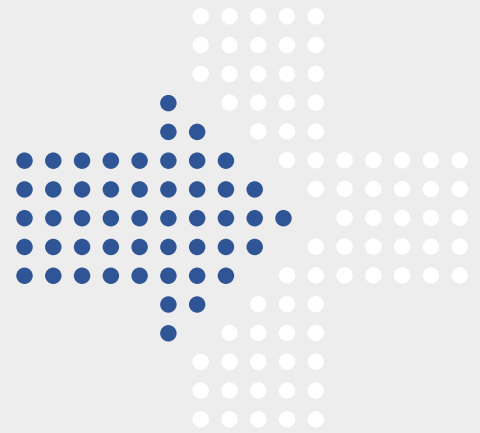Roland Löffler
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June 2021

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APPLIED METHODS OF IMPACT ASSESSMENT

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

Contents

0.   Abstract

This report documents the results of a Transnational Cooperation Activity: "Showing and Identifying Impact of Erasmus+ on transnational level" with eight participating countries (Austria, Finland, Hungary, Iceland, the Netherlands, Norway, Slovenia, and Sweden). The aim was to develop methods to measure the effects of Erasmus+ mobility in the field of school education. This is based on the one hand on the questionnaires[1] completed by the participants 2014 to 2019 in mobility and on the other hand analyses on the target groups of the mobility programmes.

The model used summarizes the indicators used for the measurement in six topics: (A*ctive) 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 theses scales.

Furthermore, based on the administrative data on the mobility, the model analyses effects of different variables on the way how participants assess the impact of the Erasmus+ mobility programme: the sociodemographic characteristics of the participants, the sending and receiving institutions as well as the different motivations for participation in the 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 3.8 (out of 5).
- The score of the indicator for (Active) European citizenship and innovation is stable at 4.2 over the analysed years. This points to a strong positive impact of the mobility programme on the change of the participant's view on the European topic. The highest values are achieved by questions that aim to the rising interest in European topics.
- For all years analysed, the indicator for competence is 3.8 (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 rather positive by the participating staff (average across all countries and years: 3.5). They think that by participating in a mobility they have improved their career and employment opportunities. The reason why the average values by employability are lower than

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[1] Data were collected based on individual mobility reports, completed by each participant after their Erasmus+ 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.

for other subject areas may be due to the fact, that in many cases the participants (mainly teachers) have very well-secured employment relationships. The effect on employability therefore only plays a subordinate role in the perception of the participants.

- 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 4.1 whereas the sub-indicator network oscillates between 4.1 and 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 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 3.8. 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 target group comparison entails the following recommendations:

- By comparing size of target-group with the number of participants in Erasmus+ school-mobility-programme we can conclude that there is overall potential to widen and expand the programme, especially in Sweden, Norway, and the Netherlands.

- Based on the differences in age-structure between target- and intervention-group we can conclude that Iceland, Sweden, and Slovenia should promote participation of younger staff and Estonia and the Netherlands participation of older teaching staff.

- Considering the results of extreme group analysis, NAs should above all pay attention to motivation of participants, recognition, and linkage of mobility in the context of the home institution, the field of education and some receiving countries. This means more in detail:

  o Overall motivation very positively influences satisfaction with the mobility-programme. On basis of this result NAs should pay attention on advertising potential benefits of mobility to raise motivation[2] of participants. The more motivated they are, the better their satisfaction with the programme is. The participants also should have an idea why they are doing the mobility and how it is imbedded. In this context it is essential, that participants are actively involved in the application for and/or preparation of mobilities within their institutions, which could probably secure, that it meets the needs and objectives of the sending institution and in return is recognised by the sending institution. We therefore recommend to highly focus on the motivation of participants. The more motivated they are, the better their satisfaction with the programme is. The participants also should have an idea why they are taking part in the mobility programme and how it is imbedded. In this context it is essential that participants are actively

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[2] This refers to the reasons that respondents give why they take part in an Erasmus+ mobility programme.

    involved in the application for and/or preparation of mobilities within their institutions, which could probably secure, that it meets the needs and objectives of the sending institution and in return is recognised by the sending institution.

- o NAs should draw attention on the linkage of mobility to the needs and objectives of their sending organisations. Participants who do not recognize the benefits of mobility for their sending institution show less satisfaction with the programme and are more critical of the individual aspects of mobility. The implementation of the mobility programmes requires a positive and supportive embedding in the sending institutions in order to develop its full potential.

- o Concerning destination country in school-education-mobility we once again find a result we also found in the context of adult-education: Participants in Erasmus+ who visited a country with a comparably low mobility-satisfaction profit less from their mobility in many of the sub-dimensions we investigated. Therefore, a closer look in the reasons for this result and how to attract mobility in this destination countries repeatedly receiving comparably low satisfaction scores seems fruitful.

- o Since pre-school teachers seem to benefit a lot from their mobility it might be a good strategy to expand this field of mobility.

- ▪ To improve overall satisfaction with Erasmus+ school mobility programme – based on the results of regression analyses – it seems most effective to concentrate on those variables with a negative influence on satisfaction consistent over several dimensions of satisfaction (like competence development, innovation, employability, …). Among those variables we can identify four that belong to the groups of high or medium influential variables. These are: no links of mobility to needs of home organisation, no recognition of mobility by sending institution, activity was a training event (like a conference) and the mobility receiving countries with rather low mobility-satisfaction. As a result of analyses, we can conclude that NAs in a first stage should concentrate on those four factors, to improve satisfaction with the mobility programme in school education even more.

- ▪ Last, but not least, we recommend not to change the programme fundamentally since we found compelling evidence, that the participants in school mobilities got 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 innovation. In general, these results can serve as a confirmation that the Erasmus+ programme serves the expectations of school mobility participants in an exemplary way.

Database

The calculations are based on the responses of 25.036 participants for the years 2014 to 2019 from the following countries: Austria, Estonia, Finland, Hungary, Iceland, the Netherlands, Norway, Slovenia, and Sweden. 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 school education mobility in Erasmus+.

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

I. Introduction

Content of the report

An Expert group led by 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 school 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 Sweden. 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 based on 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[3]. 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 internationalization, 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 rates can be considered a reliable measure of the

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[3] http://ec.europa.eu/education/news/2016/0610-education-skills-factsheet_en.htm ; Council Conclusions on investing in education and training – a response to ‚Rethinking Education: Investing in skills for better socio-economic outcomes' and the "2013 Growth Survey";
http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/educ/119282.pdf ; Council conclusions on the role of education and training in the implementation of the ‚Europe 2020' strategy (2001/C 70/01), Official Journal of the European Union 4.3.2011; „2013 Annual Growth Survey (2013/c 64/06), Official Journal of the European Union, 5.3.2013

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 of 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.

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[4].

- 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 countries [5].

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[4] This is due to the format of the template set by the EU commission. The team of experts has already pointed out the weaknesses of the questionnaire in the earlier phases of this project (for VET and adult education).
[5] Although there are uniform requirements for participation in the Erasmus+ mobility program, it is the responsibility of the national agencies to determine the form in which they promote the program, 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

I. 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". In 2019 this concept was adjusted for the field of adult education. This report continues this work in the field of school 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.

II. 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 school education this model had to be revised because only staff mobility takes place in this field of education, based on the adaptations of the model for the field of adult 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 school 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 School Education
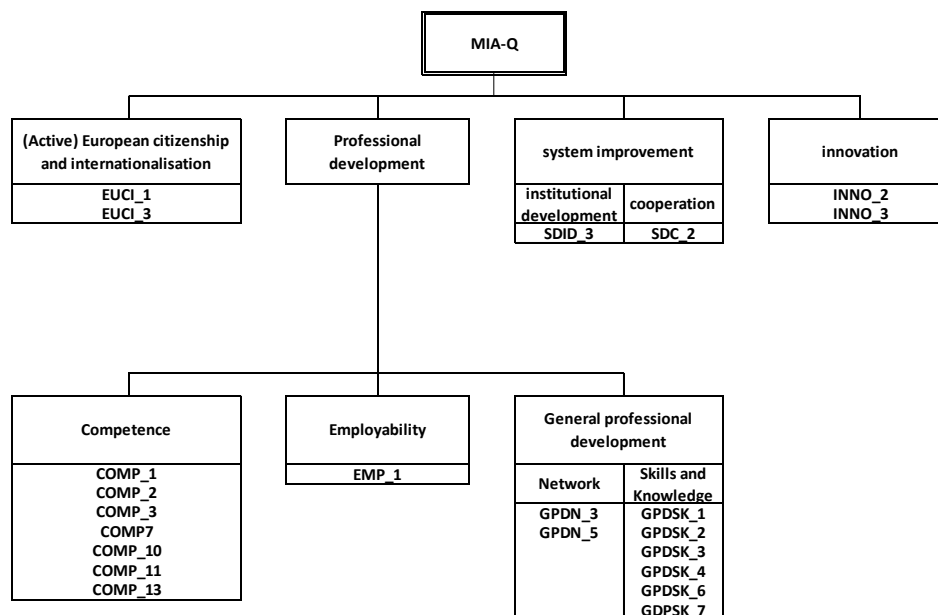
III. Definitions of topics and selection of indicators

1. (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 (not only EU) 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[6] 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 school education fit to these topics. After an analysis of the questions regarding content and statistical reliability it was decided to use only the following questions for the model:

- By participating in this Erasmus+ activity I have developed the following competences: cultural awareness and expression.
- My participation had the following impact on my sending institution: strengthening my sending institution's efforts to internationalise its activities.

2. 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 school education (as in adult education) only teaching and administrative staff could apply for funding for KA1 mobility, the topics "competence" and "employability" were integrated as sub-topics in the topic "Professional development". In addition, a third sub-topic "general professional development" was integrated. 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" (focusing on the personal skills and new teaching methods) and "network" (focusing on managerial and organisational skills).

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

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[6] For selected documents and sources related to European issues, see footnote 3.

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 respective 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 respectively 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 project
  - o provide staff with opportunities to enhance their personal skills?
  - o 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:

- By participating in this Erasmus+ activity I have developed the following competences: analytical skills.
- By participating in this Erasmus+ activity I have developed the following competences: interpersonal and social competences.
- By participating in this Erasmus+ activity I have developed the following competences: learning to learn.
- By participating in this Erasmus+ activity I have developed the following competences: sense of initiative and entrepreneurship.
- By participating in this Erasmus+ activity I believe a have developed the following competences: emotional skills.
- By participating in this Erasmus+ activity I believe a have developed the following competences: practical skills.
- By participating in this Erasmus+ activity I believe a have developed the following competences: digital competence.

For Employability:

- Personal and professional development: thanks to this mobility activity … I have enhanced my employment and career opportunities.

For General professional development:

    For "network":

- As a consequence of my mobility period abroad, I have … reinforced or extended my professional network or built up new contacts.
- As a consequence of my mobility period abroad, I have … have shared my own knowledge and skills with students and/or other persons.

    For "skills and knowledge"

- As a consequence of my mobility period abroad, I have …enhanced my organisational/management/leadership skills.
- As a consequence of my mobility period abroad, I have … experimented and developed new learning practices and teaching methods.
- Thanks to this mobility activity, I have gained sector specific-skills relevant for my current job and professional development.
- Thanks to this mobility activity, I have improved my knowledge of the subject taught/of my professional area.
- Thanks to this mobility activity, I have increased my awareness on new methods of assessing/giving credit for skills and competences acquired in school/informal learning context.
- Thanks to this mobility activity, I have learned from good practices abroad.

The fact that this sub-indicator Employability is based on only one question in the questionnaire, this element represents 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 models for vocational education and training and adult education. 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. This also applies to the system improvement indicator.

3. System improvement

The most important question under this topic 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 school 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, although only two questions or the questionnaire proved to be reliable enough to be integrated into the model.

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: Improving the organisation and management at my sending Institution.

For cooperation:

- 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.

4. 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 (ET 2020)[7] 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?

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[7] https://ec.europa.eu/education/policies/european-policy-cooperation/et2020-framework_en

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.
- As a consequence of my mobility period abroad: using new teaching/training methods, approaches and good practices at my sending institution.

# III. Model results on a transnational level

I. 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.

II. Overall indicator

Figure 2: Programme score and indicator score, all participating countries (2014-2019)
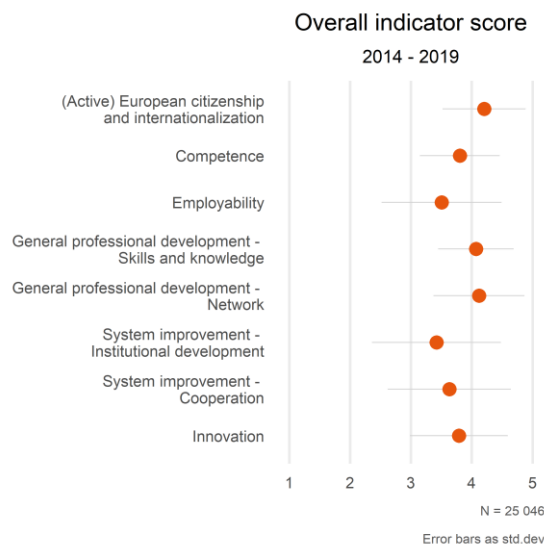
Source: Database "MIA-Q", Status of the model: April 2021

The calculations are based on the responses of 25.046 participants. The overall indicator of MIA-Q for the participating countries, based on the participants' surveys of staff for the years 2014 to 2019 is 3.82. The range of underlying sub-indicators for the six selected topics ranges from 3.41 (Employability) to 4.20 (European Citizenship and Internationalisation). This is slightly below the results for adult education: with this educational sector the overall indicator scored 3.90, with a range from 3.58 (Employability) to 4.38 (Competence). The model also yielded somewhat higher average values in the

area of vocational training; these varied from 3.7 (European Citizenship and Internationalization) to 4.2 (Competence). This is due to the fact that in VET both learners and teachers participate in mobility, whereby learners tend to expect greater effects on their further educational and employment career than teachers who are already integrated in the employment system. In the field of school education, mobility is only intended for teachers and other staff.

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´ professional competences, and above all in the field of networking (4.1) and of professional development (general professional development skills and knowledge: 4.2).

The indicators in school 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.

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

- Compared to Higher Education, the number of participants in mobility in school education is lower but higher than in adult education and higher than staff mobility in VET. The number of participants is limited by the fact that participation is tied to a suitable school profile and participation (compared to the previous funding period) is not based on an individual application, but on a nomination by the school management. In addition to that only teaching and administrative staff can use mobility in KA1 school education.

- The absolute number of participants: the smaller the number of underlying answers, the more likely "outliers" play a role in the overall result. This is the case with data collected for Iceland. 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 non-natives[8] in the mobility actions may influence the results. For example, different values that people with a country of origin other than the sending country bring with them from their cultural environment can determine the response behaviour in the subject area (Active) European citizenship and internationalization.

- 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

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[8] Persons with a different citizenship than the sending country.

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.

III.   Results for main topics

The MIA Q model aims to demonstrate the impact of Erasmus+ mobility in school 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 4,2 (on a 5-part scale). Respondents think that their participation in Erasmus+ is (or will be) highly strengthening their sending institution's effort to internationalise its activities.

However, the positive assessment of the effects of Erasmus+ mobility increases slightly over the observation years (2014: 4.15; 2019: 4.22).

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 4.1.

