,9%
NO	0,5%	0,8%
SE	1,3%	1,6%
SI	n/a	n/a
total	1,2%	1,8%

Source: LFS-2015 & Erasmus+ Data

2. Structure of participants and target group

The most interesting potential a target group comparison offers is to analyse and compare structures of participants and the target group. This offers the opportunity to detect selective structures of the mobility programme. According to the variables available in both datasets we can do this mainly considering age and gender.

Since the comparison group does not fit the mobility group exactly it is not valid, to interpret every single difference but rather to focus on the big ones. Concerning gender, we find several of them in the table below. According to these results female participants in Erasmus+ are overrepresented. This is true especially for Finland and Norway but the other way round in Estonia where male participants seem to be highly overrepresented in the programme.

When it comes to age structure the middle-agers (35-54-years) prove themselves as the dominant group. Among the participants they are overrepresented nearly by 8%-points compared to the ISCO-Employees group. The younger ones and the older ones are underrepresented if we look at all at once. But this tendency is not true for all participating countries. In some countries the underrepresentation of the younger persons (under the age of 35) is much more explicit (Finland, Netherlands, Norway) than in others. In these countries we also find higher proportions of the older ones among the Erasmus+ participant compared to the group of employees. Austria, Estonia and Hungary somehow mark an even different exception since we find an overrepresentation of the younger ones and at the same time, an underrepresentation of the older ones.

Figure 27: Comparison of gender-structure

	ISCO 235 employees		Erasmus+ participants		difference	
	%-male	%-male	%-male	%-fem	%-male	%-fem
AT	30,6%	30,6%	27,9%	72,1%	-2,7%	2,7%
EE	6,4%	6,4%	27,8%	72,2%	21,4%	-21,4%
FI	26,7%	26,7%	15,1%	84,9%	-11,6%	11,6%
HU	20,3%	20,3%	24,3%	75,7%	4,0%	-4,0%
IS	17,8%	17,8%	27,4%	72,6%	9,6%	-9,6%
NL	30,4%	30,4%	32,0%	68,0%	1,6%	-1,6%
NO	38,3%	38,3%	29,7%	70,3%	-8,7%	8,7%
SE	25,9%	25,9%	23,4%	76,6%	-2,5%	2,5%
SI	n/a	n/a	16,3%	83,7%	n/a	n/a
total	27,9%	27,9%	23,1%	76,9%	-4,8%	4,8%

Source: LFS-2015 & Erasmus+ Data

Figure 28: Comparison of age-structure

	ISCO 235 employees			Erasmus+ participants			difference		
	<35y	35-54y	55+y	<35y	35-54y	55+y	<35y	35-54y	55+y
AT	26,0%	57,2%	16,8%	30,8%	56,3%	12,9%	4,8%	-0,9%	-3,9%
EE	22,6%	47,8%	29,6%	25,4%	60,4%	14,2%	2,8%	12,6%	-15,4%
FI	21,7%	57,7%	20,6%	12,1%	60,9%	27,0%	-9,5%	3,2%	6,4%
HU	27,5%	48,2%	24,3%	39,3%	51,6%	9,1%	11,9%	3,4%	-15,2%
IS	26,5%	47,5%	26,0%	16,4%	61,0%	22,6%	-10,1%	13,4%	-3,4%
NL	27,3%	43,9%	28,9%	19,6%	44,6%	35,8%	-7,7%	0,7%	7,0%
NO	24,6%	54,3%	21,1%	15,7%	54,7%	29,7%	-8,9%	0,4%	8,6%
SE	19,4%	44,4%	36,2%	19,9%	59,6%	20,6%	0,4%	15,2%	-15,6%
SI	n/a	n/a	n/a	22,7%	65,2%	12,0%	n/a	n/a	n/a
total	24,9%	49,4%	25,7%	21,9%	57,3%	20,8%	-3,0%	7,8%	-4,8%

Source: LFS-2015 & Erasmus+-Data

If we change our perspective from the characteristic of participants to the characteristic of organisations other teaching professionals (ISCO 235) work for we could elaborate a contrafactum to compare the size of their sending organisation to. But since the data concerning the variable “sending institution employs less than 250 persons” does not prove reliable compared to the expertise of National Agencies involved in the project this comparison is skipped.

VI. Conclusion

The detailed analysis of the model results (both at transnational level and in the comparison of the participating countries) shows:

- That due to the total number of datasets, the stability of results in terms of time, and the low variance the model is well suited to reflect the participants' (self) assessment of the effects of adult education mobility in Erasmus+.
- That the impact of mobilities on the participant's development and the development of the sending institutions is appreciated by the participants, the overall programme score is 3.9 (out of 5). This applies to all analysed topics. In their feedback, the participants indicate that mobility has a positive effect on their skills, their professional development, their network, their employability and on aspects such as innovation and internationalisation, which enhances the further development of both the participants and the institutions.
- That the score of the indicator for European citizenship and innovation is stable at 3.9 over the analysed years. This points to a rather positive impact of the mobility programme on the change of the participant's view on the European scope. The highest values are achieved by questions that aim to the rising interest in European topics.
- That for all years analysed, the indicator for competence is 4.4 (on a 5-part scale) in the transnational perspective. Participants stated that thanks to the mobility experience they learned from good practices abroad, gained practical skills relevant for their current job and professional development, and that they developed their social and civic competences.
- That, in general, the effects on the (future) employability are rated as positive by the participating staff (average across all countries and years: 3.6). They think that by participating in a mobility they have improved their career and employment opportunities.
- That the average of the indicator general professional development over the years of observation is stable at 4.1; the sub-indicator for skills and knowledge is around 4,0 whereas the sub-indicator is stable at 4.2. The participants rate the positive effect of the mobility on their further occupational activity rather high. They claim to have improved their awareness of methods for assessing and giving credit for skills or competences acquired in formal and informal learning context, to have become more motivated to carry on developing their professional skills and also have improved their organisational, management and leadership skills.
- That regarding system improvement, the participants reflect a certain impact in regard to the reinforcement of cooperation between partner institutions and think that this will go on in the future. Therefore, the overall score for this issue is 3.5.
- That for the overall period, the indicator for innovation is almost 4.0. Participating teachers and trainers think that their participating will lead to the use of new teaching or training methods at their sending institution and to the introduction of new subjects and curricula.
- That, although the assessment of the effects of mobilities in the topics of employability and system improvement is less than in the areas of competence, professional development and European citizenship and internationalisation, the participants also feel that these topics are positively impacted by the mobility. Among other things, this could be explained by the different systems to which the sending and receiving

institutions belong. Another explanation, however, lies in the fact, that KA1 aims on professional development of individuals and institutions and not so much on the system itself.

The results can be used in several ways:

- To show the importance of mobility programmes for a sustainable and positive development of the education and labour market situation in Europe.
- To provide guidance on how to optimise Erasmus+ mobility programmes for accuracy and target group adequacy.
- To improve the questionnaires of the participant surveys towards a better reproducibility of European goals and strategies by means of in-depth analyses.

The detailed analysis of causes, effects and structures entails the following recommendations:

- We recommend to highly focus on the motivation¹² of participants. The more motivated they are, the better their satisfaction with the programme is. In this context it is essential, that participants are actively involved in the application for and/or preparation of mobilities within their institutions. The participants also should have an idea why they are doing the mobility. These prerequisites are probable not met in all cases in public organisations since participants rate their satisfaction in mobility comparably low.
- National Agencies should pay attention to the comparable low rating of participants sent by public organisations. Further investigations are needed to gain insight to the reasons for this result.
- The selectivity in age and gender is different for the different participating countries. Therefore, the recommendations should be drawn on a national level according to the results shown. Some should promote participations of men others of females. Some should promote the younger participants other countries the older ones.
- Additionally, the low share of realised AE-mobility compared to all educational and training activities of ISCO-group 235 (other teaching professionals)¹³ has to be considered. Related to the educational-training-affinity this group proves there is a huge potential to increase this Erasmus+ programme in size. However, this is directly dependent on the budget available for adult education under Erasmus+.
- Since satisfaction of participants differs quite remarkable, depending on their country of destination we recommend National Agencies as a matter of quality assurance to elaborate on this result and monitor data, if these results form a trend over a period of time and if these results origin in the evaluation of single institutions.
- Last, but not least, we have to recommend not to change the programme fundamentally since we found compelling evidence, that the participants in AE mobilities found what they were looking for and what motivated them to join the programme: Those motivated in improving cooperation rate their satisfaction in the corresponding sub dimension very high. The same is true for motivation in individual

¹² This refers to the reasons that respondents give as to why they take part in an Erasmus+ mobility programme. See Footnote 2, p. 4.

