



Recruiting and Preparing Teachers Through an Alternative Programme: A European Policy Experiment on the Teach For All Approach in Five Countries

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Table of Contents

Acknowledgements.....	V
Executive Summary: The NEWTT Policy Experiment – Testing Four Hypotheses.....	VII
List of Tables	XIV
List of Figures	XX
1 The NEWTT Project.....	1
2 Theoretical Background.....	4
2.1 Previous Research on Alternative Pathways into Teaching.....	4
2.2 Teach For All– Studies of a Prominent Alternative Teacher-Training Pathway.....	6
2.3 Theoretical Impact Model.....	8
3 Design of the Policy Experiment.....	11
Head Teacher Survey.	12
3.1 Participants in the Policy Experiment	13
3.1.1 Process of Control Group Selection.....	15
3.1.2 Timeline of Control Group Selection	16
3.2 Timeline and Stages of Data Collection of the Policy Experiment.....	17
3.3 Intended and Recruited Samples (Overall and Country-Specific).....	20
3.4 Sample Head Teachers.....	25
3.5 Design of Instruments	26
3.5.1 General Instruments.....	27
3.5.2 Knowledge Test.....	28
3.6 Procedure of the Project.....	30
4 Macro-Level Results.....	33
4.1 Socioeconomic Factors and Working Conditions of Teachers in Participating Countries.....	33
4.2 Process of Teacher Education – Alternative vs. Traditional Routes	36
4.2.1 Overview of Academic Teacher Education in the Participating Countries.....	36
4.2.2 Overview of Teacher Education Within the Teach For All Programme.....	39

Macro-Level Results – Summary.....	47
5 Meso-Level Results	50
5.1 Selection Process.....	51
5.1.1 Prerequisites for Traditional Academic Teacher Education	51
5.1.2 Recruitment Process for the Teach For All Programme	52
5.2 Content of Teacher Education	57
5.2.1 Overview of the Content of Traditional Teacher Education Programmes.....	57
5.2.2 Overview of the Content of Alternative (Teach For All) Teacher Education Programmes.....	58
5.3 Schools as a Context for Professional Development	64
5.3.1 Collaboration Between Teach For All Organisations and Schools.....	64
5.3.2 Overview of Mentoring/Teacher Induction in the Teach For All Programme.....	68
5.3.3 Overview of Mentoring/Teacher Induction in Traditional Routes into Teaching ..	69
5.3.4 Tasks of Fellows at School.....	78
Meso-Level Results – Summary	82
6 Micro-Level Results.....	84
6.1 Characteristics of Traditionally-Trained and Alternatively-Trained Teachers at the Beginning of Their Teaching Careers	84
6.1.1 Participant Characteristics: Austria.....	84
6.1.2 Participant Characteristics: Basque Country	96
6.1.3 Participant Characteristics: Bulgaria.....	108
6.1.4 Participant Characteristics: Latvia	122
6.1.5 Participant Characteristics: Romania.....	131
Characteristics of Traditionally-Trained and Alternatively-Trained Teachers at the Beginning of Their Teaching Careers – Transnational Summary	142
6.2 Development of Teacher Competences and Teacher Knowledge of Alternatively-Trained Beginning Teachers over the First Two Years of Their Teaching Career	144
6.2.1 Development of Teacher Competences and Teacher Knowledge: Austria.....	145
6.2.2 Development of Teacher Competences and Teacher Knowledge: Basque Country	150
6.2.3 Development of Teacher Competences and Teacher Knowledge: Bulgaria	156

6.2.4	Development of Teacher Competences and Teacher Knowledge: Latvia.....	162
6.2.5	Development of Teacher Competences and Teacher Knowledge: Romania	167
	Development of Teacher Competences and Teacher Knowledge of Alternatively-Trained Beginning Teachers over the First Two Years of Their Teaching Career – Transnational Summary	172
6.3	Comparison of Teacher Competences, Opportunities to Learn, and Pedagogical Knowledge of Alternatively-Trained and Traditionally-Trained Beginning Teachers at the End of the Second Year Working at School	174
6.3.1	Comparison of Opportunities to Learn, Teaching Competences, and Pedagogical Knowledge of Alternatively- and Traditionally-Trained Teachers: Austria.....	176
6.3.2	Comparison of Opportunities to Learn, Teaching Competences, and Pedagogical Knowledge of Alternatively-Trained and Traditionally-Trained Teachers: Bulgaria	182
	Comparison of Teacher Competences, Opportunities to Learn, and Pedagogical Knowledge of Alternatively-Trained and Traditionally-Trained Beginning Teachers at the End of the Second Year Working at School – Transnational Summary	188
6.4	Indicators of Job Satisfaction and Inclination to Stay in the Profession for Alternatively- Trained and Traditionally-Trained Beginning Teachers After the First Two Years Working at School.....	190
6.4.1	Indicators of Job Satisfaction and Inclination to Stay in the Profession: Austria .	191
6.4.2	Indicators of Job Satisfaction and Inclination to Stay in the Profession: Basque Country	196
6.4.3	Indicators of Job Satisfaction and Inclination to Stay in the Profession: Bulgaria	198
6.4.4	Indicators of Job Satisfaction and Inclination to Stay in the Profession: Latvia ...	203
6.4.5	Indicators of Job Satisfaction and Inclination to Stay in the Profession: Romania	205
	Indicators of Job Satisfaction and Inclination to Stay in the Profession for Alternatively-Trained and Traditionally-Trained Beginning Teachers After the First Two Years Working at School – Transnational Summary	207
7	Discussion.....	208
8	References	217
9	Annex	225

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Executive Summary: The NEWTT Policy Experiment – Testing Four Hypotheses

‘A New Way for Talents in Teaching’ (NEWTT) is a European policy experiment funded by the European Commission under Erasmus+/Key Action 3. The funding was provided in view of educational policy challenges and in order to support innovations that show the potential to inspire policy reform. The current challenge consists of teacher shortages in several European Union Member States. The Teach For All approach of recruiting, selecting, and preparing academics who did not go through an established teacher education programme is tested as a possible response to this challenge.

The NEWTT project implemented a semi-experimental design in five European countries (Austria, Bulgaria, the Basque Country of Spain, Latvia, and Romania). The experiment involved over 300 Teach For All network participants and up to 240 traditionally-educated beginning teachers. Due to different terminology within the Teach For All network and during the development of the project, the Teach For All network participants will be referred to as alternatively-trained teachers, trainees or fellows throughout the report. In each country, the alternatively-trained teachers were the NEWTT intervention while the traditionally-trained teachers were the control groups. All groups were followed over a period of two years; data was collected via online questionnaires at four different points in time in order to test the following four main hypotheses:

1. The selection, recruitment, and initial training methodologies of the NEWTT alternative pathway will produce alternatively-trained teachers who are suitable for teaching (suitability being defined in terms of teacher competence, i.e. pedagogical knowledge, teacher attitudes, and self-efficacy). They will perform at least as well against initial measures of teacher competence as beginning teachers who graduated from traditional programmes.
2. Alternatively-trained teachers who enter teaching through the NEWTT alternative pathway pilots will develop their competence as teachers (as reflected in pedagogical knowledge, teacher attitudes, and self-efficacy) over the course of the NEWTT pilots.
3. The overall competence of alternatively-trained teachers (as reflected in pedagogical knowledge, teaching attitudes, and self-efficacy) will compare positively with that of beginning teachers who graduated from traditional programmes.
4. Compared to beginning teachers from traditional programmes, a higher or at least identical percentage of alternatively-trained teachers from the NEWTT national pilots will complete their second year of the programme and, after the end of the alternative pathway programme, will continue teaching or contributing to outcomes at the schools where they have taught during their training.

The report mainly presents descriptive results. However, Austria and Bulgaria, the two countries with the largest samples of both NEWTT intervention and control groups, received a more elaborate analysis than the other participating countries. In these two countries, the evaluation also included a head teacher survey.

Results Regarding Hypothesis 1:

Selection and Baseline Profiles of Alternatively-Trained Teachers Are at Least as Adequate as Those of Traditionally-Trained Teachers.

The selection procedure for NEWTT programme applicants consisted of diverse phases, during which the Teach For All organisations observed and rated a large number of criteria. By employing such a complex selection procedure, the national organisations intended to find the most eligible and motivated candidates to participate in their two-year programmes.

The selection criteria for acceptance onto traditional academic teacher education programmes are not as complex as the recruitment process for the Teach For All programmes. Nevertheless, depending on each country, certain prerequisites must be satisfied, including: interview, standardised test, grade average in final school examination, grades in state matriculation examinations, and grades in a university entrance examination.

The following paragraphs sum up key characteristics of traditionally-selected and alternatively-selected teachers at the beginning of their teaching careers. The average age of the participants varied between 23 years (control group Latvia) and 34 years (Plovdiv master's students, Bulgaria) across countries. In all countries except Latvia, participants of the control groups were older than participants of the intervention groups. Regarding the gender distribution of the participants in the five countries, there were more female participants in all groups. Overall, the percentage of men was higher in the intervention groups than in the control groups.

Considering final secondary school examination grades, participants of all the intervention groups generally achieved good or very good grades. In all countries except Romania, participants of the intervention groups achieved higher, or at least the same, grades as participants of the control group. Most of the participants of the intervention and control groups in the five countries had a degree in the humanities, or languages and arts, and many had a degree in law and business. The Basque Country was an exception here as most of the participants of the intervention group had a degree in engineering.

Concerning previous pedagogical experience, participants of both the intervention and control groups in all countries claimed to have more experience of working with children or adolescents outside of the school context (e.g. as a sports coach or youth group leader) than within the school context (e.g. as a tutor or teaching assistant). In general, participants of the intervention groups

answered 'quite often' or 'very often' more frequently than the participants of the control groups. This shows a higher level of pedagogical experience outside of the school context for the intervention groups. At the same time, participants of the control group reported a relatively higher level of previous experiences within the school context.

In four of the five participating countries, more participants of the intervention groups stated to have worked or studied abroad than those of the control groups. In Austria, the Basque Country, and Latvia, at least 75% of the participants of the intervention groups stated to have worked or studied abroad; in Bulgaria and Romania, this was true for significantly fewer participants (Bulgaria 40%; Romania 44%). Concerning the control groups, less than one third of the participants in Austria, Bulgaria and Romania had worked or studied abroad. The Basque Country was an exception here, as 73% of the participants had spent time abroad.

In all countries, participants of the intervention groups were significantly more involved in volunteer work than participants of the control groups. Overall, participants of both groups were mostly involved in social organisations. They were distinctly less engaged in entrepreneurial activities and least involved with political organisations.

Regarding the different job motives of participants, in the intervention groups the most important motives driving the decision to become a teacher were the wish to work with children and adolescents as well as a feeling of social responsibility. For participants of the control groups, a passion for their subject and wishing to work with children and adolescents were the predominant motives for choosing to become a teacher. While items regarding job security were rated the lowest overall, control group members rated them on average significantly higher than members of the intervention group.

Results Regarding Hypothesis 2:

Overall Positive Development of Alternatively-Trained Teachers during Their First Two Years in the Profession.

Alternatively-trained teachers in all countries were asked to assess their teaching competence regarding different areas such as fostering autonomous learning, classroom management, and instructional methods. They assessed their levels of competence in all areas of teaching competence as at least satisfactory at the end of the second school year. Overall, participants of the intervention group in each country assessed their competences lower before starting to work at school than at the end of the second year working at school. Participants in Bulgaria and the Basque Country felt most competent by the end of the second year working at school. In general, participants in all countries felt least competent in the areas revolving around fostering pupils' autonomous learning, and applying a given evaluation tool to a specific situation. Nonetheless, they felt that their competence in these areas was overall satisfactory.

Regarding the self-assessed competences, several country-specific development patterns were observed. In Austria and Romania, the dominant pattern of competence development was a large gain in competence after the end of the first year working at school, which remained stable throughout the second year. In Bulgaria and the Basque Country, the predominant pattern was a strong increase in candidates' assessment of their competence during the first year, followed by a decrease during the second year. However, compared to their assessment before they started to work at school, they still felt more competent at the end of the second school year, i.e. overall, there was an increase in levels of competence. Latvia was the only country where the most frequent development pattern was one of steady growth over the two-year period.

In addition to the self-assessments, two tests have been applied serving as external assessments: an internationally validated test on general pedagogical knowledge (PUW) and a tailor-made training-based test that was self-developed. Regarding the PUW, alternatively-trained teachers in the Basque Country showed the best average results. Here, they already performed rather well after their initial training, with three quarters of them solving at least 50% of the test questions correctly. However, alternatively-trained teachers performed best in the test at the first measurement point. This is also true for Austria, Latvia and Romania, where a small percentage of alternatively-trained teachers managed to score 100% when taking the test for the first time, but fewer or no alternatively-trained teachers managed to do so the second time. In Bulgaria, one third of alternatively-trained teachers managed to solve at least 50% or more of the test questions correctly at the end of the second school year. The best achieved 75% of correct answers in the test at both measurement points. Even though there is an evident learning effect visible in the test results for most countries, the overall test performance of the majority of alternatively-trained teachers was moderate.

Results in the second, tailor-made and training-based teacher knowledge test were more positive. In terms of development, knowledge gains could be observed for alternatively-trained teachers in all countries between the first and last measurement points. However, even though alternatively-trained teachers increased their test results over time, in most countries the overall performance in the test was not particularly high. Notably, alternatively-trained teachers in Bulgaria and Latvia performed best at the end of the second year working at school, compared to the other countries.

