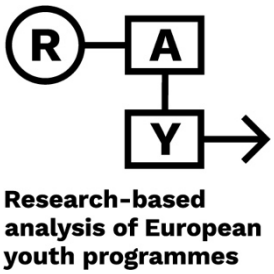

Research-based analysis of European youth programmes

EXPLORING INCLUSION IN ERASMUS+ YOUTH IN ACTION:

EFFECTS OF INEQUALITIES ON LEARNING OUTCOMES

RESEARCH REPORT

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‘Erasmus+: Youth in Action’ is part of the Erasmus+ Programme of the European Union and supporting European youth projects. The ‘Research-based Analysis of European Youth Programmes’ (RAY) is conducted by the RAY Network, which includes the National Agencies of Erasmus+ Youth in Action and of the European Solidarity Corps together with their research partners in currently 34 countries*.

This study explores how social inequalities affect the learning outcomes of young people who participated in Erasmus+ Youth in Action projects and is based on a secondary analysis of data collected through the RAY surveys between October 2017 and May 2018 within ‘Research-based Analysis and Monitoring of Erasmus+ Youth in Action’ (RAY-MON), designed and implemented by the Institute of Educational Science at the University of Innsbruck and the Generation and Educational Science Institute in Austria in cooperation with the RAY Network. It was co-funded within the Transnational Cooperation Activities (TCA) of Erasmus+ Youth in Action and by SALTO Inclusion & Diversity.

This report reflects the views only of its authors, and the European Commission and SALTO Inclusion & Diversity cannot be held responsible for any use, which may be made of the information contained therein.

Where available, national research reports can be requested from the respective National Agencies and their research partners (see https://www.researchyouth.net/network/. Further RAY publications can be retrieved from https://www.researchyouth.net/reports/.

* In 2017/18: Austria, Belgium, the Czech Republic, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Turkey, United Kingdom.

Erasmus+

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Research-based analysis of European youth programmes

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SUMMARY

The present study explores how different dimensions of social inequality affect the individual learning outcomes of young people who participated in Erasmus+ Youth in Action projects, focusing on the development of skills for lifelong learning, particular related to participation in society and democratic life, intercultural interaction, learning and personal development. The respective learning outcomes were analysed with respect to educational inequality, employment inequality, inequality related to participation in civil society and democratic life, inequality resulting from migration or belonging to a minority, and inequality related to mobility, using objective and subjective indicators for these different dimensions of inequality.

The results of the study indicate that young people who are exposed to one or more of these inequalities show, in general, slightly higher learning outcomes resulting from their participation in projects funded by Erasmus+ Youth in Action than their peers. This could be explained by young people suffering from these inequalities are experiencing situations which are new for them and are, therefore, more touched by them; they might be more eager to make best use of these experiences in order to catch up with their peers – and might be the more active learners. This seems to be true especially for young people who experience obstacles to mobility or had never been abroad before their participation in the E+/YiA project.

On the other hand, this does not necessarily apply for all groups of young people and to all skills outlined above, and it does not necessarily apply to all of these social inequalities or specific facets of them.

For example, young people who had experienced unemployment during the year prior to the project – which would be an objective indicator for employment inequality – indicate significantly lower learning outcomes for some of the skills than their peers; on the other hand, young people reporting that they are confronted with obstacles to employment show higher learning outcomes. This suggests, that those experiencing obstacles to employment did not necessarily experience unemployment during the previous year, but are afraid of it, possibly due to precarious employments, and are more eager to develop their skills – including through their E+/YiA experience – as to decrease the risk of unemployment.

Furthermore, young people with a second-generation immigration status report significantly higher learning outcomes. This indicates that also these young people are more eager to develop their skills in order to overcome disadvantages resulting from their status. On the other hand, belonging to a minority in general does not show an effect on the learning outcomes.

Overall, the results indicate that E+/YiA projects do not lead to further inequalities among young people in learning outcomes, but rather that they contribute to decreasing the gap between young people with fewer and more opportunities – contrary to the commonly observed 'Matthew Effect' in educational contexts.

A second important finding of the study is that the specific way a project is designed and implemented has the highest explanatory power for the learning outcomes. Therefore, it is recommended to further explore which specific project designs, contexts, educational concepts, methodologies etc. contribute to improving the learning outcomes – in particular of young people with fewer opportunities – and to foster the development of the necessary competences of youth workers and youth leaders involved in developing and implementing E+/YiA projects.

1. INTRODUCTION

'Erasmus+ Youth in Action' is the youth component of the Erasmus+ Programme of the European Union (2014-2020). It aims at developing key competences of young people as well as to promote active citizenship, intercultural dialogue, social inclusion, solidarity and participation in democratic life and in the labour market, in particular through increased learning mobility opportunities for young people, youth leaders, youth workers and others active in youth work and youth organisations. Special emphasis is given to the inclusion of young people with fewer opportunities (YPFO) in the programme.

The programme supports learning mobility of young people (e.g., through youth exchanges or volunteering projects[1]) or of youth leaders, youth workers and others active in youth work and youth organisations (e.g., through training and networking activities). Furthermore, the programme supports cooperation for innovation and the exchange of good practices as well as activities contributing to policy reform (e.g. through projects fostering a dialogue between young people and policy makers).

This study will primarily focus on youth exchanges (thematic meetings of between 16 and 60 young people between age 13 and 30 years from two or more countries for five to 21 days), the European Voluntary Service (volunteering projects abroad for young people between age 17 and 30 years from two weeks to 12 months), structured dialogue meetings between young people (at least 30 participants between age 13 and 30 years) and decision makers in the field of youth, as well as youth worker mobility projects (between two days and two months with up to 50 participants).

1.1. RESEARCH-BASED ANALYSIS OF EUROPEAN YOUTH PROGRAMMES

'Research-based Analysis of European Youth Programmes' (RAY) is a research programme, which aims to explore a broad scope of aspects of the Erasmus+ Youth in Action programme (E+/YiA) and of the European Solidarity Corps, seeking to contribute to the development of the current programmes' implementation as well as to the development and implementation of the next programme generation (2021-2027). In particular, RAY aims to explore the effects of Erasmus+ Youth in Action on young people, youth leaders, youth workers and others involved in the projects funded by this programme as well as on youth groups, organisations, institutions, structures and communities involved in the programme, including with respect to the objectives of E+/YiA. Furthermore, RAY aims to study the implementation of the E+/YiA, in particular with respect to promotion and support provided to applicants and beneficiaries, and how funded projects are implemented, in particular with respect to their thematic orientation, the project methodologies, and the educational approaches and methods, including their effectiveness in view of the objectives of E+/YiA.

The RAY research programme is implemented by the RAY Network, which was founded in 2008. RAY Network partners are the National Agencies of E+/YiA and of the European Solidarity Corps

[1] Since October 2018, the support for volunteering projects was transferred to the European Solidarity Corps programme (2018-2020). For this study, the responses to surveys with participants and project leaders involved in projects ending in 2017 were used, thus when volunteering was still part of E+/YiA.

together with their research partners[2] in 34 countries[3]. At the transnational level, RAY research activities are designed and implemented by a transnational research team, supported by working groups composed of RAY Network partners, and coordinated together with the RAY coordination office at the National Agency of E+/YiA and of the European Solidarity Corps in Austria.

In principle, the research on the programmes and their activities envisages a combination of quantitative and qualitative social research methods and instruments, in particular surveys with project participants, project leaders and staff of beneficiary organisations as well as qualitative social research methods, such as interviews and focus groups with different actors involved in the programmes as well as participant observation and participatory research. Surveys and interviews can also involve young people, youth leaders and youth workers not participating in the programme and thus acting as control groups.[4]

1.2. RESEARCH-BASED ANALYSIS AND MONITORING OF ERASMUS+ YOUTH IN ACTION

This RAY research project (RAY-MON) aims at contributing to **monitoring** and developing E+/YiA and the quality of projects supported by it by exploring a broad scope of aspects of E+/YiA. This is done through multilingual online surveys with project participants and project leaders/team members, conducted every second year in order to study the implementation and outcomes of E+/YiA over the full programme period (2014 to 2020) and, thus, the development of the E+/YiA over time. The first cycle of surveys was conducted between October 2015 and May 2016, covering a sample of a full year of funded activities ending in 2015. The Transnational Analysis of these surveys is available on the RAY website.[5]

One of the objectives of this research project is to explore 'the level of access to E+/YiA for young people (in particular of YPFO) as well as for organisations, bodies and groups in the youth field' – thus exploring if and in which way the respective objective of E+/YiA (see above) is achieved. In line with this objective, this report will explore the question of whether and how learning outcomes differ according to different dimensions of social inequality. In other words, whether the learning outcomes of people with fewer opportunities differ from those with more and/or better opportunities.

Since the inclusion of YPFO has been a priority already in previous generations of European youth programmes, and since this topic could not be explored in-depth as part of the regular transnational analysis of RAY-MON, a first study on this topic was already conducted in 2014/15 by researchers from Belgium (Flemish-speaking community), France, Luxembourg and the RAY transnational research team together with the SALTO Resource Centre on Inclusion (see Geudens et al., 2015)[6]. The present study was initiated following the first cycle of RAY-MON

[2] See https://www.researchyouth.eu/network.

[3] As of December 2019: Austria, Belgium, Czechia, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, the Netherlands, Northern Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, United Kingdom.

[4] For a description of RAY research projects see Annex section 9.1 and https://www.researchyouth.eu/ray-research-activities.

[5] See https://www.researchyouth.eu/results-erasmus-youth-in-action.

[6] See https://www.researchyouth.eu/inclusion.

surveys in E+/YiA in 2015/16. Building on the experience from 2014/15, the research approach was further developed.

The present report is based on the data collected within RAY-MON through surveys conducted between October 2017 and May 2018, covering a sample of a full year of funded activities ending in 2017. The sample included projects funded by RAY Network partners in 31 countries. The questionnaires were available in 26 languages.

In chapter 2, we discuss various concepts, which are connected to the central question of this report. First, we focus on the issue of inclusion of young people within the framework of policy programmes of the European Union (section 2.1). Then, the learning concepts with a focus on non-formal learning and citizenship, on which the European Youth Programmes are based, are presented (section 2.2). Finally, different approaches to measure social inequality through various indicators are compared to identify people with fewer opportunities (section 2.3). Chapter 3 provides information on the research design. We describe the indicators used for assessing social inequality and the measurement concept for learning outcomes. In chapter 4, the results of the empirical analysis are described in detail, differentiated according to various dimensions of social inequality. In chapter 5 follows an integrated discussion of the results. Chapter 6 makes proposals to improve the empirical basis of the RAY survey with a focus on young people with fewer opportunities.

2. CONCEPTION AND CONSIDERATIONS

The central goal of this chapter is to clarify the subject and related concepts of the study. In a first step, we aim to clarify the notion of YPFO in the context of E+/YiA. Therefore, we follow the historical roots and the emergence of this concept when becoming a key element of European Youth Programmes. In a second step, we deal with learning in the context of E+/YiA projects with a focus on non-formal learning and take a specific look at the learning of YPFO. The third part of this chapter investigates different ways to identify YPFO using indicators and methods of social inequality research with a focus on youth.

2.1. POLICIES AND DEFINITIONS IN THE YOUTH FIELD AT EUROPEAN LEVEL RELATED TO YOUNG PEOPLE WITH FEWER OPPORTUNITIES

2.1.1. HISTORY

The inclusion of YPFO has a long tradition in the youth sector at the European level. In the context of the European Communities, already in the late seventies a programme for the exchange of young workers was established (see Council of the European Communities, 1979, 1984), providing an opportunity for international experiences for young workers who could not take part in the existing school-based and university-based exchange programmes, some of them with a long tradition over decades.

Youth for Europe I (1989-1991)

Already the decision of the Council of the European Communities (1988) on the first phase of the Youth for Europe programme (1989 to 1991) states that "the programme shall be designed to encourage the participation of young people who experience the most difficulties in being included in the existing programmes between the Member States" (Council of the European Communities, 1988, p. 43). This suggests that the Youth for Europe programme was also intended to offer an alternative to existing exchange programmes, which were not accessible to all young people. This is reflected also in the programme objectives, e.g. that the participation should be open "to young people from all kinds of social, economic and cultural backgrounds" (p. 43), thus taking an inclusive approach.

Furthermore, the decision gives priority for allocating grants to youth exchanges which "are designed also for young people with disadvantaged backgrounds" (p. 45).

Youth for Europe II (1992-1994)

The decision of the Council of the European Communities (1991) on the second phase of the Youth for Europe programme (1992 to 1994) goes a step further, not only giving priority to exchange projects especially designed for young people with disadvantaged backgrounds, but also offering a higher percentage of funding in relation to eligible costs for "disadvantaged young people" (Council of the European Communities, 1991, p. 29) (up to 75% compared to the usual maximum of 50%). Furthermore, it was requested in this decision, that at least one third of the European Community funds allocated to youth exchanges should be used for ‘disadvantaged young people’.

Youth for Europe III (1995-1999)

The decision on the third phase of the Youth for Europe programme (1995 to 1999) – now by the European Parliament and the Council of the European Union (1995) – refers more prominently to the inclusion of 'disadvantaged young people' in the programme. In fact, there is a separate article in this decision stating that "special attention will be paid to ensuring that disadvantaged young people have access to activities" (p. 3) run under this programme. 'Disadvantaged young people' were defined as young people who experience the most difficulties in being included in this programme, due to cultural, social, economic, physical, mental or geographical reasons. This is more specific than the previous decisions, now also including disadvantages due to physical, mental or geographical reasons. The focus on the inclusion of 'disadvantaged young people' in the programme is expressed quite prominently also in other sections of the decision, e.g. that this focus should be reflected in the implementation of all Actions of the programme. Similar to the previous programme, it was requested in this decision, that at least one third of the European Union funds allocated to youth exchanges should be made available for the participation of YPFO, and that funding may amount up to 75% of eligible costs (normally up to 50%).

YOUTH programme (2000-2006)

The decision of the European Parliament and the Council of the European Union (2000) on the 'YOUTH' programme (2000 to 2006) makes little explicit reference to the inclusion of young people with fewer opportunities into the programme, basically expressing that special attention should be paid to "ensuring that all young people, without discrimination" have access to the programme (p. 4), and that funding should take into account the need for an "equal opportunity of participation for young people of every Member State" (p. 7). Furthermore, the decision uses a slightly different terminology, not using the term 'disadvantages', but 'difficulties', i.e. that efforts should be made to facilitate access to the programme for "young people who face difficulties of cultural, social, economic, physical, mental or geographical nature" (p. 7). In line with this, there is the request that priority access to the Action 'Youth Initiatives' will be given to "those young people most in need" or, as indicated in the programme guide, to young people "who come from less privileged cultural, geographical and socio-economic backgrounds" (European Commission, 2000, p. 12). Projects meeting these criteria were also eligible for a higher portion of funding. Youth Initiatives were an Action already under the Youth for Europe programme between 1995 and 1999, which were funding in-country projects. They turned out to be very suitable for including YPFO into the programme since they were more easily accessible to YPFO than other Actions with cross-border projects.

New is the request that special attention should be paid to training and cooperation activities "seeking to encourage the participation of young people who find it most difficult to participate in Community actions" (European Parliament and Council, 2000, p. 9).

The programme guide also refers to 'young people with special needs', frequently combined with 'or in difficulty' or the like. In this context, extra funding was available for "exceptional actual costs related to young people with special needs" (European Commission, 2000, p. 14).

European Commission White Paper: A New Impetus for European Youth (2001)

In this policy document, social inclusion is a prominent theme and is connected to the European Social Inclusion Strategy. It needs to be noted that the term 'inclusion' is not included in the documents referred to so far while its link to 'disadvantaged young people' (young people with fewer opportunities) seems to be obvious as outlined below. In particular, inclusion is referred to in the contexts of employment, poverty, ethnic minorities etc., sometimes also using the term 'integration' synonymously with or complementary to 'inclusion', in particular in the context of inclusion/integration of 'disabled young people'. More specifically, the document refers to the inclusion of 'disadvantaged young people', where 'disadvantaged' is understood with respect to access to employment, education (including non-formal education) and ethnic minority background. It is to be noted that the inclusion/integration of 'disabled young people' is mentioned separately from the inclusion/integration of 'disadvantaged young people'.

The proposals in the document include specifically a "better accessibility to the LEONARDO, SOCRATES and YOUTH programmes for disabled and disadvantaged young people" (European Commission, 2001, p. 52).

Youth in Action (2007 to 2013)

The decision of the European Parliament and the Council of the European Union (2006a) on the Youth in Action programme uses for the first time the term 'young people with fewer opportunities, including young people with disabilities' instead of 'disadvantaged' or 'disabled' young people, presumably in order to avoid a stigmatisation of these groups. In fact, one of the ten specific programme objectives is "facilitating participation in the Programme by young people with fewer opportunities, including young people with disabilities" (European Parliament and Council, 2006a, p. 32). Furthermore, the inclusion of YPFO is – according to the programme guide – one of four permanent programme priorities, thus putting strong emphasis on the inclusion of this group. More specifically, YPFO are defined as young people that are at a disadvantage compared to their peers, because they face one or more of the following situations and obstacles: social obstacles, economic obstacles, disability, educational difficulties, cultural differences, health problems, geographical obstacles (being explained in more detail in the programme guide).

The inclusion of YPFO is emphasised across all Actions, giving priority to applications for projects involving YPFO and using an adequate project design and methodology for them; additional funding could be applied for covering costs to support the inclusion of YPFO. Special emphasis is put on the inclusion of YPFO in the European Voluntary Service (EVS), introducing also short-term EVS projects with a service duration between two weeks and two months, specifically aimed at YPFO.

Inclusion strategy of the Youth in Action programme

The emphasis given to the inclusion of YPFO in the Youth in Action programme is elaborated further in the 'Inclusion strategy of the Youth in Action programme' (European Commission, 2007). At the same time, this strategy goes a big step further:

- it aims to "stimulate the use of the Youth in Action programme as a tool to enhance the social inclusion, active citizenship and employability of young people with fewer

opportunities to contribute to social cohesion at large" (p.1), thus fostering inclusion in social, political and working life beyond the Youth in Action programme itself;
- it links inclusion to promoting equality (including gender equality) and non-discrimination, thus specifying purposes of inclusion;
- it considers non-formal and informal learning offered through the Youth in Action programme as an opportunity for YPFO to develop their competences, including respective recognition of competences developed through participation in funded projects, thus fostering their access to the labour market or further education.

Subsequently, the strategy emphasises the political dimension of the programme.

Specific objectives of the strategy are to increase the quality and quantity of 'inclusion projects' (projects involving YPFO and/or projects with a clear thematic focus on inclusion), and to develop resources providing special inclusion-related support to all programme activities (in particular a SALTO Resource Centre Inclusion, but also training tools, publications, information etc.). Furthermore, the strategy outlines a broad spectrum of recommendations for actions and measures fostering inclusion.

EU Strategy for Youth – Investing and Empowering 2009-2018

The 'EU Strategy for Youth' (European Commission, 2009) promotes the inclusion of young people in general, in particular through one of its three goals 'Improving Access and full participation of all young people in society', but also through fostering inclusion in particular of young people excluded due to "unemployment, disability, societal and individuals' attitudes towards migration, discrimination, physical and/or mental health, addictive behaviour, abuse, family violence and criminal record" (p. 5).

'Social inclusion' is proposed as one of seven Fields of Action, aimed at preventing poverty and social exclusion among disadvantaged youth groups and breaking their intergenerational transmission. Some actions to be taken by Member States and Commission are specifically aimed at the inclusion of YPFO, and one of them is to "realise the full potential of youth work and youth community centres as means of inclusion" (p. 5).

Erasmus+ Youth in Action (2014 to 2020)

The regulation of the European Parliament and of the Council (2013) establishing the Erasmus+ programme makes relatively little reference to young people with fewer opportunities or with special needs, except as one of the specific objectives in the 'youth chapter' of the regulation and in the chapter on the access to the programme.

The programme guide has a stronger focus on the inclusion of YPFO, with frequent references to it, in particular concerning youth-related Actions. Nevertheless, 'equity and inclusion' is one of six important features of the overall Erasmus+ Programme, using the same wording as in the Youth in Action (2007-2013) programme guide and referring to the inclusion strategy in the youth field. New is the mention of refugees, asylum seekers and migrants to be included among YPFO, thus taking into consideration the refugee and migration movements in 2015 and onwards.

Apart from this, references in the programme guide to YPFO are similar to those in the previous programme, including with respect to award criteria and additional funding.