¹³ Data available in the Labour Force Survey (LFS) concerning ISCO-group 235 "Other Teaching Professionals" has been chosen to serve as comparison group to the AE mobility participants (see chapter V, p. 40)

development etc. In sum, these results can serve as a confirmation that the Erasmus+ programme serves the expectations of AE mobility participants in an exemplary way.

VII. Annex

I. Adult education in the partner countries: a brief overview

The educational systems of the partner countries differ both in terms of structure and in terms of differentiation. This applies in particular to the area of adult education. The systems of adult education in the individual partner countries are briefly outlined below in order to better interpret the model results.

1. Adult education in Austria

Adult education in Austria covers a large number of educational institutions with different objectives and educational programmes. The educational spectrum includes general educational provision, such as basic education and the acquisition of qualifications in 'second-chance education', vocational education and training programmes, higher education and university-based programmes. Of vital importance for participation in and the success of further education are the development and implementation of adult and target-group-specific programmes, as well as high-quality educational advice and career guidance.

Organisational structure of adult education in Austria

At federal level, general adult education and training comes under the remit of the Federal Ministry of Education, Science and Research (BMBWF), although other ministries have responsibility for specific areas. At association level, adult education and training is organised by the Austrian Conference of Adult Education Institutions (KEBÖ), which comprises the ten largest continuing education and training associations. University-based and tertiary research institutions are also important players in this area. Finally, numerous NGOs, associations and enterprises are involved in non-profit and commercial adult education and training.

The St. Wolfgang Federal Institute for Adult Education (BIFEB) is part of the Federal Ministry of Education, Science and Research and acts as a competence centre for the professionalisation of adult further education and training, quality development and specialist discussion.

Adult education programmes and funding

The Federal Ministry of Education, Science and Research supports non-profit organisations involved in adult education and training. The preconditions and criteria for awarding subsidies are laid down in the Federal Financing Act on the Funding of Adult Education and Public Libraries from Federal Funds.

The Adult Education Initiative (IEB) is a programme that provides courses in basic education and enables adults who have not acquired school-leaving qualifications to do

so. The aim of the Adult Education Initiative is to open up better access opportunities to the labour market and to support social integration. Young people and adults living in Austria, regardless of origin and previous education, have the opportunity to acquire basic skills free of charge, even after the end of their school-based education. The legal basis for this is an agreement pursuant to Article 15a of the Federal Constitutional Law (B-VG) between the federal government and the federal states (Länder).

The European Social Fund (ESF) is a structural fund of the European Union. In respect of the adult education and training sector, it provides funds for projects aimed at the sustainable integration of disadvantaged adults into society, education and the labour market, the breaking down of barriers and the creation of equal opportunities, as well as professionalisation and quality development. ESF project funding is co-financed by the Federal Ministry of Education, Science and Research and has the following areas of focus: basic education, acquiring school-leaving qualifications, educational advice and professionalisation.

For more information please consult the webpage of the Federal Ministry of Education, Science and Research;

https://www.bmbwf.gv.at/en/Topics/adult_education_austria.htmlA

2. Adult education in Finland

The Finnish adult education and training system is the result of a historical process. It is not the result of consistent decisions for effecting structural changes, but each adult education organisation has emerged to satisfy specific educational needs. Formal adult education comes primarily through the university system and vocational schools (which are government funded, students do not have to pay fees), whilst non-formal learning is defined as not aiming towards qualifications or diplomas.

Organisational structure of adult education in Finland

Different institutions arrange a great variety of courses and programmes for adults at all levels of formal education, and the provision of liberal adult education is extensive. Over 7 per cent of the Ministry of Education's main title of expenditure is allocated to adult education. Of this total, about 40 per cent is allocated to vocational adult education and training and apprenticeship training, one fourth goes to adult education provided by higher education institutions, a fifth to liberal adult education, and about 5 per cent to developing adult education and continuing education for teaching staff.

With the exception of further and specialist vocational qualifications, adult education and training leading to qualifications is provided free of charge. The government also subsidises other forms of education and training intended for adults in order to keep student fees at a reasonable level.

Participation in adult education

During the last two decades, participation in adult education and training has more than doubled. More than three million people participated in adult education or training at some point in their lives, which equals to 85 per cent of the adult population. According to a latest adult education data collection (released early 2018) the rate of participation in adult education and training by persons aged 18 – 64 years was 50 per cent, 1.6 million people. Women are still more active than men in both general and vocational studies.

General adult education and 'Non-Formal' Learning

General adult education comprises general upper secondary schools for adults and liberal adult education. General upper secondary schools for adults are institutions mainly intended for gainfully employed adults, who wish to complete basic education or general upper secondary education syllabi or parts of these. Liberal adult education offers non-formal (non-certificate-oriented) studies, which provide adults with opportunities to develop themselves without qualification- or occupation-specific aims. Educational institutions offering liberal adult education are: folk high schools, adult education centres, study centres, summer universities and sports institutes.

There is a long tradition of network of 'liberal' education centres in Finland including adult education centres, study centres, folk high schools, sports centres and summer universities. A common feature of these is that their objectives are not set by external or 'top down' governing bodies but are decided by the organisation within the institutions. These organisations usually include associations and foundations and may represent different ideological or views, but also base their decisions on local cultural and educational needs.

Vocational Institutions and career-related training

Vocational adult education and training can be divided into upper secondary and additional vocational education and training. The education or training may be either

certificate-oriented or non-formal. Upper secondary vocational education and training is certificate-oriented, whereas additional vocational training may be either. Apprenticeship training is a primarily work-based form of providing VET carried out under the supervision of a workplace instructor and based on the student's stated competence needs.

Source: https://eacea.ec.europa.eu/national-policies/eurydice/content/adult-education-and-training-25_en

3. Adult education in Hungary

In Hungary, adult education and training is **multifunctional**:

- on one hand it serves as second-chance education (to provide missing basic qualification and/or a first vocational qualification);
- it also serves to provide further (higher level) qualifications or vocational qualification and to ensure continuous professional development;
- it provides help during unemployment, or for obtaining “marketable” professional knowledge within employment, before becoming unemployed;
- creates the chance of social inclusion and social involvement of disadvantaged and disabled people;
- it meets intellectual needs of adult learners that are not included in curricula of school-based education;
- complementary trainings provide knowledge, e.g. language skills, computer user skills that do not provide a qualification.

In Hungary, adult learning is mainly organised in the following **two sectors**:

Adult education is the school-based, formal education provided for adult learners. In this sense, adult education is a type of training where „the student receives school-based education matching the student's workplace, family, or other activities, as well as his/her knowledge and age.” As the above activity is mainly organised by general educational institutions, it is regulated by the General Education Act (Act CXCV of 2011). Education for adults studying in higher education is subject to the Higher Education Act (Act CCIV of 2011). The purpose of these law has been defined as the following: the right to learn must be lifelong for any individual. The state should create the legal frameworks for adult education, operate its institutional system and provide the financing background. The state should also help adults stay in their jobs or acquire new ones while promoting the development of adults' constructive lives. Presently students may only start a new academic year in adult education from the year they reach the age of 17 in the case of an eight-grade primary school, or when they reach the age of 21 in the case of a secondary school and vocational school. (Students with special educational needs may be subject to other rules as well.) In secondary schools, students may continue their studies within the frame of adult education from the academic year when they reach the age of 16. In Hungary, education is obligatory until the end of the academic year in which the student reaches the age of 16. The primary aim of adult education is to acquire a specific vocational qualification. Secondary aims are to improve people's labour market position, to continue professional training, to facilitate the acquisition of valuable competences in the labour market and the acquisition of a higher level of professional qualifications. Further objectives are to support the unemployed to re-enter the labour market and to strengthen employment status, job performance, the vocational trainings' success through employment-friendly training courses. This can be done by teaching career guidance by learning basic job-search skills, or learning other competences needed for certain jobs, such as basic computer skills, language skills and communication skills.