Results Regarding Hypothesis 3:

Alternatively-Trained Teachers Receive a More Comprehensive Induction to the Profession and Show Higher Results Than Traditionally-Trained Teachers at the End of the Second Year.

All participants of both intervention and control groups in Austria and Bulgaria perceived a variety of opportunities to learn (OTL). Members of the control groups on average reported fewer OTL overall than members of the intervention groups. This reflects the different training structures of the intervention and control groups. Since participants of the intervention groups took part in an ongoing training programme at their respective Teach For All organisations, they received additional OTL through practical and theoretical sessions. In addition, members of the intervention groups had a trainer or mentor who supports them individually and in groups. They received feedback and reflection opportunities, and the trainer visited them at school. Overall, control groups perceived having the most OTL through reflection with colleagues and experiences with pupils. The same was true for the Bulgarian intervention group. The Austrian intervention group perceived the highest amount of OTL, whereby almost 100% of participants perceived at least one instance of OTL. The difference in perceived lack of OTL was in line with these results. Participants of the intervention groups reported fewer missing OTL than the participants of the control groups. Moreover, the areas in which groups reported a perceived lack of OTL were partly the same. All groups in both countries perceived a lack of OTL regarding the application of a given evaluation tool and the development of realistic week or term plans with pupils.

In Austria, participants' self-assessment of teaching competences in the intervention as well as control group reflected the OTL results. The competence assessments are lowest for those areas in which a higher number of participants reported lacking OTL. Thus, both groups show lower competence assessments in the areas of applying evaluation tools and developing realistic week or term plans with pupils. Results show that members of the intervention group ascribed to themselves levels of teaching competence that were comparable to those of the control group, if not higher. In general, both groups assessed their competences in the different areas as at least satisfactory. In Bulgaria, participants of both intervention and control groups overall assessed their teaching competences slightly higher. In general, both groups assessed their competences concerning the different areas of teaching expertise as good. Even in the areas where a percentage of participants reported a lack of OTL, they still assessed their competences as satisfactory.

The test results of both knowledge tests administered to participants — i.e. the internationally developed and tried PUW, and the in-house designed, tailored test of teacher knowledge — showed significantly higher results for the intervention groups of both countries at the end of the second year working at school. In Austria, approximately half of the intervention group participants achieved 57% or more correctly answered test questions in the PUW test. In the control group, more than half of respondents answered less than 30% of the test questions correctly. Concerning the in-house test of general teaching knowledge, the majority of intervention group participants managed to answer at least half of the test questions correctly.

For the control group, results indicate that there was a small subgroup of participants within the control group who developed in a similar way to the intervention group. However, the majority of control group participants (70%) did not show satisfactory results in the in-house knowledge test. They gave only between 11% and 33% of the correct answers.

In Bulgaria too, participants of the intervention group showed significantly better results than the control group in both tests at the end of the second year working at school. Two thirds managed to solve at least 50% or more of the PUW test questions, whereas in the control group, almost three quarters of the participants solved only 25% of the test questions correctly. In the in-house test of general teacher knowledge, the majority of the intervention group managed to answer at least 55% of the questions correctly. However, here results indicate that participants of the intervention group fell into two sub-samples. Roughly, 55% of respondents showed a very positive test result, with the best participants correctly answering almost 90% of the questions. However, the other sub-sample showed distinctly lower achievement. In this sub-sample, correct test results ranged between 11% and 44%. In the control group, the majority of participants (87.5%) scored only between 11% and 44% of the correct test answers.

Results Regarding Hypothesis 4:

Alternatively-Trained and Traditionally-Trained Teachers Appear to be Similarly Satisfied with Their Jobs.

All participants of both intervention and control groups in all countries reported to be rather satisfied or satisfied with their jobs overall. In Austria, levels of contentment with the working situation and the decision to become a teacher were the highest overall, both in the intervention and control groups. In Latvia and Romania, while participants of the intervention groups were rather satisfied with their jobs overall, they were the most restrained in their contentment. The high ratings of satisfaction with the decision to enter the teaching profession, as well as with the actual working situation were very stable over the two school years. That data, measuring the inclination to stay in the teaching profession, indicates good teacher retention for all intervention and control groups. Unfortunately, it was not possible to obtain statistical retention rates for traditionally-trained teachers in the participating countries. For the intervention group, Austria and Latvia show the lowest attrition rates during the two-year programme.

When asked about their ability to cope with work-related stress, participants of the intervention groups of all countries agreed or rather agreed that they were able to cope with work-related stress. There was no significant difference in the ability to cope with stress between the intervention and control groups in either Austria or Bulgaria.

Participants from all groups in all countries felt enthusiastic about their teaching careers. In all five countries, participants agreed strongly with the statement that interactions with pupils are one of the most rewarding parts of a teacher's job.

List of Tables

Table 1: Selection Periods by Country	16
Table 2: Overview of Intended and Actual Sample Sizes in the NEWTT Project	22
Table 3: Percentage of Lower-Secondary School Teachers who ‘Agree’ or ‘Strongly Agree’ with the Statements.....	36
Table 4: Steps of Teacher Education by Traditional and Alternative Route into Teaching.....	37
Table 5: Duration of Study Programme for Different School Types in Years	37
Table 6: Duration of the Teaching Practicum in ECTS Credits by Participating Countries	38
Table 7: Requirements for Teaching by Participating Countries	39
Table 8: Duration of Different Phases of the Alternative Training Programme Phases by Teach For All Partner Organisation.....	41
Table 9: Training Workload During Alternative Training Programme (in Lessons) by Teach For All Partner Organisation.....	42
Table 10: Ongoing Training and Professional Development Courses Offered by Teach For All Partner Organisation.....	43
Table 11: School Type and Teaching Grades of Placement School by Teach For All Partner Organisation.....	43
Table 12: Characteristics of Placement School by Teach For All Partner Organisation	44
Table 13: Function/Tasks of Fellows at Placement School by Teach For All Partner Organisation	45
Table 14: Subjects Taught at Placement School by Teach For All Partner Organisation	45
Table 15: Prerequisites for Academic Teacher Education by Participating Country.....	51
Table 16: Advertising Strategies by Teach For All Partner Organisation.....	52
Table 17: Overview of Application Requirements by Teach For All Partner Organisation	53
Table 18: Candidate Rating Criteria by Teach For All Partner Organisation.....	54
Table 19: Selection Phases by Teach For All Partner Organisation	55
Table 20: Candidate Selection Process in 2016 by Teach For All Organisation.....	56
Table 21: Head Teacher Survey — Head Teachers’ General Perception of Alternately-Trained Teachers.....	57
Table 22: Content of Training at Pre-Institute/Online Campus by Teach For All Partner Organisations	59
Table 23: Content of Training During the Summer Institute by Teach For All Partner Organisations – Introductory Topics.....	60
Table 24: Content of Training During the Summer Institute by Teach For All Partner Organisations – Topics on Community Involvement	60
Table 25: Content of Training During the Summer Institute by Teach For All Partner Organisations – Topics on Teaching Methods and Tools.....	61

Table 26: Content of Training During the Summer Institute by Teach For All Partner Organisations – Topics on Professional Development	62
Table 27: Training Content of Summer School by Teach For All Partner Organisation.....	62
Table 28: Content of Ongoing Training Offered by Teach For All Partner Organisations	63
Table 29: Content of Professional Development Offered by Teach For All Partner Organisations	64
Table 30: Placement Strategy by Teach For All Partner Organisation.....	65
Table 31: Indicators for a School’s Inclusion in the Hamaika Esku Programme.....	66
Table 32: Ongoing Training and Professional Development Courses by Teach For All Partner Organisation.....	69
Table 33: Percentage of Teachers in Lower-secondary Education with Access to Various Types of Induction Activity, as Reported by Head Teachers in 2013	71
Table 34: Head Teacher Survey — Information on Existence of Induction Process	71
Table 35: Head Teacher Survey — Information on Organisation of Induction Process.....	72
Table 36: Head Teacher Survey — Information on Structures and Activities Included in Induction Process	72
Table 37: Head Teacher Survey — Beliefs on Costs of Induction	73
Table 38: Percentage of Teachers in Lower-secondary Education Who Had a Mentor in 2013 at the Time of the Survey (by Age Group)	74
Table 39: Head Teacher Survey — Frequency of Hospitations with New Teachers per Month ..	74
Table 40: Head Teacher Survey — Frequency of Hospitations with Fellows per Month.....	75
Table 41: Head Teacher Survey — Frequency of Planned Meetings with New Teachers / Educational Staff.....	75
Table 42: Head Teacher Survey — Frequency of Meetings between New Traditionally-Trained Teachers and Fellows for Communication and Exchange of Materials.....	76
Table 43: Head Teacher Survey — Cooperation Between Teachers and Fellows.....	77
Table 44: Head Teacher Survey — Perception of Alternatively Trained Personnel (Total of Head Teachers).....	78
Table 45: Weekly Teacher Tasks of Fellows at School by Country (in 60-Minute Hours)	80
Table 46: Austria — Number of Participants According to Their Field of Study and Degree Obtained	88
Table 47: Austria — Prior Pedagogical Experience of Working with Children in School.....	89
Table 48: Austria — Prior Pedagogical Experience of Working with Children Beyond the School Context.....	89
Table 49: Austria — Time Spent Studying or Working Abroad	90
Table 50: Austria — Involvement in Social Organisations.....	91
Table 51: Austria — Involvement in Political Organisations	91
Table 52: Austria — Entrepreneurial Initiative	91

Table 53: Austria — Motives for Becoming a Teacher	94
Table 54: Austria — Job Motive Scales.....	95
Table 55: Basque Country — Number of Participants According to Their Field of Study and Degree Obtained	101
Table 56: Basque Country — Prior Pedagogical Experience of Working with Children at School by Group	102
Table 57: Basque Country — Prior Pedagogical Experience of Working with Children beyond the School Context by Group	102
Table 58: Basque Country — Time Spent Studying or Working Abroad	103
Table 59: Basque Country — Involvement in Social Organisations.....	103
Table 60: Basque Country — Involvement in Political Organisations	104
Table 61: Basque Country — Entrepreneurial Initiative.....	104
Table 62: Basque Country — Motives for Becoming a Teacher	106
Table 63: Bulgaria — Number of Participants According to Their Field of Study and Degree Obtained	113
Table 64: Bulgaria — Prior Pedagogical Experience of Working with Children at School.....	114
Table 65: Bulgaria — Prior Pedagogical Experience of Working with Children Beyond the School Context.....	115
Table 66: Bulgaria — Time Spent Studying or Working Abroad.....	115
Table 67: Bulgaria — Involvement in Social Organisations by Group	116
Table 68: Bulgaria — Involvement in Political Organisations.....	116
Table 69: Bulgaria — Entrepreneurial Initiative	117
Table 70: Bulgaria — Motives for Becoming a Teacher.....	120
Table 71: Bulgaria — Job Motive Scales	121
Table 55: Latvia — Number of Participants According to Their Field of Study and Degree Obtained	125
Table 56: Latvia — Prior Pedagogical Experience of Working with Children or Adolescents at School.....	126
Table 57: Latvia — Prior Pedagogical Experience of Working with Children or Adolescents beyond the School Context.....	126
Table 58: Latvia — Time Spent Studying or Working Abroad	127
Table 59: Latvia — Involvement in Social Organisations.....	127
Table 60: Latvia — Involvement in Political Organisations	127
Table 61: Latvia — Entrepreneurial Initiative.....	128
Table 62: Latvia — Motives for Becoming a Teacher	130
Table 63: Romania — Number of Participants According to Their Field of Study and Degree Obtained	135
Table 64: Romania — Prior Pedagogical Experience of Working with Children at School.....	136

Table 65: Romania — Prior Pedagogical Experience of Working with Children Beyond the School Context.....	136
Table 66: Romania — Time Spent Studying or Working Abroad.....	137
Table 67: Romania — Involvement in Social Organisations.....	137
Table 68: Romania — Involvement in Political Organisations.....	138
Table 69: Romania — Entrepreneurial Initiative	138
Table 70: Romania — Motives for Becoming a Teacher	140
Table 71: Austria — Teaching Competences over Time.....	146
Table 72: Basque Country — Teaching Competences over Time.....	151
Table 73: Bulgaria — Teaching Competences over Time	157
Table 74: Latvia — Teaching Competences over Time.....	163
Table 75: Romania — Teaching Competences over Time	168
Table 76: Austria — Areas Most Frequently Reported as Lacking in Opportunities to Learn....	177
Table 77: Austria — Self-Assessed Teaching Competences at the End of the Second School Year by Group	179
Table 78: Bulgaria — Areas Most Frequently Reported as Lacking in Opportunities to Learn..	183
Table 79: Bulgaria — Self-Assessed Teaching Competences at the End of the Second School Year by Group	185
Table 80: Austria — Job Satisfaction (Item Level)	192
Table 81: Austria — Satisfaction with School as a Work Place.....	192
Table 82: Austrian Head Teachers — Suitability of Fellow Profile	193
Table 83: Austrian Head Teachers — Attitude towards Repeated Placement of Fellows at Their School.....	193
Table 84: Austrian Head Teachers — Financial Conditions of Replacing Current Fellow	193
Table 85: Austria — Teacher Enthusiasm (Item Level).....	194
Table 86: Austria — Teacher Enthusiasm Scale.....	194
Table 87: Austria — Ability to Cope with Work-Related Stress — (Item Level).....	195
Table 88: Austria — Ability to Cope with Work-Related Stress.....	195
Table 89: Basque Country — Job Satisfaction	196
Table 90: Basque Country — Teacher Enthusiasm.....	197
Table 91: Basque Country — Ability to Cope with Work-Related Stress	197
Table 92: Bulgaria — Job Satisfaction (Item Level).....	199
Table 93: Bulgaria — Satisfaction with Job Choice.....	199
Table 94: Bulgarian Head Teachers — Suitability of Fellow Profile.....	200
Table 95: Bulgarian Head Teachers — Attitude Towards Repeated Placement of Fellows at their School.....	200
Table 96: Bulgarian Head Teachers — Financial Conditions of Replacing Current Fellow.....	200
Table 97: Bulgaria — Teacher Enthusiasm (Item Level)	201