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

(Active) European citizenship
and internationalization

By year

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
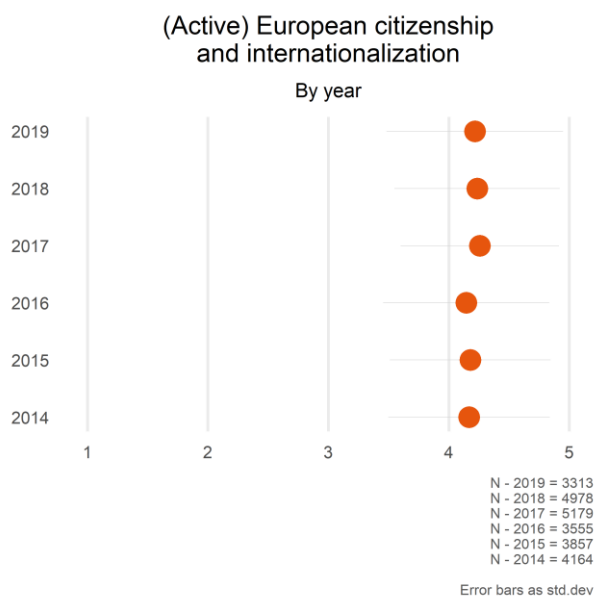
Source: Database "MIA-Q", Status of the model: April 2021

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 3.8 (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
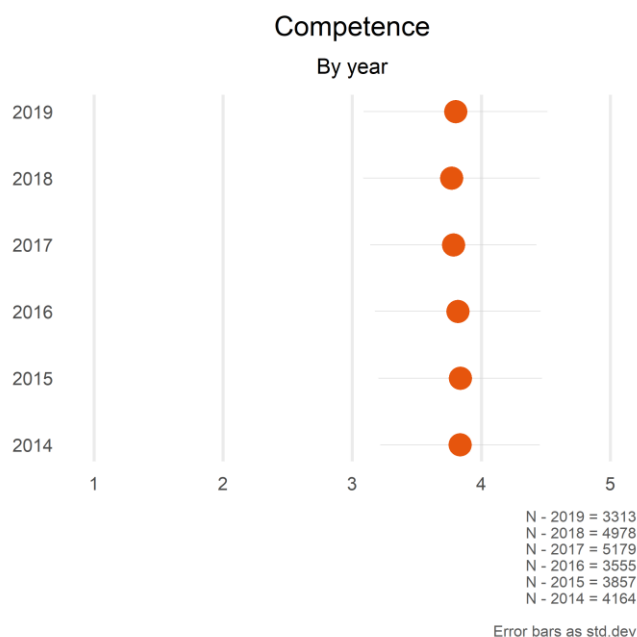
Source: Database "MIA-Q", Status of the model: April 2021

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 analytical, emotional skills and social and civic as well as digital competences. This applies equally to women and men as well as to younger and older participants.

For participants in the middle age groups (30 to 49), the assessment of the positive effect of the stay abroad on the development of their competences is higher than for older ones and very young participants (up to 29).

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 (interpersonal and social 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: 3.5). 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. The reason why the average values by employability are lower than for other subject areas may be due to the fact, that in many cases the participants (mainly teachers) have very well-secured employment relationships. The effect on employability therefore only plays a subordinate role in the perception of the participants.

Figure 5: Employability score, all participating countries by year


```
N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
```
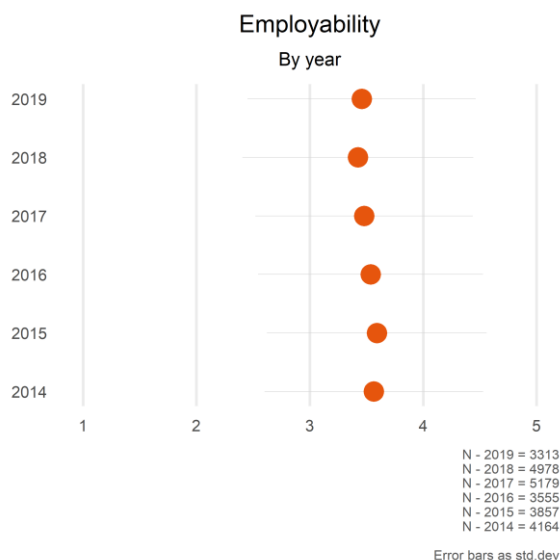
Source: Database "MIA-Q", Status of the model: April 2021.

This also corresponds to the fact that older participants rate the effect of mobility on their employability as significantly lower than younger participants (age> 59: 3.2, age up to 29: 3.8)

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 leadership and management skills, work-related knowledge and skills, linguistic and intercultural skills and their professional

network. To get results for both aspects (skills and knowledge and network) this indicator was split up into two components.

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

General Professional Development

By year

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
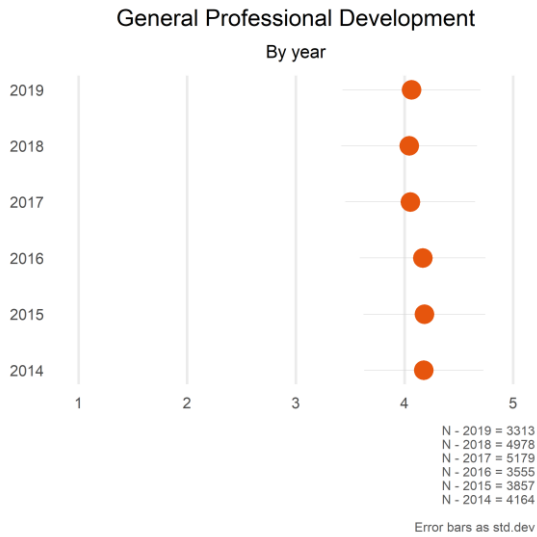
Source: Database "MIA-Q", Status of the model: April 2021

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

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

**General Professional Development -
Skills and knowledge**

By year

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
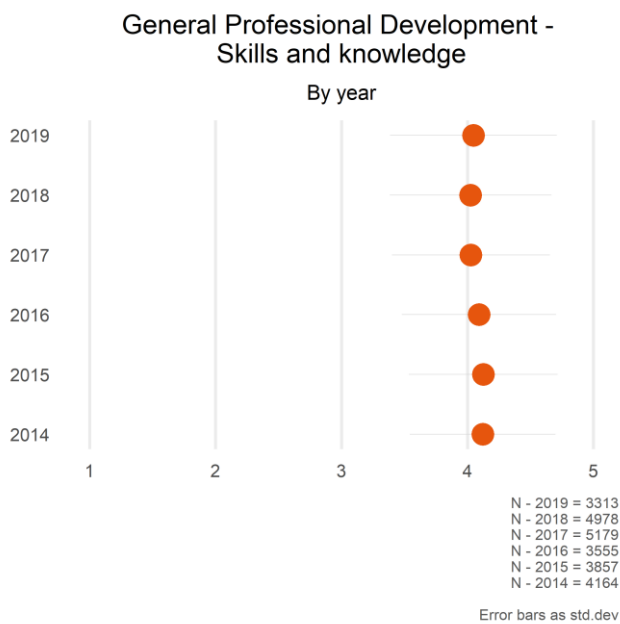
Source: Database "MIA-Q", Status of the model: April 2021

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

General Professional Development - Network
By year


```
N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164
```

Error bars as std.dev
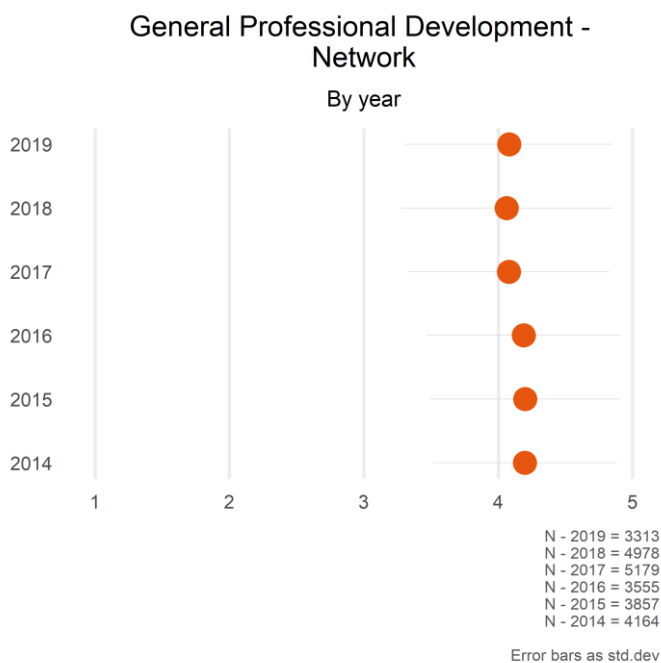
Source: Database "MIA-Q", Status of the model: April 2021

The relative highest impact of the mobility on their networking activities is stated by participants of the middle-age-group (4.2), but also the younger participants think that the mobility experience has positive effects on their networking possibilities.

System improvement

To sustainably raise the level of education, the European Union and the member states (as well as the EEA countries) 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. 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.

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.

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

System improvement

By year

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
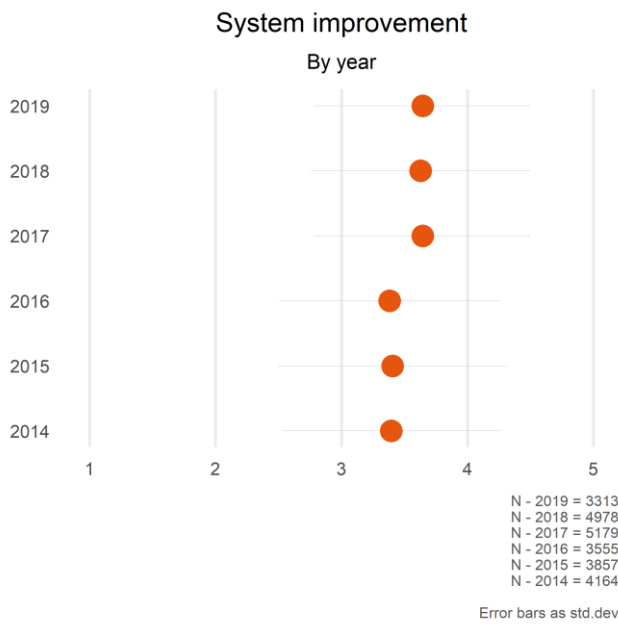
Source: Database "MIA-Q", Status of the model: April 2021

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

System development - Institutional development

By year

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
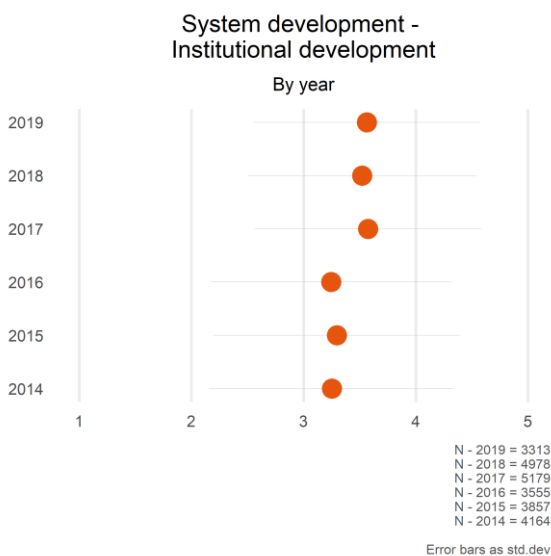
Source: Database "MIA-Q", Status of the model: April 2021

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

**System development -
Cooperation**

By year

Year	
2019	
2018	
2017	
2016	
2015	
2014	

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
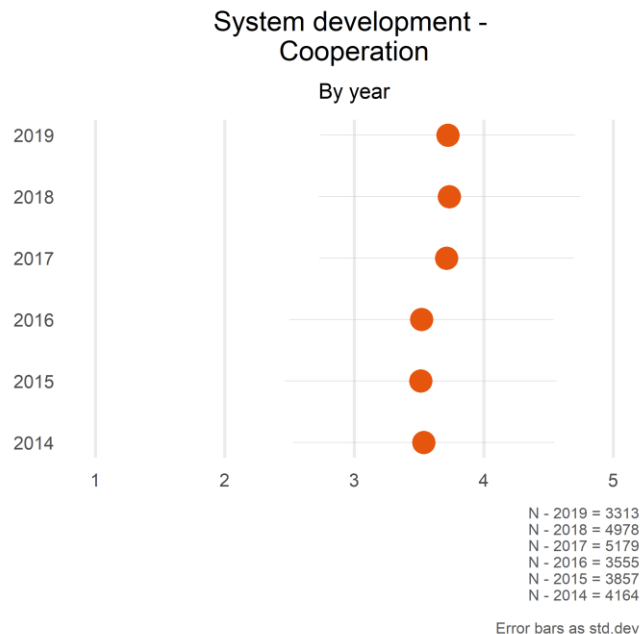
Source: Database "MIA-Q", Status of the model: April 2021

Over the entire observation period, the values for the sub-indicator "cooperation" exceeded those of the sub-indicator "institutional development". 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, several measures are devoted to this objective in European strategies. Hence, this model also examines the participants' assessments of this issue for 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 3.8. 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 increasing (from 3,71 in 2014 to 3.84 in 2019).

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Figure 12: Innovation score, all participating countries by year

Innovation
By year

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
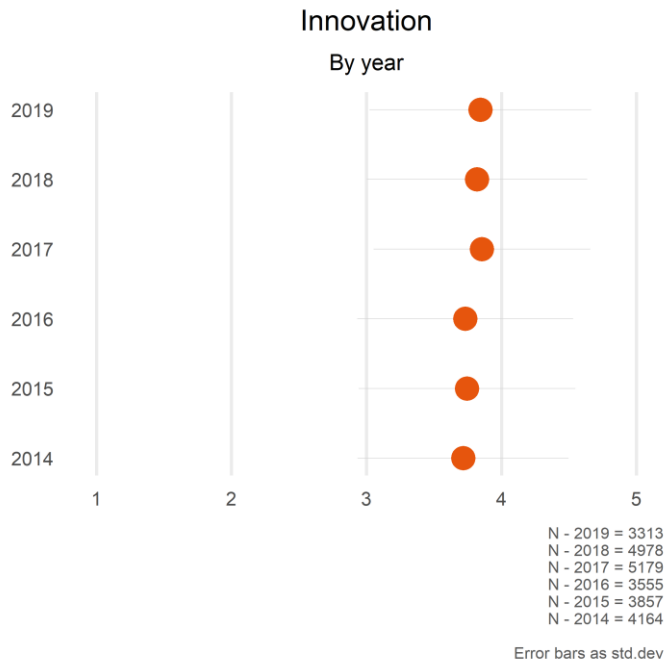
Source: Database "MIA-Q", Status of the model: April 2021

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.   Target Group Comparison

Whereas all the calculations so far 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 school education teaching staff which is the target group of the mobility-programme. We do this to answer the question, who is more likely to participate in Erasmus+ and who is not? This helps us to identify potential 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 all 8 participating countries (data for Slovenia in all details needed were provided by the Statistical office of the Republic of Slovenia)
- 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 occupation. 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. 1,1 million school-teaching staff) in all 8 participating countries.

The occupation "teaching professionals" the school-teaching staff belongs 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

Figure 13: ISCO codes for selection

ISCO-International Standard Classification of Occupations[9]		
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 ISCO-groups 233 & 234 fit the target group of Erasmus+ school education mobility programme best and therefore can serve as group for comparison, although we have to keep in mind that according to structures of educational systems there might be slight differences between participating countries e.g., which age group of children is covered by primary education

Comparison of these ISCO-groups in the LFS to the Erasmus+ data of school mobility can start by relating pure numbers of people to each other (see figure 14). Doing this we can calculate (or at least approximate) the range of the programme. From 2014 to 2019 more than 25.000 schoolteachers participated in Erasmus+ mobility of the 8 countries included in this report. Compared to 1,09 million teachers in these countries means, that in 6 years the programme managed to cover 2,3% of the target group (depending on the available budget). This percentage varies quite heavily across participating countries from 0,9% in Norway to 9,3% in Iceland. One explanation for these differences is, that smaller countries are rewarded higher proportions of budget. This argument might explain differences between the Netherlands and Iceland, but it is not powerful to explain differences between Finland (5,3% participation rate) and Norway (0,9% participation rate) since both have got similar size of population. Another reason might be the share of secondary teachers among all teachers assuming that it is easier to participate for secondary teachers than it is for primary teachers. If we look at the result in figure 14 more closely, we find some evidence for that explanation, but it also fails to explain differences between Estonia (participation rate of 5% realized with a secondary-share of 43,3%) and Slovenia (participation rate of 4,2% realized with a secondary-share of 48%).

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[9] For a detailed description of ISCO-codes compare: ILO-International Labour Organisation (2012): International Standard Classification of Occupations, ISCO-08. Volume 1: Structure, Group Definitions and Correspondence Tables, Geneva, 138 ff. [URL: https://www.ilo.org/public/english/bureau/stat/isco/docs/publication08.pdf] (Last accessed: 24th Sept. 2021)

Therefore, we can conclude that there is overall potential to widen and expand the programme, especially in Sweden, Norway, and the Netherlands.