Erasmus+ Inclusion and Diversity Strategy in the field of Youth

The inclusion strategy of the Youth in Action programme (European Commission, 2014) was revised and amended with 'diversity' as second focus complementing social inclusion, thus also aiming at empowering young people and youth workers to successfully deal with and support diversity in their social environment. In this respect, inclusion and the respect for differences and, thus, diversity are considered to be interdependent.

The aims and objectives of the strategy were revised accordingly but also reorganised in general. The definition of YPFO is largely identical with that in the previous strategy, while partly being rephrased, mostly in line with the meanings of the previous strategy. While many exclusion factors are considered to be depending on the country or context, the strategy also refers to "absolute exclusion factors" (p. 8), e.g. when people's fundamental rights are violated, no matter how common this situation is in a particular context. In this respect, the strategy puts special emphasis on groups for whom absolute exclusion factors apply.

EU Youth Strategy 2018-2027

The 'EU Youth Strategy' (European Commission, 2018) prominently refers to the inclusion of YPFO, also in the context of other European Union policies, e.g. in one of the five main actions, namely to "launch a new and more inclusive EU Youth Dialogue, with a focus on youth with fewer opportunities" (p. 2). Furthermore, the strategy intends to pay special attention to "reaching out to all young people" (p. 3), in particular YPFO. Under the topic 'engage', it also refers to the Erasmus+ inclusion and diversity strategy in the field of youth with respect to better targeting disadvantaged groups. Under the topic 'connect', the strategy requests a special emphasis on YPFO with respect to an increasing participation of young people in Erasmus+ and the European Solidarity Corps. Under the topic 'empower', it encourages Member States to focus on "reaching out to all young people, in particular those with fewer opportunities" (p. 7).

Table 1: Box: Definition(s) of YPFO from the Erasmus+ programme guide and/or the Erasmus+ inclusion and diversity strategy

Inclusion and diversity projects should have a positive impact on the situation of young people with fewer opportunities. These are young people who are at a disadvantage compared to their peers because they face one or more of the exclusion factors and obstacles below. The following situations often prevent young people from taking part in employment, formal and non-formal education, transnational mobility, democratic process and society at large: - Disability (i.e. participants with special needs): young people with mental (intellectual, cognitive, learning), physical, sensory or other disabilities etc. - Health problems: young people with chronic health problems, severe illnesses or psychiatric conditions etc. - Educational difficulties: young people with learning difficulties, early school leavers, lower qualified persons, young people with poor school performance etc. - Cultural differences: immigrants, refugees or descendants from immigrant or refugee families, young people belonging to a national or ethnic minority, young people with linguistic adaptation and cultural inclusion difficulties etc.

- Economic obstacles: young people with a low standard of living, low income, dependence on social welfare system, young people in long-term unemployment or poverty, young people who are homeless, in debt or with financial problems etc.

- Social obstacles: young people facing discrimination because of gender, age, ethnicity, religion, sexual orientation, disability, etc., young people with limited social skills or anti-social or high-risk behaviours, young people in a precarious situation, (ex-)offenders, (ex-)drug or alcohol abusers, young and/or single parents, orphans etc.

- Geographical obstacles: young people from remote or rural areas, young people living on small islands or in peripheral regions, young people from urban problem zones, young people from less serviced areas (limited public transport, poor facilities) etc.

This definition deliberately focuses on the situation young people are in, to avoid stigmatisation and blame. This list is not exhaustive, but gives an indication of the type of exclusion situations we are talking about. Some target groups of this strategy, such as notably young people not in employment, education or training (NEETs), find themselves in several of the situations listed above at the same time.

The causes of disadvantage can be manifold, and the solutions similarly so. The 'comparative disadvantage' is important, because being in one of the situations referred to above does not automatically lead to fewer opportunities compared to peers (not all people from minorities are discriminated, a person with a disability is not necessarily disadvantaged if the environment is adapted etc.). The risk of exclusion because of specific factors and obstacles varies according to country and context.

Besides these context-dependent factors, there are also a number of 'absolute exclusion factors'. When people's fundamental rights are violated, they are always disadvantaged no matter how common this situation is in a particular context (for instance all homeless, everyone who lives in poverty). Special attention should be given to groups for whom absolute exclusion factors apply.

Source: (European Commission, 2014, p. 7, 2019, p. 10)

2.1.2. DISCUSSION

International exchanges for young people have a long tradition, becoming more and more popular after World War II – then primarily aimed at contributing to international understanding, but being limited to specific contexts: schools, universities, youth organisations being active in different countries, bilateral agreements etc. – contexts, in which they could be organised with reasonable organisational effort. It is understandable, that there was an initiative in the late seventies and early eighties to promote youth exchanges also in the context of the European Communities. It is interesting, that the first exchange programme of the European Communities was one for young workers – a group who was practically excluded from international exchanges since they would have had to take holidays to take part. Therefore, the exchange programme for young workers was complementary to existing – mostly private – international exchange schemes, thus providing for the inclusion of young workers in international exchanges. But, in the context of the European Communities, it was exclusive for young workers. Therefore, it was understandable, that the European Communities established a programme for *all* young people, independent of their backgrounds: this was the start of European Union youth programmes in 1989, then known as 'Youth for Europe'.

The idea of a programme for *all* young people raised the question as to how it can be assured that those who were excluded from international exchanges would actually be included. This resulted in a struggle with terminology: how should those young people be named, who should be included. It started with negative connotations, such as 'disadvantaged' young people or 'young people with difficulties', and shifted to 'young people with fewer opportunities' in order to avoid a stigmatisation of this group, maybe not really successfully. Since the introduction of the Youth in Action programme in 2007, the term 'young people with fewer opportunities' is used consistently in policy texts. At the same time, this term was linked to (social) 'inclusion', which was emphasised in EU youth policy through the White Paper on Youth in 2001, thus introducing a positive approach to YPFO. Subsequently, an inclusion strategy was established in the context of European Union youth programmes. This is also in line with the Lisbon Strategy, emphasising social cohesion as one of the pillars of the European Union.

It needs to be noted, that the policy texts outlined above refer to two levels of inclusion, not always differentiating clearly between them: on the one hand, they refer to the inclusion of YPFO in the European Union youth programmes, thus making them inclusive programmes; on the other hand, they refer to inclusion in society at large, thus providing for participation of everyone in all areas of society – education, work, civil society as well as in social, public and political life. In particular, this applies for (young) people with fewer opportunities, who do not have equal access to all these domains of society and are, therefore, excluded to a certain degree from some of these domains. In this respect, exclusion and fewer opportunities can be considered to be interdependent, one resulting in the other and vice-versa. The two levels described above are linked, in that the inclusiveness of the European Union youth programmes is intended to be a step towards or even a model for an inclusive society, thus fostering inclusion at large.

The latter is part of an agenda of the European Union at large: fostering social cohesion in Europe in order to provide for a supra-national (European Union) identity and solidarity. In this respect, Erasmus+ Youth in Action as well as the other European youth policies are instruments to contribute to this broader policy objective.

Overall, the policies on the inclusion of YPFO as outlined above were developed further in a coherent and consistent way and linked to other policies at European level. The criteria for defining YPFO were continuously extended with respect to obstacles they are confronted with. The earlier definition 'young people who experience the most difficulties in being included in this programme' shifted continuously to young people being confronted with obstacles or situations preventing them to participate in society and democratic life. The respective obstacles and situations were broadened over time, presently being disabilities, health problems, educational difficulties, cultural differences, economic obstacles, social obstacles and geographical obstacles, which are elaborated in detail in the policy texts.

Nevertheless, these definitions are difficult to handle since they refer to young people being at 'disadvantage compared to their peers'. This is relative and depends on the context and social environment of the respective young people: an obstacle in one setting might not be an obstacle in another setting. This is an advantage in order to be able to interpret obstacles depending on the country or region, but it also leaves a lot of room for different interpretations since there are hardly any measurable indicators and benchmarks for these obstacles, namely when it is an obstacle or disadvantage. Only in the Erasmus+ inclusion and diversity strategy, is reference made also to 'absolute exclusion factors', e.g. the violation of fundamental rights.

In order to explore the participation of YPFO in EU youth programmes in a reliable way, it would be necessary to further develop respective indicators and instruments for such analyses, both at European level as well as at the level of Member States. While fostering inclusion in and through Erasmus+ Youth in Action is part of a broader policy of the European Union (see above) and, therefore, difficult to grasp in concrete terms, one can transfer the dimension of fewer opportunities and exclusion of young people as outlined above into a multidimensional set of categories of indicators:

- The factors mentioned in policies considered to be relevant for fewer opportunities and exclusion could be categorised as follows: education, socio-economic situation, health. In particular, these factors do not need to have a monetary dimension.
- There are objective indicators for fewer opportunities/exclusion (educational achievement, financial resources etc.) and subjective indicators (feeling to be disadvantaged compared to others).
- There are country-specific indicators for fewer opportunities/exclusion – what is a disadvantage/exclusion factor in one country is not necessarily one in another country.

2.2. LEARNING CONCEPTS AND LEARNING OUTCOMES

Besides aiming at the participation of young people with fewer opportunities in the E+/YiA programme's activities, the programme assumes that young people and especially those with fewer opportunities are learning something in the projects. In this study, we will, therefore, not limit our analyses to the description of YPFO, but also link the question of fewer opportunities in E+/YiA projects to the outcomes or the learning in the projects. In this chapter, we discuss some concepts on the way learning takes place and how this is measured.

2.2.1. LEARNING IN THE CONTEXT OF ERASMUS+ YOUTH IN ACTION

Apart from the general objectives of the Erasmus+ Programme, the Youth strand of the Erasmus+ Programme has some specific goals related to the non-formal and informal learning aspects of the promoted projects. The most important learning goals concerning young people participating in the projects are competence development and the promotion of specific values and attitudes. The learning in the projects should “improve the level of key competences and skills of young people, including those with fewer opportunities” (European Parliament & Council of the EU, 2013, p. 347/59). The regulation act is making here a reference to the key competences for lifelong learning of the EU that should also be supported in the EU's non-formal and informal learning programmes. The second goal of the Youth strand is the promotion of values and attitudes related to active citizenship, intercultural dialogue, social inclusion and solidarity, which refers also indirectly to the learning and development of those values and attitudes in the projects.

In the definition of the Erasmus+ programme, the key competences for lifelong learning were attributed a great importance, not only in the goals but also in the evaluation of the programme. Two of the six indicators fixed by the European Commission for the evaluation are about the improvement of participants' learning outcomes: on one hand the percentage of participants declaring to have increased their key competences and on the other hand those having increased their language skills. The eight key competences set by the reference framework of key competences for lifelong learning are: communication in the mother tongue, communication in foreign languages, mathematical competence and basic competences in science and

technology, digital competence, learning to learn, social and civic competence, sense of initiative and entrepreneurship, cultural awareness and expression (European Parliament & Council of the European Union, 2006).

In the RAY-MON surveys, the original questionnaires were developed by the Institute of Educational Science based on national Austrian surveys. In the following years the questionnaires were revised and adapted by the RAY Network research partners. On the one side, the questionnaires' aim is to be able to analyse the outcomes of the projects along the programme objectives defined by the European Commission. Therefore, a lot of the questions are linked to European documents and concepts e.g. the eight lifelong learning competences, the framework for European cooperation in the youth field or the Europe 2020 strategy. Thus, participation and active citizenship, social inclusion, cultural diversity, lifelong learning, sustainability, and entrepreneurship are the main subject fields in the questionnaire. On the other side, the questionnaires are based on an understanding of competence as a combination of cognitive and non-cognitive dimensions.

> *"the term 'competence' is used in line with the above definitions and describes a combination of [knowledge,] skills, [...] attitudes and values, thus combining cognitive aspects (knowledge and skills) and affective aspects (attitudes and values)." (Fennes, 2009, p. 143)*

Therefore, the questions explore not only aspects linked to the learning of knowledge or the acquisition of skills but investigate also the effects on personal development related to attitudes and values.

2.2.2. LEARNING IN NON-FORMAL CONTEXTS

In this study, which is based on the data gathered by the RAY-MON surveys, we want to use a concept of learning which goes beyond the current discourse on (lifelong) learning promoted by the EU. Different authors (Elfert, 2015; Volles, 2014) criticise that the present view of lifelong learning, also used in the EU's exchange programmes, is based on a neo-liberal conception and not anymore on the humanistic and universalistic approach described for example in the UNESCO Faure and Delors Reports on Education (Faure, 1972; Delors, 1999). The initial goals of lifelong learning were to develop a person's resources in order to become a complete fulfilled individual, able to understand the world and to engage himself/herself as citizen and as agent of change (Elfert, 2015). Today's conception of lifelong learning in the EU is more guided by the economic crisis and unemployment problems and, thus, sees lifelong learning rather as the responsibility of an individual to permanently adapt to the need of the market (Volles, 2014).

We see learning to an important extent as the ability of a person to learn from his/her experiences (Lindesmith, Strauss and Denzin, 1999, p.31). This learning takes place with (symbolic) others in a given situation where the individual brings his/her history of experiences and knowledge, which is then changed and adapted to new situations.

In educational research two competing metaphors (Sfard, 1998) are often used to describe the way that learning is conceptualised. Whereas the acquisition metaphor stresses the fact that knowledge is simply transferred to the learner, the participation metaphor sees the learner as a person who learns by participating in certain kinds of activities. Even if the participation metaphor seems very useful to describe the way that learning takes place in the E+/YiA projects, Sfard (1998) recommends to combine both metaphors to use the advantages of each one.

Another distinction, which is often used to describe the learning in E+/YiA projects, is the formal / informal dichotomy. In European youth and education policies three types of learning are defined: formal, non-formal and informal (European Commission, 2000). Even if in theory these three types of learning are distinctive, in practice the three forms cannot entirely exclude each other. Therefore, researchers prefer to refer to a learning continuum between formal and informal learning (Chisholm, 2008), where an activity can combine a range of features, of which some are more characteristic of formal learning settings than of non-formal or informal ones.

Based on these assumptions, we think that E+/YiA projects can provide ideal conditions for participants' learning. The context of the projects is clearly non-formal: the projects are not organised by educational institutions and do not lead to a certification, but they are structured in terms of the learning. Nevertheless, the learning inside the projects is very diverse and combines all sorts of learning methods and settings, going from informal to formal and integrating acquiring and participative learning. RAY special research studies on learning in YiA projects showed that participants developed their competences best through a combination of non-formal, informal and formal learning methods and settings (Fennes, Gadinger, Hagleitner and Lunardon, 2013; Weis and Meyers, 2013).

Besides these effective learning preconditions, set up by the E+/YiA projects, the learner himself/herself also influences the learning process. When exploring these learning processes, it falls short to merely look at young people and their learning in a static or passive way. Every young person (and also every adult) has a learning trajectory (Leander et al., 2010) or a learning career (Bloomer & Hodkinson, 2000). This means that every person experiences, over his/her life course, learning situations, events and activities which have different meanings for the learner. The individual actively integrates these meanings in his/her personal learning career, which is transformed with every new situation. Thus, learning is "intricately bound up with the formation of self" (Bloomer, 2001, p. 440). Therefore, changes in the learning career of young people are often linked to identity transformations or induced by external situations outside of the formal learning institutions.

Participation in an E+/YiA project can constitute such a turning point in the learning career of a young person. If we assume that most participants have mainly experienced classical learning situations in formal institutions, which are characterised by learning in the same classroom with unchanging classmates, the experience in an E+/YiA project, which includes going abroad and meeting strangers, may trigger new experiences and meanings in the learning of a young person (see also Leander et al., 2010).

Nevertheless, even if young people's agency is important for the learning process, learning is also influenced by structures that young people are part of (Bloomer, 2001). Structure and agency have to be seen as dialectic; young people act according to the structures they have been socialised in, but with their actions they also contribute to the shaping of these structures. In the learning process, Bloomer (2001) asserts that structures set the frame for learning opportunities, e.g. family background may influence how important a young person considers learning opportunities and outcomes. Structures also lead to different experiences concerning learning among young people, e.g. gender may influence the experiences concerning mathematical learning, or the attendance of a school in a poor commune may lead to other experiences than the attendance of a school with ample material resources. YPFO are probably influenced by these structures in their learning and we can assume that they learn differently in the projects of E+/YiA due to the societal situations and structures they are part of and the experiences they had until then.

2.2.3. DISCUSSION

To resume these few considerations on learning for this study: it is important to look at learning in a holistic way. Learning is not only the acquisition of knowledge, but combines the learning of knowledge, skills, attitudes and values (Fennes, 2009) or in other words, learning to know, to do, to be and to live together (Delors, 1999). The questionnaire of the RAY-MON study for the participants tries to evaluate the outcomes of the learning process in those four dimensions.

We assume that learning in the E+/YiA projects occurs in those four dimensions and that, if there are differences in the learning of YPFO, they would also appear along those four dimensions. We are aware that YPFO could evaluate their learning in some dimensions more closely linked to their identity, e.g. attitudes and values, as more important. Nevertheless, for the following analysis we decided to focus only on one question concerning the development of skills in the projects (or learning to do). This specific question had the advantage that it used an extensive item set referring to skills for lifelong learning and was probably answered very consistently by the participants, whereas for the other dimensions, the questions used different scales and would be more difficult to interpret. The question on the skills learned in the project allowed us to realise a factor analysis and thus, by extracting the relevant indicators, we were able to use dimensions that were based on the young persons' answers and not on theoretical assumptions (see section 3.3).

2.3. THEORETICAL MODELS AND CONCEPTS USED FOR THE DEFINITION AND ANALYSIS OF FEWER OPPORTUNITIES

In section 2.1 we explored the definition for YPFO in the Erasmus+ programme and concluded that the programme's definition is primarily based on practical assumptions which are difficult to use for this research. Therefore, this section wants to explore how, on the other side, theoretical models or concepts used in scientific theories or in international studies can be useful for the definition of people who have fewer opportunities.

2.3.1. SOME REFLECTIONS ON INDICATORS

During the process that led to the elaboration of this study, some researchers of the RAY network had already initiated a reflection concerning the usefulness of different indicators for the definition and analysis of YPFO (see section 1.2). This section aims to resume some of these reflections, by basing them on existing theories or scientific findings. They lead, at the end of the section, to a discussion concerning the orientation of indicators to be used in our study.

Monetary or non-monetary indicators, poverty / deprivation and social exclusion

In most societies, economic, social or cultural resources are not equally distributed and therefore form the basis for the categorisation of people in a given society. Persons belonging to a higher social class have more power, prestige and more control over resources (Diemer et al, 2013, p. 79). The social position of a person may also have consequences on other domains, e.g. health, learning or mobility. Sociology has always been interested in finding the factors or indicators underlying the social stratification in a society and thus showing inequalities of different groups.

The most common indicators used to measure socio-economic status are education, occupation and financial resources (e.g. income). Whereas education and occupation are more obviously definable, at least for adults (see later in this section for discussion on indicators during transition), the measurement of financial or economic resources in studies seems to be based

on different approaches. The concepts we are going to discuss in this section are (1) monetary indicators compared to non-monetary indicators and (2) poverty or deprivation in opposition to social exclusion.

Monetary indicators are often based on income and wealth. Whereas the question in our surveys related to income tries to gather all forms of income of a person or household (e.g. earnings from a job, pension, welfare, social security, interest), the wealth variable concentrates on assets or capital that belong to a person or a household (e.g. savings, house, car, business, other funds). These absolute measures can be converted into relative measures that document the position of a person inside a given group e.g. the 10% of households having the highest income in a country.

By inverting the information gathered on financial resources, researchers focus on the concept of poverty, which looks at those persons or households that are lacking certain financial or economic resources. A commonly used relative monetary indicator is the at-risk-of-poverty rate, which calculates the percentage of people in a country whose disposable income is below 60% of the national median equivalised disposable income. But indicators relying only on monetary information are not able to show the consequences of poverty on everyday life. The concept of deprivation looks, therefore, at items that people living in poverty are not able to afford or situations that occur due to insufficient financial resources. Nowadays, most studies whose goal it is to analyse the economic inequality in a society use non-monetary indicators complementary to the income variable. The advantages of using both types of indicators are on the one side a more accurate identification of people living in poverty and on the other side the identification of the multiple dimensions of poverty (Nolan & Whelan, 2010, p.307).