The term adult training refers to organising adult learning outside the school system. It is a complex term that includes general, vocational and language training. The participants of the training do not have a student status within the training institution. The legal relationship is determined by the adult training contract between the participants and the training institution. Adult training is regulated by the effective Adult Training Act (Act LXXVII of 2013). Participants in adult training can be those who have already completed compulsory education, or people subjected to compulsory education and joining adult training in addition to participating in compulsory education. The effective law does not

cover the entire scope of adult training, and regulates the following training fields: state-recognised training in the NVQR (vocational qualification in the National Vocational Qualifications Register); other supported trainings outside the NVQR; general and other supported language trainings; other supported trainings. The Adult Training Act does not regulate such trainings whose typical participants are adults and strongly profession-specified. These include the trainings for those in official service, (military, police, etc.), public service officers, as well as professional trainings in the health sector and in-service trainings for teachers. All trainings implemented from central budget or EU sources shall be considered as supported trainings. Training provider institutions offering trainings subject to the Adult Training Act (Act LXXVII. of 2013) may be a legal entity, unincorporated business entity, individual company, private enterprises or general education institution maintained by the state. For pupils in need of special education, it is also worth disputing the legal framework for the disabled adult concept. The concept of a disabled adult is defined in the Act XXVI of 1998. The rules and conditions are governed in the Adult Training Act and the Act 123/2007. (V.31.) on the detailed rules of adult education normative support government decree. According to this regulation, only adult with disabilities may be eligible for normative support. Disabled support grants free access to general, language and NQR (National Qualification Register – state-recognized) and non-NQR vocational training for adults with disabilities. In case of general, language or vocational training not included in the NQR, the training institution must have a programme accreditation certificate. If education is excluded from the above listed training fields, adult training organising institutions shall be subject to Act CLV of 1997 on Consumer Protection and they render free market services.

Source: https://eacea.ec.europa.eu/national-policies/eurydice/content/adult-education-and-training-35_en

4. Adult education in Iceland

According to the Adult Education Act no 27/2010, adult education in Iceland is intended for adults who have limited formal schooling to provide them with suitable educational opportunities and facilitating renewed study (1). Although the law on adult education in Iceland is relatively new, work on revision has already started. The current law has made a considerable impact on adult education however, there is a need for more focus and simplification (2).

By law adult education has several goals aimed at individuals, the labour market and the system. One of those goals is to provide educational opportunities for people with limited education and to enhance competence and employability. Another goal is to meet the labour markets needs for enhanced knowledge by providing educational opportunities. The goal of adult education is also to provide a recognition system for education that falls outside of formal secondary and tertiary education and to support that education acquired outside of the formal school system is valued. Besides this, the goal of adult education is to increase the education level in Iceland and strengthen the education system (1).

Adult education has many forms. Courses which are subsidized by public funding mainly aim at providing people with skills which are either relevant for the labour market or provide credits for further studies, e.g. at upper secondary school. Great emphasis is placed on validation of prior learning, be it informal or non-formal. Educational and vocational counselling forms an important part of this process. Furthermore, adult learning is also commonly offered for people who are already qualified, e.g. people with vocational qualifications who need upskilling. The last category is formed by smaller courses, where ICT learning is probably the most common.

The need for accessible adult education in Iceland may be considered substantial as 19% of 25-34-year-olds have not attained upper secondary education. Although the proportion has fallen by 9 percentage points since 2008 it is still well above the OECD average of 15% (3).

Adult education institutions

Lifelong Learning centres are operated in all parts of the country. Their role is to ensure quality and variety of education as well as to encourage participation (4). Adult education is included in public funding providing several adult education institutions with funds for their operations (1). Additionally, unions, companies, associations and others offer adult education (4). In March 2020 there were 26 formally recognised adult education institutions in Iceland and three are in the recognition process (5).

Further readings

For further reading about adult education in Iceland please consult the webpages of the Government of Iceland¹⁴, the Adult Education Act¹⁵, Eurydice¹⁶ and articles on the EPALE website; “Consultation in Adult Education in Iceland 2017-2018”¹⁷ and “Adult education in Iceland”¹⁸.

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¹⁴ <https://www.government.is/topics/education/adult-education/>

¹⁵ <https://www.government.is/media/menntamalaraduneyti-media/media/frettatengt2016/Thyding-log-um-framhaldsfraedslu-november-2016.pdf>

¹⁶ https://eacea.ec.europa.eu/national-policies/eurydice/content/main-providers-35_en

¹⁷ <https://epale.ec.europa.eu/en/content/consultation-adult-education-iceland-2017-2018>

¹⁸ <https://epale.ec.europa.eu/en/resource-centre/content/adult-education-iceland>

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5. Adult education in the Netherlands

The Dutch Adult Education sector is not a clear sector but a fragmented field consisting of a large variety of smaller and larger organisations engaged in adult learning. Adult Education can be both formal and non-formal and can be targeted towards literacy, numeracy, digital skills at one hand and general skills and competences at the other. However, the main part of adult education in the Netherlands is non-formal either related to local policies or in the private sector. In the Netherlands non-formal is very distinct from the formal education. In non-formal adult education the focus is on the learner as centre of the learning process; there is a strong connection to changes in the professional field; training is adapted to the requirements of the labour market: and there is opportunity for a wide variety of study options

Organisational structure

There is no centralized governance of the Adult Education sector and the central government budget for adult education is allocated to the municipalities. Organisations involved in Adult Learning are often local and regional and range from public to private organisations such as VET-schools, welfare organisations and language providers. In the Netherlands, the focus within Adult Education is on adults from 18 years and older, but there is no formal limitation based on age. However, the field may be fragmented, the Adult Education Sector in the Netherlands mainly focusses on the learning of Adults with disadvantaged backgrounds. Therefore, education in the Netherlands is focused on the personal development of adults and their participation in society, in particular participation in the labour market. In some cases, the adult education brings participants up to the level required for admission to vocational education courses. But adult education does not include any form of higher education.

Funding structure

As mentioned before, the overall budget for adult education is allocated to the municipalities. The municipal authorities are responsible for contracting the different regional and local organisations to offer adult education courses that fit the needs of the local population. As the OECD (<https://www.oecd.org/netherlands/49528317.pdf>) states 'The municipalities fund is by far the main source of income for the municipalities. It is meant for all the expenses the municipalities have to make. Funding and allocating to municipalities take place through objective criteria, related to demography, size and other features. Municipalities are free to spend this money according to the priorities of local democracy, which can also be for educational purposes. There is no exact information on the amount of money concerned.'

6. Adult learning in Norway

Lifelong learning is an important principle of Norwegian education policy. Basic skills training and validation of prior learning play a significant part in our adult education policies. Along with learning in formal and non-formal structures, working life is of major importance as an arena for lifelong learning in Norway. The goal of Government policy is to provide everybody with the possibility of widening their competencies and developing their skills throughout life. This may contribute to increased life quality for the individual and value creation and flexibility in working life. The competence and skills of the population are a major factor in securing economic growth, employability, competitiveness and cooperation.

Organisational structure of adult education in Norway

In the formal sector the provision of adult education at primary and lower secondary school level is the responsibility of the municipalities, and at upper secondary level it is the responsibility of the counties. The Ministry of Education and Research has the regulatory responsibility for all levels of formal education in Norway from kindergarten upwards. The content of adult education and primary and secondary education in general, is regulated by the Norwegian Directorate for Education and Training. The responsibility for immigrant education lies within Ministry of Education and Research.

Skills Norway (the Norwegian Institute for Adult Learning) has a particular responsibility for improving the participation rate in adult learning, specifically with programmes focused on basic skills training within working life and outside. Skills Norway has particular competence within the fields of adults' legal rights and validation of prior learning. Skills Norway also works in close co-operation with social partners and NGOs to advance adult learning in working life.

In the non-formal sector several actors have tasks and responsibility:

Adult education associations: The main objective of the adult education associations is to provide educational opportunities that are independent of curricula and exams. However, they can also provide formal training at all levels. The Norwegian Association for Adult Learning (NAAL) is an umbrella organisation for publicly approved Norwegian education associations.

Distance education: Distance education comprises various forms of flexible learning, ranging from traditional correspondence courses to web-based learning and use of various digital media. The courses cover all levels of training. Flexible Education Norway (FUN) is a nationwide organisation for institutions that provide distance education.

Folk high schools: The folk high school are institutions for adult education that generally do not grant academic degrees. The objective is to promote learning for life and general knowledge. The Folk High School Council represents the interests of the folk high schools.

Laws and regulations

The right to free education for adults up to and including upper secondary is guaranteed by law. The responsibility is divided between municipalities and counties. Adults who need primary and lower secondary education have a statutory right to such education. Adults also have a statutory right to upper secondary education. This applies to adults who have not already completed an upper secondary education.

Adult education is regulated by the Adult Education Act (1976) and the Education Act (1998). Under the Adult Education Act, the provision of courses is the responsibility of the respective public education authorities at the various levels of education. The Education Act regulates primary, lower secondary and upper secondary education for all, included adults. Higher education (universities and university colleges) is regulated in a separate law, which applies to this level of education in general (regardless of the students' age). In 2001, rules about validation in HE were added to the law. A new law on non-formal adult learning was introduced in 2010, to regulate organised learning activities outside the formal sector. In addition, there is a separate Act on Folk High Schools (1984).

Source: <https://www.kompetansenorge.no/English/Adult-learning-in-Norway/>

7. Adult education in Slovenia

Education and learning of adults in Slovenia has been systematically organised for over sixty years. Through years there has been many changes in political systems, different educational level of adults, their needs and capabilities, the needs for different contents and indicators that have to be reached. The system is actively adapting to all this changes and is keeping in line with national and European strategic documents and development guidelines on adult education.