Figure 14: Participation rate

	total number in target group	Erasmus+ participants	Participation rate	Share secondary (ISCO-233 on 233+234)
AT	140 080	3 890	2,8%	53,6%
EE	24 048	1 197	5,0%	43,3%
FI	80 034	4 229	5,3%	36,5%
HU	153 122	3 395	2,2%	28,9%
IS	10 078	934	9,3%	14,1%
NL	240 494	4 551	1,9%	45,4%
NO	154 506	1 439	0,9%	20,1%
SE	249 080	3 759	1,5%	16,5%
SI	39 215	1 652	4,2%	48,0%
total	1 090 657	25 046	2,3%	32,5%

Source: LFS-2015 & Erasmus+-Data

Another interesting potential a target group comparison to participant data offers is to analyse and compare socio-demographic structures of both groups. 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.

For gender we find a high female dominance in the target group, varying from 70,9% in the Netherlands to 91,7% in Estonia. The differences between target and participation group in most cases are small but even expand female dominance by 1,1%-points. The only higher deviation we find in Austria, where the share of males in the intervention group is more than 5%-points higher than it is in the target group.

Figure 15: Comparison of gender-structure

	ISCO 233/234 employees		Erasmus+ participants		difference	
	%-male	%-fem	%-male	%-fem	%-male	%-fem
AT	19,2%	80,8%	24,8%	75,2%	5,6%	-5,6%
EE	8,3%	91,7%	9,3%	90,7%	1,0%	-1,0%
FI	18,0%	82,0%	17,4%	82,6%	-0,7%	0,7%
HU	17,6%	82,4%	15,8%	84,2%	-1,7%	1,7%
IS	15,1%	84,9%	16,4%	83,6%	1,3%	-1,3%
NL	29,1%	70,9%	29,4%	70,6%	0,3%	-0,3%
NO	26,3%	73,7%	27,7%	72,3%	1,4%	-1,4%
SE	21,7%	78,3%	22,5%	77,5%	0,8%	-0,8%
SI	15,3%	84,7%	12,7%	87,3%	-2,6%	2,6%
total	22,2%	77,8%	21,1%	78,9%	-1,1%	1,1%

Source: LFS-2015 & Erasmus+ Data

Also concerning age on the first sight we do not find massive deviations by comparing both groups (compare figure 16). On average the participants are one year older than teachers in the target group are (43 to 44 years). Slightly higher deviations we only find in Iceland and Sweden, where the age of participants on average is (nearly) 3 years higher than that of their teaching colleagues. But averages do not tell the whole story. If we look at the share of age cohorts, we find the older (-4,5%-points) and the younger ones (-3,9%-points) being underrepresented. The younger participants (below 31 years of age) especially in Iceland, in Sweden and in Slovenia and the older participants (above 59 years of age) especially in Estonia and the Netherlands seem to face barriers to participate in the programme.

Figure 16: Comparison of age-structure

	ISCO 233 & 234 empl.			Erasmus+ participants			difference		
	mean age	share < 30 y.	share > 60y.	Mean age	share < 30 y.	share > 60y.	mean age	share < 30 y.	share > 60y.
AT	42,7	18,8%	4,8%	44,2	17,2%	4,3%	1,5	-1,6%	-0,5%
EE	45,4	13,4%	14,1%	43,5	13,7%	3,9%	-1,9	0,2%	-10,2%
FI	44,1	8,9%	7,5%	45,2	5,3%	2,9%	1,1	-3,6%	-4,6%
HU	43,7	8,9%	3,2%	45,3	6,9%	1,7%	1,6	-2,0%	-1,5%
IS	45,3	8,3%	13,6%	48,1	2,3%	10,9%	2,8	-6,1%	-2,8%
NL	42,8	20,1%	11,1%	41,9	20,7%	4,9%	-0,9	0,5%	-6,2%
NO	43,3	13,7%	10,8%	45,2	9,3%	7,3%	1,9	-4,4%	-3,5%
SE	43,9	13,8%	11,5%	46,6	6,0%	7,2%	2,7	-7,8%	-4,3%
SI	n/a	14,2%	1,7%	42,8	7,2%	1,4%	n/a	-7,0%	-0,3%
total	43,4	14,8%	9,0%	44,3	10,9%	4,5%	0,9	-3,9%	-4,5%

Source: LFS-2015 & Erasmus+-Data

To a certain extent it is understandable that a considerable number of the younger ones (e.g., because of own children) do not have the flexibility to participate and that some of the older ones (e.g., because of health issues) favour to stay at home. Nevertheless, the differences among participating countries show that these barriers can be solved. Therefore, we can conclude, that Iceland, Sweden, and Slovenia should promote participation of younger and Estonia and the Netherlands participation of older teaching staff.

V.   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 17: Variables by dimensions

Participant	Organisation	Mobility
Sending country	Recognition by sending institution	Duration of mobility
Age	Mobility linked to needs of home organisation	Amount of grant
Gender	Sending organisation public / non-profit	Distance
Main motivations	Receiving organisation public / non-profit	Type of certificate
Recurring participation		Type of activity
		Field of education
		Receiving country

Concerning **participant variables,** we can include the following variables in our analysis: sending country (which are those nine participating in this study) age, gender, main motivations to participate in the mobility programme (13 different motivations can be distinguished) and the number of participations so far in an EU-mobility-programme.

When it comes to **organisational variables** we can build upon: the recognition of the mobility by the sending institution (no recognition, new role in institution, salary increase, other, informal recognition by management), mobility linked to needs and objectives of home organisation (on a scale from not at all to well linked), sending institution public, sending institution non-profit, receiving institution public, receiving institution non-profit.

The third dimension column comprises variables describing the mobility as such: its duration (in days), the amount of grant given for the mobility (ranging from 0.- € to nearly

8.000 €), distance of mobility (ranging from 0 to over 8.000km), the type of certificate granted (ranging from attendance to work certificate), type of activity (ranging from job shadowing to a single training event like a conference), field of education (from arts to welfare) and the receiving country (including all EU member states and others).

Some of these variables are available for the whole period from 2014-2019 (e.g., type of certificate) others only for a shorter period like 2014-2016 or 2017-2019 (e.g., mobility linked to needs of home organisation). Wherever possible we took variables for the whole period, but if we had to decide we favoured those for the period 2017-2019 because the later period comprises more participants.

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 which seems feasible to generate a holistic picture of results. In the second stage these variables (in the context of regression models) will help to explain the differences in overall satisfaction as well as its components respectively its single dimensions (Active) European citizenship and internationalisation, Competence, Employability, General professional development – Skills, General professional development – Network, System improvement - Institutional development, System improvement – Cooperation, Innovation).

I.   **Extreme-Group-Analysis**

The purpose of the extreme group analysis is to identify and describe those people/ participants (and aspects of mobility) most satisfied with and those most critical against their Erasmus+ mobility. We do this to answer the question who profits most or least from his/her participation. By doing so we can identify aspects of the programme worth reforming to raise overall satisfaction.

Since we conduct an extreme-group analysis we will only discuss those aspects of all the variables representing the extremes of satisfaction/profit. If we, e.g., have got five different "types of certificates" we will calculate satisfaction with all five but only describe and discuss those, who have got the highest and the lowest satisfaction-score.

The extreme-group analysis to some extent also 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 described above. The mean score of satisfaction equals 3,810 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. Starting discussion of variance by focussing on individual participant variables in the table below, we can observe mentionable differences in satisfaction concerning the sending country, frequency of participation and motivation of participants (in competence, innovation, and cooperation) ranging from 3,55 to 4,20. Compared to that the differences concerning age and gender are rather low and range between 3,75 to 3,83.

Summing up the individual participant variables the **most critical participants** are those with a low motivation in competence-improvement, low motivation for innovation, low motivation for cooperation, those taking part the first time and participants from Norway. In contrary the **most satisfied participants** are those with high motivation in competence-improvement, high motivation for innovation, high motivation for cooperation, those participating in a mobility programme more than ten times and participants from Hungary.

Figure 18: Satisfaction by individual participant variables

Most "critical"	Score	VARIABLE	Score	Most "satisfied"
below 30 years	3,75	AGE	3,83	40-50 years
male	3,76	GENDER	3,83	female
low	3,55	MOTIVATION to improve competence[10]	3,98	high
low	3,67	MOTIVATION for innovation[11]	4,10	high
low	3,60	MOTIVATION for cooperation[12]	4,18	high
first	3,76	No. of PARTICIPATIONS	4,20	more than 10
Norway	3,69	Sending COUNTRY	4,04	Hungary

Source: Erasmus+-Data

When it comes to organisational/institutional variables (see figure 19) we also find a different range in variance among them. Satisfaction varies in a rather small band from 3,80 to 3,83 concerning variables describing sending and receiving organisations as public and/or non-profit. Differences grow rather heavily when it comes to recognition by sending institution (variance from 3,61 to 3,90) and the links of mobility to the needs / objectives of home organisation (variance from 2,97 to 3,91 comparing the most critical to the most satisfied participants).

Figure 19: Satisfaction by organisational-institutional variables

Most "critical"	Score	VARIABLE	Score	Most "satisfied"
no recognition at all	3,61	RECOGNITION by sending institution	3,90	salary increase
not linked	2,97	LINK to needs/ objectives of home-organisation	3,91	well linked
non-profit: yes	3,80	Sending ORGANISATION public / non-profit	3,85	non-profit: no
public: no	3,80	Receiv. ORGANISATION public / non-profit	3,83	public: yes

Source: Erasmus+-Data

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[10] Motivation to improve competence is an index calculated from the following answering-options to the variable main-motivations: To learn from good practice abroad (1), to gain practical skills relevant for my current job (2), increase social, linguistic, cultural competences (6).

[11] Motivation for innovation is an index calculated from the following answering-options to the variable main-motivations: to experiment and develop new learning practices (3), create spin-off to develop new educational activities (8).

[12] Motivation for cooperation is an index calculated from the following answering-options to the variable main-motivations: to extend professional network (4), reinforce cooperation with partner institution (7), to make new contacts (10), to build cooperation with players in the labour market (12).

With a so far unmet score of 2,97 the most critical participants are those, who judge their mobility not linked to the needs and objectives of their home organisation. Although the number of people affected is not high (n=140 which equals roughly 1% of participants in period 2017-2019) National Agencies should draw attention on this result since these participants in their satisfaction are far off all the others.

Last, but not least, we also can observe considerable differences in satisfaction depending on variables describing mobility itself: So those participants who stay for a longer time are more satisfied than those with a shorter mobility period. This result comes along with a comparable result concerning grant and distance of mobility. Those participants receiving a Europass mobility certificate are considerably more satisfied than those receiving (only) a course-specific certificate. An activity like job-shadowing results in much more satisfied participants than the participation in a training-event like a conference. Concerning the field of activity those participating in pre-school-teacher-training can be found among the most satisfied participants. Also, the receiving country makes a big difference. Here we find a range from 3,56 to 3,95 depending on where mobility leads participants. In school-education we once again find a result we also found in the context of adult-education. Therefore, a closer look how to attract mobility in those destination countries repeatedly receiving comparably low satisfaction scores seems fruitful.

Figure 20: Satisfaction by mobility variables

Most "critical"	Score	VARIABLE	Score	Most "satisfied"
2-4 days	3,76	DURATION	4,00	more than 15 days
1.500 - 2.000 €	3,76	GRANT (€)	3,98	more than 2.500 €
100 – 500 km	3,70	DISTANCE	3,97	4.000 – 7.000 km
course specific	3,74	CERTIFICATE	3,98	Europass mobility document
training event (e.g. conference)	3,76	ACTIVITY	3,89	job shadowing
Biology & chemistry	3,76	FIELD	3,98	pre-school-teacher-training
Comparably low scoring[13]	3,56	Receiving COUNTRY	3,95	Hungary & Netherlands

Source: Erasmus+-Data

Considering all results at once, National Agencies should above all pay attention to motivation of participants, recognition, and linkage of mobility in the context of the home institution, the field of education and some receiving countries.

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[13] Since we just can report differences in satisfaction of participants and do not have sufficient data explaining reasons for this result, we do not display a single country. As one can see in the annex (table 44, p.77) satisfaction equals an increasing/decreasing continuum where it is not fruitful to figure out only one.

II. **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 general professional development: 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 descriptions, 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 only focus on variables having significant impact (indicated with * or ** or *** depending on their significance level).[14] 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 eg.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 the possible data-scale 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 stays in the scale of the variable itself.

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 21) this means that the model is able to explain 19,6% of total variance.[15]

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 overall.

Concerning **participant variables,** we can find a significant influence on overall satisfaction by the sending countries Estonia, Hungary, Iceland, Netherlands, Norway,

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[14] Concerning all the other variables that do not prove a significant influence (missing a */**/***-indication) we cannot be sure if their influence is just randomly and therefore, they will not be interpreted.
[15] Social sciences deal with complex phenomena influenced by a high variety of variables which cannot be controlled all. Therefore, explanation of variance seldomly reaches values (percentage of explained variance) as high as they are more typical for technical sciences or medicine. Explaining 20% of variance in social science equals medium strength of explanatory power.

Sweden, and Slovenia. Except for the participants from the Netherlands all these influences are positive ones concerning their satisfaction with mobility. In this context the Dutch are the most critical and the Hungarian the most satisfied participants.

The overall highest influence on satisfaction we find concerning motivation in cooperation improvement (Beta-Score 0,253). Those participants very highly motivated at the same time are those who are the most satisfied ones. We can interpret this a very supportive result since this means, that those motivated most found what they have been looking for and their expectations have been met.

Figure 21: Contribution to mobility satisfaction by participant variables

	Influence on overall satisfaction / profit		
	B (unstand. coeff.)	Beta (stand. coeff.)	Std. Error
(Constant)	3,240***		0,023
Sending Country Estonia	0,218***	0,082***	0,023
Sending country Finland	0,014	0,008	0,016
Sending Country Hungary	0,255***	0,158***	0,016
Sending Country Iceland	0,217***	0,064***	0,028
Sending Country Netherlands	-0,047**	-0,032**	0,015
Sending Country Norway	0,061**	0,023**	0,023
Sending Country Sweden	0,088***	0,051***	0,016
Sending Country Slovenia	0,194***	0,087***	0,020
Age of participants	-0,003	-0,005	0,004
Participant is male	-0,001	0,000	0,011
Motivation: Cooperation	0,546***	0,253***	0,018
Motivation: Innovation	0,239***	0,127***	0,015
Motivation: Competence	0,203***	0,093***	0,018
Frequency of mobility	0,075***	0,065***	0,009
R^2	0,197		
R^2 (adjusted)	0,196		
F (df=14; 13.413)	234,769***		
* $p<0,05$; ** $p<0,01$; *** $p<0,001$			

Source: Erasmus+ Data / Participant from AT excluded because of multicollinearity

When it comes to **organisational variables,** we find significant influence for links of mobility to needs/objectives to home organisation, receiving organisation, public and sending organisation non-profit as well as two out of three forms of recognition by sending institution (no recognition and "new role in sending institution"). Except for two variables all others have a positive effect (in the form of the more the better) on satisfaction. These two exceptions are "no links to needs/objectives of home organisation" and "no recognition of mobility by sending institution". This result repeatedly points out that mobility needs a positive and supportive imbedding in the home organisation in order to enable its full

potential. In this picture the result fits that we find the highest positive effect of all in all three dimensions for the variable "good link to needs/ objectives of home-organisation". If the answer to this question is "yes" satisfaction rises by 0,278 (see Beta-value of 0,278 for this variable in figure 22).