Another concept which is closely related to poverty is social exclusion. Based on the assumption that people living in poverty do not have the necessary financial resources to buy certain goods, they may also be excluded from areas where you need these goods. One of the priority areas of the EU is research on social exclusion which tries to find out those "persons whose resources (material, cultural and social) are so limited as to exclude them from the minimum acceptable way of life in the Member State in which they live" (EEC, 1985, p.24 in: Nolan & Whelan, 2010, p.306). But the concept of social exclusion of the EU is criticised for its methodological weaknesses. Vrooman (2013) exposes that the “EU's policy concept seems biased towards the material aspects of social exclusion, which is a fairly limited operationalisation of the theoretical demarcations we find in the scientific literature” (p. 1266). Accordingly, he defines the concept of social exclusion as a simultaneous deprivation on several dimensions: in the areas of social participation, normative integration, basic social rights and material goods and services. In his eyes it is not sufficient to only look at the risk linked to the materialistic aspect of social exclusion, as is the case in the concept of the EU.

As Saunders, Naidoo and Griffiths (2008) describe clearly, deprivation, poverty and social exclusion are thus different concepts used to measure different situations:

> *"Deprivation – defined as an enforced lack of socially perceived necessities – has emerged as a way of identifying who is missing out on what the community regards as the necessities (or essentials) of life. Social exclusion – which exists when individuals do not participate in key activities in society – has opened up new areas of inquiry relating to a lack of connectedness between individuals, the communities in which they live, and key economic and social processes. [...] The low overlap between the three indicators [deprivation, social exclusion and income poverty] implies that they all have a role to play in documenting the extent of social disadvantage and helping to identify the factors that contribute to its various manifestations." (p. 175).*

In a study on young German state benefit recipients, Popp (2008) shows that even multiply-deprived young persons don't feel socially excluded, thus showing that deprivation and social exclusion are also different concepts among young people. Especially family support and social support can help to cope with multiple deprivations and prevent the feeling of not belonging to society.

Objective or subjective indicators

Socio-economic status is normally defined as a person's position on an index composed by relatively objective indicators such as income, wealth, education level and occupational prestige (Diemer & Ali, 2009, in: Diemer et al., 2013, p.79). On the other hand, subjective social status is the way that persons perceive themselves or their social class. These two measurements of status do not necessarily match but can deliver a complementary view on social status.

Whereas the typical indicators for socio-economic status are important, they fail to reveal the person's perceptions of their social status in comparison to others. Subjective social status is furthermore measured by using more qualitative and relatively subjective approaches (Liu et al., 2004, in: Diemer et al, 2013, p.79). The goal of these indicators is not to give an adequate representation of the person's economic or educational position but rather to see the person's evaluation of his or her social position in a group.

A very popular assessment of social status is the question asking participants to rank themselves on a social ladder of prestige, ranging from 1 'low' to 10 'high', relative to others in their country or in a community (Diemer et al, 2013, p.106). In studies with children or adolescents, questions are often easier to respond to, e.g. the question used by the HBSC study (Health-Behaviour in School-Aged Children) to measure the subjective perception of family wealth by adolescents: “How rich do you think your family is?” with five responses from 'poor' to 'very rich' (Moreno-Maldonado et al, 2018, p. 522).

Different studies among young people show that objective and subjective indicators of social status are not comparable and that subjective indicators provide important information of their own. In a study analysing the influence of young people's socio-economic status on their health, Moreno-Maldonado et al. (2018) conclude that the relationship between objective socio-economic indicators and subjective social status is weak and that these indicators should not be used as substitutes for one another. Furthermore, the subjective perception of wealth had a significant association with health, which is probably explained by the psychological consequences that material deprivation can have on a person's health situation. In her study on young German state benefit recipients, Popp (2008) also shows that objective material deprivation

leads not automatically to a subjective feeling of exclusion. The negative consequences of the experience of multiple deprivations are buffered by family and thus influence the subjective perception of belonging to society.

Diemer et al. (2013) conclude in their article on best practices to measure social class, that there is probably no single 'best' measure of socio-economic status or subjective social status and that in every study, researchers need to consider the dimensions of social class that are needed for this specific study and the best way to operationalise them (Williams, 2009 in: Diemer et al, 2013, p.107).

Macro-level or micro-level indicators

In this third section we want to look at the influence of the country level (or the macro-level) on the micro-level (or individual indicators). As we are analysing international data of young people residing all over Europe, we have to ask whether or not the country or the area of residence influences the effect of socio-economic position respective to the learning outcomes. We will discuss different possible influences of the macro-level, or the structures of a country, on the results.

The analysis of data from an international study is always shifting between two opposite paradigms: the assumption that developments or results are similar regardless of the cultural background of different countries and the assumption that countries have different cultural histories and realities that make a comparison of the data impossible (Hadler et al., 2015, p. 250). Hadler et al. (2015) take a pragmatic position by using both paradigms in international research. On the one side, studies have to be aware of the different meaning of concepts or the different interpretations of words and phrases in a given culture and develop adapted instruments and methods. On the other side, international studies assume that individuals may be questioned on universal concepts that apply to all countries.

The socio-economic status of individuals is certainly a concept that has shown its universalistic utility in a lot of countries. Nevertheless, we should be aware that responses of young people in a given country can have different meanings or reflect other realities. For example, the social position of a long-term unemployed young person may be different, depending on the conditions of the labour market or the social security system in his/her country. The same diploma can have different national values, depending on the conditions for obtaining it as well as the number of successful graduates, and may thus provide different opportunities for obtaining a job. Different objects of wealth do not have the same value in every country.

Regardless of the countries' influence on objective indicators, there is evidence showing the effect of culture and group membership on subjective evaluations. As described above the subjective social status is by definition the way that young people evaluate their position in comparison to others in a group, most often other young people living in their country. Additionally, in studies across countries responses may also be influenced by specific response styles linked to a country, showing "country-level characteristics such as power distance, collectivism, uncertainty avoidance and extraversion" (Harzing, 2016, p. 243). For example, in Greece, Turkey, Spain and Portugal respondents showed more often extreme response styles and a high level of acquiescence, whereas in Northern and Western European countries respondents gave rather middle responses.

Given the international composition of the participants in the projects and in the programme at large, the countries of origin of the respondents have an influence on the sample and, therefore, may have an influence on the responses to questions concerning the learning outcomes. A first question we have to reflect on is whether the programme and the projects in the different countries are able to reach the same kind of persons. There exists ample evidence that in adult learning, structural and institutional barriers are also influencing the participation of individuals in learning opportunities (Roosmaa & Saar, 2017; Boeren, 2016). The barriers for not participating in adult non-formal learning opportunities are very different across countries: they are not only related to the characteristics of the institutions offering learning opportunities (accessibility, fee policies etc.) but also to country-specific dispositions and situations hindering the participation of specific groups (Roosmaa & Saar, 2017). Boeren (2016) suggests, therefore, to use a "Comprehensive Lifelong Learning Participation Model" which integrates the individual, the institutional and the country level.

In the case of E+/YiA projects, the phenomena influencing the sample, the outcomes and the responses as described above might apply as well. Additionally, participants in E+/YiA projects might also be selected by their organisation according to criteria which are not revealed externally, thus also influencing the sample and the project outcomes.

The transnational reports of the RAY network have always pointed at relatively important differences between countries of residence of participants, even if the tendencies across countries appear similar (Bammer, Fennes & Karsten, 2017). In international studies there seems also to be a tendency to analyse simultaneously the influence of structural factors, country factors and individual factors. For example, Deeming & Jones (2015) use a multi-level approach to assess the correlations of subjective well-being at the country and individual level. The researchers of the HBSC study decided to change the construction of the family affluence score due to the vast heterogeneity in country wealth in their network (Inchley et al., 2016). Instead of using uniform cut-points for low, medium and high FAS (Family Affluence Scale), the research team changed to criteria which calculate groups in each country and region using the same percentage (e.g. 20% of young people with the lowest score in a country belong to the group with low family affluence).

Status during transition to adulthood

Another subject that our study has to deal with concerns the changing situation of young people during their transition to adulthood. For young people at the beginning of the transition phase, the classical indicators of socio-economic status like education or employment are not yet available. Which other indicators could be used to assess the situation of young persons and how can those different pieces of information be used together?

In most surveys with young people, the classical indicators on occupational prestige and educational attainment are replaced by the respective information from young people's parents. Even regarding young people at the beginning of their employment career, indicators relying on occupational prestige should not be used as they are only valid for adults who are "firmly entrenched in the labour market" (Diemer et al, 2013, p.81). Another problem is then how to collect this information, when the person targeted (e.g. the parent) cannot provide it directly. In that case Diemer et al. (2013) suggest to use only the educational attainment of the parents, because it is less biased, even if provided by the young person, than household income, wealth or parental occupational prestige and thus still a very good indicator for socio-economic status.

This method to just replace the indicators for young people's socio-economic status by their parents' indicators is criticised by Lui, Chung, Wallace & Aneshensel (2014):

> *"Although social status is widely acknowledged in social science research to be a multidimensional construct that varies over the life course, few studies on young adults have used social status in this multifaceted and dynamic manner (Harris 2010; Scharoun-Lee et al. 2011). Rather, previous studies often use static indicators of parents' status as a proxy or use single point-in-time young adult status even though it is in flux (Goodman and Huang 2002; Chen et al. 2006; Cubbin et al. 2011)." (Lui, Chung et al., 2014, p.1135)*

They also criticise the use of indicators that have different meanings during the transition e.g. when educational attainment is measured regardless of the age of a person or income is measured regardless of the employment situation.

Therefore, Lui, Chung et al. (2014) suggest that during transition to adulthood indicators used for defining the status of young people should rely on intergenerational indicators (social status transferred across generations) as well as intragenerational indicators (social status acquired within one's lifetime) (Lui, Chung et al., 2014, p.1135) to account for the changing situations young people go through. They also recommend to use indicators covering multiple dimensions (e.g. economic, human, social, cultural capital) and to use them repeatedly at different times.

The results of their analysis, which are based on a longitudinal sample of young people, show that some of the young people reproduced the advantages or disadvantages of their parents whereas some of the adolescents changed their destination and were socially upwardly or downwardly mobile. The researchers point thereby to the connection of timing of events and status attainment during the transition phase. Patterns of social inequalities are often triggered by key events early in the transition phase, e.g. leaving school early leads to low economic status or becoming a parent early is linked to a low social status.

Composite indicators or single items

Some researchers argue that the composite indicators of SES (Socio-economic status), including information on education, occupation and income, explain less variation in the dependent variables than the single indicators (see Diemer et al., 2013). Thus, they argue to use individual indicators rather than composite indicators.

> *"Secondly, regarding the implications for health research, the different measures, besides not overlapping, showed different capacities for predicting health, with greater capacity when the socioeconomic indicators were used together. These results also highlight the importance of including multiple indicators for assessing SEP in health research (Ensminger and Fothergill 2003; Galobardes et al. 2007)." (Moreno-Maldonado et al. 2018, p. 531)*

2.3.2. INTERNATIONAL / EUROPEAN SURVEYS

In this section we are looking at the way that some scientific surveys, carried out at European or international level, used indicators to gather information about the social background / status of the interviewees or to determine whether a person is socially excluded or at risk. The samples of the different surveys are not only young persons, but also children and adults. Young persons are in the transition from childhood to adulthood and as they go through a transition from school to work, from living with their parents to living on their own, from being a child to

being a parent, the indicators used to evaluate their situation do also change. We will therefore describe the indicators used by the surveys, the predictive force of the indicators in the surveys and the possible usefulness of these indicators for our survey.

Study "Health-Behaviour in School-Aged Children" (HBSC)

The HBSC study is a collaborative cross-national study adopted by the Regional office for Europe of the World Health Organisation (WHO)[7]. The sample of the survey realised across Europe and North America are pupils aged 11, 13 and 15 years. Its goal is to understand young people's health in their social context – where they live, at school, with family and friends. An important factor that influences health of young people as well as adult persons is their socio-economic status or the socio-economic environment they are living in.

In 1998 the HBSC consortium developed the Family Affluence Scale (FAS), a proxy for measuring the socio-economic status (SES) of the adolescents (Hartley, Levine & Currie, 2016). The FAS indicator is constructed using different items. "The FAS includes items which reflect the material resources that a family has, their patterns of consumption and their purchasing power in different countries across Europe and North America." (Hartley, Levine & Currie, 2016, p. 234). In order to reflect the changes in living conditions and norms, the FAS was adapted once and is actually also being revised, resulting in different indicators called FAS I, II and III (see Table 2). The changes proposed for the FAS III were based on the critique that in very rich or very poor countries FAS II would categorise a lot of children as high respectively as low FAS and that a new FAS version is needed to take into account new trends in family consumption.

Table 2: The three FAS indicators and questions used

FAS I	FAS II	FAS III (proposition)
How many computers (PCs, Macs or laptops) does your family own?	How many computers (PCs, Macs or laptops) does your family own?	
Does your family own a car, van or truck?	Does your family own a car, van or truck?	
During the past 12 months, how many times did you travel away on holiday with your family?	During the past 12 months, how many times did you travel away on holiday with your family?	How many times did you and your family travel out of (name of country) abroad for holiday/vacation last year?
Do you have your own bedroom for yourself?	Do you have your own bedroom for yourself?	
	Children were asked to imagine that the ladder pictured shows how Scottish/Danish/etc. society is made up.[...]	
	Do you ever go to bed hungry because there is not enough money to buy food?	

[7] See http://www.hbsc.org

FAS I	FAS II	FAS III (proposition)
		Does your family have a dish-washer?
		Does your family have a washing machine?
		Does your family have a tumble dryer?
		Do you have internet access at home?
		Do your parents pay people from outside the family to work at your home on a regular (that is, on a daily or weekly) basis?
		Do you receive pocket money?
		How many bathrooms (room with a bath or shower) are in your home?

Unlike the more traditional measures of SES which use parental occupation or education, the FAS is based on items known by the children or adolescents. Thus, the rate of missings is rather low. In a recent study of adolescents in Sweden, the FAS was tested along with self-reported information of the occupational status of parents and perceived SES to predict health outcomes (Svedberg, Nygren et al., 2016). For determining the perceived SES, the study used a question from the HBSC survey: “How well off do you think your family is?” with five response categories. Whereas 4 out of 10 adolescents were not able to complete the information on their father's or mother's occupation status, there were no missing answers for the FAS and only 3.8% missing for the perceived SES. The completion rates for their parents' occupation status was higher in the age group 14 to 16 years (62% and 69%) than in the age group 11 to 13 years (53% and 56%).

The FAS I and the FAS II have been validated in the analysis of health outcomes on the individual as well as on the country level (Boyce, Torsheim et al., 2006). On the individual level the FAS II has shown to be a “valuable indicator of family wealth that can be reported easily by youth” (Boyce, Torsheim et al., 2006, p.485). What is even more important in the HBSC survey, the FAS could be linked to a number of individual health outcomes and behaviours.

The results of different health studies show furthermore that the diverse questions or concepts used to measure SES reflect different dimensions of SES. Svedberg et al. (2016) found only weak correlations between the three socio-economic indicators used in their survey (parents' occupational status, FAS and perceived SES). They conclude that the three concepts used measure different reflections of SES among adolescents and that studies should not only rely on one indicator to measure adolescents' SES.

Elgar, Clercq et al. (2013) used the FAS to calculate the absolute family affluence of adolescents and also relative affluence and relative rank of adolescents compared to peers at their school or in their region. On the one hand the absolute affluence shows how the unequal distribution of material goods and services can have an influence on health. The relative affluence

on the other hand is based on the own affluence in comparison to others and can show the psycho-social effect on health. Based on the data of eight different countries of the HBSC survey, the researchers show the interaction of absolute and relative affluence: especially for adolescents with lower levels of absolute affluence, the relative difference in affluence seems to have a bigger influence on their health as for adolescents with higher absolute affluence.

Svedberg et al. (2016) found that the FAS is a good indicator for objective family SES, but it has also limitations, e.g. to detect differences in midrange groups. In the study of Svedberg at al. the perceived SES was found to better predict health outcomes than traditional measures. Elgar, Clercq et al. (2013) conclude that all affluence measures based on the FAS are linked to psychosomatic symptoms, but that the absolute affluence relates the least and the rank affluence within regions relates the most to psychosocial health. Especially in samples that represent different socio-economic contexts (e.g. different countries), the differentiating between absolute and relative affluence could be important. Levin, Torsheim et al. (2011) also found the FAS to be an important predictor of individual life satisfaction of adolescents. They show however that the relationship between FAS and life satisfaction differs between countries, even after adjustment for economic factors (like national income and income distribution).

Programme for International Student Assessment (PISA) and Programme for the International

Table 3: Questions used for economic, social and cultural status (ESCS)

Questions	HISEI	PARED	HOMEPOS
Highest occupational status of father	x		
Highest occupational status of mother	x		
Highest educational level of father		x	
Highest educational level of mother		x	
In your home, do you have:			
A desk to study at			x
A room of your own			x
A quiet place to study			x
A computer you can use for school work			x
Educational software			x
A link to the Internet			x
Classical literature			x
Books of poetry			x
Works of art			x
Books to help with your school work			x
Technical reference books			x
A dictionary			x

Questions	HISEI	PARED	HOMEPOS
A dishwasher			x
A <DVD> player			x
<Country-specific wealth item 1>			x
<Country-specific wealth item 2>			x
<Country-specific wealth item 3>			x
How many of these are there at your home?			
Cellular phones			x
Televisions			x
Computers			x
Cars			x
Rooms with a bath or shower			x
How many books are there in your home?			x

The occupational status of the parents is asked through open-ended questions in the student questionnaire or in the parent questionnaire (depending on the country), which are coded by the participating country according to the International Standard Classification of Occupations and then into the International Socio-Economic Index of Occupational Status (OECD, 2012). The educational level of the parents is also collected through the student or the parent questionnaire. It is classified using ISCED code and afterwards recoded into estimated years of schooling. For the index of home possessions, the scale is constructed in two steps: first on a national level and then for country comparisons, the relative positions of the countries are estimated on a joint scale (OECD, 2012, p.314).

Missing values for one variable “were imputed with predicted values plus a random component based on a regression on the other two variables” (OECD, 2012, p. 316). The three sub-components are used for a principal component analysis with an OECD weight. The ESCS score is the component score for the first principal component with zero being the score of an average student and one being the standard deviation. The analysis was also performed for each country to make sure that the index has similar factor loadings in each country (OECD, 2010, p.131). The results show that the index is also valid across countries.

The PISA results show that socio-economic background of the students has a powerful influence on performance in education (OECD, 2010). Ehmke & Siegle (2005) show further that the ESCS is a better predictor for the school results than the separate components and that especially for higher or lower social groups the composite index can explain more variance than the single index of parental occupational status.

In addition to the socio-economic background, the PISA study also collects information on the general background of the students, including the immigrant status, the home language, the family structure and the school location (OECD, 2010). Schlicht-Schmälzle & Ackermann (2012) show on basis of the PISA data, that the educational achievement of secondary school students

in different countries depends on three separate aspects of the socio-economic background of their families: the economic status of the parents (measured through home possessions), the educational status and the migration background of the family. The different countries have their own logic with regard to the importance of these factors for the educational stratification and should thus be presented separately.

In the Survey of Adult Skills (PIAAC) not enough information was collected to compute the ESCS. Instead, the parents' educational attainment was used as a proxy for socio-economic background on the assumption that education is an important predictor of income, wealth and occupation (OECD, 2016, p.93). The results of the survey show that socio-economic background (measured by the educational attainment of parents) has a significant influence on adults' proficiency in literacy and also on information-processing skills: those who have at least one parent with tertiary education have better results than those adults with neither parent having attained an upper secondary degree (OECD, 2016).

European Union Statistics on Income and Living Conditions (EU-SILC)

On the European level, the EU-SILC is a cross-sectional and longitudinal multidimensional survey on income, poverty, social exclusion and living conditions[8]. Since 2007 all EU-27 countries are participating in this yearly survey. Data is obtained for all persons aged 16 years and over and for the household. For children below 16 years there is a special questionnaire concerning their education and child-care.

EU-SILC and its predecessor survey “European Community Household Panel Survey (ECHP)” collect information on income and deprivation indicators on a wide range of areas, e.g. food, clothing, durables, social activities and problems with housing (Nolan & Whelan, 2010) (see Table 4). The variables include not only the information on housing deterioration, scarce housing situation, lack of facilities etc., but also if this is due to lack of financial resources or because they don't want it.