Organisational structure and funding

The main responsibility for adult education and training lies with the Ministry responsible of education and its Upper Secondary, Higher Vocational and Adult Education Directorate and the central piece of legislation in the field is the Adult education Act (sl).

The central public institute and umbrella institution for adult education in the Republic of Slovenia is The Slovenian Institute of Adult Education (SIAE). The fundamental purpose of their operations is to develop the field of adult education in line with the Resolution on the Master Plan for Adult Education in the Republic of Slovenia for 2013–2020 and other national and European strategic documents and development guidelines on adult education.

Adult education Act regulates non-formal education and learning of people who have fulfilled their basic education obligation and do not hold the status of a pupil or a student.

The network of adult education providers comprises specialized adult education institutions as well as various organisations that offer adult education as a supplementary activity. They include units for adult education in basic schools, upper secondary schools and in higher education institutions; adult education centres called folk high schools; third age universities; educational centres in business companies and other organisations whose main activity is not education; privately owned adult education institutions and private not-for-profit institutes; associations, libraries, museums, galleries; chambers of commerce, chambers of craft and small business and other chambers; and driving schools (which are under the domain of the Ministry of the Interior).

Participants and organisations

Publicly subsidized adult education programmes include those that target basic skills; programmes aimed at achieving a formal educational qualification; programmes targeting the unemployed or those at risk of becoming redundant; and liberal (popular) adult education programmes.

Adults can also achieve all levels of formal educational qualifications. Acquiring basic school educational qualification is a legally guaranteed right and is free of charge at any age. Adults who wish to complete upper secondary education may enrol in regular upper secondary education programmes with special organisational adjustments for adults, provided they fulfil the requirements regarding previous education or any formally adopted special conditions for enrolment. Adults can also enrol in all levels of tertiary education programmes as part-time students.

Three forms of liberal/popular education have been continuously receiving public funding, namely study circles, centres for independent learning and learning exchange.

Source: Eurydice, https://eacea.ec.europa.eu/national-policies/eurydice/content/adult-education-and-training-77_en

8. Adult education in Sweden

Introduction

The goal of adult education (vuxenutbildning) is to help adults supplement their education in order to strengthen the individual's position socially and in working life. Adult education has deep-rooted traditions in Sweden, and the country has a high proportion of adults participating in education and training.

The proportion of the adult population in Sweden without secondary education is relatively low, but Sweden also has the largest differences in literacy proficiency between foreign-born and native-born adults in Europe. Reducing educational inequality was one of the original purposes when adult education became formalised and remains crucial, along with the other two purposes: creating opportunities for individuals to supplement their schooling and providing the labour market with a well-educated workforce.

The state and municipalities have the overall responsibility for providing the infrastructure for lifelong learning, and there are many forms of adult education in Sweden, both formal and non-formal.

Formal adult education

The formal education system for adults aims to give adults the opportunity to supplement their education in accordance with their individual needs. The legislation is rights-based and each adult over the age of 20 has the right to education equivalent to the compulsory school and the upper secondary school. The goal for the state education system for adults is to strengthen the learners' position in the labour market and to strengthen their capacity to participate in cultural and political activities. The quality of education provided must be equal regardless of the type of school and its location.

Each municipality is responsible for ensuring that municipal adult education is available but may commission other organisations to provide adult education. The curriculum for adult education programme (Läroplan för vuxenutbildningen) from 2012 states that "Adult Education shall transmit knowledge and support students so that they can work and take an active role in the community. It also aims to facilitate continued studies." Adult education provided by municipalities consists of three different forms of education:

- Municipal adult education at compulsory and upper secondary school levels
- Special education for adults (särskild utbildning för vuxna, särsvux)
- Swedish tuition for immigrants (svenskaundervisning för invandrare, sfi)

Labour market training (arbetsmarknadsutbildning) is provided by the Swedish Public Employment Service (Arbetsförmedlingen) and intended primarily for unemployed adults in need of retraining or further training and education. The parliament and the government have assigned the Swedish Public Employment Service the goal of focusing on people who are at some distance from the labour market and who, for example, have been unemployed for a longer period of time.

Non-formal adult education

For over a hundred years non-formal adult education has played an important part in Swedish society. Since the first study circle (studiecirkel) started in late 1800, people have gathered to increase their knowledge together. Liberal adult education (folkbildning) includes study associations (studieförbund) and folk high schools (folkhögskolor). The Swedish National Council of Adult Education (Folkbildningsrådet) is responsible for distributing government grants to liberal adult education providers.

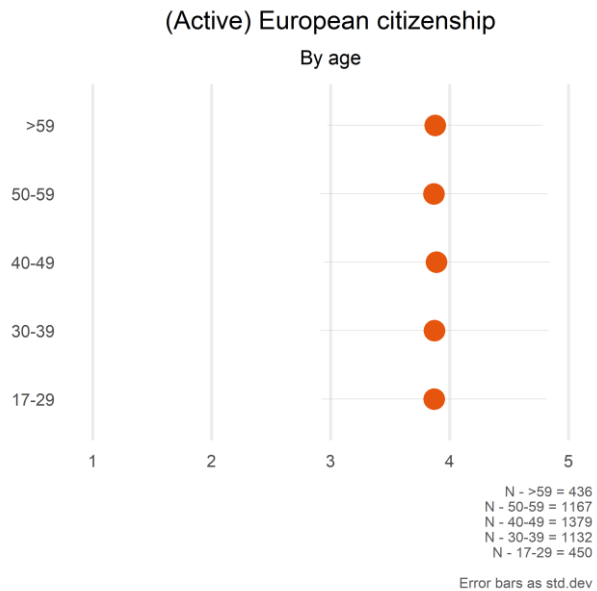
The state has provided financial support to non-formal adult education since 1912. It is generally agreed that non-formal education should be run separately from the state but be financed by public funds. The financial support is calculated on the basis of activities of the year before. The study associations also receive funding from the regions and the municipalities, but lately this support has been reduced or withdrawn.

Liberal adult education is characterised by great freedom in setting its own objectives, while the government defines the purposes of the government grants. These are to help to enable people to influence their own lives and encourage commitment to participating in developments in society. This support is also aimed at helping to close education gaps, raise the standard of education in society, and broaden interest and increase participation in cultural life. Since 2015, the government is targeting financial contributions to courses and study circles for newly arrived, asylum seekers and for migrant women far from the labour market.

The importance of non-formal education to Swedish society is recognised by all political parties.

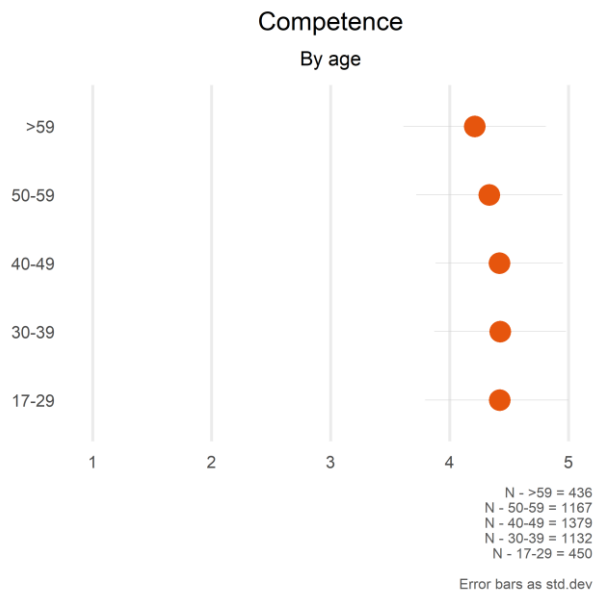
II. Additional charts

Figure 29: European citizenship and internationalisation score, all participating countries and years, by age



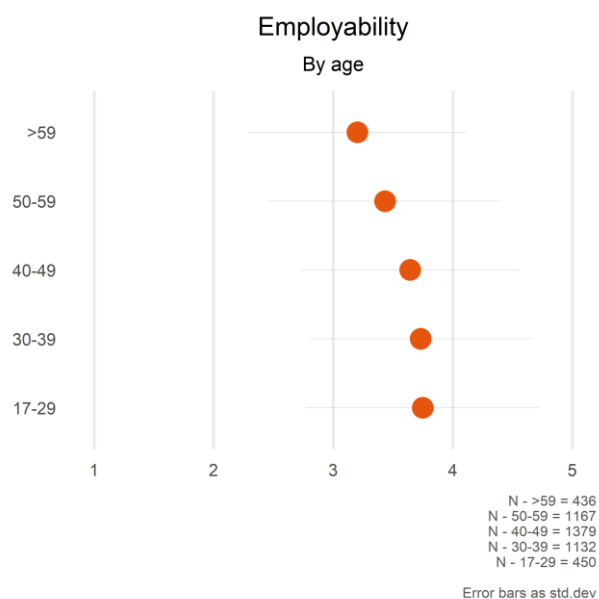
Source: Database "MIA-Q", Status of the model: May 2020