Table 98: Bulgaria — Teacher Enthusiasm Scale	201
Table 99: Bulgaria — Ability to Cope with Work-Related Stress — (Item Level)	202
Table 100: Bulgaria — Ability to Cope with Work-Related Stress	202
Table 101: Latvia — Job Satisfaction	203
Table 102: Latvia — Teacher Enthusiasm	204
Table 103: Latvia — Ability to Cope with Work-Related Stress.....	204
Table 104: Romania — Job Satisfaction.....	205
Table 105: Romania — Teacher Enthusiasm	206
Table 106: Romania — Ability to Cope with Work-Related Stress.....	206
Table 107: Interview Guideline.....	227
Table 108: Qualitative Content Analysis of the Interviews — Perfect Fellow.....	228
Table 109: Measuring Plan of Instruments (Individual Characteristics) by Measurement Point and Group	229
Table 110: Measuring Plan of Instruments (Learning Environment) by Measurement Point and Group	230
Table 111: Measuring Plan of Instruments (Results) by Measurement Point and Group	231
Table 112: Overview of Items Concerning Motives for Becoming a Teacher	232
Table 113: Austria – Descriptive Statistics: Age and Grades	232
Table 114: Austria – Descriptive Statistics: Exam Grades by Group.....	233
Table 115: Basque Country – Descriptive Statistics: Age, Grade on Final Secondary School Examination, Pedagogical Experience	234
Table 116: Bulgaria — Descriptive Statistics: Age, Grade on Final Secondary School Examination, Pedagogical Experience	234
Table 117: Latvia — Descriptive Statistics: Age, Grade on Final Secondary School Examination, Pedagogical Experience	235
Table 118: Romania — Descriptive Statistics: Age, Grade on Final Secondary School Examination, Pedagogical Experience	235
Table 119: Romania — Distribution of Degrees by Group	235
Table 120: Head Teacher Survey — Suitability of Fellow Profile (Total of Head Teachers).....	236
Table 121: Head Teacher Survey — Attitude towards Repeated Placement of Fellows at Their School (Total of Head Teachers).....	236
Table 122: Head Teacher Survey — Financial Conditions of Replacing Current Fellow (Total of Head Teachers)	236
Table 123: Austria – Descriptive Statistics: Weekly Teacher Tasks in 60-Minute Hours.....	237
Table 124: Basque Country – Descriptive Statistics: Weekly Teacher Tasks in 60-Minute Hours	238
Table 125: Bulgaria – Descriptive Statistics: Weekly Teacher Tasks in 60 Minute-Hours.....	239
Table 126: Latvia – Descriptive Statistics: Weekly Teacher Tasks in 60 Minute-Hours.....	240

Table 127: Romania– Descriptive Statistics: Weekly Teacher Tasks in 60 Minute Hours	240
Table 128: Head Teacher Survey — Descriptive Statistics on Cooperation Between Teachers and Fellows	241
Table 129: Head Teacher Survey — Collaborative Teaching Between Fellows and Teachers...	241
Table 130: Head Teacher Survey — Descriptive Statistics on Collaborative Teaching Between Fellows and Teachers.....	242
Table 131: Bulgarian Head Teacher Survey — Frequency of Fellows' Tasks at School.....	243
Table 132: Austrian Head Teacher Survey — Frequency of Fellows' Tasks at School.....	244
Table 133: Bulgarian and Austrian Head Teacher Survey — Frequency of Fellows' Tasks at School	245

List of Figures

Figure 1: Overview of NEWTT Partners	2
Figure 2: Impact Model of Teacher Induction	9
Figure 3: Hierarchical Criteria for the Selection of Control Group Members.....	14
Figure 4: Timeline of Impact Evaluation and NEWTT Training Programme Phases.....	17
Figure 5: Project Design	19
Figure 6: Data Collection Stages for all Subgroups.....	20
Figure 7: Minimum and Maximum Annual Basic Gross Statutory Salaries for Full-Time Teachers in Public Schools (ISCED 2/3) per Year, in Euros, 2015/16	34
Figure 8: Austria — Survey Design.....	85
Figure 9: Austria — Age Distribution in Years by Group.....	86
Figure 10: Austria — Gender Distribution by Group	87
Figure 11: Austria — Involvement in Volunteer Work	92
Figure 12: Austria — Job Motives of Participants by Group.....	95
Figure 13: Basque Country — Survey Design.....	97
Figure 14: Basque Country — Age Distribution in Years by Group	99
Figure 15: Basque Country — Gender of Participants by Group.....	100
Figure 16: Basque Country — Involvement in Volunteer Work by Group	105
Figure 17: Bulgaria — Survey Design	109
Figure 18: Bulgaria — Age Distribution in Years by Group.....	111
Figure 19: Bulgaria — Gender Distribution by Group.....	112
Figure 20: Bulgaria — Involvement in Volunteer Work.....	118
Figure 21: Latvia — Survey Design.....	122
Figure 22: Latvia — Age Distribution in Years by Group	123
Figure 23: Latvia — Gender Distribution by Group	124
Figure 24: Latvia — Involvement in Volunteer Work by Group	128
Figure 25: Romania — Survey Design.....	131
Figure 26: Romania — Age Distribution in Years by Group.....	133
Figure 27: Romania — Gender Distribution of Participants by Group.....	134
Figure 28: Romania — Involvement in Volunteer Work by Group.....	139
Figure 29: Austria — Participants’ Development as Reflected in PUW Test Results over Two Years	147
Figure 30: Austria — Participants’ Development as Reflected in In-House Knowledge Test Results: First Year	148
Figure 31: Austria — Participants’ Development as Reflected in In-House Knowledge Test Results: Second Year.....	149
Figure 32: Basque Country — Participants’ Development as Reflected in PUW Test Results over Two Years.....	153

Figure 33: Basque Country — Participants’ Development as Reflected in In-House Knowledge Test Results: First Year.....	154
Figure 34: Basque Country — Participants’ Development as Reflected in In-House Knowledge Test Results: Second Year.....	155
Figure 35: Bulgaria — Participants’ Development as Reflected in PUW Test Results over Two Years.....	159
Figure 36: Bulgaria — Participants’ Development as Reflected in In-House Knowledge Test Results: First Year.....	160
Figure 37: Bulgaria — Participants’ Development as Reflected in In-House Knowledge Test Results: Second Year.....	161
Figure 38: Latvia — Participants’ Development as Reflected in PUW Test Results over Two Years.....	164
Figure 39: Latvia — Participants’ Development as Reflected in In-House Knowledge Test Results: First Year.....	165
Figure 40: Latvia — Participants’ Development as Reflected in In-House Knowledge Test Results: Second Year.....	166
Figure 41: Romania — Participants’ Development as Reflected in PUW Test Results over Two Years.....	169
Figure 42: Romania — Participants’ Development as Reflected in In-House Knowledge Test Results: First Year.....	170
Figure 43: Romania — Participants’ Development as Reflected in In-House Knowledge Test Results: Second Year.....	171
Figure 44: Presentation of Question on OTL and Teaching Competences in Online Survey Tool.....	175
Figure 45: Austria — Perceived Opportunities to Learn.....	178
Figure 46: Austria — Comparison of Intervention and Control Groups’ Test Results in the Pedagogical Knowledge Test (PUW) at the End of the Second Year Working at School.....	180
Figure 47: Austria — Comparison of Intervention and Control Groups’ Test Results in In-House Test of Teacher Knowledge at the End of the Second Year Working at School.....	181
Figure 48: Bulgaria — Perceived Opportunities to Learn.....	184
Figure 49: Bulgaria — Comparison of Intervention and Control Groups’ Test Results in the Pedagogical Knowledge Test (PUW) at the End of the Second Year Working at School.....	186
Figure 50: Bulgaria — Comparison of Intervention and Control Groups’ Test Results in In-House Test of Teacher Knowledge at the End of Second Year Working at School.....	187
Figure 51: MAXQDA2 Output of Coded Categories.....	225

1 The NEWTT Project

This evaluation study was conducted in the context of ‘A New Way for New Talents in Teaching’ (NEWTT), an ERASMUS+ Key Action 3 project funded by the European Commission for three years from 2016 to 2019. NEWTT was defined as a ‘policy experiment’ and was designed to find a solution to the current challenges facing European education systems, including teacher shortages and teacher retention by investigating alternative pathway programmes in five Member States.

In this policy experiment, participants in the alternative teacher training programmes constituted the intervention groups, while beginning teachers from traditional teacher training institutions provided the control groups in NEWTT.

Traditional teacher training institutions refers to teacher education at universities, whereas the alternative teacher training programmes adhere to the Teach For All approach. Teach For All is a global network of independent partner organisations in 49 countries, and a global organisation that works to support the progress of the network. One of its main objectives is to recruit and train promising university graduates and young professionals to teach in under-resourced schools. NEWTT investigated the Teach For All network partner organisations’ specific approach to alternative pathways into teaching with the aim of promoting policy reforms (EACEA, 2016) in the face of teacher shortages. However, it must be noted that the shared programmatic approach of the Teach For All network is not intended to substitute traditional pathways into teaching. The Teach For All network shares a comprehensive theory of change encompassing numerous other objectives apart from reducing teacher shortages, which go beyond the scope of this policy experiment and are not the subject of this report. To learn more about the overall Teach For All approach, visit <https://teachforall.org/what-we-do#27531>.

The training provided by Teach For All partner organisations is characterised by an intensive mentoring structure implemented by trainers of Teach For All partner organisations and a high proportion of opportunities for practical exercise and experience. Participants have very little or no prior teaching experience — most will teach pupils for the first time in their careers within the context of the Teach For All training programmes.

The five national NGOs, which conducted the alternative teacher training programmes, were: Teach For Bulgaria; Teach For Romania; Teach For Austria; Iespējamā Misija (Latvia); and Empieza por Educar (the Basque Country of Spain).

Overall, the NEWTT project involved 15 partners that together formed the NEWTT consortium. Figure 1 contains a table of all national NEWTT project partners by country.

Countries	National NGOs	National Ministries	Other national partners
Austria		Board of Education for Vienna*	Federation of Austrian Industries
Basque Country		Basque Ministry of Education, Language Policy, and Culture	
Bulgaria		Ministry of Education and Science	University of Plovdiv
Latvia		Ministry of Education and Science	
Romania		Ministry of National Education	University of Bucharest

* Formerly known as Vienna Board for Education

Figure 1: Overview of NEWTT Partners

The alternative teacher training programmes set up in the five participating countries were each managed by a National Management Group. The overall project was managed by a Central Management Group and overseen by a Central Steering Group. National ministries and/or public authorities provided strategic leadership as members of both the national and transnational groups, guiding the experiment within their countries or jurisdictions.

Each national consortium established its own National Management Group, which was responsible for project coordination and project management within its country as well as the exchange of experiences and expertise between national-level project partners. This included monitoring and reporting on national-level project milestones, and administrative tasks.

The Central Management Group was responsible for project coordination and communication. It controls the project's progress according to the established timeline and objectives. This committee includes at least one representative from each National Management Group and from Teach For All. The Central Management Group is chaired by Teach For Bulgaria.

The Central Steering Group is responsible for the strategic development of the project as a whole and decides all key strategic questions in the transnational consortium. The committee includes

at least two representatives¹ from each National Management Group (including representatives from the ministries and delegated authorities), Teach For All, and the evaluation team. Teach For Bulgaria also chairs this group.

Two partners are not included in the table in Figure 1 because they are partners on a non-national level: The University of Duisburg-Essen in Germany, and the Teach For All network. The University of Duisburg-Essen provides the external evaluation team, a set of experts responsible for designing and conducting the impact evaluation of the NEWTT project. The Teach For All organisation supports the national consortia with the planning and implementation of the NEWTT national pilots. This is mainly done via the office in London, United Kingdom. International Teach For All staff members are dedicated to assisting their national network organisations. Their priorities include providing support in the areas of teacher recruitment and selection, teacher training and support, and public and private sector support (including engagement with public authorities, teacher placement, and policy-making).

¹ Representatives are appointed by each national consortium.

2 Theoretical Background

This chapter starts exploring previous research on alternative pathways into teaching in general before reviewing previous studies of the Teach For All programme. As mentioned above, the Teach For All approach is being implemented in many countries under country-specific synonyms such as Teach For America in the United States, or Teach First in the UK and Germany. Next, the chapter introduces the theoretical impact model of teacher induction, which provides the basis for evaluation design. The chapter closes with an overview of the research hypotheses derived from the model.