Table 4: Material deprivation items used in ECHP and in EU-SILC and the related dimensions

Material Deprivation items	Dimensions in ECHP (1994)	Dimensions in EU-SILC (2006)	Items in EU-SILC (2017)
A week's annual holiday away from home	Basic	Consumption	x
Keeping home adequately warm	Basic	Consumption	x
In arrears on rent, utilities, or hire purchase loans	Basic	Consumption	x
Replacing any worn-out furniture	Basic		x

[8] http://ec.europa.eu/eurostat/web/microdata/european-union-statistics-on-income-and-living-conditions

Material Deprivation items	Dimensions in ECHP (1994)	Dimensions in EU-SILC (2006)	Items in EU-SILC (2017)
Afford to pay unexpected required expenses		Consumption	x
Meat, chicken, or fish every second day	Basic		
Meals with meat, chicken, or fish (or vegetarian)		Consumption	x
Buying new, not second-hand clothes	Basic		
Having friends or family for a meal once a month	Basic		
Car	Secondary	Consumption	x
Microwave oven	Secondary		
Dish washer	Secondary		
Video recorder	Secondary		
Afford a PC?		Consumption	x
Colour TV	Secondary	Housing facilities	x
Bath or shower	Housing facilities	Housing facilities	x
Indoor flushing toilet	Housing facilities	Housing facilities	x
Hot running water	Housing facilities		
Can afford a telephone		Housing facilities	x
Can afford a washing machine		Housing facilities	x
Damp home	Housing deterioration		x
Rot in home	Housing deterioration		x
Leaking roof	Housing deterioration		x
Noise from neighbours	Environment	Neighbourhood, Environment	x
Pollution	Environment		

Material Deprivation items	Dimensions in ECHP (1994)	Dimensions in EU-SILC (2006)	Items in EU-SILC (2017)
Shortage of space	Environment		
Not enough light	Environment		x
Vandalism	Environment		
Crime, violence or vandalism in the area		Neighbourhood, Environment	x
Pollution, grime or other environmental problems in area		Neighbourhood, Environment	x

Nolan & Whelan (2010) compare the percentages of people living in poverty measured by their household income, the material deprivation and the self-assessed economic strain[9] in European countries. The income and the material deprivation each measure different information about a household's situation. The self-assessed economic strain on the other side seems to be higher for those with the highest deprivation scores than for those with low income. The authors conclude that in order to improve the reliability to identify people living in poverty, surveys should include information on income and on deprivation and thus define as poor those with both a low income and high levels of deprivation.

The EU-SILC has tested in 2009 and in 2014 specific items on material and social deprivations of children (Guio et al., 2017). They are collected through the household questionnaire which is answered by an adult and thus do not reflect the children's individual deprivation but rather the household deprivation in relation to children. Guio et al. (2017) test the suitability, validity, reliability and additivity of 18 chosen items and conclude that 17 of the items can form a new indicator of material and social deprivation of children in the EU (see Table 5).

Table 5: Items for the proposed material and social deprivation (MSD) index in EU-SILC

The household does not have for at least one child:	The household cannot afford:
Some new clothes	To avoid arrears
Two pairs of shoes	To have adequate warmth in home
Fresh fruit & vegetables daily	To have (access to) a car
Meat, chicken, fish daily	To replace worn-out furniture
Suitable books	Internet
Outdoor leisure equipment	
Indoor games	

[9] The following question is used: "Thinking now of your household's total income, from all sources and from all household members, would you say that your household is able to make ends meet?" Respondents offered responses ranging from "with great difficulty" to "very easily".

The household does not have for at least one child:	The household cannot afford:
Leisure activities	
Celebrations	
Inviting friends	
School trips	
Holiday	

2.3.3. DISCUSSION

In the last two sections (2.3.1 and 2.3.2) we made some theoretical reflections on the way that indicators on YPFO can be structured and showed some possible indicators used in other scientific surveys. In this section we will discuss a possible structuring of indicators related to our definition of YPFO and the possibilities given by the RAY surveys.

Measuring objective or subjective status

One of the main questions discussed by the RAY researchers in preparation of this study was the use and the combination of subjective and objective indicators on young people's status. In the preceding sections we showed that subjective and objective indicators related to one dimension of the status do not measure the same reality (e.g. the perceived SES and the real SES or the absolute and relative family affluence). It is not recommended to replace an objective measure by a subjective one and vice versa.

Both measures have their merits, as they measure different aspects. Whereas objective indicators are useful to define young people that in reality have less resources e.g. financial resources to buy goods, the subjective indicators can show the perceptions that young people have concerning their resources, e.g. if they assess themselves as being deprived materially. We also think that an assessment of a dimension based solely on subjective indicators is difficult to interpret if other objective indicators are missing.

Therefore, we will rely in our analysis on objective as well as subjective indicators for every dimension used.

Using intergenerational and intragenerational information

Another difficulty of assessing YPFO in the RAY survey is linked to the changing socio-economic situation of young people in the transition phase to adulthood. We showed the difficulties of using the classical indicators of socio-economic status for young people that are still in education or at the beginning of their professional career. On the other side, the usage of indicators only related to young people's parents' socio-economic status does not reflect the possibility of young people's own social mobility.

Therefore, it is useful to rely on measures indicating intergenerational information (i.e. related to the socio-economic status transferred across generations) and intragenerational information (i.e. socio-economic status acquired during one's lifetime). Even for a young person working and living on his/her own, the socio-economic status of the parents is an important indicator supplementing information on their own socio-economic status.

Some of the international studies with pupils rely on a very complicated system to collect data on parents' socio-economic status. Pupils aged under the age of 16 do certainly have more difficulties to give information about their parents' education and occupation than young people aged 17 and older. It seems that information on the educational status of the parents is easier to collect and a very good indicator for assessing the socio-economic background of parents.

Integrating macro-level, country information

In section 2.3 we have made some reflections about the difficulties to analyse data from individuals living in different countries with cultural and economic differences. These factors have especially an influence on questions about subjective evaluations of young people.

In the HBSC study the FAS indicator has shown to be a valid indicator across countries also for predicting individual life satisfaction. Nevertheless, the relationship between FAS and life satisfaction was different across countries, even when economic factors of the countries were adjusted.

We should be aware in our analysis that young people have given different answers according to their country of residence. Therefore, the results should be critically analysed by country of residence (or a group of similar countries).

Concepts of poverty, material deprivation and social exclusion

In section 2.3 we have shown the differences between monetary and non-monetary indicators, the concepts of poverty, material deprivation and social exclusion. Monetary indicators seem difficult to use in surveys with children or young people, especially concerning the income of their parents or young people's income at the beginning of their professional career.

Therefore, most surveys rely on lists of non-monetary indicators indicating family affluence or material / social deprivation. The advantage of some of those lists of indicators is that children or young people know the information and are able to respond easily to those questions. The benefit of those indices of non-monetary indicators is that they have been validated by other studies to measure material deprivation. The disadvantage of those indices is that they need to integrate a lot of questions to assess economic deprivation.

As the RAY survey did not use any given indices or monetary indicators, the evaluation of the economic situation of young people will be rather difficult in our study. The analysis will show if some of the existing indicators could be used to evaluate the economic situation of young people.

Which indicator for learning outcomes?

The review of the HBSC survey on pupils' health showed that the FAS index (relative measure as well as absolute measure) is a good indicator for predicting health outcomes among young pupils. In the PISA survey concerned with educational outcomes, the ESCS index has shown to be a good indicator for learning outcomes of pupils in school. Other studies have shown the importance of supplementary information like immigrant status, language, family structure or geographical information for learning outcomes.

In our study we assume that learning outcomes in a non-formal setting are also influenced by the structures and societal situations that young people are part of and the experiences they had within these structures (see section 2.2.2). Therefore, the economic inequalities that influence the outcomes in the formal context, may also show an effect on non-formal learning. The inequalities could have the same effect on the learning in non-formal contexts as in formal settings: YPFO would then learn less. On the other side, non-formal education (taking a learner-oriented approach) might be better suited for YPFO than formal education; therefore, the projects funded through E+/YiA (which generally apply a non-formal learning approach) could have a higher impact concerning learning outcomes among YPFO.

We will also look at some inequalities based on language, migration, culture and geography, as these could further influence the learning outcomes.

Possible composite indicators

The review of some of the composite indicators used in international surveys (e.g. ESCS in PISA survey) showed the complexity of the construction of such an index. It is based on a relatively broad set of questions and demands a certain theoretical concept with fixed dimensions that the index should represent. It is rather difficult to build an index on existing questions that do not fit a given theoretical concept. At the beginning of the project we examined the construction of a composite indicator following Geudens et al. (2015), but due to the high complexity and the lack of validity we abandoned it in favour of a single indicator approach (see section 3.2).

3. RESEARCH DESIGN

A key conclusion of the previous chapters is that YPFO is a multidimensional concept with many substantive facets that may prevent participation in employment, education, mobility, etc. Empirical inequality research suggests that the multidimensionality of social obstacles or factors of social exclusion should be measured using single indicators which are related to the different dimensions – an approach, which is applied for this study[10]. The learning outcomes achieved within the framework of E+/YiA projects can be manifold. In the present analysis, the focus on learning outcomes is limited to a small segment within the broad concept of the eight key competences for lifelong learning. The central research question aims to find out whether the effects of participation for the young people on personal development in E+/YiA projects differ depending on the social preconditions. Consequently, the central empirical research question is defined as follows:

- How do social inequalities in different dimensions affect the learning outcomes of young people who participated in E+/YiA projects?

For the analysis, we use the data of the RAY-MON survey conducted by the RAY Network in 2017/2018. We proceed in two steps: first, by selecting appropriate independent variables related to different dimensions of inequality. The selection of the variables refers on the one hand to the literature review carried out above, but on the other hand also to available and useful variables in the dataset. In a second step, we analyse the effects of these variables (which are considered to indicate inequality) on individual learning outcomes achieved through participation in E+/YiA projects.

3.1. DATA

The data set used is based on an extensive survey conducted by the RAY network between October 2017 and June 2018. It is already the second cycle of the RAY-MON (Research-based analysis and monitoring of Erasmus+ Youth in Action) survey in this programme period 2014-2020 after the first cycle between October 2015 and May 2016 (Bammer, Fennes & Karsten, 2017). We use the second cycle because improvements have been made in the sampling and questionnaire design. Another methodological advantage of the RAY-MON dataset 2017/18 is the larger sample size (see background of RAY-MON in chapter 1).

The data collection was conducted as a standardised online survey, centrally administered by the RAY transnational research team in cooperation with the RAY coordination office. A total of 33 partners in 31 countries within the RAY network participated in the survey[11]. There exists no central database of the total population for the sampling procedure (all persons who participated in E+/YiA projects). Therefore, the sampling procedure was carried out under instruction guidelines of RAY Coordination by the National Agencies of RAY Network partners. According to the sampling guidelines cluster sampling should be used based on projects: First, select projects randomly and second, select all participants of all projects selected. For smaller countries (< 1,000 participants), it was recommended to select all participants for surveying or at least as many as possible. The RAY-MON survey of 2017/18 was conducted in two rounds

[10] In contrast, the study on the inclusion of YPFO in E+/YiA in 2014/15 used a composite indicator.

[11] Austria, Belgium, Cyprus, Czechia, Germany, Denmark, Estonia, Finland, France, Greece, Croatia, Hungary, Ireland, Iceland, Italy, Liechtenstein, Lithuania, Luxembourg, Latvia, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovenia, Slovakia, Spain, Sweden, Turkey, United Kingdom.

(October/November 2017 and April/May 2018). Invited were participants of projects, which had an activity end in 2017.

The questionnaire was provided in 26 different languages. The language could be changed during the survey. The participants were invited to the survey between two and ten months after the end of the core activity of their project.

In order to reduce the number of missings, we only select those answers for this analysis that had completely answered the questionnaire. In addition, we restrict the data set to participants in the age group between 18 and 30 years. This smaller age bracket was chosen because the age group of minors is smaller than the other age groups and single questions were more difficult to answer for younger participants. An analysis of missings in the data showed a high number of missings among young people on some of the questions. The upper age limit was set because the target group of the main E+/YiA programmes is explicitly defined up to 30 years[12].

The total sample size of the RAY-MON 2017/18 dataset is 23,571 respondents. For this analysis, we use a restricted dataset, according to the parameters above, which has the sample size of 16,997 respondents. 65% (11,009) of the respondents are female participants, 35% (5,891 responses) are male participants and 0.5% (97) with no defined gender. 29% (4,923) of the answers relate to the age group 18-20, 45% (7,680) to the age group 21-25 and 26% (4,394) to the age group 26-30. The sample includes young people from 58 countries of residence (see Table 21).

Respondents of the survey had been involved in projects that can be mapped to different activity types according to the Erasmus+ programme (see Table 19). 55% (9,341) had participated in a Youth Exchange project (YE), 13% (2,259) in a European Voluntary Service project (EVS), 8% (1,327) in Structured Dialogue (SD), 21% (3,558) in a Youth Worker Mobility project (YWM) and 3% (512) in Transnational Cooperation Activities (TCA). Consequently, the sample includes responses from participants who participated in project types (activity types) with different settings, objectives and target groups.

3.2. MODELLING THE DATA

Modelling the effect of E+/YiA projects on disadvantaged young people compared to young people who are not disadvantaged is a challenging empirical task. The central challenge is to identify disadvantaged young people in a valid and reliable way.

Initially, following Geudens et al. (2015), (see chapter 1) we examined whether the development of a composite indicator is a possible empirical approach to determine the group of disadvantaged people (see also section 2.2.3). We do not have a theoretical concept for a valid and reliable identification of YPFO, based on RAY-MON data. Therefore, we have dropped the idea of constructing a composite indicator. According to the literature, empirical analysis also confirms that there is only a small association between subjective and objective indicators. By composing single indicators, information would be lost in the analysis. Therefore, we use for analysis a single indicator approach. However, it can be checked whether effects of subjective and objective indicators are related or not by using the method of regression analysis.

Therefore, we model the effect of selected indicators of objective and subjective social disadvantage on learning outcomes using an extended regression model. More specifically, we use a

[12] Eligibility for activities: Youth Exchange: 13-30 years, European Voluntary Service: 17-30 years, Youth Worker Mobility: no age limit, Structured Dialogue: 13-30 years, Transnational Cooperation Activities: no age limit. Source: Erasmus+ Programme Guide, Version: 20.01.2017.

linear mixed model (LMM) with a random intercept component. The LMM is chosen for three main reasons. 1) The sampling procedure of the RAY-MON survey: a simple linear regression model has a random sampling as a central precondition to calculate reliable standard errors and inference statistics. Because of cluster sampling, an LMM is a better option, as it allows to control for clusters and groups. 2) The different activity types of E+/YiA projects: as described above, the respondents of the survey participated in projects with different types of activities according to the definition of the Erasmus+ programme. LMM allows to control for these activity types which differ a lot. 3) The uniqueness of E+/YiA projects: furthermore, every project has a distinct design (even within one activity type as specified above), which causes the participants within one project to experience the same situations. The learning experiences of participants within one project will, therefore, be more similar than those of participants from different projects. LMM allows to control for the project level. In summary, we use an LMM to control learning outcomes based on the project level and activity type through a random intercept component.

In order to present the results as simple as possible, we only present the results of the fixed coefficients of the LMM which can be interpreted like unstandardised simple regressions coefficients (see reading aid in Table 10). For the methodically informed reader, we provide further information on modelling in the appendix.

3.3. DESCRIPTION OF VARIABLES

In the following section, we describe the variables we selected to indicate the different dimensions of disadvantage, to represent the learning outcomes based on self-assessment of participants and used as further control variables.

3.3.1. INDICATORS OF INEQUALITY

As we perform a secondary analysis, the choice of indicators depends on the existing dataset. RAY-MON was not primarily designed to represent people with disadvantage in all different dimensions. The number of selectable variables in RAY-MON is therefore limited. Nevertheless, we have found some variables that reflect different dimensions of inequality according to the literature analysis conducted above.

In some dimensions we combine two variables to create a corresponding indicator. Furthermore, we distinguish between objective and subjective indicators. Objective indicators define disadvantage on the basis of certain observable facts. In the case of subjective indicators, individuals themselves are asked if they consider themselves to be disadvantaged or subjectively feel they have fewer opportunities. In the following section, we describe briefly the derived indicators in each dimension (see Table 6). For all indicators, the number of missing values is low; the highest percentage of missings can be found for the educational attainment of parents at about 3%. These low percentages of missings point to the good quality of the responses and their suitability as possible indicators.

Educational attainment of parents: In the RAY-MON 2017/18 dataset only two questions directly address intergenerational aspects of socio-economic status: the educational attainment (highest education) of the participant's father and mother. Due to differences in the educational systems between the RAY countries, the response categories were recoded into three categories according to the ISCED classification: “Primary school” and “Lower secondary school” (ISCED 1/2); “Upper secondary”, “Technical school” and “Upper Vocational School” (ISCED 3); “University, Polytechnic, post-secondary/tertiary level College” (ISCED 4/5). “Don't know” answers were recoded to Missing. We combined both variables to construct our first objective

variable in the educational dimension *educational attainment of parents* as follows: we used the highest education either of the father or the mother. In case one of the parent's educational attainment was missing, the highest education of the other parent was taken. In the event both were missing, the response was coded as missing. The descriptive statistics show that about 9% of parents of the respondents have an educational attainment no higher than lower secondary school (see Table 6).

Table 6: Descriptive statistics of indicators for inequality

Dimension	Indicator	Category	Frequency	Percent
Educational inequality	Educational attainment of parents (objective)	<=Lower Secondary School	1.579	9,3%
		Upper Secondary/Technical School	5.873	34,6%
		University/tertiary	9.084	53,4%
		(Missing)	461	2,7%
	Educational attainment of participants (objective)	<=Lower Secondary School	333	2,0%
		Upper Secondary/Technical School	1.784	10,5%
		University/tertiary	4.361	25,7%
		In education or training	10.462	61,6%
		(Missing)	57	0,3%
	Perception of obstacles to education (subjective)	No Subjective Obstacle to Education	16.253	95,6%
		Subjective Obstacle to Education	735	4,3%
		(Missing)	9	0,1%
Employment inequality	Unemployment (objective)	No unemployment	5.445	32,0%
		Unemployment >= 3 Months	878	5,2%
		In education or training	10.462	61,6%
		(Missing)	212	1,2%
	Perception of obstacles to work and employment (subjective)	No subjective obstacle to work	4.729	27,8%
		Subjective obstacle to work	1.800	10,6%
		In education or training	10.459	61,5%
		(Missing)	9	0,1%
Participation inequality	Perception of obstacles to participation (subjective)	No subjective obstacle to participation	15.329	90,2%
		Subjective obstacle to participation	1.659	9,8%
		(Missing)	9	0,1%
Migration and Minorities	Family language (objective)	No migration background	10.386	61,1%
		Immigration status 2nd generation	4.857	28,6%
		Immigration status 1st generation	1.614	9,5%
		(Missing)	140	0,8%
	Belonging to minorities (subjective)	Yes	2.328	13,7%
		No	14.457	85,1%
		(Missing)	212	1,2%
Mobility inequality	Never been abroad (objective)	Been abroad	15.549	91,5%
		Never been abroad	1.296	7,6%
		(Missing)	152	0,9%
	Perception of obstacles to mobility (subjective)	No subjective obstacle to mobility	16.118	94,8%
		Subjective obstacle to mobility	870	5,1%
		(Missing)	9	0,1%

Educational attainment of participants: Young participants in our sample are to a great extent still in education or training. Educational attainment is thus not a compelling indicator of inequality for young pupils or students. Therefore, for this indicator we exclude all those who have not completed their training at least at the time of the survey (participants which have been a pupil, a student or an apprentice for at least 3 months during the 12 months before the project). The educational attainment of those participants who finished school is an objective indicator for their own educational resources and complements therefore the first objective educational

indicator on parents' educational attainment. The descriptive statistics show that the vast majority are still in education. Only a share of 2% has an educational attainment no higher than lower secondary school (see Table 6).

Perception of obstacles to education: This subjective indicator is based on two variables which are connected as filter questions. In the first question, respondents were asked: "Do you feel that you are faced with obstacles ..." (q39). Answer categories are "... in accessing education?", "... in accessing work and employment?", "... to your active participation in society and politics?", "... to mobility?" and "... in some other way?". If one of these options is chosen, the respondents may select in the next question (q40) which specific obstacle type they experience out of a list of 17 categories. For the indicator *perception of obstacles to education* we combine the following answers: respondents experiencing an obstacle in the access to education (q39) and also selecting the specific obstacle type "Low educational attainment/achievement" (q40). According to this indicator about 4% of participants perceive a subjective obstacle to access education (see Table 6).