Figure 22: Contribution to mobility satisfaction by organisational variables

	Influence on overall satisfaction		
	B (unstand. coeff.)	Beta (stand. coeff.)	Std. Error
(Constant)	3,495***		0,019
no link to needs/ objectives of home-org.	-0,437***	-0,077***	0,048
good link to needs/ objectives of home-org.	0,470***	0,278***	0,014
receiving: public	0,056***	0,042***	0,013
receiving: non-profit	-0,016	-0,014	0,011
sending: public	0,000	0,000	0,013
sending: non-profit	-0,083***	-0,051***	0,014
Recognition by sending institution: new role	0,078***	0,050***	0,013
Recognition by sending institution: none	-0,076***	-0,043***	0,014
Recognition by sending instit.: salary increase	0,108	0,016	0,056
R^2	0,107		
R^2 (adjusted)	0,107		
F (df=9; 13.460)	179,532***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data

Among the **mobility variables** the variables for the form of certificate, the activity during the mobility, the educational field of mobility, receiving country, duration, budget, and distance of mobility prove influential. As we have done before also for the mobility variables, we mostly find positive influence on satisfaction. The two exceptions are a course-specific certificate and one out of three receiving countries. All together the influence of the significant mobility variables is comparably low also resulting in a comparably low part of variance explained by the regression model (R^2 = 0,034, which means that 3,4% of all variances we find in the overall-satisfaction variable can be explained with the mobility-variables included in the model). But this result does not necessarily mean that the variables are of less importance. By building and calculating a full model in the next step we will test how robust results are we discussed so far.

Figure 23: Contribution to mobility satisfaction by mobility-variables[16]

	Influence on overall satisfaction / profit		
	B (unstand. coeff.)	Beta (stand. coeff.)	Std. Error
(Constant)	3,583***		0,008
Certificate: course-specific	-0,090***	-0,079***	0,014
Certificate: Europass-Mobility	0,118***	0,053***	0,010
Activity: job shadowing	0,090***	0,071***	0,014
Activity: training event	0,019	0,009	0,026
Edu-field Training for Pre School Teachers	0,143***	0,035***	0,045
Education-field Biology / Chemistry	-0,065	-0,009	0,023
Receiving country with low satisfaction	-0,227***	-0,061***	0,048
Receiving country: Hungary	0,122**	0,016**	0,026
Receiving country: Netherlands	0,145***	0,035***	0,005
Duration (in groups)	0,027***	0,058***	0,005
Budget (in groups)	0,021***	0,045***	0,005
Distance-band	0,027***	0,039***	0,008
R^2	0,034		
R^2 (adjusted)	0,033		
F (df=12; 25.033)	72,76***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data

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.

In the table below, 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 Austria, Estonia, Hungary, Norway Sweden, and Slovenia significantly more satisfied. Concerning destination country of mobility just one (out of three which have been tested) stays significant influential and shows a negative effect on participants satisfaction. Because this result proves stable even in the overall-regression model underlines its reliability. Age and gender do not influence overall satisfaction, but motivation does quite heavily. Although all forms of motivation prove significant the influence of motivation in cooperation is the highest one. Frequency, budget, duration, and distance of mobility stay significantly influential also in this far-reaching model.

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[16] 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 24: Contribution of all variables at once on overall satisfaction with school-mobility

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	2,944***		0,035
Participant from AT	0,032*	0,022*	0,016
Participant from EE	0,226***	0,085***	0,023
Participant from FI	0,016	0,009	0,018
Participant from HU	0,254***	0,157***	0,018
Participant from IS	0,207***	0,061***	0,029
Participant from NO	0,062**	0,023**	0,023
Participant from SE	0,097***	0,057***	0,017
Participant from SI	0,206***	0,092***	0,020
Age (in groups)	-0,007	-0,013	0,004
Participant: male	-0,011	-0,008	0,011
Motivation: Cooperation	0,495***	0,229***	0,018
Motivation: innovation	0,214***	0,113***	0,015
Motivation: competence	0,163***	0,075***	0,017
Frequency of mobility	0,059***	0,051***	0,009
no link to needs/ objectives of home-org.	-0,375***	-0,066***	0,044
good link to needs/ objectives of home-org.	0,391***	0,231***	0,013
Receiving organisation: public	-0,004	-0,003	0,013
Receiving organisation: non-profit	0,014	0,011	0,010
Sending organisation: public	-0,029*	-0,018*	0,012
Sending organisation: non-profit	-0,034**	-0,021**	0,013
Recognition by sending institution: new role	0,029*	0,019*	0,012
Recognition by sending institution: none	-0,042**	-0,024**	0,013
Recognition by sending instit.: salary increase	0,089	0,013	0,051
Certificate: course-specific	-0,002	-0,002	0,010
Certificate: Europass-Mobility	0,053**	0,023**	0,018
Activity: job shadowing	0,056***	0,043***	0,014
Activity: training event	-0,010	-0,004	0,018
Education-field Training for pre-school teachers	0,120***	0,028***	0,032
Education-field Biology / Chemistry	0,033	0,005	0,051
Receiving country with low satisfaction	-0,137***	-0,044***	0,025
Receiving country: Hungary	0,057	0,007	0,064
Receiving country: Netherlands	0,043	0,010	0,032
Duration (in groups)	0,028***	0,056***	0,007
Budget (in groups)	-0,026***	-0,054***	0,007
Distance-band	0,028***	0,038***	0,007
R^2	0,274		
R^2 (adjusted)	0,272		
F (df=35; 13.392)	144,121***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data / Participant from NL excluded because of multicollinearity

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We have a comparatively high positive influence on satisfaction motivation for "good links to needs and goals of the home organisation", whereby the link also retains its negative influence in the overall model. The same dichotomy applies to "Recognition by the sending organisation. If there is none, it has a negative effect on satisfaction, if there is one in the form of a new role in the sending organisation, it increases mobility satisfaction. Participants from public and / or non-profit sending organisations appear somewhat more critical. Last, but not least, it can be said that the mobility activity job shadowing, the receipt of a Europass mobility certificate and the participation in the pre-school teacher training improve participant satisfaction. All the variables included in the model develop an explanatory power of 27.2% of the total variance in overall satisfaction, a value that is considerably high in explaining social phenomena.

Dimensions of satisfaction/profit

As explained earlier we separated eight different sub-dimensions of satisfaction by factor analyses ranging from individual competence development to general professional development – institutional. For all these sub-dimensions we calculated a separate regression model to identify if influencing variables change by analysing different aspects of satisfaction. In this section we will describe the results, the corresponding figures for detailed regression analyses can be found in the annex (pages 69-76). In figure 25 we give an overview to the significant influences per sub-dimension indicating direction and strength of influence. Since it is not very useful to describe results known yet (e.g., no links of mobility to needs and objectives of home organisation has a negative impact on satisfaction) eight times we will mainly concentrate on the deviations to general results.

Competence Development:

Besides the well-known results described before concerning this dimension of satisfaction it is mentionable that participants from Finland (who do not show a positive effect in the overall model) score significantly higher as well as those participants who have been guests in the Netherlands. Participants form Estonia, Hungary and from Slovenia do have an overall positive effect but among them the highest can be found in the dimension of competence-development.

System development: institutional

When we found the highest effects the variables for some sending countries had in the dimension before, we can find the lowest in the context of system development - institutional. This is true for the participants from Hungary, Norway, and Slovenia. Besides, that it is worth mentioning that (against the overall trend) coming from Austria, visiting a country with a comparably low mobility-satisfaction and duration of mobility do not have an effect on the dimension discussed here. Contrary to that age, receiving organisation is public and recognition in form of salary increase do have an effect.

System development: cooperation

Contrary to the overall-model age and receiving country Netherlands do have an influence on the dimension system development-cooperation whereas the variables motivation innovation, motivation cooperation, sending organisation non-profit, Europass-mobility-certificate and visiting a country with a comparably low mobility-satisfaction (also against the overall trend) do not. A very positive result can be seen in the fact, that the overall influential variable "motivation in cooperation" develops its highest effect in this cooperation-dimension discussed here. This repeatedly points to the fact, that participants receive what they have been looking for.

Figure 25: Overview on significant variables (BETA) on overall satisfaction and all its sub dimensions

Variable	Com-petence developm.	System develop.: institutional	System develop.: cooperat.	European citizenship	Inno-vation	Employ-ability	Gen. prof. develop.: network	Gen. prof. develop.: institution.	Satisfac-tion-sum
Participant from AT	0,068		0,060	0,110	-0,091	-0,108	0,116	0,023	0,022
Participant from EE	0,155	0,055	0,048	0,085	0,021	0,022	0,067	0,056	0,085
Participant from FI	0,071	-0,039		0,124	-0,090	-0,033	0,071	-0,026	
Participant from HU	0,301	0,087	0,138	0,201			0,156	0,098	0,157
Participant from IS	0,054	0,053	0,045		0,025	0,063	0,029	0,048	0,061
Participant from NO	0,031	0,055	0,033	0,044	-0,018	-0,038	0,020		0,023
Participant from SE	0,081	0,075	0,063	0,104	-0,070		0,076		0,057
Participant from SI	0,141	0,043	0,086	0,091			0,118	0,041	0,092
Age (in groups)		0,017	0,017	0,040		-0,127			
Participant: male					-0,021		-0,031	-0,036	
Motivation: Cooperation	0,125	0,131	0,273	0,210	0,036	0,095	0,334	0,074	0,229
Motivation: innovation	0,119	0,044		0,017	0,217	0,033	0,052	0,195	0,113
Motivation: competence	0,095	0,029		0,093	0,059	0,049		0,136	0,075
Frequency of mobility	0,059	0,031	0,018	0,051	0,024	0,032	0,039	0,050	0,051
no link to needs of home-organisat.	-0,053	-0,030	-0,034	-0,049	-0,063	-0,047	-0,039	-0,070	-0,066
good link to needs of home-organis.	0,184	0,140	0,111	0,137	0,218	0,145	0,133	0,276	0,231
Receiving organisation: public		-0,039	0,033	0,039	-0,030			-0,021	
Receiving organisation: non-profit			0,029				0,022		
Sending organisation: public			-0,019		-0,020		-0,020		-0,018
Sending organisation: non-profit	-0,019				-0,030			-0,016	-0,021

Source: Erasmus+-Data

Figure 25: Overview on <u>significant</u> variables on overall satisfaction and all its sub dimensions (continuing)

Variable	Com-petence developm.	System develop.: institutional	System develop.: cooperat.	European citizenship	Inno-vation	Employ-ability	Gen. prof. develop.: network	Gen. prof. develop.: institution.	Satisfac-tion-sum
Recog. by sending institution: new role			0,016		0,022	0,019			0,019
Recog. by sending institution: none	-0,027	-0,018		-0,025	-0,022			-0,020	-0,024
Recog. by sending instit.: salary increase		0,018							
Certificate: course-specific			-0,025		0,033	0,021			
Certificate: Europass-Mobility	0,020	0,020		0,021	0,023		0,018		0,023
Activity: job shadowing	0,041	0,046	0,140	0,032	-0,022	-0,038			0,043
Activity: training event				-0,024	-0,018		-0,016		
Edu-field: Train. for pre-school teachers	0,024	0,026	0,021		0,033	0,029		0,018	0,028
Education-field: Biology / Chemistry									
Receiving country with low satisfaction	-0,055			-0,031	-0,059	-0,031		-0,061	-0,044
Receiving country: Hungary									
Receiving country: Netherlands	0,018		0,022				0,016		
Duration (in groups)	0,060		0,040	0,073		0,044	0,095	0,034	0,056
Budget (in groups)	-0,065	-0,054	-0,091				-0,034		-0,054
Distance-band	0,071	0,034	0,059	0,047			0,028	-0,029	0,03

Source: Erasmus+-Data

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European citizenship

When it comes to discuss the model on European citizenship, we have to highlight four variables proving significant influence whereas these variables do not in the overall model. These are participants from Finland, age, receiving organisation public and an activity in form of a training-event. On contrary the variables sending organisation public and/or non-profit, recognition in form of a new role, the educational field of pre-school teacher-training and budget of mobility do not. A detail in results that is worth mentioning is the high impact of motivation in cooperation on the satisfaction concerning European Citizenship.

Innovation:

Participants from Finland, male participants, when the receiving organisation is public and when activity was a training event satisfaction in dimension innovation against the overall trend was affected negatively. Opposite to this result we can conclude that those participants highly motivated in innovation rate their satisfaction in innovation-dimension also high. This result proves that they profited from their mobility what they have been looking for.

Employability:

Concerning employability, we find (against the overall trend) negative effects for participants from Austria, Finland and Norway and no significant effects for those from Hungary, Sweden, and Slovenia. These negative effects (against the trend) also are true for age and the activity of job-shadowing. Whereas all these variables in most other cases influence satisfaction (and its sub-dimensions) positively it is the other way round concerning satisfaction in the dimension of employability. Several other variables do not have any effect on employability although they had one on overall satisfaction (sending organisation public and/or non-profit, missing recognition by sending institution, Europass-mobility certificate, budget, and distance of mobility. Employability therefore can be seen as a dimension of satisfaction which to a certain extent is judged differently and is influenced by different variables.

General Professional development: network

Motivation in cooperation is the variable that has got the highest significant impact on the satisfaction dimension "general professional development: network". A score of 0,334 is the highest to be observed among all effects in all nine models tested. Since networking and cooperation can be referred to as different sides of the same coin this result once more proves the conclusion of good match between motivation for and profit from the mobility programme. Besides that, we should mention that recognition (not in one single form) is influential on this dimension and also that the educational field does not play any role here.

General Professional development: institutional

Last, but not least, the regression model explaining satisfaction within the dimension "general professional development: institutional" nearly has got the same explanatory power than that for overall satisfaction (R^2=0,264 in figure 43 on page 75 in the annex). Above that we find it worth mentioning that activity and certificate of mobility do not have any significant effect on this dimension of satisfaction.

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 25) allows to change

perspective by indicating the significant influence variables have on the sub-dimensions of satisfaction (indicated by the Beta-value of significant influences).

If we look at the results, we can identify different groups of variables concerning the number of dimensions they have influence on and also the direction (positive, negative or even both) of the influence:

Typology of variables concerning number of dimensions influenced:

- We find the highly influential variables (influence on 7-9 dimensions): These are all the sending country variables, all the motivational variables, all link to needs of home organisation variables, the frequency of mobility, activity job-shadowing, educational field of pre-school-teacher-training, duration and distance of mobility.
- A group of medium influential variables (influence on 4-6 dimensions) like age, receiving organisation public, sending organisation public and/or non-profit, two recognition variables (no recognition, new role), Europass-mobility certificate, visiting a country with a comparably low mobility-satisfaction and budget of mobility.
- Partially or non-influential variables (influence on 0-3 dimensions) like gender, receiving organisation is non-profit, recognition in form of salary increase, a course specific certificate, activity training event, educational field biology/chemistry and receiving country either Hungary or Netherlands.

Typology of variables concerning direction of influence:
- There is a group of just positive influential variables: Participants form Estonia, Hungary, Iceland and Slovenia, Motivation in cooperation, innovation or competence, frequency of mobility, good links to needs of home organisation, receiving organisation is non-profit, recognition by sending institution in form of a new role ore in form of salary increase, educational field of training for pre-school teachers, receiving country Netherlands, duration and distance of mobility.
- We can observe a group of variables with a consistent negative influence on satisfaction: participant is male, no links of mobility to needs of home organisation, sending institution is public and/or non-profit, no recognition of mobility by sending institution, activity was a training event, visiting a country with a comparably low mobility-satisfaction and budget of mobility.
- A group of inconsistent variables which have got a positive influence on one dimension of satisfaction whereas it has got a negative one on another dimension: This is true for participants from Austria, Finland, Norway and Sweden, age of participants, receiving organisation is public, course-specific certificate and activity job-shadowing.

To improve overall satisfaction with Erasmus+ school mobility programme it seems most effective to concentrate on those variables with a negative influence consistent over dimensions of satisfaction. This is true for 8 variables. Among those we can identify four that belong to the groups of high or medium influential variables. These are: no links of mobility to needs of home organisation, no recognition of mobility by sending institution, activity was a training event (like a conference) and receiving country with a rather low mobility-satisfaction. As a result of analyses, we can conclude that NAs should concentrate on those four to improve satisfaction with the mobility-programme in school education even more.

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 school 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 3.8 (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 (Active) European citizenship and internationalisation is stable at 4.2 over the analysed years. This points to a strong 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 3.8 (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 rather positive by the participating staff (average across all countries and years: 3.5). They think that by participating in a mobility they have improved their career and employment opportunities. The reason why the average values by employability are lower than for other subject areas may be due to the fact, that in many cases the participants (mainly teachers) have very well-secured employment relationships. The effect on employability therefore only plays a subordinate role in the perception of the participants.