2.1 Previous Research on Alternative Pathways into Teaching

Current research on teacher professionalisation works with the underlying assumption that teacher education programmes strongly correlate with teacher competence (Baumert & Kunter, 2006; Terhart, 2001). In addition, teacher training programmes at universities are considered the most important element in conveying profession-specific knowledge (Cochran-Smith & Zeichner, 2005; Terhart, 2006). However, in several countries, traditional teacher training programmes have not been able to fill the continuously arising vacancies in the teaching profession. This is partly due to the perceived unattractiveness of the profession for social and economic reasons (Eurydice, 2018, p. 28). Therefore, the search for solutions to teacher shortages in several European countries has fostered an interest in alternative ways of training teachers.

Several studies have compared traditional and alternative pathways into teaching in order to determine which components of teacher education promote better outcomes (Laczko-Kerr & Berliner, 2002; Hutchings, Maylor, Mendick, Menter, & Smart, 2006; Kane, Rockoff & Staiger, 2008; Boyd, Grossman, Lankford, Loeb, & Wyckoff, 2009).

Boyd et al. (2009) conducted a comprehensive study in which they collected data on all first-year teachers, which they linked to their respective pupils' test scores in mathematics and English language arts. They also collected detailed information about the components of more than 30 different teacher preparation programmes in New York City and matched the data to the pupil achievement results of first-year teachers. In doing so, the researchers were able to analyse the impact of various components of teacher preparation on student achievement. They found that some graduates from teacher preparation programmes had a significantly greater impact on student achievement. Those programmes producing more effective first-year teachers tended to be characterised by a greater focus on practical experience, such as lesson planning, student assessment, and classroom instruction.

Baeten and Meeus (2016) provide a literature review of second-career teachers, covering aspects such as job motive, teaching beliefs, and attitudes. They reviewed articles primarily from the United States and Australia; however, articles from Europe such as those by Berger and D'Ascoli

(2012) from Switzerland, Priyadharshini and Robinson-Pant (2003) from the United Kingdom, and Tigchelaar, Brouwer, and Korthagen (2008) from the Netherlands were also taken into account. All articles were based on empirical studies making use of either quantitative surveys or interviews. However, none of the cited articles incorporated a control-group design.

Regarding the motivations of second-career teachers, the articles generally found high levels of intrinsic motivation, a desire to help young people, and a desire to contribute to society (Berger & D'Ascoli, 2012; Chambers, 2002; Haggard, Slostad, & Winterton, 2006; Lee, 2011 as cited in Baeten & Meeus, 2016; Lee & Lamport, 2011 as cited in Baeten & Meeus, 2016; Powers, 2002; Priyadharshini & Robinson-Pant, 2003 as cited in Baeten & Meeus, 2016; Tigchelaar, Brouwer, & Korthagen, 2008, Tigchelaaret, Brouwer, & Vermunt, 2010; Williams & Forgasz, 2009 as cited in Baeten & Meeus, 2016). Findings from research on the expertise of second-career teachers indicate that they possess both subject-specific (Chambers, 2002; Mayotte, 2003; Williams & Forgasz, 2009 as cited in Baeten & Meeus, 2016) and practical knowledge (Salyer, 2003 as cited in Baeten & Meeus, 2016), and that they possess a strong work ethic and good work habits (Chambers, 2002; Resta, Huling, & Rainwater, 2001 as cited in Lee & Lamport, 2011; Williams & Forgasz, 2009 as cited in Baeten & Meeus, 2016).

Findings from other studies indicate that due to their previous work and life experiences, second-career teachers are self-confident regarding their goals, capabilities, and their desire to teach (Tigchelaar et al., 2008, 2010 as cited in Baeten & Meeus, 2016). Research on second-career teachers' approaches to learning and teaching concluded that they are application-oriented. This means they want to share their experience with learners and help them understand the real-world application of knowledge (Chambers, 2002; Lee, 2011 as cited in Baeten & Meeus, 2016). Second-career teachers also value social support since many of them are used to working in teams (Uusimaki, 2011; Williams, 2010; Lee & Lamport, 2011 as cited in Baeten & Meeus, 2016). Researchers concluded that the greatest challenges for second-career teachers are classroom management (Bolhuis, 2002; Casey, Dunlap, Brister, Davidson, & Starrett, 2013; Haggard, Slostad, & Winterton, 2006; O'Connor, Malow, & Bisland, 2011; Powers, 2002; Priyadharshini & Robinson-Pant, 2003 as cited in Baeten & Meeus, 2016) and time management in terms of, for example, lesson preparation conducted at home and additional meetings (Brindley & Parker, 2010; Brouwer, 2007; Casey et al., 2013; Haggard et al., 2006; Mattarozzi Laming & Horne, 2013; Lee & Lamport, 2011; Priyadharshini & Robinson-Pant, 2003 as cited in Baeten & Meeus, 2016).

Finally, concluding their extensive literature review, Baeten and Meeus (2016) recommend that teacher education programmes adapted for second-career teachers should: a) include a preparatory period; b) transfer second-career teachers' expertise to the teaching profession; c) provide opportunities for self-directed learning and peer support; d) integrate coursework and

field experience; e) offer extensive field experience; f) provide intensive mentoring support; and g) be flexible.

2.2 Teach For All– Studies of a Prominent Alternative Teacher-Training Pathway

In the United States, Teach For America is one of the more prominent alternative teacher training programmes. Since its foundation in 1989, there have been several studies of the effects of the Teach For America programme on the attitudes and beliefs of the individuals who participate in it. For example, a study by Dobbie and Fryer (2011) used data from an online survey of Teach For America applicants to provide the first causal estimate of the impact of service programmes (i.e. alternative pathways that focus on serving students in vulnerable communities) on the values and future careers of the teachers they train and develop. They found that Teach For America’s programme increases racial tolerance, strengthens belief in the power of education to improve life prospects, and encourages long-term involvement in education. Specifically, participation in the Teach For America programme strengthens teachers’ beliefs that children from low-income backgrounds can compete academically with children from more affluent backgrounds and that it is possible to close the achievement gap. Further, it increases the likelihood that trainees of Teach For America will pursue a career in the education sector.

Studies, investigating the effects of participation in Teach For America on students’ learning outcomes, have produced mixed results. Kane, Rockoff, and Staiger (2008) used student panel data over a six-year period to evaluate the effectiveness of traditionally- and alternatively-certified teachers (NYC Teaching Fellows and Teach For America teachers respectively) in publicly-funded schools in New York City. In the study, students’ reading and mathematics test scores were linked to their respective teachers, controlling for students’ prior-year test scores and a number of student, classroom, grade, and school factors, as well as the level of teachers’ experience. The results indicated that although the difference in impact between certification statuses was rather small, Teach For America teachers had a greater effect on students’ performance in mathematics than did teachers from traditional certification pathways or other alternative certification pathways.

Xu, Hannaway, and Taylor (2011) conducted a similar study in North Carolina, USA. They concluded that teachers of Teach For America were more effective than traditional teachers with regard to student performance in examinations. The positive impacts of the Teach For America teachers could be observed in all eight subjects under investigation. However, effects were stronger in natural sciences than in other subjects.

A meta-analysis by Whitford, Zhang and Katsiyannis (2017) assessed over 700 studies of alternative-teaching pathways from 1989 to 2016, and selected 12 highly rigorous studies, including 4 randomized control trials on Teach For America. The study provides evidence that Teach For America teachers have a positive impact on student achievement across all grade levels

and subjects. Further, the study finds that teachers from other alternative teaching pathway programmes, also have a slightly positive effect on student achievement compared to other traditionally-trained teachers. However, the effect is stronger for Teach For America teachers.

Laczko-Kerr and Berliner (2002) also conducted research in the United States comparing the academic achievements of students taught by regularly-certified and under-certified primary school teachers. The sample of under-certified teachers included three subsets, one of which was teachers from the Teach For America programme. The under-certified teachers were matched with the regularly-certified teachers, resulting in 109 pairs of teachers. The results indicated that students of Teach For America teachers did not perform significantly differently from students of other under-certified teachers, and that the students of certified teachers outperformed the students of the under-certified ones in reading, mathematics, and language arts.

Compared to the abundance of research on alternative pathways within the United States, research within the European context has to date been rather scarce. However, Hutchings et al. (2006) conducted a broad evaluation of the Teach First programme in the United Kingdom during the first two years of its existence. The main objective of the study was to identify innovative aspects of the programme which could be beneficial to initial teacher training as a whole. Data was gathered through interviews with various stakeholders, through focus groups, questionnaires and observation. The authors identified a number of innovative aspects such as: the selection criteria for individuals to participate in the programme; the recruitment of high-achieving graduates who would otherwise not have considered teaching; the development of a strong esprit de corps among trainees; continuity from initial training to induction year; and strong ongoing support structures. Schools also reported that trainees had a positive impact in various ways, including imaginative teaching, initiation of extra-curricular activities, and stimulation of professional dialogue among teachers. Additionally, trainees evaluated the programme positively, with 40% of those completing the programme staying at their placement schools for a third year (Hutchings et al., 2006).

Further, in 2013, Allen and Allnutt found that students benefited from the presence of a Teach First teacher in their school. They tracked the performance of schools in the first three years after a Teach First teacher had been placed there and compared the performance to that of comparable schools. Results of their analysis indicated that in years two and three after a Teach First teacher's introduction to a school, there were school-wide gains in GCSE results of approximately 5% of a standard deviation — equivalent to a boost of one grade in one of a student's eight best subjects.

In 2015, Abs, Eckert, and Anderson-Park evaluated the training programme of a similar alternative pathway into teaching: Teach First Germany. They followed one cohort of Teach First Germany trainees over a period of eight months with four stages of data collection. In addition

to collecting data on the quality of the different training modules, the researchers examined various outcome variables: teacher self-efficacy, teacher competence, and teacher performance in a test of pedagogical knowledge. The knowledge test consisted of curriculum-based questions and questions taken from an international test of teacher knowledge (TEDS-M). The results indicated that Teach First Germany trainees rated their teacher competence and teacher efficacy at a high level over the stages of data collection. However, while they felt ever more competent over time, their teacher efficacy slightly decreased over this same period. The test results also indicated a significant gain in knowledge regarding curriculum content-specific questions as well as TEDS-M questions. A descriptive comparison of the average proficiency of alternative pathway trainees and traditional pathway teachers in the TEDS-M study revealed that alternative pathway trainees possessed a higher level of proficiency at the beginning of their programme than traditional pathway teachers did at the beginning of their studies. At the end of the programme, alternative pathway trainees possessed a similarly high or higher level of proficiency than beginning teachers within the regular pathway. In summary, the findings of the different studies underline the potential for innovative and impactful approaches to teacher recruitment, training, and professional development undertaken by numerous alternative pathway programmes.

In particular, research findings suggest that alternative pathway programmes with rigorous selection criteria and practical on-the-job training can be effective for introducing to the profession new entrants with no prior teaching experience and for training them to achieve positive outcomes. Still, research in the field has been limited mostly to English-speaking countries and selected countries in the European Union. There remains a need for greater investigation into alternative pathways into teaching, to determine the effects of implementing such programmes. Additionally, there is much to be learned about the effects of adapting such programmes to meet the culturally diverse needs of European Union member states.

2.3 Theoretical Impact Model

Using intervention groups in five countries, the NEWTT project analyses the characteristics, processes of competence acquisition, and educational output (as defined by pedagogical competence) of individuals entering the teaching profession through the Teach For All alternative pathway and compares them to control groups consisting of beginning teachers trained through traditional teacher training programmes in the five countries.

In this policy experiment, the term *competence* refers to the capacity to deal with realistic, recurring, and challenging situations in a productive way (Hartig, Klieme, & Leutner, 2008). Although a range of knowledge, skills, and mindsets contribute to teacher effectiveness, the focus of the NEWTT project is on pedagogical knowledge, teacher attitudes, — such as constructivist teaching beliefs (Cheng et al., 2009; Savasci & Berlin, 2012) — and self-efficacy. Pedagogical knowledge (Shulman, 1986) is one component of competence, therefore tests of

pedagogical knowledge (König & Blömeke, 2010; Tatto, 2013) form part of the competence assessment in the NEWTT project. Moreover, teacher enthusiasm (Keller, Goetz, Becker, Morger, & Hensley, 2014; Kunter, Frenzel, Nagy, Baumert, & Pekrun, 2011) is considered an additional component of competence in this project, as enthusiasm motivates teachers to perform and to bridge competence gaps in their interactions with students. Competence supports teacher self-efficacy, which is defined as the confidence to contribute to student development (OECD, 2014b; Dicke, Parker, Marsh, Kunter, Schmeck, & Leutner, 2014; Holzberger, Philipp, & Kunter, 2013). Teacher self-efficacy has also been shown to contribute to teacher retention (Klassen & Chiu, 2011; Chesnut & Burley, 2015); therefore, both will be examined within the NEWTT project.

Figure 2 shows the basic impact model, which builds on the assumption that educational outputs depend on educational processes and prerequisites (input-process-output model). In addition, the various levels of the education system based on Parsons (1978) and further elaborated by Fend (2008) are included in the model. The theoretical model differentiates between three levels:

Context/Input	Process	Output
Prerequisites	Processes of developing competence	Results/Success criteria
Cultural norms of acquiescence, competition for high performing graduates on the labour market, payment schemes in the teaching profession	Route into teaching (alternative route vs. traditional route)	
Selection criteria for teacher candidates, established cooperation between training provider and schools	<i>Characteristics of learning environment:</i> Quality of training modules, quality of trainers, program coherence, support and feedback structures	
Gender, age, type of degree, grades, prior (pedagogical) work experience, perception of work related stress, working hours, initial competences for teaching and learning, initial self-efficacy, initial motives for becoming a teacher	<i>Characteristics of utilisation of learning environment:</i> Use of learning strategies, use of preparation time, professional cooperation, participation in induction activities	Competences for teaching and learning, pedagogical knowledge, teacher enthusiasm, teacher self-efficacy, retention

Figure 2: Impact Model of Teacher Induction

the macro-level of political decision-making; the meso-level of the institution and the formalised curriculum; and the micro-level of the individual, which is where teaching and learning takes place. Fend (2008) posits that processes at the macro-level (and at the meso-level) of the

education system are recontextualised (i.e. taken up in various ways according to the needs, resources, and intentions of the actor) at meso- and micro-levels.