There is a slight association between subjectively perceived obstacles to the access to education and the educational attainment of parents: 8% of participants whose parents have an educational attainment lower or equal to lower secondary school experience subjective obstacles in their access to education, in comparison to only 3% of participants whose parents have a tertiary education degree.

Unemployment: For the second dimension concerning economic inequalities, it was again difficult to find an adequate objective indicator able to determine young participants' fewer opportunities. The RAY-MON survey did not ask specific questions related to the objective economic situation of the young person or of his/her parents, neither directly (e.g. through income) nor indirectly (e.g. through possessions). One question asked concerned the difficulty to pay the fee for the E+/YiA project. Another set of questions assessed the participants' occupation the year before the project, also inquiring for precarious employment situations e.g. unemployment or unwanted half-time work. Both questions were difficult to use as an indicator for objective economic inequality. Whereas in the case of the first question half of the respondents didn't have to pay a fee for the project, over half of the participants were still in education and thus the occupational status is not immediately relevant. Nevertheless, we tried to establish an indicator for this dimension. The comparison of both questions showed that especially participants who were unemployed acknowledged difficulties to pay the fee of the project. A similar comparison with the subjective question on fair share led to the same result. Therefore, we decided to take as an objective indicator for economic inequality those participants who had an experience of unemployment (at least 3 months) during the 12 months before the survey. About 5% of the respondents experienced a phase of unemployment in the year before the survey (see Table 6).

Perception of obstacles to work and employment: The construction of this subjective indicator was done in the same way as described above (see perception of obstacles to education). For this indicator *perception of obstacles to work and employment* we combine the following answers: respondents experiencing an obstacle in the access to work and employment (q39) and also selecting the specific obstacle types "Low educational attainment/achievement", "not

having enough money" and/or "a history of unemployment in my family" (q40). As this subjective indicator reflects the same aspect as the objective indicator on unemployment, young people still in education and training were excluded from the results. According to this indicator about 11% of participants experience a subjective obstacle to work and employment (see Table 6).

The comparison of the objective and subjective indicator on work and employment shows the connection of both indicators: 43% of participants who experienced unemployment perceive a subjective obstacle to work, compared with only 26% of those who did not experience unemployment.

Perception of obstacles to social participation: The third dimension we want to look at is related to social inequalities. In scientific research on fewer opportunities, indicators of social inequalities are normally not central, but social inclusion is a key element of the E+/YiA programme. There are a lot of objective indicators that can be used to evaluate the degree of social inclusion or participation, e.g. engagement in associations, voting behaviour. Unfortunately, there was no such indicator in the RAY-MON survey. Instead we use for this dimension only a subjective one which refers to the experiences concerning various forms of discrimination. For this indicator *perception of obstacles to social participation* we combine the following answers: respondents experiencing an obstacle to active participation in society and politics (q39) and also selecting the specific obstacle types "belonging to a disadvantaged group", "having difficulties with an/the official language(s) in my country", "belonging to a group that is discriminated against", "my social background", "my gender", "my sexual orientation", "belonging to a cultural/ethnic/religious minority" and "having a criminal conviction/spent time in custody" (q40). In total, about 10% of the respondents report to have obstacles to social participation (see Table 6).

Family language: The fourth dimension in our analysis deals with cultural inequalities based on migration or belonging to a minority. There are different approaches to determine migration background. In the RAY-MON dataset there is only the possibility to refer to migration background by using the proxy of the language(s) used in the family. Therefore, we combine the following two questions: first, "Is the language mainly spoken in your family an official language of the country or region where you live?" and second, "At home, does your family (including grandparents) also speak languages other than an official language of the country or region where you live?". We define three different groups based on their family languages. As 1st generation immigrants we define those respondents for whom the family language is not a country language (regardless of the second question). The combination of *family language is country language* and *other languages spoken in family* is mapped to 2nd generation immigration. If family language is country language with no other languages spoken in the family we assumed there is no migration background. We are aware that this definition of immigration status via language is not the most valid one but nevertheless it may indicate the degree of acculturation based on language. According to this concept, 10% of the respondents are identified as people with 1st generation immigration status and 29% as with 2nd generation immigration status (see Table 6).

Belonging to a minority: Minorities may be defined in many different aspects. For this analysis, in order to assess the subjective view of the cultural dimension, we use this simple question in the RAY-MON questionnaire: “Do you belong to a cultural, ethnic, religious or linguistic minority in the country where you live?”. According to this subjective question, 14% of the respondents belong to minorities in their countries.

The comparison of the objective and subjective indicators in this dimension shows the interconnectedness of both indicators: 6% of participants who have no migration background based on family languages self-identify as belonging to a minority, compared with 17% of participants with 2nd generation immigration status and 51% of participants with 1st immigration status.

Never been abroad: The last dimension we want to focus on in our analysis is related to inequalities in mobility. The absence of mobility experiences may result in inequalities regarding future mobility, especially in the European context. For example, immobility could prevent the realisation of learning opportunities, employment opportunities and cultural experiences. That's why we use as an objective indicator of this dimension the question concerning the number of times the participant has been abroad before the project. 8% of the young people say that they have never been abroad before this project.

Perception of obstacles to mobility: As a supplement for indicating obstacles to mobility, we created a subjective indicator, which reflects a complementary subjective view on mobility. For this indicator *perception of obstacles to mobility* we combine the following answers: respondents experiencing an obstacle to mobility (q39) and also selecting the specific obstacle types “living in a remote area” and “living in a deprived (sub-)urban area” (q40). This dimension refers to obstacles due to the residence area in a country, which is difficult to determine in an objective way, especially in different country contexts. For example, living in a suburban area may indicate in one country better possibilities, but leads in another country to disadvantages. About 5% of the respondents report to have subjective obstacles to mobility (see Table 6).

The objective and subjective indicators in this dimension are only slightly linked: 5% of participants who have been abroad perceive obstacles to mobility compared with 7% who have never been abroad.

In the RAY-MON dataset some other potential variables for indicating inequalities were asked in the participant's questionnaire. We have checked the validity and reliability of these variables but finally decided not to use them. This concerns for example the variable on fair share: “Compared to the way other people of your age/peers live in your country, do you think …”[13]. In our opinion, this variable is not specific enough (what dimension of disadvantage is represented here?) and therefore difficult to interpret. In the metadata, there would also be the possibility of using the assessments of project managers regarding the participation of “young people with fewer opportunities” or of “young persons with special needs”. Because there is no clear guidance on categorisation we assess this metadata as not consistent and therefore not very reliable for an analysis.

[13] Answer categories: … that you are getting your fair share of opportunities?, … that you are getting more than your fair share of opportunities?, … that you are getting somewhat less than your fair share of opportunities?, … that you are getting much less than your fair share of opportunities?.

3.3.2. LEARNING OUTCOMES AS DEPENDENT VARIABLES

Non-formal learning is a central cornerstone of the field of European youth work. Therefore, a main goal of the E+/YiA programme is the learning in the projects (see chapter 2). We have shown (in section 2.2.1) that learning in the E+/YiA projects is very diverse and combines learning in different dimensions: knowledge, skills, attitudes and values (Fennes, 2009). YPFO likely learn in all of those four dimensions, when they participate in a project of E+/YiA. Nevertheless, based on analytical reasons and reflections to simplify the analysis, we choose to take only one question on the development of skills as the central dimension for this analysis. The analysis could of course be extended to the three other dimensions (knowledge, attitudes and values); but for this we would need further time and resources.

The item set relating to skills as learning outcomes comprises 14 items. The wording of the question in the item set is: "To what extent do you agree or disagree to the following statements? Through the participation in the project I improved my ability…". Each item has the following response categories: 1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree. Although the variable is based on an ordinal scale, the scale is used – as common in social science – as a continuous scale with a range between 1 and 4. The evaluation of the learning outcome is based on self-assessment.

Since the item set represents different aspects of skills development, we first performed an exploratory factor analysis. In the next step, we selected items for the development of composite indicators in line with our theoretical assumptions and an intuitive understanding. With the chosen items we carried out a confirmative factor analysis (see Table 7). Finally, we constructed the composite indicators with selected items by the calculation of the mean value.

Table 7: Statistical description of extracted factors

Composite Indicator for Skills	**RMSEA**	**RMSR**	**TLI**	**Mean**	**SD**	**Skewness**	**Missing**	**Number of items**
Active Participation	0.019	0.01	0.99	3.20	0.56	-0.66	7	4
Learning and Personal Development	0.065	0.02	0.98	3.08	0.62	-0.55	12	4
Intercultural Interaction*	-	-	-	3.48	0.57	-1.30	2	2

Source: RAY-MON 2017/18. Analysis by authors. Comments: * only two variables, therefore statistics of factor analysis are not meaningful. Abbreviations: RMSEA (root mean square error of approximation), RMSR (root mean square residuals), TLI (Tucker Lewis Index), SD (standard deviation).

Based on this methodical procedure we extracted three factors or dimensions based on the skills learning outcome item set.

Active participation: This composite indicator comprises the items "… to say what I think with conviction in discussions", "… to develop an idea and put it into practice.", "… to negotiate joint solutions when there are different viewpoints.", "… to achieve something in the interests of the community or society." In our point of view, this dimension can be summarised as active participation as a result of non-formal learning.

Learning and personal development: The items "... to think logically and draw conclusions.", "... to identify opportunities for my personal or professional development.", "... to learn or to have more fun when learning", "... to plan and carry out my learning independently." are included in this second indicator. This indicator emphasises effects related to learning and individual personal development.

Intercultural interaction: The third indicator is based on the items "... to communicate with people who speak another language." and "... to get along with people who have a different cultural background". The items clearly refer to intercultural interaction as a central learning outcome.

Table 7 shows a high reliability of the extracted indicators. The average mean values of the indicators are rather high, which means learning outcomes in these dimensions are assessed in general as very high (results in a negative skew).

3.3.3. CONTROL VARIABLES

Control variables are used in regression analysis in order to adjust or control the interested relationship between two variables (here: effects of inequality indicators to learning outcomes) for possible effects of third variables. Control variables are not of central research interest, but may strongly influence the results if they are not controlled.

As control variables of the linear mixed models we use gender, age (in three groups), country of residence and duration of the activity (see in Annex for frequency table). We collapse the countries of residence into regional country groups: Central Europe (Austria, Czech Republic, Germany, Hungary, Liechtenstein, Slovakia), Eastern Europe (Croatia, Estonia, Latvia, Lithuania, Poland, Romania, Slovenia), Northern Europe (Denmark, Finland, Iceland, Norway, Sweden), Southern Europe (Cyprus, Greece, Spain, Italy, Malta, Portugal, Turkey), Western Europe (France, Ireland, United Kingdom, Belgium, Luxemburg, Netherlands) and Other (all other non-RAY countries). [14]

3.4. FURTHER METHODICAL ANNOTATIONS

For analysis we use GNU R (R Core Team, 2018) in the version of 5.3. For multilevel modelling we rely on the package lme4 (Bates et al., 2019). Since lme4 gives no inference statistics, p-values, ICC (intraclass correlation) and marginal R^2/conditional R^2 were calculated with the package sjplot (Lüdecke, 2019). For data wrangling, preparation and frequency analysis we use the packages of the tidyverse (Wickham, 2017).

[14] In case this study is repeated, this grouping of countries should be reviewed in the context of structures and traditions of youth work in these countries.

4. RESULTS

In the following chapter we report the results. In the first step, we present the mean values of the learning outcomes differentiated according to the single indicators of inequality. Subsequently, we present the results of the multilevel regression models. Methodologically, we use a two-stage approach. In the first stage we include only indicators in the multilevel regression models (models with sub-indices 1). In the second stage we add further control variables (models with sub-indices 2). Thus, we can test the effect of inequality indicators isolated from other socio-demographic variables and investigate whether given effects are stable. We apply this procedure for each dimension of inequality.

In the last sections we create a model that includes all indicators of inequality and further discuss the effects of control variables, projects and activity types on learning outcomes.

4.1. EDUCATIONAL INEQUALITY

We begin by examining whether the three indicators chosen to represent learning outcomes differ according to the indicators of educational inequalities. Table 8 shows the results of the mean value comparison (including standard deviations).

Table 8: Educational inequality – comparison of mean values (standard deviation)

Indicator	Categories	Active Participation	Learning and Personal Development	Intercultural Interaction
Educational attainment of parents (objective)	<=Lower Secondary School	3.22 (0.56)	3.16 (0.59)	3.5 (0.56)
	Upper Secondary/Technical School	3.21 (0.55)	3.09 (0.6)	3.48 (0.57)
	University/tertiary	3.2 (0.57)	3.06 (0.63)	3.49 (0.57)
Educational attainment of participants (objective)	<=Lower Secondary School	3.14 (0.58)	2.99 (0.61)	3.39 (0.66)
	Upper Secondary/Technical School	3.18 (0.56)	3.05 (0.61)	3.45 (0.6)
	University/tertiary	3.18 (0.58)	3.08 (0.61)	3.42 (0.58)
	In education or training	3.22 (0.55)	3.09 (0.62)	3.52 (0.56)
Perception of obstacles to education (subjective)	No Subjective Obstacle to Education	3.2 (0.56)	3.08 (0.62)	3.48 (0.57)
	Subjective Obstacle to Education	3.23 (0.6)	3.18 (0.63)	3.49 (0.58)

Source: RAY-MON 2017/18. Analysis by authors.

With the exception of *learning and personal development*, learning outcomes differ only slightly between the categories of indicator educational attainment of parents. Participants whose parents have no higher educational attainment than lower secondary school tend to report higher learning outcomes than, for example, persons whose parents have a tertiary degree. Regarding the outcome *learning and personal development*, the differences in the learning outcomes are much higher. Participants with a low family educational background state to benefit more than the average in relation to personal development. Interestingly, these results are not reflected in the educational attainment of the participants. Participants who are still in education or training indicate the highest learning outcomes in all three dimensions. Conversely, participants with the lowest educational attainment achieve the lowest mean values.

Participants who perceive subjective obstacles in their access to education report higher learning outcomes than people who do not experience such obstacles. The difference is again particularly pronounced in the dimension outcome *learning and personal development*. In the next step, we examine whether these differences can also be observed in a multi-level regression model when the indicators of educational inequality and other variables (project level, activity type, age, gender) are mutually controlled. For each dimension of the output indicators we define two regression models.

Table 9: Results of Linear Mixed Model with indicators of educational inequality as independent variables

	Active Participation (M1.1)		**Active Participation (M1.2)**		**Learning and Personal Development (M2.1)**		**Learning and Personal Development (M2.2)**		**Intercultural Interaction (M3.1)**		**Intercultural Interaction (M3.2)**	
Predictors	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*
(Intercept)	3.19	**<0.001**	3.11	**<0.001**	3.07	**<0.001**	2.89	**<0.001**	3.37	**<0.001**	3.33	**<0.001**
Educational attainment of parents (Ref. Upper Secondary/Technical School)												
<=Lower Secondary School	0.02	0.293	0.00	0.898	0.07	**<0.001**	0.03	0.111	0.02	0.120	0.02	0.207
University/tertiary	-0.01	0.140	-0.01	0.185	-0.03	**0.002**	-0.03	**0.001**	-0.00	0.693	-0.01	0.448
Educational attainment of participants (Ref. Upper Secondary/Technical School)												
<=Lower Secondary School	-0.07	0.051	-0.07	**0.049**	-0.06	0.136	-0.05	0.194	-0.05	0.185	-0.05	0.132
University/tertiary	-0.01	0.604	-0.02	0.303	0.02	0.268	-0.02	0.192	-0.02	0.127	-0.01	0.630
In education or training	0.03	**0.046**	0.02	0.196	0.04	**0.009**	0.02	0.319	0.06	**<0.001**	0.05	**<0.001**
Perception of obstacles to education (Ref. No Obstacle)												
Subjective Obstacle to Education	0.03	0.179	0.02	0.413	0.10	**<0.001**	0.08	**0.001**	0.01	0.515	0.01	0.649
Gender (Ref. Female)												
Male			0.02	**0.012**			0.00	0.981			-0.01	0.310
Other			-0.06	0.306			-0.05	0.394			-0.19	**0.001**
Age Group (Ref. 21-25)												
18-20			0.02	**0.022**			0.03	**0.004**			0.08	**<0.001**
26-30			-0.01	0.405			0.01	0.594			-0.04	**0.002**
Country Region (Ref. Central Europe)												
Eastern Europe			0.13	**<0.001**			0.23	**<0.001**			0.09	**<0.001**
Northern Europe			-0.05	0.092			0.11	**<0.001**			-0.04	0.143
Southern Europe			0.13	**<0.001**			0.30	**<0.001**			0.10	**<0.001**
Western Europe			0.06	**0.005**			0.22	**<0.001**			0.03	0.117
Other			0.11	**<0.001**			0.31	**<0.001**			0.09	**<0.001**
Activity Duration (Ref. 4-7 days)												
1-3 days			-0.06	**0.032**			-0.14	**<0.001**			-0.34	**<0.001**
8-14 days			0.02	0.121			0.01	0.443			0.02	0.149
15-60 days			0.01	0.809			-0.00	0.910			0.04	0.367
60 - 365 days			-0.09	**0.043**			-0.04	0.452			0.07	0.179
Random Effects												
σ^2	0.29		0.29		0.36		0.35		0.28		0.28	
τ_{00}	$0.02_{\text{project\_group:key\_act\_typ}}$		$0.01_{\text{project\_group:key\_act\_typ}}$		$0.02_{\text{project\_group:key\_act\_typ}}$		$0.02_{\text{project\_group:key\_act\_typ}}$		$0.03_{\text{project\_group:key\_act\_typ}}$		$0.02_{\text{project\_group:key\_act\_typ}}$	
	$0.01_{\text{key\_act\_typ}}$		$0.00_{\text{key\_act\_typ}}$		$0.00_{\text{key\_act\_typ}}$		$0.00_{\text{key\_act\_typ}}$		$0.04_{\text{key\_act\_typ}}$		$0.01_{\text{key\_act\_typ}}$	
ICC	$0.05_{\text{project\_group:key\_act\_typ}}$		$0.05_{\text{project\_group:key\_act\_typ}}$		$0.06_{\text{project\_group:key\_act\_typ}}$		$0.04_{\text{project\_group:key\_act\_typ}}$		$0.08_{\text{project\_group:key\_act\_typ}}$		$0.07_{\text{project\_group:key\_act\_typ}}$	
	$0.02_{\text{key\_act\_typ}}$		$0.01_{\text{key\_act\_typ}}$		$0.01_{\text{key\_act\_typ}}$		$0.01_{\text{key\_act\_typ}}$		$0.11_{\text{key\_act\_typ}}$		$0.04_{\text{key\_act\_typ}}$	
Observations	16509		16451		16504		16446		16514		16456	
Marginal R^2 / Conditional R^2	0.002 / 0.070		0.016 / 0.075		0.004 / 0.065		0.038 / 0.089		0.005 / 0.194		0.037 / 0.137	

Source: RAY-MON 2017/18. Analysis by authors.

Models with sub-index 1 only include independent variables linked to different dimensions of inequality. In models with sub-index 2 we extend the model with further control variables. This approach was chosen to check whether given effects of inequality indicators on learning outcomes may be explained by other socio-demographic characteristics (see Table 9).

Table 10: Simplified reading aid for the interpretation of the regression model coefficients

- The predictor variables are the fixed coefficients of the model. For each predictor the model estimates unstandardised coefficients which can be interpreted as simple OLS regression coefficients.
  Example: effect of the variable Educational attainment of parents (Model 2.1): The coefficients show that participants whose parents have lower than or equal lower secondary school have in average a 0.07 units higher learning outcome result than parents with upper secondary/technical school. The latter group is the reference level. This difference applies if all other variables in the model are simultaneously controlled for; that means e.g. no matter of gender or age group. This difference is on a significant level ($p < 0.001$) if the group structure is taken into account.
- Positive coefficients imply a positive correspondence, negative coefficients a negative correspondence with the dependent variable.
- In multi-level regression analysis, the fixed effects are for variance explained on the level of projects or activity types (random intercept). The intraclass correlation (ICC) expresses the variability of a higher level accounted for the total variability within the range 0 to 1. 0: no variability accounted for on higher level; 1: all variability explained by higher level. E.g. the ICC value of 0.06 of the level "project nested in key action types" (model 2.1) means that 6 percent of the total variability of a dependent variable can be "explained" on the project level.
- R^2 is known as a goodness of fit indicator for regression models and is defined as the proportion of the variance in the dependent variable that is predictable from the independent variable(s). The marginal R^2 calculates only the proportion of the variance that is predictable only from the fixed effect variables (without project level and key action types). The conditional R^2 includes also variables defined on a higher level. E.g. A marginal R^2 of 0.004 (Model 2.1) means that only 0.4 of variance can be explained by variables on the individual level, but 6.5 percent if we include the project and key action level.
- Low p-values refer to a higher probability that certain variables and/or groups have an effect on learning outcomes. These values ($p < 0.05$) are shown in bold.