- 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 4,1 whereas the sub-indicator network oscillates between 4.1 and 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 have improved their organisational, management and leadership skills.

- That regarding system improvement, the participants reflect a certain impact regarding 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 3.8. 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 target group comparison entails the following recommendations:

- By comparing size of target-group with the number of participants in Erasmus+ school-mobility-programme we can conclude that there is overall potential to widen and expand the programme, especially in Sweden, Norway, and the Netherlands.

- Based on the differences in age-structure between target- and intervention-group we can conclude that Iceland, Sweden, and Slovenia should promote participation of younger staff and Estonia and the Netherlands participation of older teaching staff.

- Considering the results of extreme group analysis, NAs should above all pay attention to motivation of participants, recognition, and linkage of mobility in the context of the home institution, the field of education and some receiving countries. This means more in detail:

   o Overall motivation very positively influences satisfaction with the mobility-programme. On basis of this result NAs should pay attention on advertising potential benefits of mobility to raise motivation[17] of participants. The more motivated they are, the better their satisfaction with the programme is. The participants also should have an idea why they are doing the mobility and how it is imbedded. In this context it is essential, that participants are actively involved in the application for and/or preparation of mobilities within their institutions, which could probably secure, that it meets the needs and objectives of the sending institution and in return is recognised by the sending institution.

   o NAs should draw attention on the linkage of mobility to the needs and objectives of the home organisation, participants belong to. Since participants who cannot see this linkage are far off all the others in their satisfaction and prove themselves very critical. Mobility needs a positive and supportive imbedding in home organisations of the participants to

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[17] This refers to the reasons that respondents give why they take part in an Erasmus+ mobility programme.

         enable its full potential. Probably participants and/or sending institutions could be urged to argue this linkage in the process of application.

- o Concerning destination country in school-education-mobility we once again find a result we also found in the context of adult-education: Participants in Erasmus+ who visited a country with a comparably low mobility-satisfaction profit less from their mobility in many of the sub-dimensions we investigated. Therefore, a closer look in the reasons for this result and how to attract mobility in this destination countries repeatedly receiving comparably low satisfaction scores seems fruitful.

- o Since pre-school teachers seem to benefit a lot from their mobility it might be a good strategy to expand this field of mobility.

- We recommend to highly focus on the motivation[18] of participants. The more motivated they are, the better their satisfaction with the programme is. The participants also should have an idea why they are doing the mobility and how it is imbedded. In this context it is essential, that participants are actively involved in the application for and/or preparation of mobilities within their institutions, which could probably secure, that it meets the needs and objectives of the sending institution and in return is recognised by the sending institution.

- To improve overall satisfaction with Erasmus+ school mobility programme – based on the results of regression analyses – it seems most effective to concentrate on those variables with a negative influence on satisfaction consistent over several dimensions of satisfaction (like competence development, innovation, employability, …). Among those variables we can identify four that belong to the groups of high or medium influential variables. These are: no links of mobility to needs of home organisation, no recognition of mobility by sending institution, activity was a training event (like a conference) and visiting a country with a comparably low mobility-satisfaction. As a result of analyses, we can conclude that NAs in a first stage should concentrate on those four, in order to improve satisfaction with the mobility programme in school education even more.

- Last, but not least, we recommend not to change the programme fundamentally since we found compelling evidence, that the participants in school mobilities got 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 innovation. In general, these results can serve as a confirmation that the Erasmus+ programme serves the expectations of school mobility participants in an exemplary way.

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[18] This refers to the reasons that respondents give why they take part in an Erasmus+ mobility programme.

VII. Annex

I. School 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 school education. The systems of adult education in the individual partner countries are briefly outlined below in order to better interpret the model results.

1 The Austrian School Education System

Key features of the Education System

According to the Austrian Federal Constitutional Law Article 14 - as amended (Bundesverfassungs-Gesetz, B-VG, Art. 14) democracy, humanity, solidarity, peace and justice, openness and tolerance towards everyone regardless of race, social status and financial background are fundamental principles of education in Austria.

Key features related to governance

Concerning **kindergartens** and **crèches** the **provinces** (Bundesländer) are responsible for legislation and implementation and maintained to high degree by **municipalities** (Gemeinden). However, there is also a large **private sector**.

Concerning **schools** responsibilities for legislation and its implementation are divided between the **federation** (Bund) and the **provinces** (Bundesländer) where it is executed by the parliaments of the provinces (Landtage) and the **offices of the provincial governments** (Ämter der Landesregierungen). In specific matters enumerated in the **Constitution**, the federation sets the framework, while detailed legislation is implemented by the parliaments of the provinces . The federation has overwhelming responsibility for the education system, including virtually all areas of school organisation, the organisation of school instruction, private schools as well as the remuneration and retirement law governing education staff.

Key features related to organisation and structures

Since 2010 **obligatory kindergarten attendance** was introduced for 5 year olds (i.e. children one year before school entry).

An important aspect of the Austrian school system is the strong diversification of programmes at all levels of education. Austria has put in place a strong vocational education sector.

Traditional **early streaming** (at ages 10 and 14) has been subject of on-going educational reforms but remains a fact.

General compulsory schooling lasts until the age of 15 in Austria. Since the 2016/17 school year all youths who have not yet reached the age of 18 will be required to engage in education or training after completing general compulsory schooling. They should as far as possible complete some form of education or training that goes beyond the compulsory school-leaving qualification.

Stages of the Education System

In September 2010 obligatory kindergarten attendance was introduced for 5 year olds.

School education is compulsory for nine years and starts at the age of 6.

Primary school is the general compulsory school for pupils aged 6-10 (years 1 to 4).

The lower secondary level (years 5 to 8) comprises:

- General secondary school (Mittelschule)
- Lower level of academic secondary school (Allgemeinbildende Höhere Schule).

The upper secondary level (years 9 to 13) comprises a

- general education branch and a
- vocational branch.

Teachers and Education Staff

Future pre-school teachers are taught at ECEC (=Early Childhood Education and Care) teacher training colleges, future teachers at university colleges of teacher education and at universities.

Further information may also be found on the following website:

The Austrian Education System https://www.bildungssystem.at/en/

Source: https://eacea.ec.europa.eu/national-policies/eurydice/content/austria_en

2   School education in Finland

Key features of the Education System

One of the basic principles of Finnish education is that all people must have equal access to high-quality education and training. The same opportunities to education should be available to all citizens irrespective of their ethnic origin, age, wealth or where they live - this has traditionally been a basic value in Finland. Education is free at all levels from pre-primary to higher education. Quality assurance is based on steering instead of controlling and there is no inspection system in Finland.

Key features related to governance

Governance in Finland is based on the principle of decentralisation. Although the Ministry of Education and Culture defines education policy and the Finnish National Agency for Education is responsible for its implementation, local authorities have a significant amount of autonomy and responsibility.

Key features related to organisation and structures

Compulsory basic education is provided within a single-structure system and the scope of the syllabus is nine years. Teaching and teaching equipment are available to learners free of charge.

Local authorities have a statutory duty to organise comprehensive school education in their area according to the local need. If a municipality has both Finnish- and Swedish-speaking inhabitants, it is required to provide basic education separately for both language groups. The Government may also grant registered associations, foundations, and the State the right to organise comprehensive school education. Every child who is a permanent resident in Finland must attend compulsory education. The parents and guardians of pupils are responsible for ensuring that pupils complete their compulsory education.

Stages of the Education System

One year of pre-primary education (ISCED 020) is systematic instruction provided in the year preceding the start of compulsory basic education. Children enter pre-primary education in August of the year they turn 6.

Compulsory education begins the calendar year when a child turns seven and ends when the child has completed the basic education syllabus or when ten years have passed from the start of their compulsory education.

After nine years compulsory basic education (single structure education) 15 – 16 old school-leavers opt for general upper secondary education or initial vocational education and training (vocational upper secondary education). The post-compulsory upper secondary level comprises general and vocational education. Both forms usually take three years and give eligibility for higher education.

Teaching is a popular profession in Finland. Consequently, gaining entry to a teacher education programme is very competitive. In 2017 some 13 per cent of the applicants were admitted into a class teacher (primary teacher) education programme. Thus, the qualification situation is generally very good among teachers.

Teachers in pre-primary education have university education. In general, basic and upper secondary education all teachers are required to have a Master's degree. In vocational education teachers should have a Master's degree or Bachelor's degree.

Further information may also be found on the following website:

https://www.oph.fi/sites/default/files/documents/education-system-in-finland-infographic.pdf

Source: https://eacea.ec.europa.eu/national-policies/eurydice/content/finland_en

3 School education in Hungary

Key features of the Education System

Establishment and maintenance

In Hungary, schools and kindergartens are established and maintained by the state, local governments, minority local governments, legal entities (foundations, churches, etc.) as well as natural persons. About 90 per cent of children attend public sector institutions.

Overall responsibility lies with the Ministry of Human Capacities, which is in charge of education, culture, social affairs, health care, youth and sport. However, school-based VET, adult training and higher education are within the competence of the Ministry for Innovation and Technology.

The maintenance of the education system became more centralized. In January 2013, **the state took over the maintenance of public education institutions** (with the exception of kindergartens) **from the local authorities**. The Government established Klebelsberg Centre and regional centres for the maintenance of these institutions. Local governments get contribution from the central budget to finance kindergarten education, they are responsible for the organisation of ECEC on their settlement. Minority governments are allowed to establish schools and teach in their own languages.

Stages of the Education System

Participation in education is mandatory between the ages of 3 and 16. 10 years plus 3 year kindergarten education are compulsory. However, studies are financed until the age of 18.

- ISCED 0: 3 years
- ISCED 1: 4 years
- ISCED 2: 4 years
- ISCED 3: 2 years

Creche (bölcsőde) is a welfare institution catering for children aged 20 weeks to 3 years and providing professional day care and development. **Kindergarten** (óvoda) education and care is offered for children aged 3-6 and is compulsory from age 3.

Primary and lower secondary education (ISCED 1, 2) is organised as a single-structure system in 8-grade basic schools (általános iskola) (typically for pupils aged 6-14, covering grades 1-8). Upper secondary education (ISCED 3, typically for pupils aged 14-18, usually covering grades 9-12) is provided by general secondary schools (gimnázium), vocational secondary schools (technikum) or vocational schools (szakképző iskola) or vocational school for special education (szakiskola). However, general secondary schools are also allowed to offer longer programmes starting earlier (from Grade 5 or 7).

General secondary schools provide general education and prepare for the secondary school leaving examination, which is the prerequisite for admission to higher education. Secondary vocational schools provide general and pre-vocational education, prepare for the secondary school leaving examination and offer vocational post-secondary non-tertiary

programmes (ISCED 4 C). **Vocational schools** provide general, pre-vocational and vocational education and may also provide remedial lower secondary general education for those who have not accomplished basic school.

Teaching and assessment

The minimum level of final qualification required for employment as a teacher is BA for teachers teaching at ISCED 0 and 1. It is BA or MA for teachers teaching at ISCED 2 and MA for teachers teaching at ISCED 3.

Teachers are free to choose their teaching methods. Every five years their work is evaluated by external experts contracted by a central Inspectorate.

Source: Eurydice

https://eacea.ec.europa.eu/national-policies/eurydice/content/hungary_en

4   School Education System in Iceland

Key Features of the Education System

The education system in Iceland is divided into four levels: pre-school, compulsory, upper secondary and higher education (universities). Only the first three levels are discussed further here.

The system is pre-dominantly publicly funded with very few private schools. The central government has the overall responsibility at all levels of education. The Ministry of Education, Science and Culture prepares educational policies, including national curriculum at all school levels and ensures their implementation. It also takes the initiative in the development of educational innovations, including distance learning and the publication of educational material. Local authorities are responsible for the operation of pre-schools and the single structure compulsory school level (primary and secondary schools) in their area.

Schools at all educational levels follow educational polices as determined by local authorities and the ministry. Such policies are a general guideline for schoolwork. A curriculum and work plan are prepared for each school based on the national curriculum. School curricula are guidelines for pupils, students, teachers, other school employees and parents.[19]

Stages of the Education System

Pre-primary school education

From age 1 until age 6 when primary education starts, children can attend preschool centres (leikskóli), which fall under the overall responsibility of the Ministry of Education, Science and Culture.

The Icelandic Preschool is defined as the first level of schooling, although non-mandatory. In Icelandic legislation it is stated that it is the responsibility of the Icelandic municipalities to offer children preschool education. Accountability for the Icelandic pre-school is divided between the ministry and the municipal authorities. The ministry formulates an educational policy while the local authorities supervise schools and pre-schools and bear expenses involved.[20]

Compulsory education

Compulsory education is organised in a single structure system. The primary and lower secondary education form part of the same school level, and generally take place in the same school. Legislation on compulsory education stipulates that education shall be mandatory for children and adolescents between the ages of six and sixteen.[21]

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[19] Eurydice, National education systems, Iceland Overview:
https://eacea.ec.europa.eu/national-policies/eurydice/content/iceland_en
[20] See Footnote 19.
[21] Government of Iceland, topics, education: https://www.government.is/topics/education/

Municipalities are principally responsible for compulsory schools as well as the implementation of the Primary School Act.[22]

Upper secondary education

Upper secondary education is not compulsory, but anyone who has completed compulsory education has the right to attend an upper secondary school. Students are usually between 16 and 19/20 years of age.[223]

Schools shall write their own working guides which, among other things, are to specify what areas individual schools have chosen to emphasize, define the education they offer, and their teaching methods and administration. Even though the schools working guides may vary, they have to offer courses on various levels of strength and skills.[24]

The most common form of education at this level is a comprehensive upper secondary school which offers both general academic studies and VET. Almost all VET takes place at upper secondary school level.[25]

Sources:

Eurydice, National education systems, Iceland Overview: https://eacea.ec.europa.eu/national-policies/eurydice/content/iceland_en

Government of Iceland, topics, education: https://www.government.is/topics/education/

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[22] See Footnote 19.
[23] See Footnote 20
[24] See Footnote 19.
[25] See Footnote 19.

5 School education in the Netherlands

Key features of the Education System

Compulsory education from the ages of 5 to 18

8 years of primary education (ages 4 to 12) with end advice for secondary education stream.

Multiple streams of secondary education: 2 leading to higher education, 4 to vocational education

Several routes through system

Key features related to governance

Overall responsibility for the education system lies with the State, specifically the Minister of Education, Culture and Science

The Ministry of Education, Culture and Science lays down statutory requirements for early childhood education, primary and secondary education.

The Minister of Education sets the framework (in law and other rules) in which individual schools should perform. There is no national curriculum, but there are attainment targets in general education.

The provincial authorities' role in education is limited to supervisory and legal tasks. The administration and management of schools is locally organised.

The Inspectorate of Education oversees the quality of education, adherence to educational laws and proper spending of funds (legitimacy and functionality).

Key features related to organisation and structures

The schoolboard is responsible for the school and for the quality of education, including meeting the attainment targets.

The Dutch system is on the one hand highly centralised and other the hand highly de-centralised.

Stages of the Education System

Childcare/ early childhood education (ISCED 0)

Children from 0 to 5 years old can attend day care, crèche or kindergarten. Local government is responsible for maintaining of the quality of these centres. The early childhood education centres are often located within primary schools (integral child centres - IKC).

Primary education (ISCED 1)

Mainstream primary education (PO) lasts 8 years and is for all children aged 4 to 12, compulsory from 5 years old. At the end of primary school an advice is given on which secondary school stream best fits the level of the child (usually with associated attainment test).

Secondary education (ISCED 2 and 3)

Secondary education encompasses schools providing the following streams:

Pre-vocational secondary education (VMBO, 4 years) which gives entry to MBO (VET) programmes.

General secondary education (HAVO, 5 years) which gives entry to Universities of Applied Sciences

Pre-university education (VWO, 6 years) which gives entry to academic Universities.

VMBO students may also go on to HAVO. HAVO student may also have the opportunity to attends academic universities.