Against this background, four main hypotheses were tested:

1. The selection, recruitment, and initial training methodologies of the NEWTT alternative pathway pilots will produce alternatively-trained teachers who are suitable for teaching (suitability being defined in terms of teacher competence, i.e. pedagogical knowledge, teacher attitudes, and self-efficacy). The alternatively-trained teachers will perform at least as well against initial measures of teacher competence as beginning teachers who graduate from traditional programmes.
2. Alternatively-trained teachers who enter teaching through the NEWTT alternative pathway pilots will develop their competence as teachers (as reflected in pedagogical knowledge, teacher attitudes, and self-efficacy) over the course of the NEWTT pilots.
3. The overall competence of alternatively-trained teachers (as reflected in pedagogical knowledge, teaching attitudes, and self-efficacy) will compare positively with beginning teachers who graduate from traditional programmes.
4. Compared to beginning teachers from traditional programmes, a higher or at least identical percentage of alternatively-trained teachers from the NEWTT national pilots will complete their second year of the programme and, after the end of the alternative pathway programme, will continue teaching or contributing to outcomes at the schools where they have taught during their training.

3 Design of the Policy Experiment

The policy experiment follows a quasi-experimental design in that participants are not randomly allocated to the experimental conditions. Random allocation is not a feasible option given that the self-selection of a limited group of individuals into teacher education programmes is part of the challenge to which the NEWTT project responds. Further, it is not realistic to allocate fellows or teachers from one country to an experimental group of another country. Quasi-experimental designs take into account the non-random distribution of participants in the intervention and control groups. To this end, further research of the NEWTT external evaluation following this report will use controls for individual background variables (e.g. age, gender, prior pedagogical experience, and initial competence) through statistical means in order to estimate the relative strength of the interventions' impact in a controlled manner.

The experiment takes place in Austria, Bulgaria, Latvia, Romania, and the Basque Region of Spain: five countries in Europe that currently are, or soon will be, facing shortages of effective teachers in general and at schools serving disadvantaged communities in particular (Eurydice, 2018). In each country, an intervention group of beginning teachers from the NEWTT alternative pathway and a control group of beginning teachers from traditional teacher education programmes have been established.

The national non-government education organisations in the participating countries have primary responsibility for implementing the field trials, with support from national public authorities, university training institutes and the global Teach For All organisation that supports the progress of the network of country partner organisations.

In Bulgaria, the Ministry of Education, which is a member of the NEWTT consortium, aimed to test two varieties (or tracks) of the alternative pathway into teaching, which is why two intervention groups were set up. Track 1 was composed of Teach For Bulgaria fellows undertaking the NEWTT alternative pathway programme, who were specifically and rigorously selected and prepared for working with vulnerable students in schools serving disadvantaged communities. Track 1 corresponds to the track, which was implemented across the consortium. Driven by specific policy purposes in Bulgaria, the second intervention group (Track 2) included candidates who were selected using less rigorous criteria (although still significantly more demanding than the ones used in traditional programmes) and trained using components of the NEWTT approach, such as summer training and a mentoring programme organised through a local university. The University of Plovdiv collaborated closely with trainers of Teach For Bulgaria. More information on the processes of selection and recruitment of the control and intervention groups can be found in sections 5.1.1.2 and 4.2.

Furthermore, the experiment has a transnational panel design. The design is transnational in that the main components of the evaluation measures are developed identically for the five countries.

For this purpose, Teach For All partner organisations provided materials in English to the external evaluator (January 2016 to May 2016 and June 2016). Adaptations for intervention and control groups were necessary on an international level, and national adaptations were allowed only in special cases (e.g. measuring A-level grades). The detailed process of instrument design is described in section 5.1.3.1.

Thus, the policy experiment in conjunction with the design of its evaluation allows for different types of comparisons. To test the first hypothesis, participant characteristics such as initial competence or prior pedagogical work experience were evaluated when participants started teaching in their respective intervention and control groups. To test the second hypothesis, participants' development of their teaching competence — including changes to output variables such as their knowledge, attitudes, and self-efficacy — was monitored. Third, the achievements of the intervention groups were compared to that of the control groups; in other words, the third hypothesis was tested by measuring the effect of the alternative teacher education programme on educational output². Results were expected to be as good or better than those in each respective control group. Finally, the fourth hypothesis was tested by measuring retention during the first two years of teaching as well as the intention to stay in the education sector.

The special case of two intervention groups in Bulgaria offers yet another type of comparison: the comparison between two intervention groups within one country. This type of analysis yields further evidence for the effectiveness of the selection process in finding capable teacher candidates, since one of the core differences between the two groups was the level of selectivity.

Head Teacher Survey. In order to deepen the understanding of the role of the school context in training new teachers through traditional as well as alternative pathways, the NEWTT project also conducted a head teacher survey. The resulting data add an additional perspective regarding the acquisition of competences for teaching and learning. The head teacher survey was conducted in Bulgaria and Austria, the two countries with the highest number of participants in the experimental groups. It was a one-time survey that collected data in an online format after the beginning teachers and alternatively-trained teachers had served in their respective schools for one year. The survey addressed all head teachers from schools in which participants in the NEWTT project were teaching. The questionnaire asked for background information on: the person and the school; the school's management; cooperation with and support for new teachers; tasks allocated to new teachers in alternative pathways; and the perception of new teachers in alternative pathways. The international surveys TALIS and PISA investigating this area were used as main sources for the development of adapted items concerning the school context.

² Comparisons of output variables for participants in the intervention and control groups are possible only in Austria and Bulgaria, the countries with the largest samples.

The data gathered from head teachers was designed to provide a further insight into the development of competence in teaching and learning. In this sense, the head teacher survey helped to validate the results for all countries from the administrator's perspective. The survey highlighted the relevance of alternative pathways based on the NEWTT model. To this end, head teachers were asked the following questions:

1. What are the respective school structures and how do head teachers structure the first year of teaching for beginning alternatively-trained and traditionally-trained beginning teachers?
2. To what extent do head teachers accept teachers with different formal qualifications into their teams?
3. What kind of opportunities and/or challenges do head teachers see in integrating the alternatively-trained and the traditionally-trained teachers into their schools?
4. What effects do head teachers expect alternatively-trained and traditionally-trained teachers to have on students in various dimensions (e.g. motivation, subject knowledge)?
5. What tasks do alternatively-trained teachers perform?

3.1 Participants in the Policy Experiment

Alternatively-trained teachers trained by the Teach For All partner organisations in the five NEWTT consortium countries constitute the intervention groups of this policy experiment. The Teach For All partner organisation fellows are a rigorously-selected group of university graduates coming from different professional fields, but not from the field of teacher education. Participants undergo an intensive twelve-week teacher preparatory training programme consisting of two phases. Pre-Institute is a blended-learning phase and Summer Institute comprises classes and seminars that allow for revision and in-depth studying of the contents of the blended-learning phase as well as practical exercises and first experiences of teaching.³ The whole training-programme lasts two years with intensive ongoing-training courses following the preparatory training. The Teach For All training programmes provided by the participating Teach For All partner organisation are explained in detail in section 4.2.2. Information on the content as well as selection and recruitment processes of the alternative pathway programmes can be found in chapter 5.

To select participants for the *control groups* comprising the traditionally-trained beginning teachers, a set of five hierarchical criteria was devised (see Figure 3).

³ Note that slight variations in the length and content of the programme occur among countries.

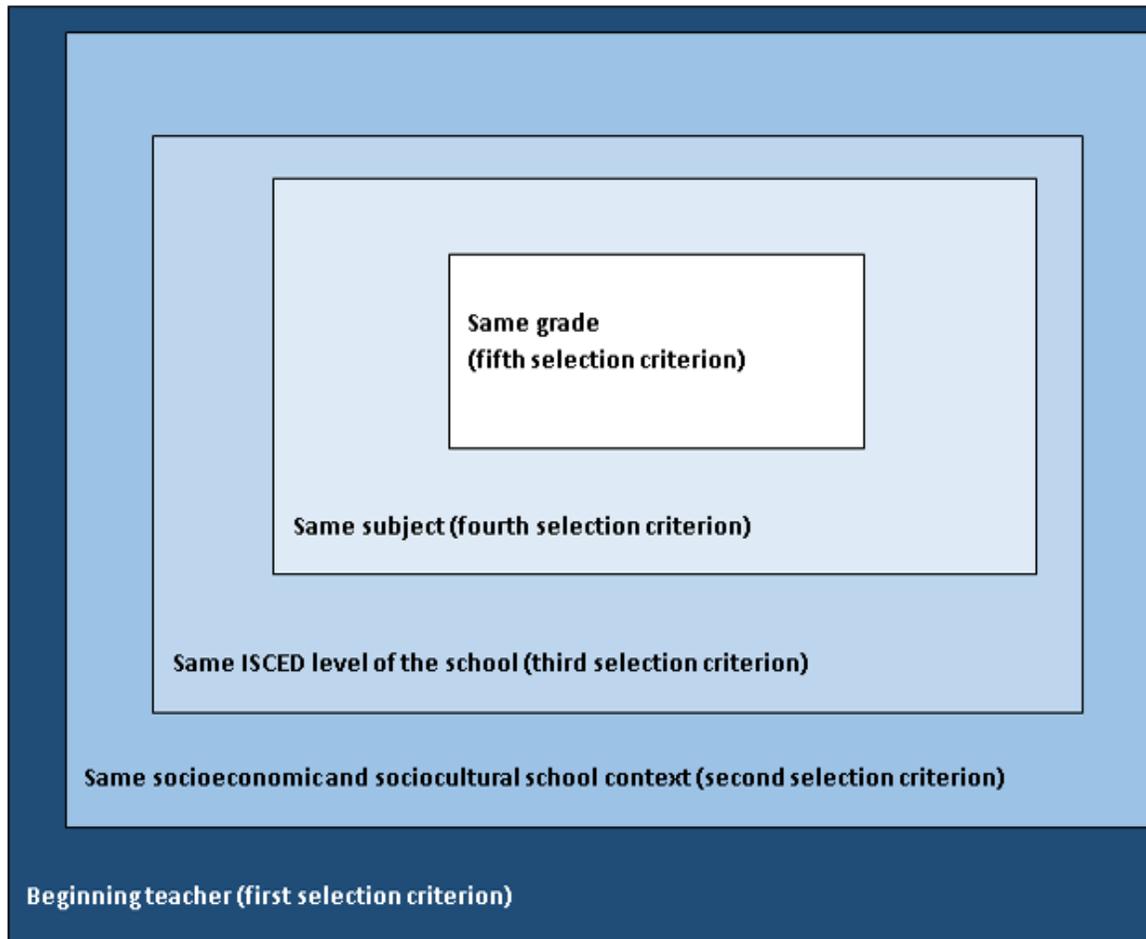


Figure 3: Hierarchical Criteria for the Selection of Control Group Members

The first and most important criterion for selecting control group members was the amount of prior teaching experience candidates had. As the participants of the intervention groups had very little or no prior teaching experience, the participants in the control group had to be beginning teachers. Therefore, the minimum criterion for selection into the control group was to be a beginning teacher. The remaining four criteria each defined an increasingly strict subset of beginning teachers, therefore the ideal control group would consist of teachers in the smallest remaining subset that fulfilled all five criteria.

The second criterion related to the school environment. The national partners sought to find control group participants who were working in schools similar to the placement schools in which the participants of the intervention groups would be working, i.e. schools with similar characteristics, such as students' socioeconomic backgrounds, the percentage of socially disadvantaged children, student dropout rates, etc. However, participants in the intervention and control groups were not supposed to be working in the same schools because some of the alternative pathway programmes encouraged their participants to actively engage and motivate

their colleagues and to share ideas and materials. Such interaction could potentially have influenced the attitudes and beliefs of the participants in the control group and could thereby have influenced the results of the analysis.

The third criterion was candidates' ISCED level. Participants in both control and intervention groups had to teach at the same ISCED level.

The fourth criterion was that the participants in the control and intervention groups ideally had to teach the same subject. Where participants were teaching more than one subject, the subject with the highest number of weekly teaching hours was to be the point of reference.

The fifth and final criterion was that participants in the control and intervention groups ideally had to teach the same grade level. Where participants taught more than one grade level, the grade level with the highest number of lessons per school week was to be the point reference.

In summary, the ideal control group consisted of beginning teachers at schools with similar characteristics as the placement schools of the intervention group, who taught at the same ISCED level and who taught the same grade level and subject. The next best composition of the control group would meet all criteria except the fifth criterion (same subject), and so on.

3.1.1 Process of Control Group Selection

After receiving a remote coaching session by the project evaluation team via Skype, each country's project management group launched the process of recruiting participants for the control groups in collaboration with national ministries of education. Even though NEWTT project management groups started their preparations for recruitment before the beginning of the school year, only one country managed to retrieve the contact information for eligible participants within the planned time. The amount of delay varied from country to country but was generally due to changes in educational policy priorities as well as challenges in the collaboration among institutions. Two national managers in particular struggled with the recruitment of control group members due to political restructuring in their countries. Only Austria and Bulgaria managed to recruit sufficient control group members to compare intervention and control groups in a meaningful way.