The results of the multilevel regression analysis are presented in Table 9. First, we look at the coefficients of the models with sub-indices 1. We can observe that indicators of educational inequality have no significant effect on learning outcomes in the dimensions of *active participation* (M1.1) and *intercultural interaction* (M3.1). Only participants who are still in education or training have higher learning outcomes on a significant level.

However, we can observe significant effects of parents' educational level and subjective perception of obstacles to education on the outcome dimension *learning and personal development*. Participants whose parents have at least lower secondary school as highest qualification achieve a significantly higher level than participants whose parents have upper secondary school/technical school as highest education level. Interestingly, this difference fades when

further socio-demographic variables are added (M2.2), mostly due to effects of the residence country of participants.

Furthermore, participants who experience subjective obstacles to access to education report significantly higher learning outcomes in the learning development dimension. This effect is stable, i.e. it does not disappear if further variables are inserted in the models.

However, the results also show that the indicators of educational inequality can only explain a small part of the variance of the outcome indicators (maximal 0.5% of variance, see marginal R^2 of models with sub-indices 1). For comparison, if we include further control variables a maximum of 3.8% of variance of outcome dimensions can be explained by the models (see marginal R^2 of models with sub-indices 2). Empirically, it can be concluded that educational inequalities have – if any – only a very small effect on chosen learning outcomes.

4.2. EMPLOYMENT (ECONOMICAL) INEQUALITY

The first indicator refers to whether young people have experienced a period of unemployment of at least 3 months in the last 12 months. The mean value comparison shows that people with unemployment experience say to have learned less in all three dimensions. In contrast, people who perceive subjective obstacles in access to work and employment consider their learning in average to be higher than people who do not perceive obstacles in access to work. However, persons still in education or training estimate their learning outcomes on average mostly as highest (see Table 11).

Table 11: Employment inequality – comparison of mean values (standard deviation)

Indicator	Categories	Active Participation	Learning and Personal Development	Intercultural Interaction
Experience of unemployment in last 12 months (objective)	No unemployment	3.19 (0.57)	3.08 (0.61)	3.44 (0.58)
	Unemployment >= 3 Months	3.11 (0.6)	3.03 (0.64)	3.38 (0.6)
	In education or training	3.22 (0.55)	3.09 (0.62)	3.52 (0.56)
Perception of obstacles to work (subjective)	No subjective obstacle to work	3.17 (0.57)	3.05 (0.61)	3.42 (0.59)
	Subjective obstacle to work	3.2 (0.58)	3.12 (0.62)	3.44 (0.59)
	In education or training	3.22 (0.55)	3.09 (0.62)	3.52 (0.56)

Source: RAY-MON 2017/18. Analysis by authors.

The regression analysis shows that differences in the mean value comparison can be confirmed vastly at a significant level (see Table 12). The effects are very stable between the simple and advanced models (sub-indices 1 vs. sub-indices 2). Negative coefficients indicate that young people with unemployment experience indicate significantly lower learning outcomes in the dimensions *active participation*, *learning and personal development*, *intercultural interaction* than people who are not unemployed. Young people, on the other hand, who feel subjectively disadvantaged in accessing employment, say that they benefit significantly more from the project experience regarding the outcome dimensions *active participation* and *learning and personal development*. This tendency can also be observed for the dimension *intercultural interaction*, but the differences are somewhat smaller and therefore not significant.

Table 12: Results of Linear Mixed Model with indicators of educational inequality as independent variables

	Active Participation (M4.1)		Active Participation (M4.2)		Learning and Personal Development (M5.1)		Learning and Personal Development (M5.2)		Intercultural Interaction (M6.1)		Intercultural Interaction (M6.2)	
Predictors	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*
(Intercept)	3.17	**<0.001**	3.09	**<0.001**	3.06	**<0.001**	2.86	**<0.001**	3.35	**<0.001**	3.33	**<0.001**
Unemployment (Ref. No Unemployment)												
Unemployment >= 3 Months	-0.07	**0.001**	-0.07	**<0.001**	-0.05	**0.026**	-0.06	**0.008**	-0.06	**0.004**	-0.06	**0.005**
In education or training	0.04	**<0.001**	0.03	**0.008**	0.04	**<0.001**	0.03	**0.006**	0.08	**<0.001**	0.05	**<0.001**
Perception of obstacles to work and employment (Ref. No Obstacle)												
Subjective obstacle to work	0.04	**0.008**	0.03	0.075	0.07	**<0.001**	0.04	**0.014**	0.03	0.096	0.02	0.216
Gender (Ref. Female)												
Male			0.02	**0.008**			0.00	0.834			-0.01	0.260
Other			-0.07	0.201			-0.06	0.327			-0.21	**<0.001**
Age Group (Ref. 21-25)												
18-20			0.03	**0.010**			0.04	**0.002**			0.08	**<0.001**
26-30			-0.01	0.208			0.00	0.884			-0.04	**0.001**
Country Region (Ref. Central Europe)												
Eastern Europe			0.13	**<0.001**			0.22	**<0.001**			0.09	**<0.001**
Northern Europe			-0.04	0.110			0.11	**<0.001**			-0.04	0.137
Southern Europe			0.13	**<0.001**			0.31	**<0.001**			0.10	**<0.001**
Western Europe			0.07	**0.001**			0.23	**<0.001**			0.03	0.147
Other			0.11	**<0.001**			0.31	**<0.001**			0.09	**<0.001**
Activity Duration (Ref. 4-7 days)												
1-3 days			-0.06	**0.041**			-0.14	**<0.001**			-0.34	**<0.001**
8-14 days			0.02	0.129			0.01	0.461			0.02	0.197
15-60 days			0.01	0.758			-0.00	0.949			0.04	0.344
60 - 365 days			-0.09	**0.042**			-0.04	0.333			0.07	0.159
Random Effects												
σ^2	0.29		0.29		0.36		0.35		0.28		0.28	
τ_{00}	0.02 $_{project\_group:key\_act\_typ}$		0.01 $_{project\_group:key\_act\_typ}$		0.02 $_{project\_group:key\_act\_typ}$		0.02 $_{project\_group:key\_act\_typ}$		0.03 $_{project\_group:key\_act\_typ}$		0.02 $_{project\_group:key\_act\_typ}$	
	0.01 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.04 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$	
ICC	0.05 $_{project\_group:key\_act\_typ}$		0.05 $_{project\_group:key\_act\_typ}$		0.06 $_{project\_group:key\_act\_typ}$		0.05 $_{project\_group:key\_act\_typ}$		0.08 $_{project\_group:key\_act\_typ}$		0.07 $_{project\_group:key\_act\_typ}$	
	0.02 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$		0.11 $_{key\_act\_typ}$		0.04 $_{key\_act\_typ}$	
Observations	16769		16707		16764		16702		16774		16712	
Marginal R^2 / Conditional R^2	0.002 / 0.072		0.017 / 0.078		0.002 / 0.065		0.036 / 0.089		0.005 / 0.190		0.037 / 0.133	

Source: RAY-MON 2017/18. Analysis by authors.

4.3. PARTICIPATION INEQUALITY

Engaging young people into active citizenship is one of the main goals of the E+/YiA programme. The RAY-MON survey queries this aspect by asking if young people subjectively perceive obstacles to active participation in society and politics. Consequently, we distinguish between the group that perceives subjective obstacles in access to participation and the group that perceives no obstacles.

Table 13: Participation inequality – comparison of mean values (standard deviation)

Indicator	Categories	Active Participation	Learning and Personal Development	Intercultural Interaction
Perception of obstacles to participation (subjective)	No subjective obstacle to participation	3.2 (0.56)	3.08 (0.61)	3.48 (0.57)
	Subjective obstacle to participation	3.23 (0.61)	3.12 (0.65)	3.48 (0.59)

Source: RAY-MON 2017/18. Analysis by authors.

Table 13 shows the mean value comparison of the three learning outcome dimensions differentiated by subjectively perceived obstacles to participation. The results show that in two dimensions, *Active Participation* and *Learning and Personal Development*, young people with subjectively perceived obstacles show slightly better learning outcomes than people who do not perceive an obstacle. In the dimension *Intercultural Interaction* there are no differences between the two groups.

However, the multilevel regression analysis shows that the differences shown in Table 13 with and without inclusion of the other control variables are not significant. The specific results of the regression analysis are therefore not presented.

4.4. MIGRATION AND MINORITIES

We use an objective and a subjective indicator to examine the effect of cultural inequality on learning outcomes. It is important to note that the indicators of cultural inequality need to be seen in the national context in each country of residence. In Table 14 we represent a mean value comparison of the learning outcomes.

Table 14: Cultural inequality – comparison of mean values (standard deviation)

Indicator	Categories	Active Participation	Learning and Personal Development	Intercultural Interaction
Immigrations status based on language (objective)	No migration background	3.19 (0.55)	3.06 (0.61)	3.48 (0.57)
	Immigration status 2nd generation	3.23 (0.57)	3.12 (0.63)	3.5 (0.57)
	Immigration status 1st generation	3.19 (0.56)	3.08 (0.61)	3.43 (0.6)
Belonging to minorities (subjective)	Yes	3.22 (0.57)	3.1 (0.63)	3.46 (0.58)
	No	3.2 (0.56)	3.08 (0.61)	3.49 (0.57)

Source: RAY-MON 2017/18. Analysis by authors.

The results can be considered ambivalent, because one would have expected a linear association between the immigration status and the learning outcomes, i.e. participants with a 1st generation status would have learnt most or least. But the results show that people whose family language indicates an immigration status in the 2nd generation achieve in all dimensions the highest average learning outcomes based on self-assessment. Young persons, who may be categorised as 1st generation immigrants, do not have outcomes very different to those without immigration history. Except for the dimension *Intercultural Interaction,* for which the mean values of this group are lower compared with the two other groups. An explanation may be linked to the construction of our indicator, which is based on the languages spoken in the participants'

families. Young people who we define as 2nd generation immigrants do probably speak multiple languages: they can communicate in one of the official languages of their residence country as well as other languages spoken in the family. This may be an advantage in mobility projects with very diverse nationalities and thus boost their learning.

Young people who see themselves as belonging to minorities in their residence countries report on average a higher outcome in the dimensions *Active Participation* and *Learning and Personal Development*. Again, except for the dimension *Intercultural Interaction*, for which people who belong to minorities have lower outcomes.

In Table 15, we include these indicators in multiple multilevel regression models. The results show that the effect of family language (2nd generation immigration status) of participants on the learning outcome is in all dimensions very stable, even if control variables are inserted into the models. The multilevel regression analysis confirms that persons with 2nd immigration status indicate significantly higher learning outcomes.

But on the other hand, the results of Table 15 show that the feeling of belonging to a minority has no significant effect on the learning outcomes when simultaneously controlling for the family language variable.

Table 15: Results of Linear Mixed Model with indicators of cultural inequality as independent variables

	Active Participation (M7.1)		Active Participation (M7.2)		Learning and Personal Development (M8.1)		Learning and Personal Development (M8.2)		Intercultural Interaction (M9.1)		Intercultural Interaction (M9.2)	
Predictors	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*
(Intercept)	3.18	**<0.001**	3.1	**<0.001**	3.07	**<0.001**	2.86	**<0.001**	3.39	**<0.001**	3.37	**<0.001**
Family language (Familiy language = Country language)												
Immigration status 2nd generation	0.04	**<0.001**	0.04	**<0.001**	0.05	**<0.001**	0.04	**<0.001**	0.02	**0.034**	0.02	**0.041**
Immigration status 1nd generation	-0.00	0.834	0.00	0.763	0.01	0.472	0.02	0.217	-0.03	**0.050**	-0.02	0.139
Belonging to minorities (Ref. No)												
Yes	0.01	0.643	0.01	0.361	0.00	0.928	0.01	0.376	-0.02	0.130	-0.01	0.343
Gender (Ref. Female)												
Male			0.02	**0.032**			-0.00	0.842			-0.01	0.197
Other			-0.07	0.205			-0.06	0.310			-0.20	**<0.001**
Age Group (Ref. 21-25)												
18-20			0.03	**0.004**			0.04	**0.001**			0.08	**<0.001**
26-30			-0.03	**0.017**			-0.01	0.345			-0.05	**<0.001**
Country Region (Ref. Central Europe)												
Eastern Europe			0.13	**<0.001**			0.23	**<0.001**			0.09	**<0.001**
Northern Europe			-0.04	0.123			0.11	**<0.001**			-0.04	0.172
Southern Europe			0.14	**<0.001**			0.32	**<0.001**			0.10	**<0.001**
Western Europe			0.07	**0.001**			0.23	**<0.001**			0.03	0.126
Other			0.11	**<0.001**			0.31	**<0.001**			0.09	**<0.001**
Activity Duration (Ref. 4-7 days)												
1-3 days			-0.07	**0.021**			-0.14	**<0.001**			-0.35	**<0.001**
8-14 days			0.02	0.192			0.01	0.540			0.01	0.249
15-60 days			0.01	0.874			-0.01	0.879			0.04	0.448
60 - 365 days			-0.11	**0.018**			-0.05	0.283			0.05	0.289
Random Effects												
σ^2	0.29		0.29		0.36		0.35		0.28		0.28	
τ_{00}	0.02 $_{project\_group:key\_act\_typ}$		0.01 $_{project\_group:key\_act\_typ}$		0.02 $_{project\_group:key\_act\_typ}$		0.02 $_{project\_group:key\_act\_typ}$		0.03 $_{project\_group:key\_act\_typ}$		0.02 $_{project\_group:key\_act\_typ}$	
	0.01 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.04 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$	
ICC	0.05 $_{project\_group:key\_act\_typ}$		0.05 $_{project\_group:key\_act\_typ}$		0.06 $_{project\_group:key\_act\_typ}$		0.04 $_{project\_group:key\_act\_typ}$		0.08 $_{project\_group:key\_act\_typ}$		0.07 $_{project\_group:key\_act\_typ}$	
	0.02 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$		0.11 $_{key\_act\_typ}$		0.04 $_{key\_act\_typ}$	
Observations	16659		16598		16654		16593		16664		16603	
Marginal R^2 / Conditional R^2	0.001 / 0.071		0.017 / 0.076		0.001 / 0.062		0.038 / 0.087		0.001 / 0.192		0.036 / 0.135	

Source: RAY-MON 2017/18. Analysis by authors.

4.5. MOBILITY INEQUALITY

The basic concept of E+/YiA projects is learning through mobility. In this context, it is interesting to ask whether young people who have a mobility experience learn more in youth projects, or whether those who have no mobility experience benefit more than average from youth projects. The mean value comparison suggests the latter one. Young persons who have never been abroad before the participation in the project report higher learning outcomes in all dimensions. However, the mean value difference in dimension *Learning and Personal Development* is particularly high (see Table 16).

Table 16: Mobility inequality – comparison of mean values (standard deviation)

Indicator	Categories	Active Participation	Learning and Personal Development	Intercultural Interaction
Never been abroad (objective)	Been abroad	3.2 (0.56)	3.07 (0.62)	3.48 (0.57)
	Never been abroad	3.26 (0.52)	3.21 (0.58)	3.5 (0.57)
Perception of obstacles to mobility (subjective)	No subjective obstacle to mobility	3.2 (0.56)	3.08 (0.61)	3.48 (0.57)
	Subjective obstacle to mobility	3.23 (0.59)	3.1 (0.66)	3.5 (0.59)

Source: RAY-MON 2017/18. Analysis by authors.

Furthermore, mean value differences can also be observed for subjective indicator for perception of obstacles to mobility, although these are very small. Young people who perceive subjective obstacles to mobility report slightly higher average outcomes than those who don't perceive obstacles to mobility.

The regression models (Table 17) confirm the effect of indicator *Never been abroad* on learning outcomes especially in the dimension *Active Participation* and *Learning and Personal Development*. But from the decrease in the strength of the regression coefficient we can conclude that part of this effect can be explained by the country of residence. This means that many young people may come from countries where there is less international mobility experience. But, in the outcome dimension *Intercultural Interaction* differences in the mean values are too small to be significant.

People who perceive subjective obstacles to mobility see a slightly positive effect on their learning outcomes. However, these differences are not significant, with the exception of the *Intercultural Interaction* dimension.

Table 17: Results of Linear Mixed Model with indicators of mobility inequality as independent variables

	Active Participation (M10.1)		**Active Participation (M10.2)**		**Learning and Personal Development (M11.1)**		**Learning and Personal Development (M11.2)**		**Intercultural Interaction (M12.1)**		**Intercultural Interaction (M12.2)**	
Predictors	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*
(Intercept)	3.19	**<0.001**	3.11	**<0.001**	3.08	**<0.001**	2.88	**<0.001**	3.38	**<0.001**	3.36	**<0.001**
Never been abroad (Ref. Been abroad)												
Never been abroad	0.07	**<0.001**	0.04	**0.024**	0.14	**<0.001**	0.09	**<0.001**	0.04	**0.021**	0.01	0.611
Perception of obstacles to mobility (Ref. No Obstacle)												
Subjective obstacle to mobility	0.02	0.215	0.03	0.163	0.02	0.446	0.03	0.234	0.04	**0.048**	0.04	**0.032**
Gender (Ref. Female)												
Male			0.02	**0.019**			-0.00	0.876			-0.01	0.127
Other			-0.08	0.177			-0.06	0.309			-0.21	**<0.001**
Age Group (Ref. 21-25)												
18-20			0.03	**0.007**			0.03	**0.003**			0.08	**<0.001**
26-30			-0.02	**0.033**			-0.01	0.639			-0.05	**<0.001**
Country Region (Ref. Central Europe)												
Eastern Europe			0.13	**<0.001**			0.22	**<0.001**			0.09	**<0.001**
Northern Europe			-0.04	0.113			0.11	**<0.001**			-0.04	0.169
Southern Europe			0.13	**<0.001**			0.30	**<0.001**			0.10	**<0.001**
Western Europe			0.06	**0.003**			0.22	**<0.001**			0.03	0.202
Other			0.10	**<0.001**			0.30	**<0.001**			0.09	**<0.001**
Activity Duration (Ref. 4-7 days)												
1-3 days			-0.07	**0.023**			-0.14	**<0.001**			-0.35	**<0.001**
8-14 days			0.02	0.171			0.01	0.584			0.01	0.221
15-60 days			0.01	0.859			-0.01	0.821			0.04	0.404
60 - 365 days			-0.10	**0.031**			-0.04	0.336			0.06	0.217
Random Effects												
σ^2	0.29		0.29		0.36		0.35		0.28		0.28	
τ_{00}	0.02 $_{project\_group:key\_act\_typ}$		0.01 $_{project\_group:key\_act\_typ}$		0.02 $_{project\_group:key\_act\_typ}$		0.02 $_{project\_group:key\_act\_typ}$		0.03 $_{project\_group:key\_act\_typ}$		0.02 $_{project\_group:key\_act\_typ}$	
	0.01 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.04 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$	
ICC	0.05 $_{project\_group:key\_act\_typ}$		0.05 $_{project\_group:key\_act\_typ}$		0.06 $_{project\_group:key\_act\_typ}$		0.05 $_{project\_group:key\_act\_typ}$		0.08 $_{project\_group:key\_act\_typ}$		0.07 $_{project\_group:key\_act\_typ}$	
	0.02 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$		0.11 $_{key\_act\_typ}$		0.04 $_{key\_act\_typ}$	
Observations	16829		16767		16825		16763		16834		16772	
Marginal R^2 / Conditional R^2	0.001 / 0.071		0.016 / 0.076		0.004 / 0.066		0.036 / 0.088		0.001 / 0.192		0.035 / 0.134	

Source: RAY-MON 2017/18. Analysis by authors.

4.6. OVERALL MODEL

Finally, we calculated regression models that include all indicators of inequality as independent variables. With this procedure we can examine possible effects of each dimension under mutual control of further dimensions. In other words, it can be checked whether the effects in individual dimensions of inequality are independent of each other. In Table 18 we present the results.