Special Education and Practical Training (ISCED 2)

Schools for special primary education and schools for special (secondary) education are for pupils who need ortho-pedagogical and ortho-didactical support. This includes special education / special secondary education (SO and VSO) and for primary education (SBO).

For pupils who have not managed to obtain their VMBO diploma there is practical training, which prepares pupils for a place on the labour market (PrO).

Teachers and Education Staff

Future teachers are trained at Universities of Applied Sciences or academic Universities. Future staff of day care provision are trained at either Colleges for Further Education (upper vocational education and training) or Universities of Applied Sciences.

Further information

https://www.nuffic.nl/en/education-systems/netherlands

Source: Netherlands | Eurydice (europa.eu)

6 School education in Norway

Norway is not a member of the European Union but is through the EEA Agreement a full member of amongst others EU's education programme, Erasmus+, and the framework programme for research and innovation, Horizon2020.

Key features of the Education System

Most children attend kindergarten. Parents in Norway are entitled to 12 months parental leave, of which 15 weeks are reserved exclusively for the father. Each of the parents are entitled to one year of unpaid leave following the first year. Children are entitled to a place in a kindergarten from the age of one. About 50 percent of kindergartens are private, but they are government funded. Fees paid by parents are moderate and are regulated by the government.

Primary and lower secondary school are mandatory for all children aged 6–16, whereas upper secondary school is a statutory right. Primary and lower secondary education is founded on the principle of a unified school that provides equal and adapted education for all students.

Key features related to governance

There is a common national curriculum for primary and secondary education, but within this framework the municipal and county authorities, schools and teachers can influence the implementation of education and training.

The municipalities are responsible for primary and lower secondary education and have substantial autonomy in allocation of resources between sectors and in provision of services. The counties are responsible for upper secondary education and training and post-secondary vocational education, whereas the national Government is responsible for other higher education.

Key features related to organisation and structures

In Norway, there is a long tradition for combining primary and lower secondary education in a comprehensive and compulsory school system with a common legislative framework and a national curriculum. This chapter will deal with both levels in a single structure.

From 1997 Norwegian children start school during the calendar year of their sixth birthday. Compulsory education covers 10 years and comprises two stages: primary school (1-7) and lower secondary school (8-10).

No formal division is made between the stages. Some schools cover all compulsory education, while others are purely primary schools or lower secondary schools.

Compulsory schools are administered by the municipalities. The County School Governors (Statsforvalteren) are responsible for the overall follow up and counselling of schools, on behalf of the national school authorities. Private schools are funded by the national school authorities subject to certain requirements.

New subject curricula for primary, lower secondary and upper secondary school are implemented from the school year 2020-21, based on the Knowledge Promotion 2016 and within the framework of the reform Subject Renewal 2020. The new National Curriculum include both general and vocational education.

Stages of the Education System

Compulsory education (Grunnskolen) is divided into two main stages: Primary School (barnetrinnet) and lower secondary school (ungdomstrinnet). Upper secondary education (videregående opplæring) is not mandatory, but young people who have completed primary and lower secondary education, or the equivalent, have a right to up to four years of upper secondary education and training. Vocational education and training usually consist generally of two years in school and one year in-service training. In-service training as an apprentice at a training establishment is usually combined with productive work, so that an apprenticeship last for two years in all. General studies last three years and lead to general university admissions certification. It is possible for pupils who have finished their vocational education to attend and pass a supplementary one year programme to obtain general university admissions certification.

Higher education mainly has a degree structure in line with the Bologna Process. Post-secondary vocational schools (fagskoler) cover a variety of courses of duration up to two years. Degrees from post-secondary vocational schools (fagskoler) at ISCED level 4 do not qualify for general higher education. Higher vocational education of a duration of two years at ISCED level 5 automatically gives access to higher education.

Teachers and Education Staff

Different types of initial teacher education qualify for teaching at different educational levels, but all teacher education qualifies for teaching at more than one level, except the kindergarten teacher education. The following types of teacher education exist:

Kindergarten Teacher Education (KTE) is a three-year bachelor program. This programme educates teacher candidates for kindergartens/ early childhood education. The addition of one year's relevant further education qualifies pre-primary teachers to work in the first to the fourth year of primary school.

Teacher candidates for primary and secondary school are provided through the following six types of teacher education programs:

- Primary and Lower Secondary Teacher Education for Years 1–7 (5 years master, level)
- Primary and Lower Secondary Teacher Education for Years 5–10 (5 years, master level)
- Integrated teacher education master's degree for Years 8–13 (5 years, master level)
- Postgraduate programmes in educational theory and practice for subject teachers (Qualification as a teacher is obtained in combination with an academic degree (in performing arts, academic subjects or with vocational basis) from a higher education institution (HEI) (1 year) (PPE)

- Teacher education in practical and aesthetic subjects (From 2021, 5 years, master level)
- Vocational teacher education (3 years, bachelor level)

https://eacea.ec.europa.eu/national-policies/eurydice/content/norway_en

7   School education in Slovenia

Key features of the Education System

The primary goal of the education system in Slovenia is to provide optimal development of the individual, irrespective of gender, social and cultural background, religion, racial, ethnic or national origin, and regardless of their physical and mental constitution or physical and mental disability. Slovenian society relies on knowledge, so citizens are provided with state funded education from their early childhood to university level and are encouraged to pursue lifelong education and learning.

Key features related to governance

Slovenian schools are organised as a public service, implemented mainly by public institutuions and in a very small proportion by private institutions that provide officially recognized or accredited programmes.

Governance of public institutions is shared between state and the local communities. Public institutions are state controlled by appointment of representatives to governance bodies, public funding, salary system, adoption of common rules and guidelines of public service, centrally adopted curricula, etc.

Preschool education programmes are funded by municipalities, payments by parents, and other sources. Basic education is funded by both the municipality and the state, as well as from other sources.

Key features related to organisation and structures

Children in Slovenia are legally entitled to a place in a kindergarten (*vrtec*) from the age of 11 months (end of childcare leave) to the age of compulsory schooling.

All basic schools have to provide free of charge non-compulsory activities of the extended programme, namely remedial and supplementary lessons, extracurricular interest activities, non-compulsory optional subjects, as well as morning care (grade 1) and after-school classes (grades 1 to 5).

At the end of upper secondary education, students take final exams. In two- and three-year vocational programmes, student complete their studies with a school leaving examination, students in four year upper secondary general and technical education programme take general matura or vocational matura. Matura is a national external examination.

Stages of the Education System

Pre-school education (predšolska vzgoja) is optional, children can enrol as early as at the age of 11 months and attend it until they start basic school.

Compulsory basic education (obvezno osnovnošolsko izobraževanje) is organised in a single-structure nine-year basic school attended by pupils aged 6 to 15 years.

Upper secondary education (srednješolsko izobraževanje) takes 2 to 5 years (typical age of students: 15-19). Educational programmes include vocational, professional and gimnazija (general) programmes.

Teachers and Education Staff

Preschool teachers, second teachers in the first grade and teachers of professional subjects in vocational and technical education they have to have an educational qualification of at least bachelor's degree programme.

Preschool teacher assistants in kindergartens, laboratory assistants and teachers of practical lessons and skills in vocational and technical education they have to have at least upper secondary technical education.

Teachers, counsellors, school librarians and other education staff they have to have a master's degree.

All education staff have a relevant pedagogical-andragogical educational qualification, additionally they have to pass the state professional examination for education staff.

Further information may also be found on the following website:

https://www.gov.si/en/topics/slovenski-solski-sistem-in-slovensko-ogrodje-kvalifikacij/

Source*:* Slovenia – Eurydice

8 School Education System in Sweden

Key features of the Education System

Almost half the Swedish population is involved in some form of organised education. An overall aim of the education system in Sweden is to strengthen the students' foundations for lifelong learning. This is expressed through the curricula for compulsory and upper secondary school.

Key features related to governance

Sweden has a decentralised education system, steered by goals and learning outcomes defined at central level. The government has the overall responsibility and sets the framework for education at all levels. Municipalities (kommuner) in Sweden are responsible for organising education within preschool (förskola), preschool class (förskoleklass), compulsory school (grundskola), upper secondary school (gymnasieskola) and leisure-time centres (fritidshem).

The major part of school funding, including grant-aided independent schools (fristående skolor), comes from municipal tax revenues. All education, from preschool class to higher education, is free of charge. Grant-aided independent schools are open to all and follow the same curricula as municipal schools do.

Key features related to organisation and structures

According to the Education Act, each municipality shall establish a local school plan (skolplan) describing the financing, organisation, development, and assessment of the activities within each school. This local school plan should indicate how the municipality intends to fulfil the national goals for the school. The school administrator at each school is required to establish a local work plan (lokal arbetsplan) based on the national goals and the local school plan. The work plan should define issues that are not determined in the national regulations, i.e., course content, organisation, and teaching methods. This should be done in consultation with the teachers and other staff.

Stages of the Education System

The preschool class (förskoleklass) is since 2018 compulsory for all children from the age of six. Preschool (förskola) is heavily subsidised and available from about the age of one. More than 90 percent of the children attend preschool. The Compulsory school (grundskola) begins at the age of seven and ends at the age of 16.

Upper secondary school (gymnasieskola) consists of 18 national programmes, 12 vocational and six programmes preparing for higher education. Thera are also five introductory programmes (introduktionsprogram) for students who are not eligible for a national programme. Students usually start upper secondary school at the age of 16 and complete their upper secondary studies at the age of 19.

Teachers and Education Staff

The current teacher education programmes in Sweden include four different professional degrees: a degree in preschool education, a degree in primary school education, a degree in subject education and a degree in vocational education.

The teaching profession has for many years struggled with declining status. The government has during the last years initiated several reforms to improve the status of the teaching profession and to increase the number of applicants to the teacher education programmes.

Further information may also be found on the following website:

English (engelska) - Skolverket

Source: Sweden | Eurydice (europa.eu)

II. Additional charts

Figure 26: (Active) European citizenship and Internationalisation, all participating countries
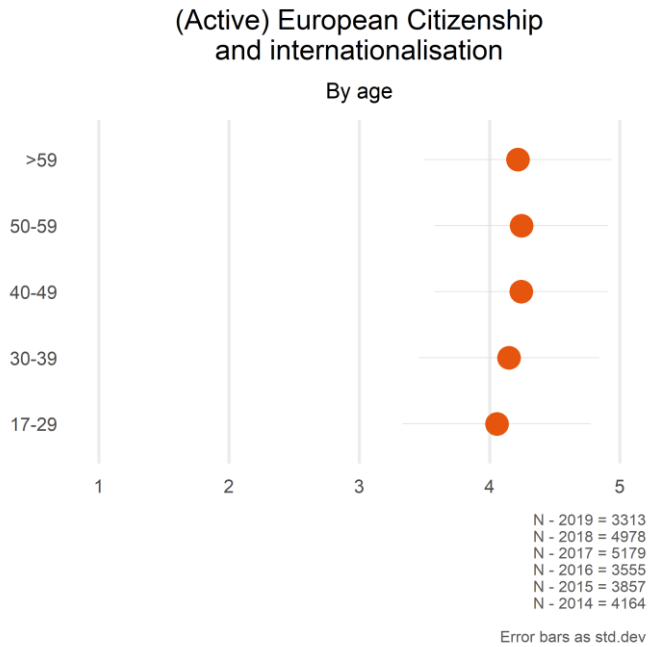
by age

Source: Database "MIA-Q", Status of the model: April 2021

Figure 27: Competence, all participating countries by age
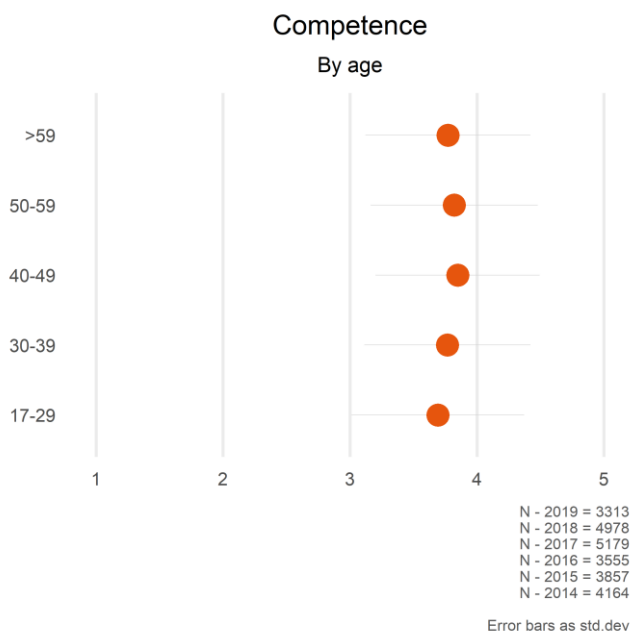
Source: Database "MIA-Q", Status of the model: April 2021

Figure 28: Employability, all participating countries by age

Employability
By age

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
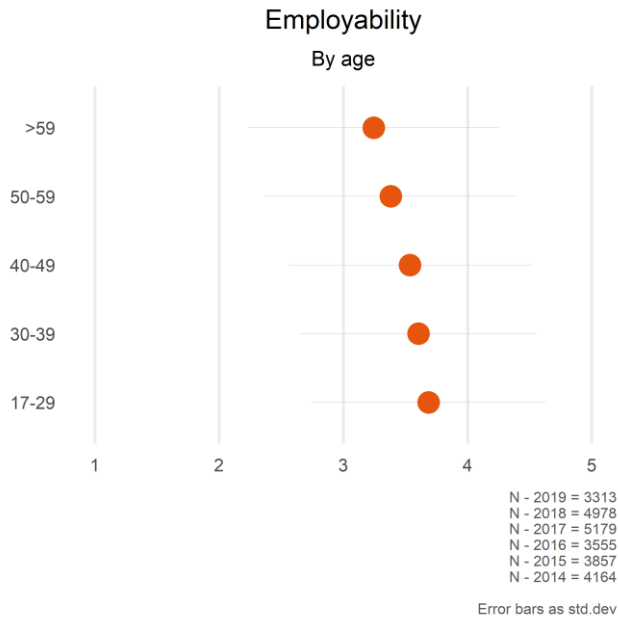
Source: Database "MIA-Q", Status of the model: April 2021

Figure 29: General Professional development, all participating countries by age

General Professional Development
By age

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
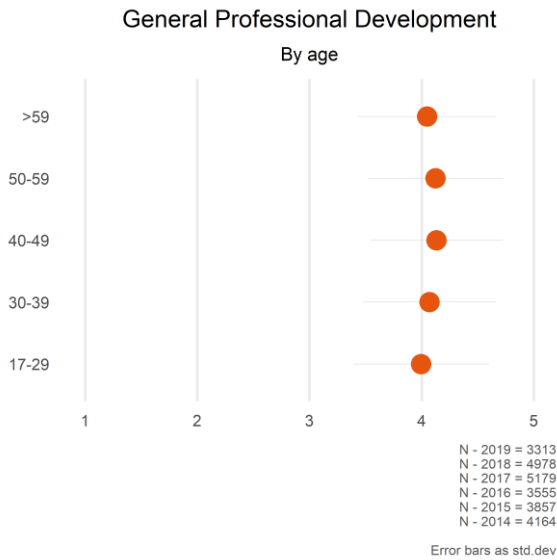
Source: Database "MIA-Q", Status of the model: April 2021

Figure 30: General Professional development – Skills and Knowledge, all participating countries by age

General Professional Development - Skills and knowledge

By age

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
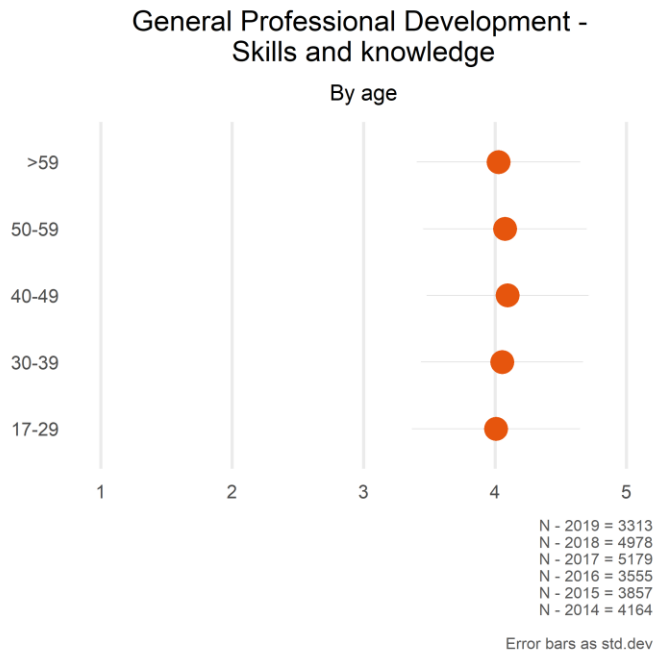
Source: Database "MIA-Q", Status of the model: April 2021