Following the recruitment of the control group, Teach For All partner organisations were asked to describe briefly their selection process and any challenges they faced. Some organisations such as those in Austria and Romania reported that they depended on local government support. Teach For Austria collaborated with the Board of Education for Vienna⁴, meeting with the head of department of secondary schools at the Board of Education for Vienna and agreeing that all teachers starting their careers in autumn 2016 would be invited to take part in the study. Austria

⁴ Formerly known as Vienna Board of Education.

did not report any challenges other than having to wait until the end of summer holidays to collect participants' letters of consent, as authorities approved candidate participation in the study very late. Romania had support from the Ministry of Education and the Pre-University State Secretary. Here, the challenges were administrative as the minister of education changed twice in 2016. The Romanian project team also faced problems when trying to contact potential participants in the control group and local inspectorates: responses to emails were late or phone calls were not returned.

Iespējamā Misija reported problems with communicating with and securing the support of their Ministries of Education, which led to delays in participant recruitment. In addition, they also faced administrative challenges due to changes in education policy. Furthermore, the group struggled with contacting schools to recruit participants for the control group. Not all schools responded, and there was no database that listed all new teachers in Latvia. These problems led to a lack of eligible control group participants.

Empieza por Educar also encountered difficulties to get the necessary information to recruit the control groups. The process was complicated, in part due to national data protection laws, restricting access to personal data and mailing addresses of the respondents. As such, certain data required by the research team could not be obtained in a timely manner, such as the list of first-time teachers in 2016.

In the initial control group recruiting phase (autumn 2016), Teach For Bulgaria also faced challenges to find a sufficient number of eligible control group participants and to assemble the participant contact information required by the evaluation team.

3.1.2 Timeline of Control Group Selection

To gain a clearer picture of the entire process of control group selection, the Teach For All partner organisations were asked to provide the dates on which they began the selection of the control groups and the date on which they finalised their selection by sending participants' email addresses to the evaluation team. Table 1 presents the information forwarded by each national Teach For All organisation.

Selection Period	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Start of selection	Mar 2016	Sep 2016	May 2016	Aug 2016	May 2016
Official end of selection	Aug 2016	Feb 2017	Dec 2016	Oct 2016	Nov 2016

Table 1: Selection Periods by Country

Table 1 shows that countries, which started the selection process earlier, achieved better results (i.e. larger number of participants) than those countries, which waited longer or had to wait longer to recruit control group members. This is a factor that can be considered for further studies.

3.2 Timeline and Stages of Data Collection of the Policy Experiment

The design of the panel survey involves four stages of data collection for the intervention groups and three stages of data collection for the control groups in each of the five participating countries. In all five countries, the first round of data collection for the intervention groups took

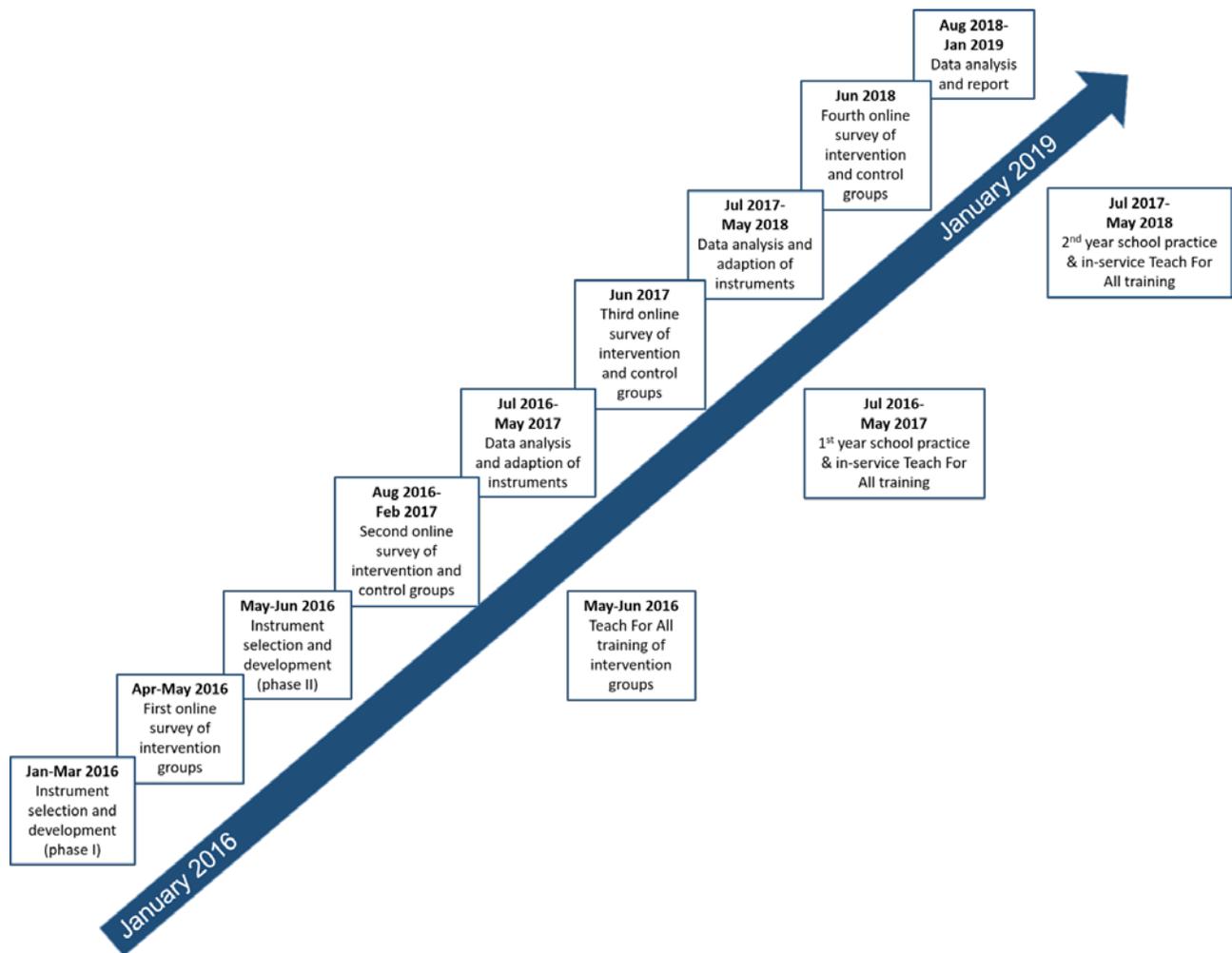


Figure 4: Timeline of Impact Evaluation and NEWTT Training Programme Phases

place before participants started their introductory training; the goal was to capture their prior knowledge and attitudes. This step was a necessary prerequisite of the experimental approach and it was originally scheduled to take place in May 2016. However, because of Teach For

Bulgaria's training schedule, it was necessary to survey the Bulgarian intervention group in March 2016 already. In this way, it was possible to use the Bulgarian intervention group partly as a pilot for the others (more detailed information on this point can be found in section 3.6).

The second round of data collection took place at the end of the initial training period but before the intervention groups started their school placements (August to September 2016). The third wave of data collection was scheduled for the end of the first school year (June 2017), while the last survey wave took place after the end of the second school year (June 2018), which also marked the end of the training programme for the intervention groups. The overall timeline of the impact evaluation is shown in Figure 4 above the blue arrow; the different NEWTT training phases are shown below the arrow. The depiction of impact evaluation shows not only the survey periods themselves but also the timeframe for preparing the surveys (i.e. instrument selection and development) as well as the necessary steps after each survey wave (i.e. data analysis and reporting).

Data collection for the control groups was identical to that for the intervention groups, with one exception: it was not possible to survey control group members before the start of their teacher training (T_0). The first stage of data collection for the control groups was scheduled to take place at the same time as the second set of data collection for the intervention groups (prior to starting work at schools: T_1), since it was the first instance at which intervention groups and control groups entered a comparable setting. It also marked the earliest point at which it was possible to capture the prior knowledge of beginning teachers training through the traditional pathway. However, only Austria was able to realise this plan. All other countries faced difficulties recruiting participants for their control groups within the planned timeframe. This meant that participants in control groups had already started to work at schools at the time of the first survey. Figure 5 shows a simplified representation of the design of the NEWTT project, including planned survey waves for intervention and control groups.

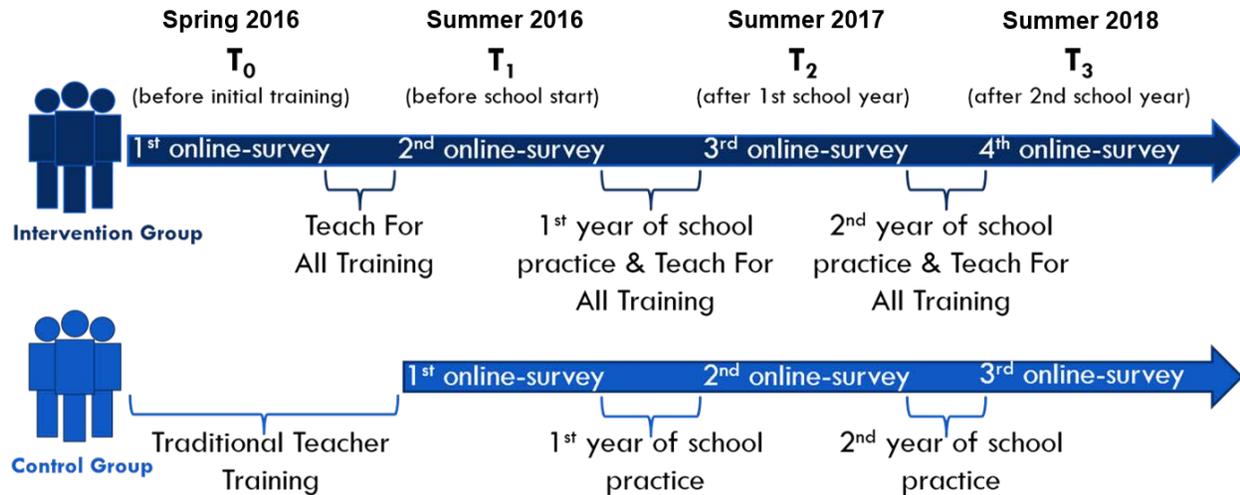


Figure 5: Project Design

Apart from the second intervention group in Bulgaria, all groups were followed over a period of two years. The second intervention group in Bulgaria — i.e. the master’s programme students from the University of Plovdiv — were followed for one year only, with data collected at three points. The first round of data collection for that group took place in May 2017 before participants started their master’s programme (T₀). The second survey was scheduled before participants started to work at schools in June 2017 (T₁), and the last survey was administered at the end of their first year working at school (T₂). A detailed overview of the stages of data collection for the different groups in the participating countries is shown in Figure 6. The participants of the Teach For All partner programmes are referred to as trainees here.

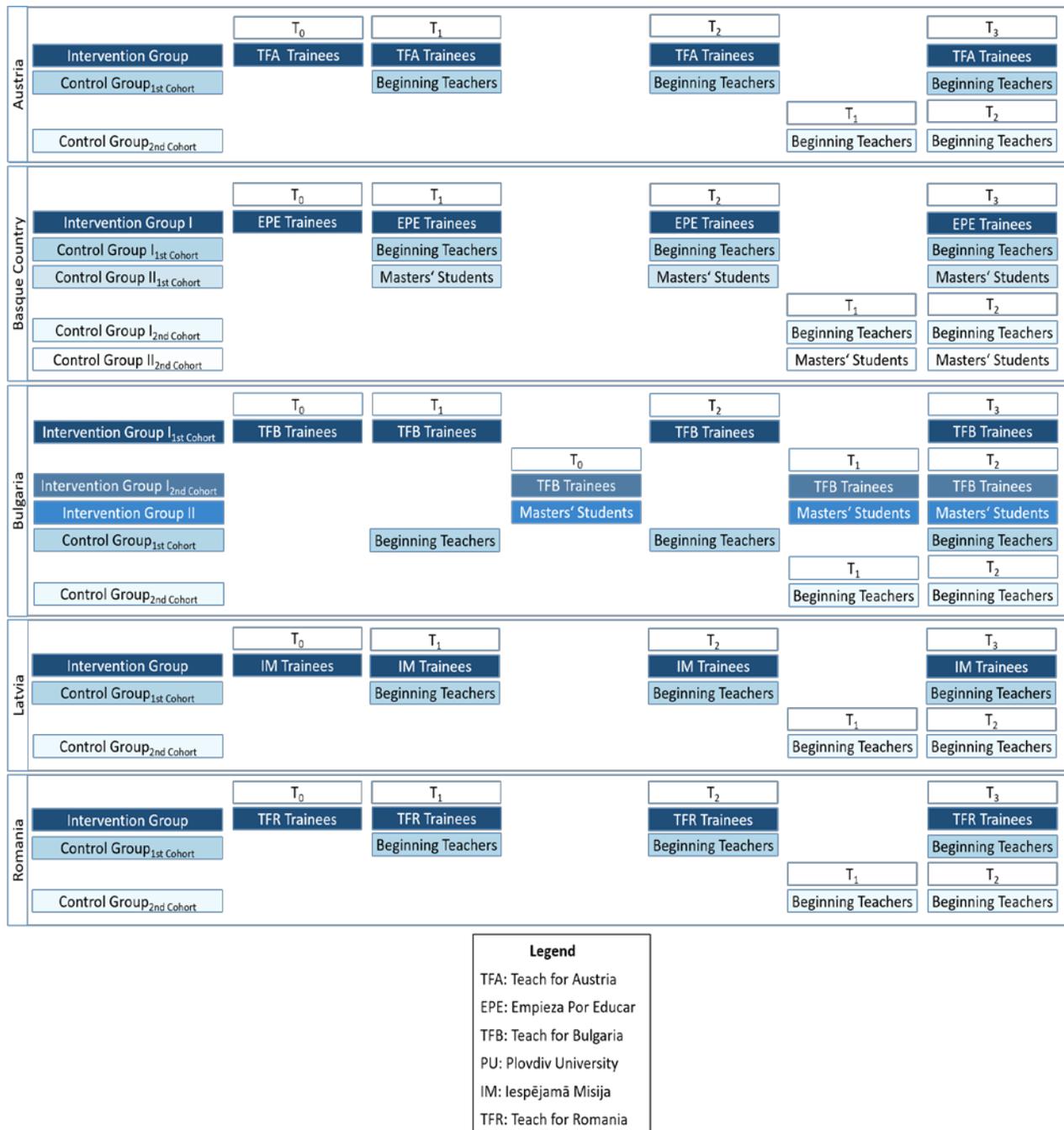


Figure 6: Data Collection Stages for all Subgroups

3.3 Intended and Recruited Samples (Overall and Country-Specific)

The size of the intervention groups varies across the five countries. This fact was clear from the beginning and results from a range of circumstances. One important factor is the age and funding opportunities of the NGOs providing the alternative pathway programmes. Recently-founded NGOs are not as well established within the country and tend to be smaller and less well known.