In the overall model we can see structural similarities in the results regarding the effects on the dimension *active participation* compared to the single dimension analysis (see section 4.1 to section 4.5). On the one hand, we see negative associations with the outcome if the educational attainment is not higher than lower secondary and if the participants have experienced unemployment in the last 12 months. On the other hand, positive effects can also be observed, for example among people with 2nd immigration status, participants who experience subjective obstacles to access to work and those with no experience of mobility abroad (M13.1). However, the effect of subjective obstacles to work and employment weakens when further variables are controlled (M13.2).

Analogously, similar results are also obtained for the dimension *learning and personal development* in the overall model. Positive effects on these dimensions can be observed if participants 1) come from a low educational background, 2) are still in education, 3) have a further migrant background, 4) experience subjective obstacles to access to work and education, and 5) have no mobility experience abroad (M14.1). The effects in these variables weaken if further control variables are included, which can be explained mainly by the effects of the residence country (M14.2).

With regard to the dimension *intercultural interaction*, the results of the overall model also hardly differ from the separate analyses carried out above. Positive effects can be observed here for persons who 1) are still in education or training, 2) have a migrant background, 3) have no experience abroad and 4) experience subjective obstacles to mobility (M15.1). These effects are quite stable with the exception of the indicator subjective obstacles to mobility, which is on the threshold to becoming significant when including the control variables (M15.2). Again, there is a negative effect of unemployment on the outcome.

In a joint analysis, we can conclude that the effects of the individual indicators of inequality on different outcome dimensions – if any are observed – are widely independent of the effects of other indicators. However, the analyses also show that the variance, which can be explained by indicators of inequality, is rather small. Excluding the control variables (models with sub-index 1), only a maximum of 1% (M14.1) of the total variance in the defined outcome dimensions can be explained in the overall model (see Marginal R^2, without variance explained by projects and activity types). In comparison, the proportion of explained variance rises up to 4.2% (M14.2) if the control variables (age, sex, duration of activity and country of origin) are included.

Although not in the scope of the main research question in the context of this analysis, we will briefly discuss in the following two sections which variables have additional effects on the defined outcome dimensions.

Table 18: Results of Linear Mixed Model with all indicators of inequality as independent variables

	Active Participation (M13.1)		Active Participation (M13.2)		Learning and Personal Development (M14.1)		Learning and Personal Development (M14.2)		Intercultural Interaction (M15.1)		Intercultural Interaction (M15.2)	
Predictors	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*	*Estimates*	*p*
(Intercept)	3.17	**<0.001**	3.1	**<0.001**	3.03	**<0.001**	2.87	**<0.001**	3.37	**<0.001**	3.34	**<0.001**
Educational attainment of parents (Ref. Upper Secondary/Technical School)												
<=Lower Secondary School	0.02	0.290	0.00	0.774	0.06	**<0.001**	0.03	0.152	0.03	0.088	0.02	0.140
University/tertiary	-0.01	0.155	-0.01	0.195	-0.03	**0.004**	-0.03	**0.002**	-0.00	0.617	-0.01	0.385
Educational attainment of participants (Ref. Upper Secondary/Technical School)												
<=Lower Secondary School	-0.08	**0.034**	-0.08	**0.030**	-0.08	0.059	-0.07	0.077	-0.03	0.379	-0.04	0.279
University/tertiary	-0.01	0.646	-0.01	0.397	0.02	0.329	-0.03	0.177	-0.03	0.101	-0.01	0.543
In education or training	0.03	0.070	0.01	0.349	0.05	**0.005**	0.01	0.404	0.06	**<0.001**	0.04	**0.005**
Perception of obstacles to education (Ref. No Obstacle)												
Subjective Obstacle to Education	0.00	0.826	-0.00	0.920	0.06	**0.009**	0.05	**0.037**	-0.00	0.918	-0.01	0.805
Unemployment (Ref. No Unemployment)												
Unemployment >= 3 Months	-0.06	**0.004**	-0.07	**0.002**	-0.05	**0.050**	-0.06	**0.016**	-0.05	**0.010**	-0.05	**0.014**
Perception of obstacles to work and employment (Ref. No Obstacle)												
Subjective obstacle to work	0.03	**0.041**	0.02	0.160	0.06	**0.002**	0.03	0.097	0.02	0.303	0.01	0.498
Perception of obstacles to particpcation (Ref. No Obstacle)												
Subjective obstacle to participation	0.01	0.646	0.00	0.931	0.00	0.807	-0.01	0.626	0.01	0.696	0.01	0.638
Family language (Familiy language = Country language)												
Immigration status 2nd generation	0.05	**<0.001**	0.04	**<0.001**	0.06	**<0.001**	0.05	**<0.001**	0.03	**0.006**	0.03	**0.008**
Immigration status 1nd generation	0.00	0.924	0.01	0.564	0.01	0.435	0.02	0.197	-0.02	0.204	-0.02	0.343
Belonging to minorities (Ref. No)												
Yes	0.00	0.817	0.01	0.487	-0.01	0.742	0.01	0.602	-0.03	0.053	-0.02	0.138
Never been abroad (Ref. Been abroad)												
Never been abroad	0.08	**<0.001**	0.05	**0.002**	0.13	**<0.001**	0.09	**<0.001**	0.04	**0.010**	0.02	0.301
Perception of obstacles to mobility (Ref. No Obstacle)												
Subjective obstacle to mobility	0.02	0.277	0.03	0.179	0.01	0.774	0.02	0.347	0.04	0.062	0.04	**0.048**
Gender (Ref. Female)												
Male			0.02	**0.022**			-0.00	0.915			-0.01	0.302
Other			-0.06	0.348			-0.05	0.419			-0.19	**0.001**
Age Group (Ref. 21-25)												
18-20			0.03	**0.016**			0.03	**0.005**			0.08	**<0.001**
26-30			-0.01	0.292			0.01	0.673			-0.04	**0.002**
Country Region (Ref. Central Europe)												
Eastern Europe			0.13	**<0.001**			0.22	**<0.001**			0.08	**<0.001**
Northern Europe			-0.05	0.101			0.11	**<0.001**			-0.04	0.170
Southern Europe			0.13	**<0.001**			0.30	**<0.001**			0.09	**<0.001**
Western Europe			0.06	**0.004**			0.22	**<0.001**			0.04	0.071
Other			0.10	**<0.001**			0.30	**<0.001**			0.08	**<0.001**
Activity Duration (Ref. 4-7 days)												
1-3 days			-0.06	**0.033**			-0.14	**<0.001**			-0.35	**<0.001**
8-14 days			0.02	0.147			0.01	0.470			0.02	0.165
15-60 days			0.01	0.876			-0.01	0.758			0.05	0.335
60 - 365 days			-0.09	**0.040**			-0.03	0.485			0.07	0.185
Random Effects												
σ^2	0.29		0.29		0.35		0.35		0.28		0.28	
τ_{00}	0.02 $_{project\_group:key\_act\_typ}$		0.01 $_{project\_group:key\_act\_typ}$		0.02 $_{project\_group:key\_act\_typ}$		0.02 $_{project\_group:key\_act\_typ}$		0.03 $_{project\_group:key\_act\_typ}$		0.02 $_{project\_group:key\_act\_typ}$	
	0.01 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.00 $_{key\_act\_typ}$		0.04 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$	
ICC	0.05 $_{project\_group:key\_act\_typ}$		0.05 $_{project\_group:key\_act\_typ}$		0.05 $_{project\_group:key\_act\_typ}$		0.04 $_{project\_group:key\_act\_typ}$		0.08 $_{project\_group:key\_act\_typ}$		0.07 $_{project\_group:key\_act\_typ}$	
	0.02 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$		0.01 $_{key\_act\_typ}$		0.12 $_{key\_act\_typ}$		0.04 $_{key\_act\_typ}$	
Observations	15993		15935		15989		15931		15998		15940	
Marginal R^2 / Conditional R^2	0.005 / 0.073		0.019 / 0.078		0.010 / 0.070		0.042 / 0.093		0.006 / 0.198		0.038 / 0.138	

Source: RAY-MON 2017/18. Analysis by authors.

4.7. EFFECTS OF CONTROL VARIABLES

As briefly described above, the inequality indicators explain only a very small share of the variance of the dependent outcome dimensions. However, the control variables included in the model are able to explain a larger proportion of variance in comparison. We can check this by comparing the Marginal R^2 between the model with the sub-indices 1 and sub-indices 2 (with control variables). For a closer look, we compare the coefficients of the control variables in the overall model (see Table 18). We focus only on the coefficients of this model, since these differ only marginally between the individual models above (M1.1 – M15.2), and since the effects of the indicators of inequality have little effect on the coefficients of the control variables due to their low explanatory power.

Gender has an ambivalent effect on the outcome dimensions. We can observe that male participants report a slightly higher level of learning outcomes in the dimension *Active Participation* dimension than female participants. In the dimensions *Learning and Personal Development* there are no differences. We can also observe that persons with another gender identity tend to indicate a lower level of the outcomes, whereby this difference in the dimension *intercultural interaction* is particularly large. However, the number of this group in the sample is very small (n=97).

An additional effect emerges from the *age* variable. With increasing age, lower outcomes are reported in all outcome dimensions. Again, this effect is particularly high in the dimension *Intercultural Interaction*.

The model shows also strong effects of the *residence country* on all outcome dimensions. Compared to the Central European reference group, participants from Eastern and Southern Europe in particular report high learning outcomes. Participants from Western Europe have also higher learning outcomes than participants from Central Europe. In contrast, participants from Northern Europe only achieve better outcomes in the *Learning and Personal Development* dimension.

The duration of the activity also has an influence on the level of self-assessed outcomes. In comparison, the results suggest that very short activities lead to a lower outcome than activities in the medium duration category (8 to 60 days). But the results also show that longer activities hardly show any added benefit. The only exception is the outcome in the dimension *Intercultural Interaction*: the longer the duration of the activity, the higher the outcomes.

4.8. EFFECTS OF PROJECTS AND ACTIVITY TYPE

The Erasmus+ programme distinguishes between several key actions and activity types in the youth field. Individual projects are realised within these key actions and activity types. But each project defines central goals and concrete project activities within this rough framework. A central assumption is therefore that the quality of the project environment defines the conditions for non-formal learning and thus also the outcomes achieved. With the linear mixed model, we can examine to which extent learning outcomes are influenced by projects nested in activity types.

Again, we describe the results based on the coefficients of random effect as part of the overall model (see Table 18). The coefficients differed only very slightly from the results of M1.1 to M15.2. For this purpose, we interpret the intra class coefficient (ICC), which expresses the variance of a higher level accounted for the total variance. The ICC ranges from 0 to 1 (0: no variance accounted for on higher levels; 1: all variance explained by higher levels).

The results show that at the project level (nested in activity type) about 5% of the total variance in the outcome dimensions *Active Participation* and *Learning and Personal development* can be explained (M13, M14). Thus, the activity type can contribute little to the explanation of these two dimensions.

The interpretation of the ICC in the M15 models is somewhat more complicated. The results of model 15.1 suggest that the type of activity in particular has a very high effect on the outcome dimension *Intercultural Interaction*. This is modified somewhat with model 15.2 by including the duration of the activity in the model. Nevertheless, in this dimension we observe a particularly high influence of the projects but also of the activity types on the results.

The importance of the project level is also expressed in the strength of conditional R^2. The conditional R^2 describes the proportion of variance explained by both the fixed (indicators of inequality and control variables) and random factors (projects and activity types). For example, in model 14.2 only about 4% of the variance can be explained by the indicators of inequality and control variables. If, however, the project level and the activity type are included, the share of the explained variance rises to 9%. This is a significant increase in the explanatory power of the model. The effect of projects and activity types on the outcome *Intercultural Interaction* is particularly high (M15.2).

We would like to make a final methodological remark: the results outlined above are partly based on a self-assessment method. This method is always highly sensitive to different group-dependent perceptions. In this context, it is difficult to say whether the described differences are actually due to real differences in outcomes or whether these differences are due to group-specific response behaviour, such as cultural background, gender-specific assessments etc.

5. DISCUSSION

In the Erasmus+ programme, young people are in general a central target group with the main objective of their inclusion and full participation in society. In particular, YPFO are specifically targeted in the Erasmus+ Youth in Action programme. In this context, it is assumed that non-formal learning settings of youth projects are particularly suitable for addressing YPFO in the project activities. Nevertheless, it can often be observed that people who have more opportunities than others profit most from educational measures designed for disadvantaged people. In science this phenomenon is widely known as the “Matthew effect”; educational inequalities which already exist in an early life period tend to influence the educational career in later life stages and increase the educational inequalities between different groups (see Blossfeld and Maurice, 2011). In this context, the empirical research of the RAY network E+/YiA also showed that young people with a tertiary education and/or specific education in the field of social/political science profited most from participation and citizenship projects and were even more socially or politically active after the project (Bárta, Fennes and Gadinger, 2018, p.10). However, it is still not clear, whether the Matthew effect appears also for other forms of learning in E+/YiA projects and if other forms of inequalities influence the learning. Therefore, our research question focuses on whether this effect will deepen further during the project participation, i.e. whether people with different social backgrounds achieve different learning outcomes in E+/YiA projects.

Another question related to the Matthew effect concerns the social selection with regard to the participation in E+/YiA projects. This question is still difficult to answer because the datasets of the RAY network are only based on surveys and there is no database of all the participants available. Nevertheless, most respondents in the surveys, who have finished their educational career, have achieved secondary or tertiary education. Even if there is a social selection among those who answered the questionnaire (an online survey with many questions implies an obstacle for YPFO, resulting in less responses from this group), we assume that also among the project participants YPFO are less represented. In the next chapter we will present some recommendations to further explore this question in the future.

Our main analysis focuses on how individual characteristics of project participants influence the learning outcomes of the E+/YiA projects. First, the present analysis has to use existing variables, which cannot appropriately map all the dimensions described in theory. In order to improve future analyses, we discuss possible adaptations of the RAY-MON questionnaire in chapter 6. Secondly, the results show both positive and negative effects on learning outcomes of YPFO (indicated by objective and subjective indicators). But in average, the observed differences in the learning outcomes due to individual characteristics are rather small. From these results we can derive an important finding: E+/YiA projects do not lead to further inequalities in learning outcomes (related to skills) among young people. YPFO who participate in an E+/YiA project achieve, in general, similar learning outcomes as their peers with ‘normal’ (or average) opportunities. In some dimensions (educational attainment of parents, migration background, never having been abroad, and subjective perceptions of obstacles) there is even a subtle indication that young people with fewer opportunities achieve better learning outcomes.

On the other hand, some indicators are somewhat negatively associated or have no effect. The effects of participants' own educational attainment seem to be less important as a predictor for learning outcomes. A possible explanation might be that a large portion of young persons between 18 and 30 are still in education or training. The indicator might not be reliable, as the educational attainment is still changing a lot during this age period. It can also be observed that

young people who were (long-term) unemployed before the project report to have learnt less than their peers. Perhaps the projects of E+/YiA do not specifically target unemployed young people, who would need projects that address their situation more specifically.

However, there are central limitations regarding the interpretation of the results in this report. First, this analysis focuses only on the skills developed through the project participation. Further research on other dimensions of learning in these non-formal settings still needs to be done. This concerns, for example, the development of values, attitudes, knowledge and effects in relation to active citizenship and the further development of educational pathways. Secondly, the learning outcomes are measured by the subjective method of self-assessment. Although this allows individual subjective expectations and reflections to be taken into account, it also raises the question of the comparability of the results. Thus, no conclusions can be drawn about the level of learning, but only about subjectively assessed learning results.

The results of the analysis also show the need to further discuss, assess and develop the concept of YPFO. The political definition of YPFO seems to be guided by the same reflections as the introduction of the 'social exclusion' concept in the EU's social policy discourses during the 1980s (see Hayes, Gray and Edwards, 2008; Edwards, 2010). The term 'social exclusion' was originally used to characterise a group of people excluded from the French social security system and was integrated in the EU's discourse in order to replace the term of poverty, which was less acceptable for some member states. Atkinsons and Davoudi (2000) point out that, since a clear definition of social exclusion is still missing, a lot of researchers use poverty as a proxy. However, this would not do justice to the concept, as it is multi-dimensional, including social and cultural dimensions and emphasising the comprehensive and dynamic process of exclusion. In analogy, the concept of YPFO was introduced in the political / practical discourse, but without a concrete scientific definition. Its multidimensionality as well as the dynamic definition of 'fewer opportunities' has a lot of potentialities that should be reflected in research. Our analysis, which had limited possibilities to represent adequately all dimensions of the YPFO concept, showed nevertheless the usefulness of the multidimensionality of YPFO: the learning outcomes differed according to dimensions like education, employment, migration or mobility. We also think that the combination of subjective and objective indicators in one dimension can lead to a better understanding of inequalities and their influence on the learning outcomes. In all the regression models, the effects of some of the control variables, not linked to the individual level but to the macro and to the meso levels, are consistently high: effects on three dimensions of skills learning outcomes are especially influenced by the country of residence and by the project level. The results of the regression models show that Southern and Eastern European countries have higher values at the learning outcomes, whereas especially Central and Northern European countries have, in comparison, lower mean values. As we have already pointed out in the theoretical chapter, this could be explained by different cultural response styles (Harzing, 2016) and perhaps a different history of youth work in European countries (Taru, Coussée & Williamson, 2014). Historical patterns of youth work seem to be influenced by the regimes in the countries: authoritarian regimes in Europe attempted to limit youth work to the smooth integration of young people in society, whereas in democratic states youth work also encouraged young people to question phenomena and developments of society and politics. The differences we see in our analysis for Western, Central and Northern European countries compared to Eastern European countries, could be related to these different traditions in youth work, which are still influencing the way youth work is carried out (Taru, Coussée & Williamson, 2014, p.125 ff). As non-formal learning experiences are less familiar for young people in Eastern European countries, they may judge the effects as more important compared to their

peers in other countries who have a more extensive experience of non-formal learning. A further explanatory approach would be that the differences are due to different education systems, e.g. different focus on language skills or citizenship education. Another argument would be that the process of participation in youth projects is structured differently by countries. In this case the results would reflect different processes of social selection on participation in projects. In any case, more research is needed to explain country differences on the learning outcomes.

The results show that the project level has the highest explanatory power for the learning outcomes. The very high variance explained by the projects points to one of the strengths of the E+/YiA programme, which is the high diversity of the projects and the activation of a young person's own resources by a project. This influence of the project seems reasonable, as it is the interaction of learners with the project leaders in the specific context of a country and based on a subject that creates learning opportunities (see also Bloomer, 2001). In the RAY special study on non-formal learning (Fennes, Gadinger, Hagleitner & Lunardon, 2013; Weis & Meyers, 2013) a main finding was that learning was especially strong, if a project had a mix of different methods and learning contexts. The project level also reflects the design of the project and the composition of the participants. Unfortunately, no conclusions can be drawn about the group composition (heterogeneous/homogeneous) from the sample. This aspect, the effect of the project design, the group composition and the pedagogical didactic methods of non-formal learning used, also requires further analysis. In any case, it is evident that less individual characteristics influence learning outcomes than the quality of non-formal learning in projects, also for people with fewer opportunities.

It is worth noting that there is not necessarily a linear relationship between the duration of an activity and skills learning outcomes, except for the dimension *intercultural interaction*, where the outcomes are higher with an increasing duration of the activity. For the other dimensions (*Active Participation* and *Learning and personal development),* long-term activities (with a duration of more than two months) hardly show higher learning outcomes than shorter activities (longer than one week). This could be caused by a lack of ongoing learning support related to these dimensions in long-term activities.

According to these findings, an improvement in learning outcomes can especially be achieved by increasing project quality, which might also require additional resources.

6. RECOMMENDATIONS FOR FURTHER RESEARCH

6.1. RECOMMENDATIONS FOR RESEARCH

6.1.1. RECOMMENDATION FOR COLLECTING SUPPLEMENTARY DATA FROM ALL PARTICIPANTS IN E+/YIA

In the last chapter 5 we discussed the difficulty to assess the social selection effect for the E+/YiA projects with the information actually available to the researchers of the RAY network. The information on all participants gathered through the reporting procedure in E+/YiA is not sufficient to describe the socio-economic status of the participants. For research purposes, it would be necessary to collect supplementary data, e.g. indicators on educational attainment, socio-economic status, migration status etc., on the whole population of participants in E+/YiA projects and to make this (anonymised) data available to research. This database on the whole population could be used not only for a better assessment of participants according to these indicators, but also to compare the sample of participants in the survey with the total population. This way the researchers could also assess if the survey response data is representative for the whole population.