Figure 30: Competence score, all participating countries and years, by age



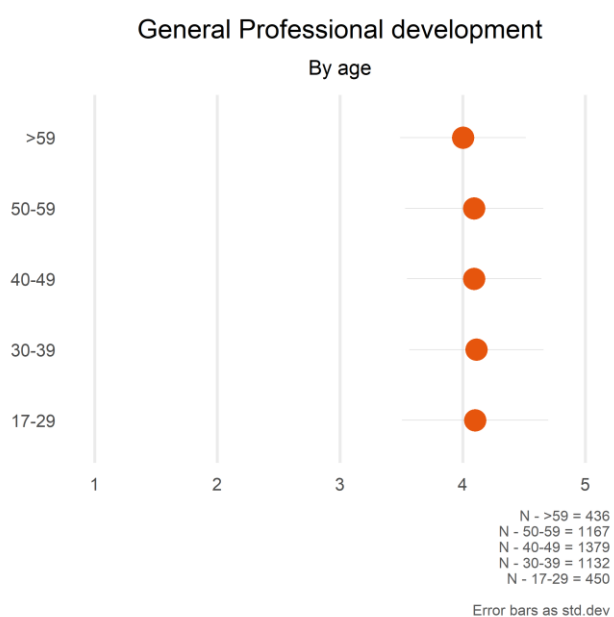
Source: Database "MIA-Q", Status of the model: May 2020

Figure 31: Employability score, all participating countries and years, by age



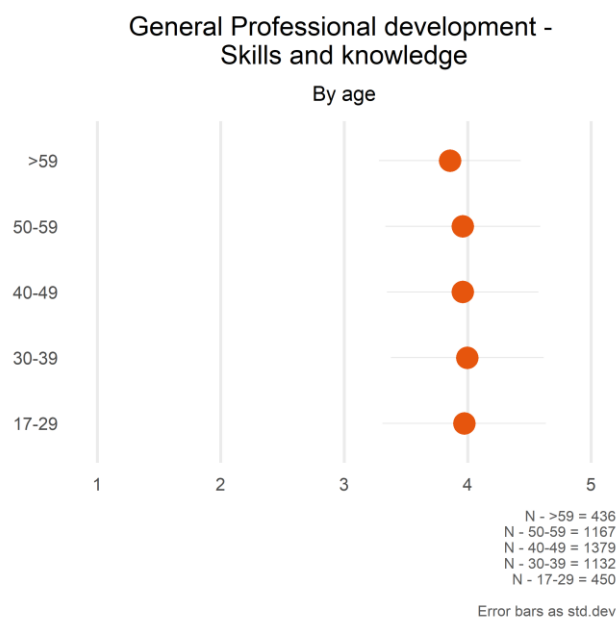
Source: Database "MIA-Q", Status of the model: May 2020

Figure 32: General professional development score, all participating countries and years, by age



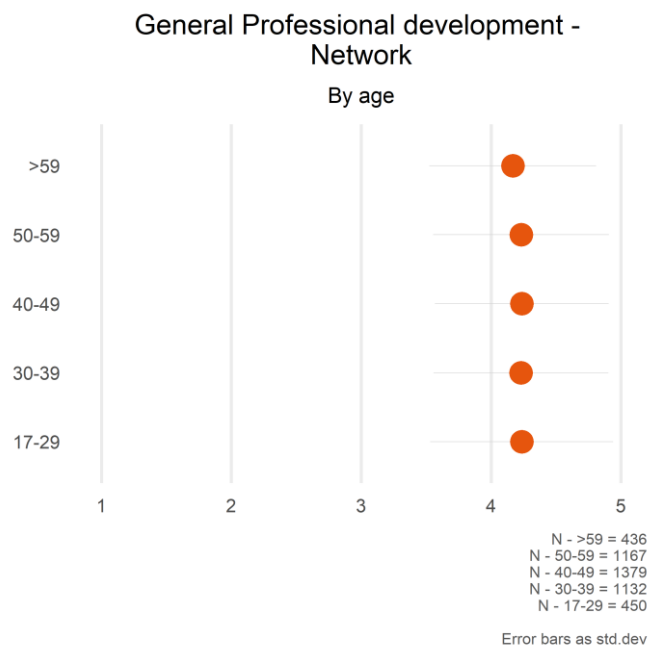
Source: Database "MIA-Q", Status of the model: May 2020

Figure 33: General professional development – skills and knowledge score, all participating countries and years by age



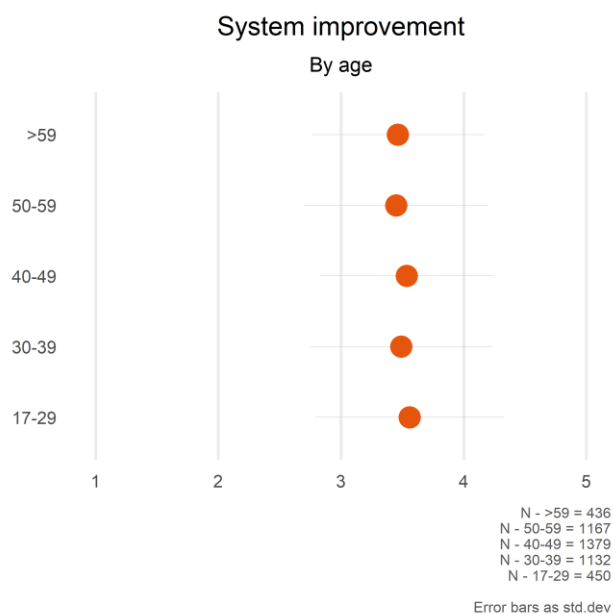
Source: Database "MIA-Q", Status of the model: May 2020

Figure 34: General professional development – network score, all participating countries by years, by age



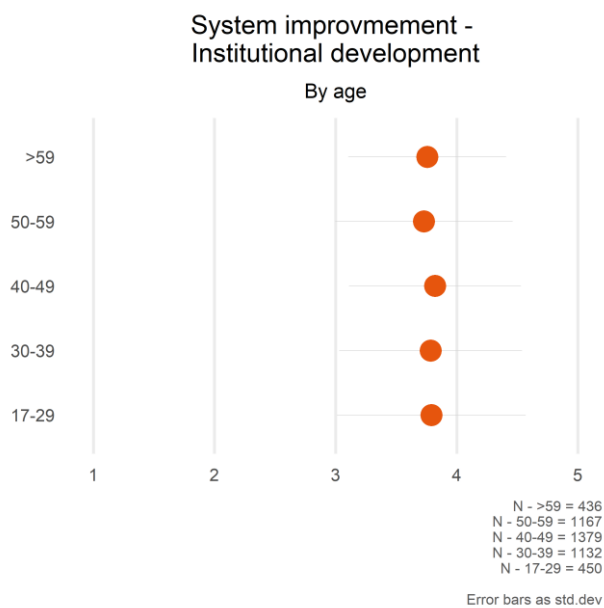
Source: Database "MIA-Q", Status of the model: May 2020

Figure 35: System improvement score, all participating countries and years, by age



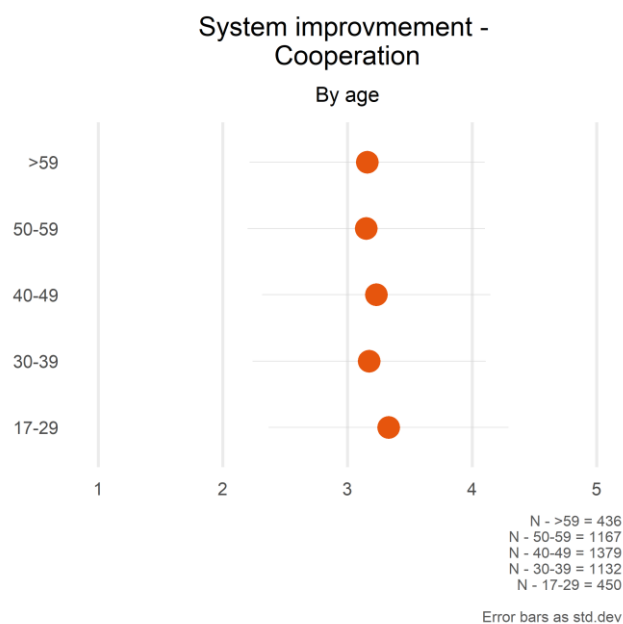
Source: Database "MIA-Q", Status of the model: May 2020