Figure 31: General professional development – Network, all participating countries by age

General Professional Development - Network

By age

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
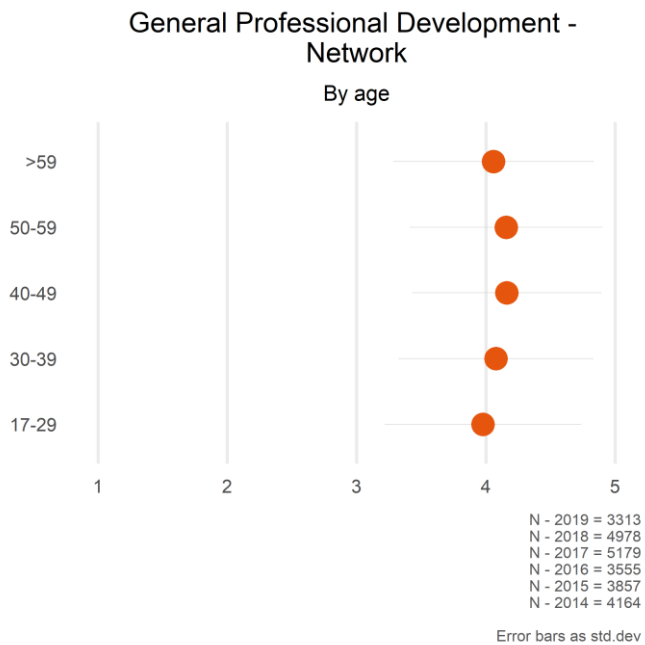
Source: Database "MIA-Q", Status of the model: April 2021

Figure 32: System improvement, all participating countries by age

System improvement

By age

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
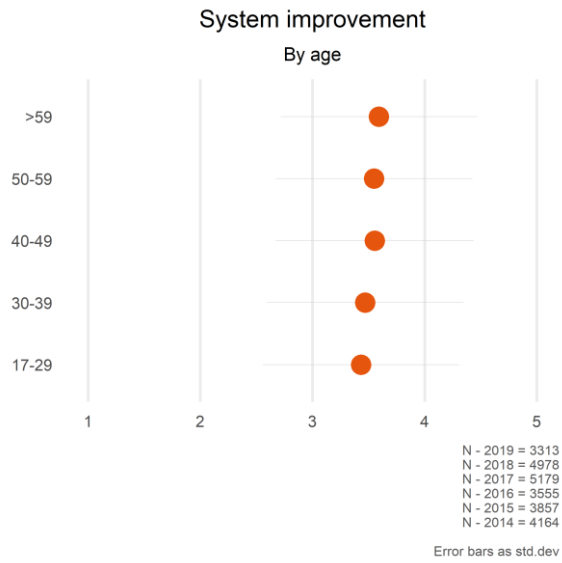
Source: Database "MIA-Q", Status of the model: April 2021

Figure 33: System improvement – institutional development, all participating countries by age

System improvement -
Institutional development

By age

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
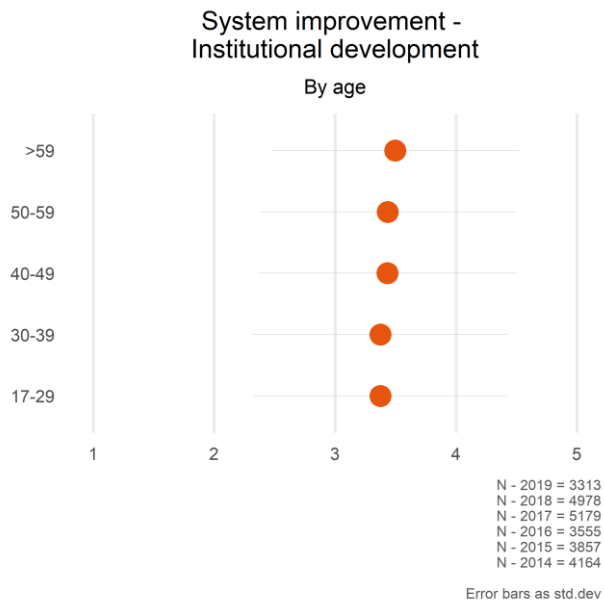
Source: Database "MIA-Q", Status of the model: April 2021

Figure 34: System improvement – Cooperation, all participating countries by age

System improvement -
Cooperation
By age

>59			●	
50-59			●	
40-49			●	
30-39			●	
17-29			●	

1   2   3   4   5

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
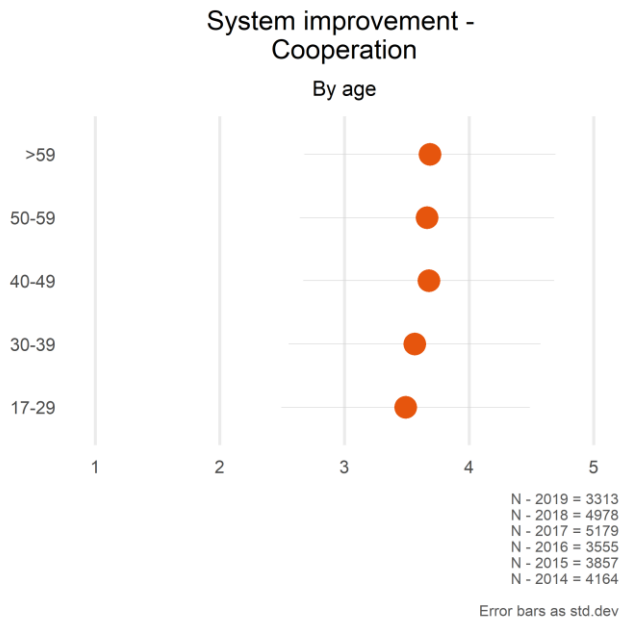
Source: Database "MIA-Q", Status of the model: April 2021

Figure 35: Innovation, all participating countries by age

Innovation
By age

>59			●	
50-59			●	
40-49			●	
30-39			●	
17-29			●	

1   2   3   4   5

N - 2019 = 3313
N - 2018 = 4978
N - 2017 = 5179
N - 2016 = 3555
N - 2015 = 3857
N - 2014 = 4164

Error bars as std.dev
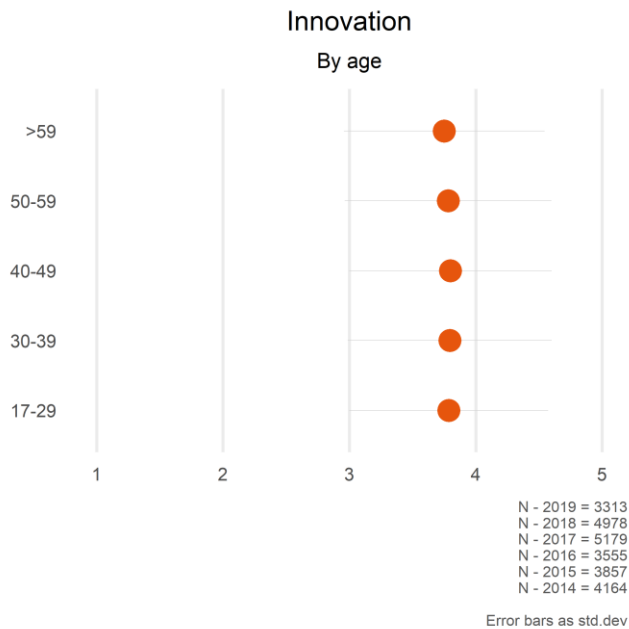
Source: Database "MIA-Q", Status of the model: April 2021

III. Causes and Effect Analysis

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

Figure 36: Regression results for satisfaction-dimension "competence"

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	2,620***		0,041
Participant from AT	0,117***	0,068***	0,018
Participant from EE	0,481***	0,155***	0,027
Participant from FI	0,139***	0,071***	0,021
Participant from HU	0,566***	0,301***	0,020
Participant from IS	0,214***	0,054***	0,034
Participant from NO	0,098***	0,031***	0,026
Participant from SE	0,163***	0,081***	0,020
Participant from SI	0,367***	0,141***	0,024
Age (in groups)	0,006	0,009	0,005
Participant: male	0,001	0,001	0,012
Motivation: Cooperation	0,316***	0,125***	0,021
Motivation: innovation	0,264***	0,119***	0,017
Motivation: competence	0,240***	0,095***	0,020
Frequency of mobility	0,080***	0,059***	0,010
no link to needs/ objectives of home-organisat.	-0,350***	-0,053***	0,051
good link to needs/ objectives of home-organis.	0,363***	0,184***	0,015
Receiving organisation: public	-0,009	-0,005	0,015
Receiving organisation: non-profit	-0,022	-0,016	0,012
Sending organisation: public	0,002	0,001	0,014
Sending organisation: non-profit	-0,036*	-0,019*	0,015
Recognition by sending institution: new role	0,018	0,010	0,014
Recognition by sending institution: none	-0,055***	-0,027***	0,015
Recognition by sending instit.: salary increase	0,055	0,007	0,059
Certificate: course-specific	-0,023	-0,017	0,012
Certificate: Europass-Mobility	0,053*	0,020*	0,020
Activity: job shadowing	0,063***	0,041***	0,016
Activity: training event	0,033	0,012	0,021
Education-field Training for Pre School Teachers	0,121**	0,024**	0,038
Education-field Biology / Chemistry	0,065	0,008	0,059
Receiving country with low satisfaction	-0,201***	-0,055***	0,029
Receiving country: Hungary	0,087	0,009	0,074
Receiving country: Netherlands	0,089*	0,018*	0,037
Duration (in groups)	0,034***	0,060***	0,008
Budget (in groups)	-0,037***	-0,065***	0,008
Distance-band	0,060***	0,071***	0,008
R^2	0,280		
R^2 (adjusted)	0,278		
F (df=35; 13.392)	148,613***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data / Participant from NL excluded because of multicollinearity

Figure 37: Regression results for satisf.-dimension "System develop. – Institut. develop."

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	2,793***		0,069
Participant from AT	-0,011	-0,004	0,031
Participant from EE	0,255***	0,055***	0,045
Participant from FI	-0,114**	-0,039**	0,035
Participant from HU	0,246***	0,087***	0,034
Participant from IS	0,317***	0,053***	0,057
Participant from NO	0,262***	0,055***	0,044
Participant from SE	0,223***	0,075***	0,033
Participant from SI	0,168***	0,043***	0,040
Age (in groups)	0,017*	0,017*	0,008
Participant: male	0,026	0,010	0,021
Motivation: Cooperation	0,493***	0,131***	0,034
Motivation: innovation	0,144***	0,044***	0,028
Motivation: competence	0,110**	0,029**	0,034
Frequency of mobility	0,062***	0,031***	0,017
no link to needs/ objectives of home-organisat.	-0,295**	-0,030**	0,085
good link to needs/ objectives of home-organis.	0,413***	0,140***	0,026
Receiving organisation: public	-0,092***	-0,039***	0,026
Receiving organisation: non-profit	0,030	0,015	0,020
Sending organisation: public	-0,034	-0,013	0,024
Sending organisation: non-profit	-0,039	-0,014	0,025
Recognition by sending institution: new role	0,027	0,010	0,023
Recognition by sending institution: none	-0,056*	-0,018*	0,026
Recognition by sending instit.: salary increase	0,217*	0,018*	0,100
Certificate: course-specific	-0,035	-0,017	0,020
Certificate: Europass-Mobility	0,081*	0,020*	0,034
Activity: job shadowing	0,107***	0,046***	0,027
Activity: training event	0,056	0,014	0,035
Education-field Training for Pre School Teachers	0,197**	0,026**	0,063
Education-field Biology / Chemistry	0,127	0,011	0,099
Receiving country with low satisfaction	-0,071	-0,013	0,048
Receiving country: Hungary	0,062	0,004	0,124
Receiving country: Netherlands	0,004	0,001	0,062
Duration (in groups)	-0,020	-0,023	0,013
Budget (in groups)	-0,046**	-0,054**	0,014
Distance-band	0,043**	0,034**	0,013
R^2	0,097		
R^2 (adjusted)	0,095		
F (df=35; 13.392)	41,102***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data / Participant from NL excluded because of multicollinearity

Figure 38: Regression results for satisf.-dimension "System development – Cooperation"

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	2,752***		0,063
Participant from AT	0,152***	0,060***	0,028
Participant from EE	0,221***	0,048***	0,041
Participant from FI	0,050	0,017	0,032
Participant from HU	0,382***	0,138***	0,031
Participant from IS	0,266***	0,045***	0,052
Participant from NO	0,155***	0,033***	0,041
Participant from SE	0,184***	0,063***	0,030
Participant from SI	0,330***	0,086***	0,036
Age (in groups)	0,016*	0,017*	0,007
Participant: male	0,037	0,015	0,019
Motivation: Cooperation	1,013***	0,273***	0,032
Motivation: innovation	0,045	0,014	0,026
Motivation: competence	-0,009	-0,002	0,031
Frequency of mobility	0,035*	0,018*	0,016
no link to needs/ objectives of home-organisat.	-0,331***	-0,034***	0,078
good link to needs/ objectives of home-organis.	0,321***	0,111***	0,024
Receiving organisation: public	0,078**	0,033**	0,024
Receiving organisation: non-profit	0,060**	0,029**	0,019
Sending organisation: public	-0,051*	-0,019*	0,022
Sending organisation: non-profit	-0,044	-0,016	0,023
Recognition by sending institution: new role	0,041*	0,016*	0,021
Recognition by sending institution: none	-0,025	-0,008	0,023
Recognition by sending instit.: salary increase	0,132	0,011	0,092
Certificate: course-specific	-0,051**	-0,025**	0,019
Certificate: Europass-Mobility	0,032	0,008	0,032
Activity: job shadowing	0,316***	0,140***	0,025
Activity: training event	0,063	0,016	0,033
Education-field Training for Pre School Teachers	0,151**	0,021**	0,058
Education-field Biology / Chemistry	-0,025	-0,002	0,091
Receiving country with low satisfaction	-0,058	-0,011	0,044
Receiving country: Hungary	-0,035	-0,002	0,114
Receiving country: Netherlands	0,157**	0,022**	0,057
Duration (in groups)	0,034**	0,040**	0,012
Budget (in groups)	-0,075***	-0,091***	0,013
Distance-band	0,073***	0,059***	0,012
R^2	0,207		
R^2 (adjusted)	0,205		
F (df=35; 13.392)	99,699***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data / Participant from NL excluded because of multicollinearity

Figure 39: Regression results for satisf.-dimension "European Citizenship & Internat.."