6.1.2. RECOMMENDATION FOR GATHERING IMPORTANT STRUCTURAL COUNTRY DATA

The results of our analysis also showed the influence of country data on the outcomes (see chapter 4). In section 4.7 we discussed some possible explanations for those differences between some groups of countries. However, to better understand and evaluate the country level differences, the researchers of the RAY network need a database with important information on country level.

The outcomes in the projects could be influenced by three different country variables. First, the European countries have a different evolution concerning the structure of their youth work, which would also influence the evaluation of actual youth work projects. So, it would be necessary to gather information on every country's history concerning youth work and the current structure of youth policy and youth work.

A second area which could influence the outcomes on a national level is related to the institutions that implement the E+/YiA programme – the National Agencies. Research on lifelong learning (LLL) programmes (Boeren, 2016; Roosmaa and Saar, 2017) shows that the participation in LLL programmes depends also on the characteristics of the institutions implementing the programme, e.g. concerning accessibility, support provided to applicants etc.

Finally, the situation of young people in a country differs very largely and may influence the way how young participants assess their learning in an E+/YiA project. Therefore, the researchers of the RAY network would also need information on the educational system, the working situation for young people (including youth unemployment), income levels, housing, wealth etc. – at least in all E+/YiA programme countries[15].

6.1.3. RECOMMENDATION FOR THE RAY-MON QUESTIONNAIRE

The theoretical reflections in chapter 3 and the analysis in chapter 4 have shown that the concept of YPFO is still not clearly defined for a scientific analysis and needs some more discussion

[15] Programme countries are all EU member states, EEA countries and EU candidate accession countries.

inside the RAY network. Some recommendations can already be made concerning the existing RAY-MON questionnaire.

New variables / questions

We think that the existing indicators in the RAY-MON survey are not adapted to reflect the different dimensions of inequality.

Educational and economic inequalities should be measured using intragenerational as well as intergenerational indicators. Young people in the RAY-MON survey are in transition from childhood to adulthood, and their own educational and economic status is changing continuously. Even when they have successfully entered the employment market, their economic situation at the beginning of their professional career can still be precarious and changing. Young people's socio-economic situation is also mainly dependent on the socio-economic situation of their family household, whose financial, cultural and social capital influences young people's chances already in an early phase of their life.

We propose to integrate, complementary to the parents' educational attainment, some more questions on the socio-economic status of the participants' parents. As most young people in the RAY surveys are normally 17 years or older, it could be possible to assess the parents' occupational status directly. If the survey is intended for younger age groups, it would be necessary to think about some easy questions which also younger adolescents can answer but still are relevant for evaluating their SES. Alternatively, or even complementary to the SES, the RAY survey could also integrate some questions to measure family wealth or family possessions, e.g. cultural, educational or economic possessions. The advantage of an existing composite indicator like the FAS or the material and social deprivation scale from EU-SILC is the reliability and validity as well as the possibility to compare data from RAY with other surveys. We would also suggest to think about how the multiple dimensions of young people with fewer opportunities can adequately be represented by using relevant objective and subjective indicators in multiple dimensions.

Review and modification of existing questions

In our study we did not use some of the existing questions of the RAY-MON survey or encountered problems during the analysis. We suggest to review some of these questions for the next survey round.

One of the interesting subjective evaluations on the economic situation of young people is the question on fair share "Compared to the way other people of your age/peers live in your country, do you think ...". This question was originally used in some German studies like the ALLBUS, the DJI-Ausländersurvey or the DJI-Youth Survey AID:A, but with a different wording for the items of the response scale. The original question was about “fair share“[16], not “fair share of opportunities”. The original question is clearly oriented towards the subjective “assessment of relative deprivation of young people, of not getting a fair share in society's wealth” (Gaiser, Gille

[16] AID:A DJI-Survey 2009: “Compared to how other people live here in Germany: what do you think you get compared to others ... 1. More than your fair share 2. The faire share 3. Somewhat less than your fair share 4. Much less than your fair share?“ (translation from the German version: „Im Vergleich dazu, wie andere Menschen hier in Deutschland leben: Was glauben Sie, erhalten Sie, im Vergleich zu anderen ... 1: Mehr als ihren gerechten Anteil 2: den gerechten Anteil 3: Etwas weniger als ihren gerechten Anteil 4: Sehr viel weniger als den gerechten Anteil?”)

& Rijke, 2013, p.133). The new response scale asking about the “fair share of opportunities” suggests that the question is not on economic justice, but rather on social justice. We think that the question is interesting, especially for assessing the comparison of young people with other people in their country. The question is rather difficult to answer for younger participants. If the question stays in the survey, we would change this question again to the original wording.

Another subjective evaluation in the survey concerns the question about minorities, relating to the cultural dimension of inequalities. For the moment the question is a filter question, where the first (filter) question asks whether young people belong to a cultural, ethnic, religious or linguistic minority in the country where they live. But the second question, which is only answered by those that stated yes in the first question, goes further by asking the participants if they are an immigrant or have an immigrant background. These options should be available for all participants and not only those who ticked the minority question.

A question we used very often in our analysis for the subjective evaluation of different dimensions was the one asking "Do you feel that you are faced with obstacles ..." in accessing different sectors. In a further question those obstacle types were then asked in detail. The structure of these two questions did not allow us to check which obstacles were combined with which obstacle types, e.g. it is possible that a participant faced obstacles to access education and mobility and said this was due to living in a remote area and not having enough money. These questions should be more clearly structured in order to assess which obstacles are related to which obstacle types.

A last comment concerns the questionnaire in general. For our analysis we used only young people aged 18 and more, because we realised that younger age groups had a lot of missing answers and also answers that were not consistent (e.g. educational attainment and years in education). We think that the actual questionnaire is probably too long and exigent for younger age groups and perhaps also for young people with lower educational background. We therefore suggest to think about a lighter questionnaire for certain groups of participants or about moving important socio-demographic questions to the beginning of the questionnaire.

Set up scientific translation process of questionnaires

Our analysis showed the influence of the countries or regions on the answers of young people. We assessed some of the explanations for these differences in the last chapters. Until now we have not pointed out another reason which could explain those differences: misunderstandings or errors in the translation of concepts or questions of the questionnaire. This should be controlled before other country-related explanations are used to interpret national differences. Therefore, we suggest to set up a scientific process to control the translation of questions in order to assess specific concepts and country-specific understandings of questions and to reduce the translation errors.

6.1.4. RECOMMENDATIONS FOR FURTHER STUDIES

Based on the implementation and findings of the present study, it is recommended that in the context of RAY further qualitative and quantitative studies should be developed and conducted.

In a first step, this could be a study on the influence of inequalities on other dimensions of learning, in particular on the development of knowledge, values and attitudes. This would be a study using the approach of the present one but exploring the differences of learning outcomes with respect to these aspects of competence through the survey responses to respective

questions in the RAY-MON questionnaires. In a second step, this could be a study on the influence of inequalities on competence development, on the one hand on specific competences such as participation and citizenship competence, but also on key competences for lifelong learning at large.

The present study showed that project types and the way projects are implemented play an important role for the learning outcomes. This could be the project design, the educational approach, the methodology, the settings, the methods used, but also the composition of the group of participants and of the members of the project team. It would be of great value to explore how these different aspects of a project affect the learning outcomes for participants and, in particular, which project designs, educational approaches, methodologies, settings and methods are specifically suitable and effective for heterogeneous groups in which different types of inequalities are appearing, thus meeting the different participants' needs for effective learning. Special emphasis should be put on the specific needs of YPFO for motivated, inspiring and effective learning in E+/YiA projects since it seems that the project designs, settings and methodologies applied in E+/YiA projects are not necessarily suitable for YPFO. Such a study could be conducted using a mixed-method approach – first exploring different ways of designing and implementing E+/YiA projects – as well as their adequateness and effectiveness – through qualitative research methods and then exploring the learning outcomes through quantitative research methods, e.g. with a survey using questions from the RAY-MON surveys complemented by questions on the project design and implementation derived from the qualitative part of the study.

The findings from the present study also suggest that differences in learning outcomes might be caused by differences in countries of origin of participants, in particular with respect to the history of youth policies and youth work as well as with respect to current youth work practice. In fact, a special study on country-specific characteristics related to youth and youth work has been conducted by RAY in parallel to the present study. It needs to be explored how the findings of this study can be used for further analyses with respect to learning outcomes of YPFO as well as which further country-specific characteristics would be useful for explaining differences in learning outcomes by countries of origin of participants.

6.2. RECOMMENDATIONS FOR NATIONAL AGENCIES AND PROJECT ORGANISERS

Encouraging and fostering the involvement of YPFO in E+/YiA projects

The analyses in this study showed that the learning outcomes of participants in E+/YiA projects are as high or even higher if they indicate one or more disadvantages compared to their peers. This is in contrast to formal education where frequently those who are more educated benefit more than the less educated – in line with the 'Matthew principle'. Therefore, taking part in E+/YiA projects can support YPFO to decrease the inequalities to those with more opportunities.

Developing and applying adequate project designs and methodologies

While one can assume that non-formal education approaches and settings, which are learner-oriented, building on intrinsic motivation and voluntary participation of learners, and applying a non-formal learning methodology, are better suited for YPFO (in particular for school drop-outs) than traditional formal education. YPFO still might need special support, in particular if

they are not familiar with non-formal learning settings and methodologies – contrary to better educated young people who frequently also profit from non-formal learning opportunities, again in line with the 'Matthew-principle' which also applies to non-formal education. A typical example would be that young people who had never been abroad before might experience anxiety when participating in an E+/YiA project abroad. This may cause them to withdraw from project activities in order not to make any mistakes and thus not benefit from the experience. Therefore, it is necessary to develop and apply specific project designs and non-formal learning approaches including special support for YPFO.

Furthermore, E+/YiA projects involving heterogeneous groups in which different types of inequalities are appearing, including young people with less and more opportunities, most likely require specific project designs and non-formal learning approaches which are adequate for such groups.

In fact, adapting project designs and methodologies which are adequate for the participants as individuals and as a group is an investment into the quality of projects. Thus it is essential for quality assurance and development in E+/YiA.

Ongoing learning support in long-term projects

One of the findings of this study is a side effect which is not specific for the topic of this study: the analysis showed that the outcomes of activities with a short and medium duration (8 to 60 days) are higher than those of shorter activities (3 to 7 days), but that for long-term activities (60 to 365 days) the outcomes increase for intercultural skills, but hardly or not at all for skills related to active citizenship, personal development and other competences for lifelong learning. It is likely that intercultural skills are further developed through informal learning due to the ongoing immersion into a different cultural environment – so it happens also without support and is ongoing because a society is multi-faceted and multi-layered, and it takes a long time to fully grasp it. But obviously, learning in the skills dimensions *active citizenship* and *learning and personal development* does not continue automatically in E+/YiA projects if not fostered and supported through non-formal learning measures. In this respect, it is recommended to develop and implement learning support measures for long-term projects.[17]

[17] Obviously, long-term activities with a duration of more than 60 days ending in 2017 were European Voluntary Service projects. Since volunteering projects were transferred to the newly established European Solidarity Corps Programme in October 2018, this recommendation primarily is addressed to National Agencies of the European Solidarity Corps – at least in this capacity.

7. LIST OF ABBREVIATIONS

E+	European Union Programme Erasmus+ (2014-2020)
E+/YiA	Erasmus+ Youth in Action: youth component of Erasmus+
ECHP	European Community Household Panel Survey
ESCS	Economic, social and cultural status
EU	European Union
EU-SILC	European Union Statistics on Income and Living Conditions
EVS	European Voluntary Service (activity type of E+/YiA)
FAS	Family Affluence Scale
HBSC	Health-Behaviour in School-Aged Children
HISEI	Highest occupational status of parents
HOMEPOS	Home possessions
ICC	Intraclass correlation OR Intra class coefficient?
ISCED	International Standard Classification of Education
LMM	Linear mixed model
NA	National Agency of E+/YiA
OECD	Organisation for Economic Co-operation and Development
PARED	Highest educational level of parents in years of education according to ISCED
PIAAC	Programme for the International Assessment of Adult Competencies
PISA	Programme for International Student Assessment
RAY	Research-based Analysis of European Youth Programmes
RAY-MON	RAY Monitoring: Research-based Analysis and Monitoring of Youth in Action
RAY Network	The RAY Network consists of the E+/YiA and European Solidarity Corps National Agencies and their research partners involved in RAY
SD	Structured Dialogue (activity type of E+/YiA)
SES	Socio-economic status
TCA	Transnational Cooperation Activities (activity type of E+/YiA)
YE	Youth Exchange (activity type of E+/YiA)
YPFO	Young people with fewer opportunities
YiA	European Union Programme 'Youth in Action' (2007-2013)
YWM	Youth Worker Mobility (activity type of E+/YiA)

	Member States of the European Union
AT	Austria
BE	Belgium
BG	Bulgaria
CY	Cyprus
CZ	Czech Republic
DE	Germany
DK	Denmark
EE	Estonia
ES	Spain
FI	Finland
FR	France
GR	Greece
HR	Croatia
HU	Hungary
IE	Ireland
IT	Italy
LT	Lithuania
LU	Luxembourg
LV	Latvia
MT	Malta
NL	Netherlands
PL	Poland
PT	Portugal
RO	Romania
SE	Sweden
SI	Slovenia
SK	Slovakia
UK	United Kingdom
	Non-EU Erasmus+ Programme Countries
MK	North Macedonia
IS	Iceland
LI	Liechtenstein
NO	Norway
TR	Turkey

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9. ANNEX

9.1. RAY RESEARCH PROGRAMME

The RAY research programme includes the following research projects:

- Research-based analysis and monitoring of E+/YiA (which this publication is about) aimed at contributing to monitoring and developing E+/YiA and the quality of projects supported by it (RAY-MON);
- a research project on the long-term effects of E+/YiA on participation and citizenship of the actors involved, in particular on the development of participation and citizenship competences and practices (RAY-LTE);
- a research project on competence development and capacity building of youth workers and youth leaders involved in training/support activities in E+/YiA; this project also explores the effects of E+/YiA on the organisations involved (RAY-CAP);
- a research project on the on the impact, role and potential of the strategic partnerships and cooperation in Erasmus+ Youth in Action (funded under Key Action 2 of E+/YiA) as instruments to foster innovation and exchange of good practices in the youth sector and related fields (RAY-INNO);
- a research project on strategies and practices for organisational development and learning of organisations and networks in the European youth sector (RAY-LEARN);
- a research project on approaches to participation and citizenship education and learning in E+/YiA exploring which approaches are effective in developing participation and citizenship competences and practices (RAY-PART);
- research-based analysis and monitoring of the European Solidarity Corps, aimed to explore a broad scope of aspects of the European Solidarity Corps and to share the research findings with different actors and stakeholders, thus contributing to monitoring and developing the European Solidarity Corps and the quality of projects supported by it (RAY-SOC).

9.2. MODELLING THE HIERARCHICAL DATA: RANDOM INTERCEPT MODELLING

There are two main reasons why we use the method of linear mixed model (LMM) with a random intercept:

- Sampling method of the RAY survey: As described earlier, the RAY survey uses the cluster sampling as sampling method. A simple OLS regression presupposes random sampling to calculate reliable standard errors. Thus, the LMM is the better option because it allows to control for the cluster structure of the sample, through modelling the nested structure.
- The design of the E+/YiA projects: Projects are applied for and implemented within the framework of defined key actions and activity types (YE, YWM, EVS, SD, TCA). Each activity type addresses different aims. Furthermore, each project stands for itself and defines individual project objectives.

Consequently, we assume a nested structure of the data: Level 1: individual participant; Level 2: projects which are nested in activity types; Level 3: activity types. We apply a random intercept model (or random effect) to account for the random variability given by the projects and activity types. That means responses of the participants within a project may be more similar than between different projects. Random slopes models cannot be applied because of the high numbers of groups (n=approx. 3,300). This would lead to identification problems. There is a high number of projects with small group sizes. But LMM allows even to include groups with a group size of n=1 as long as there is a high number of groups with bigger groups sizes (see Snijders & Bosker, 2012, p. 56).

Table 19: Frequency Activity Type: Level 3

Activity Type	n	percent
YE	9,341	55%
EVS	2,259	13%
SD	1,327	8%
YWM	3,558	21%
TCA	512	3%
Total	16,997	100%

Source: RAY-MON 2017/18. Analysis by authors.

Table 20: Frequency Project Sizes: Level 2

Group Size	Number of Groups	Number of participants	Number of participants (cumulated)	Number of participants (percent cumulated)
1	835	835	835	5%
2	431	862	1,697	10%
3	289	867	2,564	15%
4	284	1,136	3,700	22%
5	270	1,350	5,050	30%
6	233	1,398	6,448	38%
7	185	1,295	7,743	46%
8	168	1,344	9,087	53%
9	151	1,359	10,446	61%
10	105	1,050	11,496	68%
11	87	957	12,453	73%
12	71	852	13,305	78%
13	49	637	13,942	82%
14	43	602	14,544	86%
15	27	405	14,949	88%
16	23	368	15,317	90%
17	15	255	15,572	92%
18	14	252	15,824	93%
19	6	114	15,938	94%
20	9	180	16,118	95%
21	5	105	16,223	95%
22	1	22	16,245	96%
23	2	46	16,291	96%
25	1	25	16,316	96%
26	2	52	16,368	96%
27	5	135	16,503	97%
28	3	84	16,587	98%
29	1	29	16,616	98%
31	2	62	16,678	98%
34	1	34	16,712	98%
36	1	36	16,748	99%
37	1	37	16,785	99%
44	1	44	16,829	99%
47	1	47	16,876	99%
52	1	52	16,928	100%
69	1	69	16,997	100%

Source: RAY-MON 2017/18. Analysis by authors.

The model equation of the random intercept models is:

$$Y_{ijk} = \gamma_{00} + \gamma_{100}\, x_{ijk} + \gamma_{200}\, c_{ijk} + V_{00k} + U_{0jk} + R_{ijk}$$

The variables are defined as follows:

- Y_{ijk} is the dependent variable on the individual level: indicators for learning outcomes of the projects.
- x_{ijk} is an independent variable respective a set of independent variables: different dimensions of inequality (e.g. Education of parents, migration history).
- c_{ijk} is a set of independent variables to control for: control variables e.g. gender, age, residence country.
- γ_{00} is the overall average intercept of an individual in a random group.
- γ_{100} and γ_{200} are the unstandardised coefficients of the independent variables. They can be interpreted like "normal" OLS regression coefficients: When the variable x_{ijk} increases with one unit, Y_{ijk} increases γ_{100}-units, independent of group membership.
- V_{00k} is the error term for the level 3 group: activity types. In output the variance var(V_{00k}) is indicated with $\tau_{00:\,\text{activitytype}}$. That could be interpreted as the variance of the dependent variable that could be explained through the level 3 variable activity type.
- U_{0jk} is the error term for the level 2 group: project groups nested in activity type. In output the variance var(U_{0jk}) is indicated with $\tau\, 00_{\text{project:activitytype}}$. That could be interpreted as the variance of dependent variable that could be explained through the level 2 variable project_id that is nested in level 3 activity type.
- R_{ijk} is the error term for the level 1, on the individual level. In output the variance var(R_{ijk}) is indicated with σ^2. That is the unexplained variance on the individual level 1.

9.3. FREQUENCY OF CONTROL VARIABLES

Table 21: Frequency of control variables

Variable		n	percent
Gender	Female	11,009	65%
	Male	5,891	35%
	Other	97	1%
Age Groups	18-20	4,923	29%
	21-25	7,680	45%
	26-30	4,394	26%
Activity Duration	1-3 days	869	5%
	4-7 days	6,282	37%
	8-14 days	7,462	44%
	15-60 days	844	5%
	60 - 365 days	1,525	9%
	(Missing)	15	0%
Country of residence	AT	248	1%
	BE	197	1%
	CY	194	1%
	CZ	578	3%
	DE	843	5%
	DK	103	1%
	EE	355	2%
	EL	919	5%
	ES	1,230	7%
	FI	215	1%
	FR	482	3%
	HR	604	4%
	HU	452	3%
	IE	79	0%
	IS	32	0%
	IT	1,500	9%
	LI	10	0%
	LT	529	3%
	LU	42	0%
	LV	429	3%
	MT	77	0%
	NL	145	1%
	NO	69	0%
	PL	922	5%
	PT	579	3%
	RO	928	5%
	SE	121	1%
	SI	356	2%
	SK	462	3%
	TR	1,235	7%
	UK	260	2%
	x_Other Countries	2,753	16%
	(Missing)	49	0%

Source: RAY-MON 2017/18. Analysis by authors.