Figure 36: System improvement – institutional development score, all participating countries and years, by age



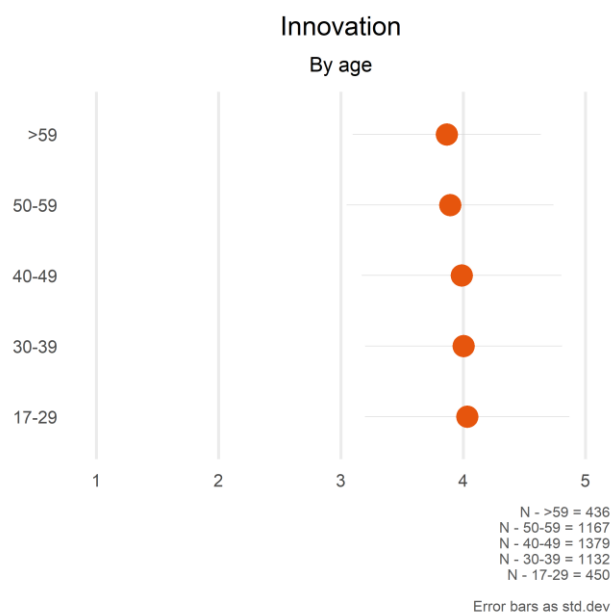
Source: Database "MIA-Q", Status of the model: May 2020

Figure 37: System improvement – cooperation score, all participating countries and years, by age



Source: Database "MIA-Q", Status of the model: May 2020

Figure 38: Innovation score, all participating countries and years, by age



Source: Database "MIA-Q", Status of the model: May 2020

III. Causes and effect Analysis

In the following section we present detailed results of regression analysis concerning the single dimensions of motivation we developed. Here you find concrete numbers supplementing the more general description of results we presented in chapter five.

Figure 39: European Citizenship

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	3,145		0,147
Sending Country Austria	0,002	0,001	0,061
Sending Country Estonia	0,152*	0,042*	0,069
Sending country Finland (+)	0,000	0,000	0,000
Sending Country Hungary	0,302***	0,110***	0,062
Sending Country Iceland	-0,162	-0,032	0,090
Sending Country Netherlands	0,006	0,002	0,061
Sending Country Norway	0,231**	0,055**	0,076
Sending Country Sweden	-0,081	-0,030	0,056
Sending Country Slovenia	0,289***	0,088***	0,066
Age of participants	0,003	0,033	0,001
Gender	0,029	0,013	0,036
Migration background	0,178*	0,041*	0,073
Special needs	-0,338	-0,046	0,130
Motivation: competence developm.	0,023	0,016	0,025
Motivation: individual development	0,040**	0,050**	0,015
Motivation: cooperation	0,182***	0,168***	0,020
Motivation: institutional innovation	0,083***	0,062***	0,023
Frequency_mobility	0,089**	0,054**	0,027
Receiving: Public organisation	0,065	0,031	0,037
Receiving: Non-profit organisation	0,060	0,031	0,034
Sending: Public organisation	-0,085*	-0,045*	0,037
Sending: Non-profit organisation	-0,038	-0,016	0,040
Year_2014	-0,315***	-0,129***	0,049
Year_2015	-0,267***	-0,110***	0,048
Year_2016	-0,414***	-0,166***	0,049
Year_2017 (+)	0,000	0,000	0,000
Year_2018	-0,090*	-0,039*	0,045
Duration of mobility	0,012	0,048	0,007
Amount of grant	0,000*	-0,067*	0,000
Distance of mobility	0,084**	0,067**	0,024
Certificate: course-specific	-0,009	-0,004	0,041
Certificate: europass	0,112*	0,044*	0,047
Certificate: other	0,110	0,022	0,085
Certificate_non (+)	0,000	0,000	0,000
Activity_structured course	0,106*	0,055*	0,045
Activity: job shadowing (+)	0,000	0,000	0,000
Activity: training event	0,079	0,032	0,046
Activity: teaching assignment	0,110	0,021	0,090
Activity: Teaching training assignment	0,074	0,018	0,074
R ²	0,137		
R ² (adjusted)	0,127		
F (df=36; 3.385)	14,868***		

* p<0,05; ** p<0,01; *** p<0,001

Source: Erasmus+-Data

(+) Excluded variable because of multicollinearity

Figure 40: Competence

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	4,067***		0,091
Sending Country Austria	0,008	0,005	0,038
Sending Country Estonia	0,022	0,010	0,043
Sending country Finland (+)	0,000	0,000	0,000
Sending Country Hungary	0,020	0,012	0,038
Sending Country Iceland	-0,106	-0,034	0,055
Sending Country Netherlands	-0,236***	-0,133***	0,038
Sending Country Norway	-0,006	-0,002	0,047
Sending Country Sweden	-0,165***	-0,096***	0,034
Sending Country Slovenia	0,012	0,006	0,041
Age of participants	-0,002**	-0,044**	0,001
Gender	0,041	0,030	0,022
Migration background	0,020	0,007	0,045
Special needs	-0,068	-0,015	0,080
Motivation: competence developm.	0,124***	0,138***	0,016
Motivation: individual development	0,085***	0,170***	0,009
Motivation: cooperation	0,026*	0,038*	0,013
Motivation: institutional innovation	0,057***	0,067***	0,014
Frequency_mobility	0,013	0,013	0,017
Receiving: Public organisation	0,002	0,001	0,023
Receiving: Non-profit organisation	0,016	0,013	0,021
Sending: Public organisation	-0,058*	-0,049*	0,023
Sending: Non-profit organisation	0,011	0,008	0,025
Year_2014	0,049	0,032	0,031
Year_2015	-0,001	0,000	0,030
Year_2016	-0,007	-0,004	0,030
Year_2017 (+)	0,000	0,000	0,000
Year_2018	-0,014	-0,010	0,028
Duration of mobility	0,001	0,006	0,004
Amount of grant	0,000**	0,086**	0,000
Distance of mobility	-0,045**	-0,058**	0,015
Certificate: course-specific	0,027	0,021	0,025
Certificate: europass	0,047	0,030	0,029
Certificate: other	-0,030	-0,009	0,052
Certificate_non (+)	0,000	0,000	0,000
Activity_structured course	-0,067*	-0,055*	0,028
Activity: job shadowing (+)	0,000	0,000	0,000
Activity: training event	-0,009	-0,006	0,029
Activity: teaching assignment	-0,090	-0,028	0,055
Activity: Teaching training assignment	-0,030	-0,012	0,046
R ²	0,162		
R ² (adjusted)	0,153		
F (df=36; 3.385)	18,132***		

* p<0,05; ** p<0,01; *** p<0,001

Source: Erasmus+-Data

(+) Excluded variable because of multicollinearity

Figure 41: Employability

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	3,306		0,150
Sending Country Austria	-0,169**	-0,058**	0,063
Sending Country Estonia	0,036	0,010	0,070
Sending country Finland (+)	0,000	0,000	0,000
Sending Country Hungary	0,122	0,043	0,063
Sending Country Iceland	-0,037	-0,007	0,091
Sending Country Netherlands	-0,032	-0,011	0,062
Sending Country Norway	-0,005	-0,001	0,077
Sending Country Sweden	-0,103	-0,037	0,057
Sending Country Slovenia	0,152*	0,045	0,067
Age of participants	-0,009***	-0,115***	0,001
Gender	0,066	0,029	0,036
Migration background	0,101	0,022	0,074
Special needs	0,085	0,011	0,132
Motivation: competence developm.	-0,080**	-0,054**	0,026
Motivation: individual development	0,226***	0,273***	0,015
Motivation: cooperation	0,051**	0,046**	0,021
Motivation: institutional innovation	0,060**	0,043	0,023
Frequency_mobility	0,031	0,018	0,028
Receiving: Public organisation	0,015	0,007	0,038
Receiving: Non-profit organisation	-0,010	-0,005	0,035
Sending: Public organisation	-0,098**	-0,050**	0,038
Sending: Non-profit organisation	0,007	0,003	0,041
Year_2014	-0,017	-0,007	0,050
Year_2015	0,068	0,027	0,049
Year_2016	0,083	0,032	0,050
Year_2017 (+)	0,000	0,000	0,000
Year_2018	-0,053	-0,022	0,046
Duration of mobility	0,006	0,025	0,007
Amount of grant	0,000**	0,083**	0,000
Distance of mobility	-0,037	-0,029	0,025
Certificate: course-specific	0,011	0,005	0,042
Certificate: europass	0,013	0,005	0,048
Certificate: other	0,005	0,001	0,086
Certificate_non (+)	0,000	0,000	0,000
Activity_structured course	0,052	0,026	0,046
Activity: job shadowing (+)	0,000	0,000	0,000
Activity: training event	0,065	0,026	0,047
Activity: teaching assignment	0,045	0,008	0,091
Activity: Teaching training assignment	-0,003	-0,001	0,076
R ²	0,163		
R ² (adjusted)	0,154		
F (df=36; 3.385)	18,333***		