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	3,075***		0,044
Participant from AT	0,193***	0,110***	0,020
Participant from EE	0,268***	0,085***	0,028
Participant from FI	0,247***	0,124***	0,022
Participant from HU	0,386***	0,201***	0,022
Participant from IS	0,058	0,014	0,036
Participant from NO	0,140***	0,044***	0,028
Participant from SE	0,212***	0,104***	0,021
Participant from SI	0,241***	0,091***	0,025
Age (in groups)	0,026***	0,040***	0,005
Participant: male	0,017	0,010	0,013
Motivation: Cooperation	0,538***	0,210***	0,022
Motivation: innovation	0,039*	0,017*	0,018
Motivation: competence	0,241***	0,093***	0,021
Frequency of mobility	0,070***	0,051***	0,011
no link to needs/ objectives of home-organisat.	-0,331***	-0,049***	0,054
good link to needs/ objectives of home-organis.	0,275***	0,137***	0,016
Receiving organisation: public	0,062***	0,039***	0,016
Receiving organisation: non-profit	-0,013	-0,009	0,013
Sending organisation: public	0,004	0,002	0,015
Sending organisation: non-profit	-0,015	-0,008	0,016
Recognition by sending institution: new role	0,009	0,005	0,014
Recognition by sending institution: none	-0,052**	-0,025**	0,016
Recognition by sending instit.: salary increase	0,030	0,004	0,063
Certificate: course-specific	-0,005	-0,003	0,013
Certificate: Europass-Mobility	0,057**	0,021**	0,022
Activity: job shadowing	0,051**	0,032**	0,017
Activity: training event	-0,065**	-0,024**	0,023
Education-field Training for Pre School Teachers	0,033	0,007	0,040
Education-field Biology / Chemistry	0,063	0,008	0,063
Receiving country with low satisfaction	-0,112***	-0,031***	0,031
Receiving country: Hungary	0,125	0,012	0,079
Receiving country: Netherlands	0,005	0,001	0,039
Duration (in groups)	0,043***	0,073***	0,008
Budget (in groups)	-0,013	-0,023	0,009
Distance-band	0,041***	0,047***	0,008
R^2	0,207		
R^2 (adjusted)	0,205		
F (df=35; 13.392)	100,025***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data / Participant from NL excluded because of multicollinearity

Figure 40: Regression results for satisfaction-dimension "Innovation"

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	3,139***		0,053
Participant from AT	-0,188***	-0,091***	0,024
Participant from EE	0,080*	0,021*	0,034
Participant from FI	-0,212***	-0,090***	0,027
Participant from HU	-0,045	-0,020	0,026
Participant from IS	0,119**	0,025**	0,044
Participant from NO	-0,068*	-0,018*	0,034
Participant from SE	-0,168***	-0,070***	0,025
Participant from SI	0,053	0,017	0,030
Age (in groups)	-0,007	-0,009	0,006
Participant: male	-0,042**	-0,021**	0,016
Motivation: Cooperation	0,109***	0,036***	0,027
Motivation: innovation	0,576***	0,217***	0,022
Motivation: competence	0,179***	0,059***	0,026
Frequency of mobility	0,039**	0,024**	0,013
no link to needs/ objectives of home-organisat.	-0,504***	-0,063***	0,065
good link to needs/ objectives of home-organis.	0,517***	0,218***	0,020
Receiving organisation: public	-0,058**	-0,030**	0,020
Receiving organisation: non-profit	0,020	0,012	0,016
Sending organisation: public	-0,044*	-0,020*	0,018
Sending organisation: non-profit	-0,067***	-0,030***	0,019
Recognition by sending institution: new role	0,047**	0,022**	0,017
Recognition by sending institution: none	-0,055**	-0,022**	0,020
Recognition by sending instit.: salary increase	0,087	0,009	0,077
Certificate: course-specific	0,054**	0,033**	0,016
Certificate: Europass-Mobility	0,075**	0,023**	0,026
Activity: job shadowing	-0,041*	-0,022*	0,021
Activity: training event	-0,058*	-0,018*	0,027
Education-field Training for Pre School Teachers	0,200***	0,033***	0,049
Education-field Biology / Chemistry	0,025	0,003	0,076
Receiving country with low satisfaction	-0,256***	-0,059***	0,037
Receiving country: Hungary	0,140	0,012	0,095
Receiving country: Netherlands	0,034	0,006	0,048
Duration (in groups)	0,011	0,016	0,010
Budget (in groups)	-0,019	-0,028	0,011
Distance-band	0,006	0,006	0,010
R^2	0,172		
R^2 (adjusted)	0,170		
F (df=35; 13.392)	79,616***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data / Participant from NL excluded because of multicollinearity

Figure 41: Regression results for satisfaction-dimension "Employability"

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	3,104***		0,067
Participant from AT	-0,272***	-0,108***	0,030
Participant from EE	0,101*	0,022*	0,044
Participant from FI	-0,094**	-0,033**	0,034
Participant from HU	-0,014	-0,005	0,034
Participant from IS	0,370***	0,063***	0,056
Participant from NO	-0,177***	-0,038***	0,044
Participant from SE	-0,033	-0,011	0,032
Participant from SI	0,037	0,010	0,039
Age (in groups)	-0,119***	-0,127***	0,008
Participant: male	-0,014	-0,006	0,021
Motivation: Cooperation	0,352***	0,095***	0,034
Motivation: innovation	0,107***	0,033***	0,028
Motivation: competence	0,183***	0,049***	0,033
Frequency of mobility	0,064***	0,032***	0,017
no link to needs/ objectives of home-organisat.	-0,457***	-0,047***	0,083
good link to needs/ objectives of home-organis.	0,421***	0,145***	0,025
Receiving organisation: public	0,005	0,002	0,025
Receiving organisation: non-profit	-0,007	-0,004	0,020
Sending organisation: public	-0,042	-0,016	0,023
Sending organisation: non-profit	-0,018	-0,006	0,024
Recognition by sending institution: new role	0,049*	0,019*	0,022
Recognition by sending institution: none	-0,040	-0,013	0,025
Recognition by sending instit.: salary increase	0,066	0,006	0,098
Certificate: course-specific	0,042*	0,021*	0,020
Certificate: Europass-Mobility	0,042	0,011	0,034
Activity: job shadowing	-0,086**	-0,038**	0,027
Activity: training event	-0,063	-0,016	0,035
Education-field Training for Pre School Teachers	0,210**	0,029**	0,062
Education-field Biology / Chemistry	0,051	0,004	0,097
Receiving country with low satisfaction	-0,164***	-0,031***	0,047
Receiving country: Hungary	-0,142	-0,010	0,122
Receiving country: Netherlands	-0,030	-0,004	0,061
Duration (in groups)	0,038**	0,044**	0,013
Budget (in groups)	0,001	0,001	0,014
Distance-band	-0,006	-0,005	0,013
R^2	0,096		
R^2 (adjusted)	0,094		
F (df=35; 13.392)	40,738***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data / Participant from NL excluded because of multicollinearity

Figure 42: Regression results for satisf.-dimension "Gen.-Prof.-Development: Network"

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	3,029***		0,048
Participant from AT	0,226***	0,116***	0,021
Participant from EE	0,237***	0,067***	0,031
Participant from FI	0,157***	0,071***	0,024
Participant from HU	0,334***	0,156***	0,024
Participant from IS	0,130**	0,029**	0,040
Participant from NO	0,072*	0,020*	0,031
Participant from SE	0,174***	0,076***	0,023
Participant from SI	0,350***	0,118***	0,028
Age (in groups)	0,005	0,007	0,006
Participant: male	-0,059***	-0,031***	0,015
Motivation: Cooperation	0,962***	0,334***	0,024
Motivation: innovation	0,130***	0,052***	0,020
Motivation: competence	0,030	0,010	0,023
Frequency of mobility	0,059***	0,039***	0,012
no link to needs/ objectives of home-organisat.	-0,294***	-0,039***	0,059
good link to needs/ objectives of home-organis.	0,300***	0,133***	0,018
Receiving organisation: public	0,016	0,009	0,018
Receiving organisation: non-profit	0,035*	0,022*	0,014
Sending organisation: public	-0,042*	-0,020*	0,017
Sending organisation: non-profit	-0,022	-0,010	0,017
Recognition by sending institution: new role	0,016	0,008	0,016
Recognition by sending institution: none	-0,013	-0,006	0,018
Recognition by sending instit.: salary increase	0,017	0,002	0,069
Certificate: course-specific	-0,006	-0,004	0,014
Certificate: Europass-Mobility	0,054*	0,018*	0,024
Activity: job shadowing	0,019	0,011	0,019
Activity: training event	-0,051*	-0,016*	0,025
Education-field Training for Pre School Teachers	-0,032	-0,006	0,044
Education-field Biology / Chemistry	-0,055	-0,006	0,069
Receiving country with low satisfaction	-0,021	-0,005	0,033
Receiving country: Hungary	0,154	0,014	0,086
Receiving country: Netherlands	0,092*	0,016*	0,043
Duration (in groups)	0,062***	0,095***	0,009
Budget (in groups)	-0,022*	-0,034*	0,010
Distance-band	0,027**	0,028**	0,009
R^2	0,247		
R^2 (adjusted)	0,245		
F (df=35; 13.392)	125,214***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data / Participant from NL excluded because of multicollinearity

Figure 43: Regression results for satisf.-dim. "Gen.-Prof.-Development: Institutional"

	B (unst. coeff.)	Beta (std. coeff.)	Std. Error
(Constant)	3,038***		0,039
Participant from AT	0,038*	0,023*	0,018
Participant from EE	0,164***	0,056***	0,025
Participant from FI	-0,048*	-0,026*	0,020
Participant from HU	0,176***	0,098***	0,020
Participant from IS	0,181***	0,048***	0,033
Participant from NO	0,019	0,006	0,025
Participant from SE	0,017	0,009	0,019
Participant from SI	0,100***	0,041***	0,023
Age (in groups)	0,002	0,003	0,005
Participant: male	-0,056***	-0,036***	0,012
Motivation: Cooperation	0,178***	0,074***	0,020
Motivation: innovation	0,409***	0,195***	0,016
Motivation: competence	0,328***	0,136***	0,019
Frequency of mobility	0,064***	0,050***	0,010
no link to needs/ objectives of home-organisat.	-0,441***	-0,070***	0,049
good link to needs/ objectives of home-organis.	0,517***	0,276***	0,015
Receiving organisation: public	-0,031*	-0,021*	0,015
Receiving organisation: non-profit	0,006	0,004	0,012
Sending organisation: public	-0,021	-0,012	0,014
Sending organisation: non-profit	-0,028*	-0,016*	0,014
Recognition by sending institution: new role	0,024	0,014	0,013
Recognition by sending institution: none	-0,038**	-0,020**	0,015
Recognition by sending instit.: salary increase	0,105	0,014	0,057
Certificate: course-specific	0,010	0,007	0,012
Certificate: Europass-Mobility	0,032	0,013	0,020
Activity: job shadowing	0,023	0,016	0,016
Activity: training event	0,002	0,001	0,020
Education-field Training for Pre School Teachers	0,084*	0,018*	0,036
Education-field Biology / Chemistry	0,015	0,002	0,057
Receiving country with low satisfaction	-0,210***	-0,061***	0,027
Receiving country: Hungary	0,063	0,007	0,071
Receiving country: Netherlands	-0,008	-0,002	0,035
Duration (in groups)	0,018*	0,034*	0,007
Budget (in groups)	0,001	0,002	0,008
Distance-band	-0,023**	-0,029**	0,007
R^2	0,266		
R^2 (adjusted)	0,264		
F (df=35; 13.392)	138,618***		
* p<0,05; ** p<0,01; *** p<0,001			

Source: Erasmus+ Data / Participant from NL excluded because of multicollinearity

Figure 44: Mean satisfaction according to the receiving country

	Mean satisfaction	No. of mobilities
Austria	3,83	373
Belgium	3,71	439
Croatia	3,96	357
Cyprus	3,56	604
Czech Republic	3,82	294
Denmark	3,87	443
Estonia	3,83	157
Finland	3,82	816
France	3,83	1.006
Germany	3,84	1.451
Greece	3,83	551
Hungary	3,96	139
Iceland	3,87	486
Ireland	3,78	1.382
Italy	3,82	2.849
Latvia	3,91	80
Malta	3,69	1.443
Netherlands	3,96	491
Norway	3,87	224
others	4,04	119
Poland	3,97	147
Portugal	3,91	754
Romania	3,97	111
Slovenia	3,85	197
Spain	3,85	2.278
Sweden	3,88	617
Turkey	3,95	117
UK	3,77	7.121
all	3,81	25.046

IV. Definition of relevant categories and underlying information

Topics

The six main topics for which sub-indicators where developed are the following[26]:

- (Active) European Citizenship and Internationalization
- Professional Development - Competence
- Professional Development - Employability
- Professional Development - General Professional development
- System improvement
- Innovation.

Response categories

The MIA-Q sub-model is based on the participant surveys for learners and staff in Mobility Tool+ and uses a large part of the questions cited in the questionnaire. Most questions have five fixed answer categories. The scales are:

- "Strongly agree, rather agree, neither agree nor disagree, rather disagree, strongly good disagree",
- "Very good, Good, Fair, Poor, very poor",
- "Very Satisfied, rather satisfied, neither satisfied nor dissatisfied, rather dissatisfied, very dissatisfied".

Observation periods

The sub-model was tested during winter 2020/spring 2021 using a centralized data extraction for all participating NAs for the mobilities of 2014 to 2019.

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[26] For a detailed description of the topics and the underlying questions for the indicators see: Löffler, Roland et al. (2018). Scientific Monitoring „Applied Methods of Impact Assessment Final report TCA Showing and Identifying Impact of Erasmus+ on EU and National Level, Part I. Wien: öibf, 9ff.

1. Model concept and operationalisation

Figure 44: The structure of the SE impact model
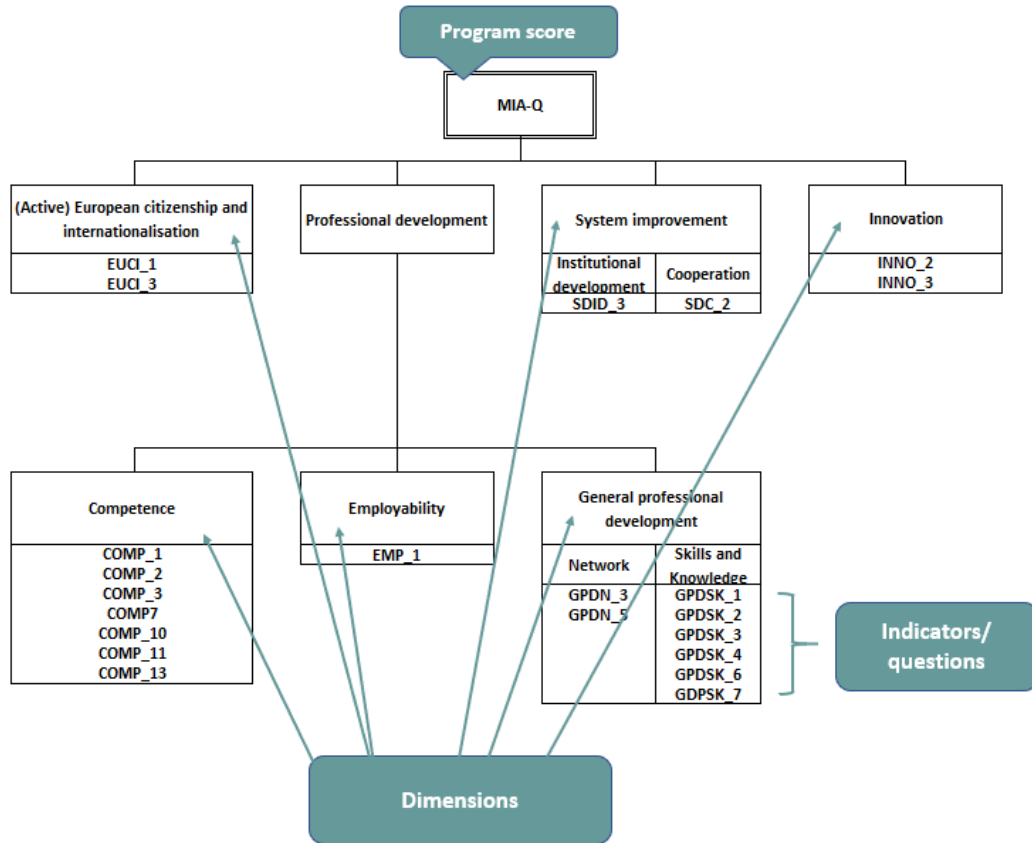
The impact model consists of six *dimensions*, each measured by a set of questions from the staff datasets. For each dimension a *dimension score* is calculated. In addition, a composite *programme score* is calculated from the six dimensions scores.

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 45: The 5-point response scale

		Scores
Strongly disagree	☐	1
Rather disagree	☐	2
Neither agree, nor disagree	☐	3
Rather agree	☒	4
Strongly agree	☐	5

All scores are based on the calculation of *unweighted means* across these scales. All 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 six 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.