Therefore, they do not have the workforce or funding to recruit and finance a large number of participants. Another factor is the level of urgency with regard to teacher shortages. Those countries with greater teacher shortages have recruited more participants. A regular problem in panel surveys is participants' decreasing commitment to take part in the subsequent surveys. This phenomenon is commonly referred to as panel mortality. With every additional wave, it is expected that some participants drop out of the survey. This can be due to decreasing commitment to the survey, or it can simply be the result of individuals moving on without updating their contact information. This is a predictable problem, especially among control group members. For intervention groups, panel mortality was not expected to be extensive since participants were obliged to take part in the survey exercise.

For most countries, the intended sample size for the control groups could not be delivered. For the countries with smaller sample sizes especially, the aim was to recruit a larger control group. To address the issue of low numbers of participants in the control groups, another cohort of control group members was put together in September 2017. For this second cohort of beginning teachers, two surveys were conducted: one at the beginning of the school year in autumn 2017, and one at the end of the first school year in May/June 2018. Table 2 shows the number of persons across countries and subgroups: firstly, in terms of planned number of participants according to the survey design; secondly, in terms of the contact information of potential participants that was provided; and thirdly in terms of the actual number of participants who filled in the questionnaires for the different measurement points. The numbers of the second cohort of control group participants are depicted in brackets. The same is true for the second cohort of intervention group participants in Bulgaria. For instance, in Austria 102 contacts were provided for potential participants for the control group in 2016. Of those 51 actually took part in the first survey wave (T_1). In 2017, another 53 contacts were provided. However, of those only 29 filled out the first questionnaire at T_1 .

Country	Subgroup	Number of Persons					
		Planned	Provided	Actually Participated			
				T ₀	T ₁	T ₂	T ₃
Austria	NEWTT Intervention	50	51	51	45	42	40
	Control (Begin. Teachers)	50	102 (+53)	-	51 (+29)	42 (+14)	38
Basque Country	NEWTT Intervention	20	38	38	37	37	29
	Control 1 (Begin. Teachers)	50	20 (+51)	-	5 (+6)	3 (+2)	3
	Control 2 (Master)	50	55 (+13)	-	22 (+7)	10 (+4)	1
Bulgaria	NEWTT Intervention 1	70	149	149 (+21)	117 (+19)	100 (+17)	84
	NEWTT (Master Plovdiv)	70	32	22	20	16	-
	Control (Begin. Teachers)	70	55 (+93)	-	46 (+30)	46 (+8)	40
Latvia	NEWTT Intervention	30	20	20	20	19	19
	Control (Begin. Teachers)	50	26 (+12)	-	10 (+5)	5 (+3)	2
Romania	NEWTT Intervention	50	43	43	41	33	31
	Control (Begin. Teachers)	50	43 (+30)	-	13 (+16)	6 (+10)	4

Table 2: Overview of Intended and Actual Sample Sizes in the NEWTT Project

The largest sample was supposed to be provided by Bulgaria, with approximately 70 fellows who would enrol in the Teach For All alternative pathway programme and take part in the master's programme at Plovdiv University at the same time. One of the selection criteria for this group was that they were not allowed to have any prior teaching experience. At the beginning of the project, this group consisted of 63 individuals. Of those, 35 were being trained to be placed in primary schools and 28 in secondary schools. However, Teach For Bulgaria selected 149 people for its programme overall, including certified teachers who were being 'recertified' through the programme. They differed from the 63 uncertified participants in the intervention group only in the sense that they did not take part in the master's programme. Although some of them were enrolled in other certification courses, these were not equivalent to master's degree courses since they were already certified. It was decided to include this group in order to create a larger sample.

In Bulgaria, the University of Plovdiv has developed a new master's programme for certifying teachers. In cooperation with Teach For Bulgaria, the University has created a master's programme which combines theoretical courses at the University with practical experience gained in school. Masters' students have to work as teachers in schools while at the same time taking university courses. The University of Plovdiv aimed to recruit 70 participants for this second intervention group. However, due to a lack of eligible candidates, less than half of the 70 places were filled. Therefore, the University of Plovdiv and Teach For Bulgaria decided to fill the

vacancies with some of the Teach For Bulgaria applicants of the 2017 cohort. Those Teach For Bulgaria fellows, who completed the questionnaires, were added as a second cohort to the NEWTT sample. Hence, the sample includes 149 participants of the first cohort (2016) and 21 of the second cohort (2017) for T_0 ; with 117 participants from the first and 19 from the second cohort for T_1 . The sample for T_2 includes 100 participants from the first and 17 from the second cohort. The final (fourth) questionnaire (T_3) was filled out by 80 Teach For Bulgaria fellows.

The first intervention group was actively recruited and supported by Teach For Bulgaria, while the second group (Plovdiv masters' students) was recruited by Plovdiv University in collaboration with Teach For Bulgaria. The two intervention groups differ in three regards. First, they were subject to different selection processes (e.g. the Plovdiv intervention group did not have to take an analytical thinking test). Second, they received different incentives (participants in the Plovdiv intervention group did not receive an additional stipend and were not placed in vulnerable schools). Third, they received different types of teacher training (participants did not take part in the Teach For Bulgaria programme, which includes an extensive mentoring programme).

Bulgaria provided 55 beginning teachers from the public school system as control group members in 2016 (first cohort). Of those, 46 completed the first and second questionnaires, and 40 completed the final (third) questionnaire. Of the renewed recruitment of 93 control group members in 2017, 30 completed the first questionnaire and eight completed the second. These participant groups were merged to enlarge the control group samples of the first and second survey waves, bringing the total up to 76 for the first survey and 52 for the second survey. The dropout rate, especially for the second cohort, is considerable.

Of the 32 enrolled Plovdiv University masters' students, 22 completed the first, 20 completed the second, and 16 completed the third online questionnaire.

The Austrian NEWTT intervention group sample was supposed to consist of approximately 50 fellows. This sample size was realised: 51 participants took part in the first survey wave. However, before the second survey wave, several participants dropped out of the programme, reducing the sample to 45 participants. The third questionnaire was completed by 42 Teach For Austria fellows, and 40 completed the final (fourth) questionnaire. This equals a dropout rate of 21.6% over the two years of the project. Nevertheless, in each survey wave the sample equals the complete population, i.e. every remaining participant did complete the survey. Therefore, the completion rate for each survey wave for the intervention group was 100%. All intervention group participants were trained to be placed at secondary schools (one was placed at a polytechnic school; all others were placed at middle schools).

Austria provided 102 individuals for the control group of beginning teachers from the public school system (first cohort), 51 of whom completed the first questionnaire, making the

participation rate exactly 50%. For the second survey, 42 participants remained of the first cohort, and 38 participants completed the final (third) survey for the control group. The renewed recruitment of control group members in August 2017 yielded an additional 29 participants for the first and 14 for the second survey. As with Bulgaria, the dropout rate was much higher for the second cohort of control group members.

In Romania, the NEWTT intervention group sample also was supposed to consist of 50 fellows. However, after Teach For Romania's selection and recruitment phase, only 43 participants signed the contract and started the programme. Two participants left the programme before the second survey wave, reducing the sample to 41 participants. Over the course of the two-year programme, more individuals dropped out, leaving 33 participants to complete the third survey and 31 to complete the final (fourth) survey. The dropout rate was 27.9% over the course of the project. However, as in Austria, wave participation for each survey was 100%.

Romania provided 43 beginning teachers as control group members for the first cohort and 30 for the second cohort. However, only 13 members of the first cohort and 16 members of the second cohort who completed the questionnaire also fit the selection criteria for control group members⁵.

The sample size in the Basque Country was one of the smallest. However, it was possible to add the *Empieza por Educar* fellows from the regions of Madrid and Barcelona, thereby enlarging the sample to 37 participants compared to the originally planned 20. As in Austria, in the Basque Country all participants of the intervention group were trained to be placed in secondary schools. The Basque Country decided to create two control groups: a control group of traditionally-trained beginning teachers and a control group of beginning teachers who were master's programme students. The Basque Country provided 20 possible participants for the first cohort of the control group and another 51 for the second cohort. However, after regarding the data, only 11 persons fit the selection criteria for the control groups. The sample decreased over time, with only five participants completing the second survey and only three completing the third questionnaire. Based on such small numbers, comparisons between intervention and control groups for the second and third survey wave are futile.

Of the 55 people recruited as possible participants for the control group of masters' students, 22 completed the first survey, 10 completed the second, and only one person completed the last survey. Even with the renewed recruitment of masters' students at the beginning of 2018, only seven more respondents could be gained for the first and four for the second survey of the

⁵ Over half of the participants who completed the questionnaire had to be eliminated from the sample because they reported to have entered the teaching profession via alternative pathways. Due to the quasi-experimental design of the study, it was essential that the control group members should be traditionally-trained teachers.

masters' students. Both control group sizes are too small to allow for meaningful comparisons with the intervention group for the last survey wave.

The Latvian sample is the smallest with only 20 participants in the intervention group. All participants were trained to teach at secondary schools: 17 participants taught grades 5 to 12, two participants taught grades 5 to 9, and one participant taught grades 10 to 12. Even though Latvia has a small sample, it has not had any dropouts between the first and second waves. One person left the programme between the second and third survey waves, reducing the sample for T₂ and T₃ to 19 participants. Although Latvia was able to recruit 26 beginning teachers for the control group, only 10 individuals completed the first, five the second, and only two the last questionnaire. For the second cohort, Latvia recruited 12 participants. Of those, five completed the first and three the second questionnaire. Due to the small sample sizes of the control group, it is not feasible to compare intervention and control group for the second and third survey waves.

Even though measures were taken to correct for the low participation rates of control group members, sufficient sample sizes for control groups could only be achieved in Bulgaria and Austria. Therefore, comparisons between intervention and control groups regarding results such as pedagogical knowledge, knowledge gain, teaching competences or job satisfaction, will only be reported for those two countries.

3.4 Sample Head Teachers

The following results refer to the survey of head teachers within the framework of the project. Originally, it was planned to survey head teachers whose schools employed fellows (intervention group) as well as head teachers without fellows at their schools (control group). Unfortunately, there was no sufficiently large control group in the two countries where the head teacher survey was conducted, so the following results refer only to the intervention groups in the two countries. The Bulgarian intervention group consists of 19 and the Austrian intervention group of 20 head teachers.

Most of the head teachers surveyed from both countries are female (79.5%). It is striking that in Bulgaria, all survey respondents were female (94.7% female; 5.3% did not give information on their gender). In Austria, 35% of respondents were male. Austrian head teachers are on average 55.26 years old ($SD=5.35$). In comparison, Bulgarian head teachers are younger; on average, they are 51.63 years old ($SD=6.50$). The majority (66.7%) of all head teachers of both countries have been working as head teachers at their school for at least six years.

95% of surveyed Austrian schools are located in a large city with more than one million inhabitants (Vienna), while in Bulgaria, 42.1% of schools are located in a hamlet, rural area or village. The remaining schools are mainly divided between small towns (31.6%) and towns, cities

and large cities (26.4%). The types of schools in Bulgaria and Austria are different and cannot be directly compared. In Bulgaria, 78.9% are elementary or secondary schools and 21.1% are secondary schools. On average, Bulgarian schools have fewer teachers ($M=25.79$, $SD=14.97$) than Austrian schools ($M=40.75$, $SD=9.23$). However, both countries average similar student numbers (Bulgaria $M=303.05$ ($SD=193.12$), Austria $M=318.45$ ($SD=84.78$)). At the time of the survey, an average of $M=2.65$ ($SD 1.87$) fellows from Teach For Austria were placed at each of these schools, while an average of $M=2.37$ ($SD 1.16$) fellows were assigned to the participating Bulgarian schools. However, this difference is not significant ($t(37) = 0.56$, $p = 0.58$).