* p<0,05; ** p<0,01; *** p<0,001

Source: Erasmus+ Data

(+) Excluded variable because of multicollinearity

Figure 42: General professional development: skills and knowledge

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	3,511		0,096
Sending Country Austria	-0,010	-0,006	0,040
Sending Country Estonia	0,017	0,007	0,045
Sending country Finland (+)	0,000	0,000	0,000
Sending Country Hungary	0,062	0,034	0,041
Sending Country Iceland	0,030	0,009	0,059
Sending Country Netherlands	0,012	0,006	0,040
Sending Country Norway	0,180***	0,065***	0,050
Sending Country Sweden	-0,070	-0,039	0,037
Sending Country Slovenia	0,135**	0,062**	0,043
Age of participants	-0,001	-0,028	0,001
Gender	0,038	0,027	0,023
Migration background	0,019	0,007	0,048
Special needs	-0,200*	-0,042*	0,085
Motivation: competence developm.	0,031	0,033	0,017
Motivation: individual development	0,076***	0,143***	0,010
Motivation: cooperation	0,085***	0,119***	0,013
Motivation: institutional innovation	0,132***	0,150***	0,015
Frequency_mobility	0,029	0,027	0,018
Receiving: Public organisation	0,020	0,014	0,024
Receiving: Non-profit organisation	0,026	0,021	0,023
Sending: Public organisation	-0,057*	-0,046*	0,024
Sending: Non-profit organisation	-0,087**	-0,057**	0,026
Year_2014	0,072*	0,045*	0,032
Year_2015	0,050	0,031	0,032
Year_2016	0,027	0,016	0,032
Year_2017 (+)	0,000	0,000	0,000
Year_2018	-0,049	-0,032	0,029
Duration of mobility	0,002	0,010	0,004
Amount of grant	0,000*	0,064*	0,000
Distance of mobility	-0,002	-0,002	0,016
Certificate: course-specific	0,052	0,040	0,027
Certificate: europass	0,055	0,033	0,031
Certificate: other	-0,044	-0,013	0,056
Certificate_non (+)	0,000	0,000	0,000
Activity_structured course	-0,086**	-0,067**	0,030
Activity: job shadowing (+)	0,000	0,000	0,000
Activity: training event	-0,044	-0,027	0,030
Activity: teaching assignment	-0,058	-0,017	0,059
Activity: Teaching training assignment	-0,084	-0,031	0,049
R ²	0,148		
R ² (adjusted)	0,139		
F (df=36; 3.385)	16,288***		

* p<0,05; ** p<0,01; *** p<0,001

Source: Erasmus+ Data

(+) Excluded variable because of multicollinearity

Figure 43: General professional development: network

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	3,967		0,105
Sending Country Austria	0,029	0,015	0,044
Sending Country Estonia	-0,109*	-0,043*	0,050
Sending country Finland (+)	0,000	0,000	0,000
Sending Country Hungary	0,012	0,006	0,045
Sending Country Iceland	-0,109	-0,030	0,065
Sending Country Netherlands	-0,017	-0,008	0,044
Sending Country Norway	-0,073	-0,025	0,055
Sending Country Sweden	-0,024	-0,012	0,040
Sending Country Slovenia	0,090	0,039	0,047
Age of participants	-0,001	-0,018	0,001
Gender	0,023	0,015	0,026
Migration background	-0,079	-0,026	0,052
Special needs	0,097	0,013	0,128
Motivation: competence developm.	-0,020	-0,020	0,018
Motivation: individual development	0,029**	0,050**	0,011
Motivation: cooperation	0,223***	0,289***	0,015
Motivation: institutional innovation	0,042**	0,044**	0,016
Frequency_mobility	0,038	0,033	0,020
Receiving: Public organisation	0,062*	0,041*	0,027
Receiving: Non-profit organisation	0,018	0,013	0,025
Sending: Public organisation	-0,124***	-0,093***	0,027
Sending: Non-profit organisation	0,060*	0,035*	0,029
Year_2014	0,075*	0,044*	0,035
Year_2015	0,010	0,005	0,038
Year_2016	0,092**	0,053	0,035
Year_2017 (+)	0,000	0,000	0,000
Year_2018	-0,027	-0,017	0,031
Duration of mobility	0,001	0,007	0,005
Amount of grant	0,000	0,009	0,000
Distance of mobility	-0,024	-0,027	0,018
Certificate: course-specific	0,011	0,008	0,029
Certificate: europass	-0,013	-0,007	0,034
Certificate: other	0,103	0,028	0,063
Certificate_non (+)	0,000	0,000	0,000
Activity_structured course	-0,116***	-0,084***	0,032
Activity: job shadowing (+)	0,000	0,000	0,000
Activity: training event	-0,069*	-0,040*	0,033
Activity: teaching assignment	0,093	0,025	0,065
Activity: Teaching training assignment	-0,048	-0,017	0,052
R ²	0,158		
R ² (adjusted)	0,148		
F (df=36; 3.175)	16,499***		

* p<0,05; ** p<0,01; *** p<0,001

Source: Erasmus+ Data

(+) Excluded variable because of multicollinearity

Figure 44: System improvement: institutional development

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	3,656		0,102
Sending Country Austria	-0,008	-0,004	0,043
Sending Country Estonia	0,199***	0,073***	0,048
Sending country Finland (+)	0,000	0,000	0,000
Sending Country Hungary	0,265***	0,128***	0,043
Sending Country Iceland	0,150*	0,039*	0,062
Sending Country Netherlands	0,122**	0,057**	0,042
Sending Country Norway	0,188***	0,059***	0,053
Sending Country Sweden	-0,018	-0,009	0,039
Sending Country Slovenia	0,303***	0,122***	0,046
Age of participants	0,000	0,006	0,001
Gender	0,012	0,007	0,025
Migration background	0,090	0,027	0,050
Special needs	-0,118	-0,021	0,090
Motivation: competence developm.	0,003	0,003	0,018
Motivation: individual development	0,055***	0,091***	0,010
Motivation: cooperation	0,141***	0,172***	0,014
Motivation: institutional innovation	0,116***	0,114***	0,016
Frequency_mobility	0,063**	0,051**	0,019
Receiving: Public organisation	0,059*	0,037*	0,026
Receiving: Non-profit organisation	0,015	0,011	0,024
Sending: Public organisation	-0,138***	-0,097***	0,026
Sending: Non-profit organisation	-0,074**	-0,042**	0,028
Year_2014	-0,481***	-0,260***	0,034
Year_2015	-0,483***	-0,262***	0,034
Year_2016	-0,543***	-0,288***	0,034
Year_2017 (+)	0,000	0,000	0,000
Year_2018	-0,043	-0,025	0,031
Duration of mobility	-0,001	-0,006	0,005
Amount of grant	0,000	-0,002	0,000
Distance of mobility	0,011	0,012	0,017
Certificate: course-specific	-0,018	-0,012	0,028
Certificate: europass	0,055	0,029	0,032
Certificate: other	0,019	0,005	0,059
Certificate_non (+)	0,000	0,000	0,000
Activity_structured course	-0,085**	-0,058**	0,031
Activity: job shadowing (+)	0,000	0,000	0,000
Activity: training event	-0,099**	-0,054**	0,032
Activity: teaching assignment	-0,050	-0,012	0,062
Activity: Teaching training assignment	-0,063	-0,020	0,052
R ²	0,276		
R ² (adjusted)	0,269		
F (df=36; 3.385)	35,930***		

* p<0,05; ** p<0,01; *** p<0,001

Source: Erasmus+ Data

(+) Excluded variable because of multicollinearity

Figure 45: System improvement: cooperation

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	3,233		0,150
Sending Country Austria	-0,129*	-0,046*	0,063
Sending Country Estonia	0,079	0,022	0,071
Sending country Finland (+)	0,000	0,000	0,000
Sending Country Hungary	0,207**	0,074**	0,064
Sending Country Iceland	0,203*	0,039*	0,093
Sending Country Netherlands	0,242***	0,082***	0,063
Sending Country Norway	0,094	0,022	0,078
Sending Country Sweden	-0,066	-0,024	0,057
Sending Country Slovenia	0,105	0,032	0,067
Age of participants	-0,002	-0,024	0,001
Gender	-0,043	-0,020	0,037
Migration background	0,054	0,012	0,073
Special needs	-0,158	-0,015	0,182
Motivation: competence developm.	0,012	0,008	0,026
Motivation: individual development	0,000	0,000	0,015
Motivation: cooperation	0,198***	0,182***	0,021
Motivation: institutional innovation	0,083***	0,062***	0,023
Frequency_mobility	0,007	0,004	0,028
Receiving: Public organisation	0,011	0,005	0,038
Receiving: Non-profit organisation	0,043	0,022	0,035
Sending: Public organisation	-0,188***	-0,099***	0,038
Sending: Non-profit organisation	0,033	0,014	0,042
Year_2014	-0,564***	-0,236***	0,050
Year_2015	-0,412***	-0,146***	0,055
Year_2016	-0,435***	-0,178***	0,049
Year_2017 (+)	0,000	0,000	0,000
Year_2018	0,005	0,002	0,045
Duration of mobility	0,022**	0,091**	0,007
Amount of grant	0,000**	-0,105**	0,000
Distance of mobility	0,032	0,025	0,025
Certificate: course-specific	0,095*	0,047*	0,042
Certificate: europass	0,208***	0,080***	0,049
Certificate: other	0,101	0,019	0,090
Certificate_non (+)	0,000	0,000	0,000
Activity_structured course	-0,006	-0,003	0,046
Activity: job shadowing (+)	0,000	0,000	0,000
Activity: training event	-0,008	-0,003	0,048
Activity: teaching assignment	0,124	0,024	0,092
Activity: Teaching training assignment	0,096	0,024	0,075
R ²	0,150		
R ² (adjusted)	0,140		
F (df=36; 3.175)	15,535***		

* p<0,05; ** p<0,01; *** p<0,001

Source: Erasmus+ Data

(+) Excluded variable because of multicollinearity

Figure 46: Innovation

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	3,202		0,127
Sending Country Austria	-0,035	-0,014	0,053
Sending Country Estonia	0,250***	0,079***	0,060
Sending country Finland (+)	0,000	0,000	0,000
Sending Country Hungary	0,245***	0,101***	0,054
Sending Country Iceland	0,130	0,029	0,078
Sending Country Netherlands	-0,001	0,000	0,053
Sending Country Norway	0,193**	0,052**	0,066
Sending Country Sweden	-0,075	-0,031	0,048
Sending Country Slovenia	0,204***	0,070***	0,057
Age of participants	0,001	0,008	0,001
Gender	0,045	0,023	0,031
Migration background	0,015	0,004	0,063
Special needs	-0,210	-0,032	0,112
Motivation: competence developm.	0,015	0,012	0,022
Motivation: individual development	0,067***	0,094***	0,013
Motivation: cooperation	0,046**	0,048**	0,018
Motivation: institutional innovation	0,275***	0,232***	0,020
Frequency_mobility	0,088***	0,060***	0,024
Receiving: Public organisation	0,039	0,021	0,032
Receiving: Non-profit organisation	0,015	0,009	0,030
Sending: Public organisation	-0,161***	-0,097***	0,032
Sending: Non-profit organisation	-0,064**	-0,031**	0,035
Year_2014	0,169***	0,079***	0,043
Year_2015	0,081	0,038	0,042
Year_2016	0,128**	0,058**	0,042
Year_2017 (+)	0,000	0,000	0,000
Year_2018	-0,032	-0,016	0,039
Duration of mobility	0,005	0,023	0,006
Amount of grant	0,000	0,026	0,000
Distance of mobility	-0,015	-0,014	0,021
Certificate: course-specific	-0,003	-0,002	0,035
Certificate: europass	0,061	0,027	0,040
Certificate: other	-0,029	-0,006	0,073
Certificate_non (+)	0,000	0,000	0,000
Activity_structured course	0,117**	0,068**	0,039
Activity: job shadowing (+)	0,000	0,000	0,000
Activity: training event	0,028	0,013	0,040
Activity: teaching assignment	-0,042	-0,009	0,078
Activity: Teaching training assignment	0,136*	0,037*	0,065
R ²	0,173		
R ² (adjusted)	0,164		
F (df=36; 3.385)	19,696***		

* p<0,05; ** p<0,01; *** p<0,001

Source: Erasmus+ Data

(+) Excluded variable because of multicollinearity

IV. Definition of relevant categories and underlying information

Topics

The main topics for which sub-indicators were developed are the following:

- (Active) European Citizenship and Internationalisation Competence
- Professional development
 - Competence
 - Employability
 - General Professional development
 - Skills and knowledge
 - network
- System improvement
 - Institutional development
 - cooperation
- Innovation

Response categories

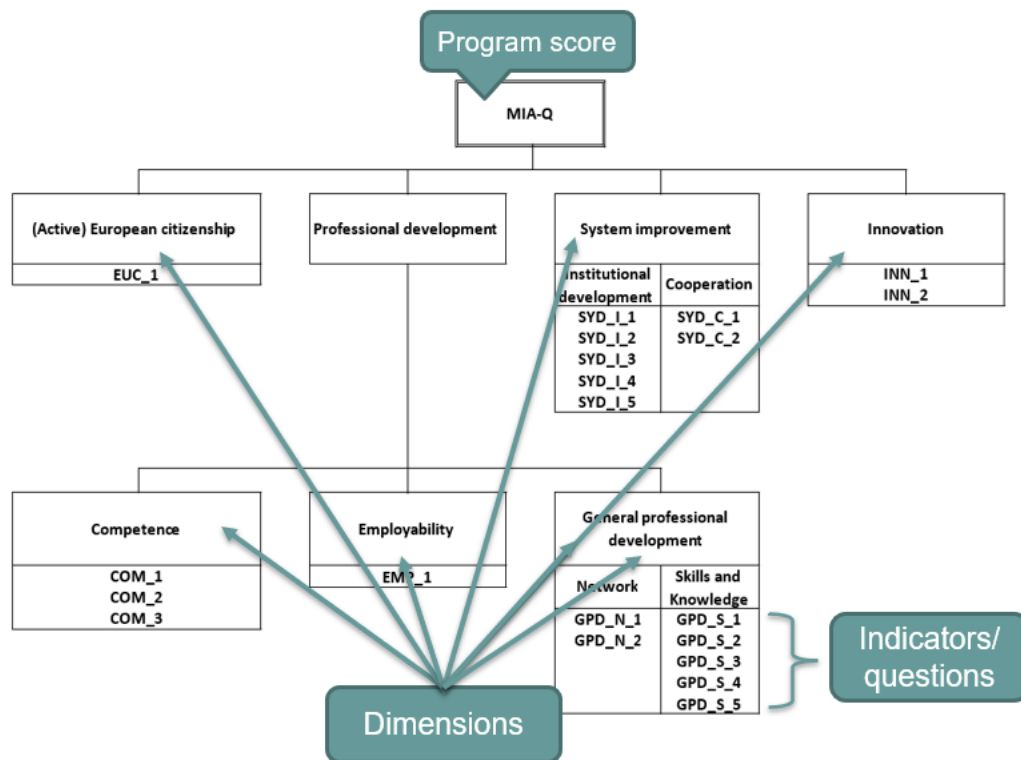
The MIA-Q sub-model is based on the participant surveys for staff in Mobility Tool+. All questions used in the model have five fixed answer categories.

Observation periods

The sub-model has been tested on a dataset comprising all the mobilities from 2014 to 2018 from all the participating NAs.

Model concept and operationalisation

Figure 1: The structure of the Adult Education impact model



In the impact model, each of the topics are represented by a *dimension* measured by one or more questions from the staff datasets. For each dimension a *dimension score* is calculated. In addition, a composite *programme score* is calculated from the six dimension scores.

Calculation of the scores

All survey questions used in the model have an identical 5-point response scale with values from 1 (strongly disagree) to 5 (strongly agree):

Figure 2: The 5-point response scale

	Scores
Strongly disagree <input type="checkbox"/>	1
Rather disagree <input type="checkbox"/>	2
Neither agree, nor disagree <input type="checkbox"/>	3
Rather agree <input checked="" type="checkbox"/>	4
Strongly agree <input type="checkbox"/>	5

All scores are calculated as *unweighted means* across these scales. The scores will consequently have a value between 1 and 5 with 3 as a balancing point between positive and negative responses. The higher the score, the more positive are the respondents.

The scores are calculated in the following way:

- **Step 1:** For each respondent, the mean score across all relevant questions is calculated
- **Step 2:** The dimension score is calculated as the mean of all the respondents mean scores from step 1
- **Step 3:** The programme score is calculated as the unweighted mean of all the dimensions scores from the steps above.

This means that all dimensions carry the same weight in the calculation of the programme score.

- **Step 4:** All scores are firstly calculated per country and year as described above. The corresponding transnational scores are calculated as the unweighted mean of the national scores.

This means that all countries carry the same weight in the calculation of the transnational scores.