3.5 Design of Instruments

Several sources were used to operationalise the components of the impact model. The most important source in terms of general instruments was the OECD TALIS study which surveyed teachers and head teachers in 34 countries.⁶ All five countries participating in the NEWTT experiment had participated in TALIS 2008 and/or TALIS 2013. In terms of the thematic issues that the NEWTT experiment addresses, TALIS is the most similar international study. In addition, it provides a basis for an extensive discussion on culture-specific tendencies with regard to survey question responses. Therefore, anchoring the NEWTT study in TALIS allows the comparison of nationally representative samples as well as the adjustment of questions according to national cultural tendencies in responding (e.g. cultural levels of acquiescence). The evaluation team contacted the officials in the respective countries to retrieve the national versions of the TALIS teacher questionnaires. This process was unexpectedly slow in some countries and obstructed the timely completion of the first survey in those countries. However, all country officials ultimately provided the requested questionnaires.

The TALIS study covers various areas of teaching and learning, such as the learning environment, feedback and support structures, as well as teachers' attitudes, classroom practices, self-efficacy, and job satisfaction.

In addition to general instruments, the NEWTT questionnaires contained knowledge tests. The first knowledge test measures the pedagogical knowledge gained during training. It is a tailored design for NEWTT and based on the training materials of the alternative pathway programmes⁷. This test is aligned with the curricular material for the intervention groups. In this sense, it is a curricular-valid⁸ test. However, half of the test questions cover general topics of teacher education which are not specific to the alternative-pathway programme and were therefore deemed suitable for the control groups as well. The second knowledge test was taken from the

⁶ In the first wave of 2008, only 30 countries participated in TALIS.

⁷ More information about the construction of the curricular-valid knowledge test can be found in section 3.5.2.

⁸ The term 'curricular-valid' is used here to describe test questions which have been explicitly designed to fulfil the methodological requirements of curricular validity.

International Teacher Education and Development Study (IEA-TEDS-M). The test was originally designed to measure the general teaching knowledge of mathematics teachers. Only questions not relating to mathematical content have been integrated from this test. Instead, the items selected focus on pedagogical knowledge of teaching and learning (PUW-Test), as well as a broader conceptual understanding of teaching. Table 109 - Table 111 in the Annex outline the measurement plan, including all measured constructs according to the different groups and survey times.

3.5.1 General Instruments

The first two surveys dealt mainly with the personal background of participants, their prior teaching experiences, an evaluation of their training programme, and attitudes towards teaching and learning. The scales concerning personal background were designed by the NEWTT evaluation team at the University of Duisburg-Essen as were those concerning the evaluation of the alternative training programmes, with the goal of enabling measurement of observable facets. The scales include questions about interactions between fellows and trainers and the quality of the learning materials.

Some scales, most of them concerning teacher attitudes and teacher enthusiasm, were taken from international research beyond TALIS. They refer to constructs that had not previously been tested to the same degree in all five NEWTT consortium countries, but that seemed to be of importance for the objectives of the experiment. The most important example here is the scale on motives for becoming a teacher.

As mentioned above, the TALIS study was the most important source for the third and fourth survey waves as participants were working within the school context⁹. The last two surveys covered questions concerning the structures of teacher induction at school, teacher tasks, job satisfaction, and collaboration between teachers. The third survey also included questions on one exemplary class (the target class) to gather data on working conditions not only at school level but also classroom level.

In addition to the questions, lead paragraphs were developed to introduce some of the questions and to transition between sections of the questionnaire. Furthermore, an introduction to the questionnaire — including information on the NEWTT¹⁰ experimental approach — as well as introductions to the topics of the questionnaire and instructions on how to complete the questionnaire were developed.

⁹ However, the scale for teacher self-efficacy – also taken from TALIS – was already used in the first survey, as it is one of two central measurements for the comparative gain of competences during the professional development.

¹⁰ The information provided about NEWTT differs slightly between the intervention and control groups, because it had to be adapted to the context of each group.

3.5.2 Knowledge Test

Participants' pedagogical competence was assessed via knowledge test items. One part of the knowledge test comprises a set of questions which have been aligned with the training material of the intervention group (known as curricular-valid test questions). McClung (1978) defines curricular validity as 'a measure of how well test items represent the objectives of the curriculum' (p. 687). Thus, the curricular validity of a test is important when measuring content-specific knowledge. To ensure the curricular validity of the test questions on teaching and learning, they were developed based on the course materials used by the five national NEWTT intervention groups. For this purpose, the content for use at the Pre-Institute and Summer Institute training in all participating countries was compiled in English. The original Teach For All training material was used as a basis against which all countries' materials were checked. Subsequently, overlap in training content across all countries was identified in order to design questions that would be curricular-valid for the intervention groups in all countries. A Skype call with Teach For All training experts was arranged to identify and modify problematic questions. A confidentiality agreement was signed to prevent the prior circulation of test question information.

After finalising the development of the test questions, a list of key terms¹¹ was sent to the national consortia for two reasons. First, this ensured that the questions were aligned with the curricular content for the national training programmes. Second, heads of training were asked to translate the key terms so that external translators would then use the standard translated training-specific words instead of their own translations. This was believed to be necessary because in the Teach For All programme specific terminology such as 'academic impact model' or 'teaching as leadership' is used.

The first curricular-valid knowledge test, used in the first survey, which was conducted in Bulgaria (the 'pilot'), comprised 33 questions, most of which were multiple-choice. The test included questions on various areas of pedagogical knowledge such as classroom management, lesson planning, goal setting, assessment and teaching methods. In a few cases, participants were asked to put the answers into the correct order. Following the pilot, two items, which were too easy to solve, were removed from the test. Therefore, the final and revised curricular-valid knowledge test presented in the first and third questionnaire for the intervention group comprised 31 questions. Test questions were considered correct when all required answers were given. For example, a question with three correct answer options was considered as correctly answered only if the person chose all three correct answers. For the last measurement point (T₃), the test had to be shortened due to time and space restrictions. Therefore, data of the test questions from Austria and Bulgaria, the two countries with the largest samples, were analysed. All

¹¹ The list of key terms included more items than were actually used in the test to serve as distractors for the heads of training. This method was intended to reduce the problem of 'teaching to the test'.

questions with very high or very low item difficulty were eliminated. The cut-off criteria were an item difficulty above 0.8 or below 0.3. This method resulted in a test reduced to 21 items with only moderate item difficulty for the questionnaire of the last wave. In addition, it was ensured that the test still included questions on each area of pedagogical knowledge (see above). The original curricular-valid knowledge test did not only include programme-specific questions but included 16 questions which were expected to be answerable also by beginning teachers having completed traditional teacher training. For the final survey of the control groups, those 16 test questions were also reduced using the same method as for the intervention group; only nine questions with moderate item difficulty were kept for the last test round of the control group.

A second part of the knowledge test was taken from the International Teacher Education and Development Study (IEA-TEDS-M). The items selected focused on pedagogical knowledge of teaching and learning (PUW-Test) as well as a broader conceptual understanding of teaching. Three items used an open-ended question format requiring participants to write up to four answers into empty textboxes. Four items used a closed-question, or in other words multiple-choice, format. The test included instructions on how to evaluate the answers. For the multiple-choice questions, solutions were given; for the open-ended questions, coding instructions were provided to determine which answers were correct and which were false. Again, answers to test questions were considered correct only when all required answers were given. The PUW-Test questions were measured twice for intervention and control groups. Since the questions were already a selection of the whole PUW-Test, the questions were not further reduced for the second measurement point (T₃).

Three additional test questions were included which were taken from the curricular-valid knowledge test designed in the context of the Teach First Germany evaluation study conducted by Abs, Eckert, and Anderson-Park (2015). The process of designing those test questions matched the design of the curricular-valid test questions described above, with the exception that only one country was involved in the study. The questions selected for inclusion in the NEWTT study focused on general pedagogical knowledge in the context of teaching. All questions were in multiple-choice format. Answers to test questions were considered correct only when all required answers were given.

3.6 Procedure of the Project

The survey tool *soSci*¹² was used for the implementation of instruments and the entire process of data collection, including the administration of contact information and sending out of serial emails. This instrument was chosen because it is a state-of-the-art, cost-efficient, online tool which can handle surveys in multiple languages.

In order to use *soSci*, an account was created which included background information on the NEWTT project and the researchers. This account was used to start a new survey project titled 'NEWTT'. Within this survey project, new questionnaires could be designed. The evaluation team started by creating and programming all survey questions and answers (including filter questions) for the first survey in Bulgaria (NEWTT intervention group) in English as a basis for translation. This included designing the layout of the questionnaire (i.e. formatting of questions and inserting logos of the EU and the University of Duisburg-Essen).

Initially, seven questionnaires (wave 1 through 4 for the intervention group, wave 1 through 3 for the control group) were designed. However, because additional intervention groups and control groups were added and slight differences for individual questions needed to be addressed, 26 nationally adapted questionnaires were designed in all.

At the same time, participants' personal information (i.e. email address, name, gender) was collected via the Teach For All partner organisations in order to be able to contact participants. A personalised link was sent to participants of the intervention and control groups granting anonymous individual access to the online survey via email. Therefore, serial emails had to be created which contained: a personal link to the questionnaire; a welcome text introducing participants to the NEWTT project and explaining its purpose; a short explanation of the questionnaire; and the evaluation team's contact details. Serial emails were personalised, meaning participants were addressed by their name to increase the probability of participation, especially for the control group. For this reason, gender information was required because the grammatical form of address varies between males and females in some of the participating countries' languages.

Once the serial emails were sent to participants, the evaluation team monitored the data collection process. Information on whether participants clicked on the link in the email and whether they completed the survey was transferred to the participant database within the online tool. The software also registered if an email could not be delivered. This enabled the evaluation team to share data regarding non-participation or errors in email addresses with Teach For All partner organisations. The monitoring process continued until all participants of the intervention groups had completed each survey. For the control groups, the follow-up was much more difficult

¹² <https://www.soscisurvey.de/>.

since there was no direct way of contacting them other than sending reminder emails. Therefore, the evaluation team closed the survey for the control group after three reminder emails had been sent and the fourth deadline had passed. The timeframe for completing the survey was set at five to seven days.

Translation Process. For each group and each survey wave, a new base instrument was designed in English. Since surveys were presented to participants in their native languages, there was a different language version for each instrument. The translated versions could vary slightly due to country-specific conditions as already pointed out in section 3.5.¹³ This meant each instrument was designed in six languages (English, Romanian, Bulgarian, Spanish, German, and Latvian). The first survey was designed for the Bulgarian intervention group. Bulgarian participants had to be surveyed in March 2016 due to the Teach For Bulgaria training timeline; other countries were surveyed in May. Using this first survey as a pilot made it possible to identify unclear or redundant questions and fine-tune the questionnaire prior to surveying participants in the other four countries. As explained in section 3.3, for Bulgaria and the Basque Country, additional groups were surveyed. Overall, 26 surveys were designed for the intervention and control groups.

As mentioned above, the survey was presented in the national language of the respective countries; coordination of translations in five countries was therefore necessary. Overall, there were three types of translation involved in the design of the instruments.

First, some questions were the same as those used in TALIS (OECD 2014b). Since those TALIS questions were administered in all five countries in the consortium at least once (either in 2008 or 2013), this meant they had already been accurately and appropriately translated, that psychometric information on the cross-national comparability of the respective items and scales was available.

Second, external translators translated the knowledge test questions. This was because these questions needed to stay unknown to the Teach For All partner organisations and to the participants in the survey until after the last survey wave had been conducted¹⁴.

Third, all other questions and texts were translated by the Teach For All partner organisations in the five partner countries. These texts included, for example, the welcome email (i.e. the text of the email explaining the European experimental project and containing the link to the

¹³ For instance, in Latvia and Austria, the grades achieved at the end of secondary school had to be measured differently to other countries. In contrast to the other countries, where average grades of final exams are reported to students, in Latvia and Austria no such average grades are calculated. Therefore, final grades were asked for in maths, the native language (Latvian/German) and the first foreign language.

¹⁴ External translators signed non-disclosure agreements regarding the test questions so they would not be shared with anyone involved in the NEWTT project.

questionnaire), the introduction to the questionnaire (the content of the first page of the questionnaire), and lead texts for individual questions.

Some Teach For All partner organisations translated the questions internally; some outsourced this task and used external translation agencies. To guarantee a comparable translation process, the evaluation team designed national adaption forms allowing the 'forwards-backwards translation' method to be used. Those forms included detailed explanations of how to use them as translation tools. However, emails were also sent to the Teach For All partner organisations explaining in detail the method of forwards-backwards translation. The information was given before every translation phase.

It was ensured that the external translators were familiar with the forwards-backwards translation method before they were hired. They were given national adaption forms containing the test questions, the list of translated key terms, and instructions on how to integrate the key terms into the translation.

After inserting the translations into the online survey tool, the proofreading process was coordinated. The list of key terms was given to proof-readers and they were informed about the project and the translation procedure. Test links were sent to the proof-readers with instructions on how to use the 'correction mode' of the survey software so that they could make annotations for correction. The corrections were inserted into the questionnaire and the revised version was sent out to proof-readers. The correction cycle was repeated one more time before the questionnaire was ready to be distributed to participants.

4 Macro-Level Results

The teaching profession requires a wide range of competences. Attracting and retaining well-qualified and motivated people in the teaching profession is getting harder at a time when public funds need to be saved and the average age of teachers is continually rising. Alongside working conditions, professional development, and satisfaction and recognition, remuneration is one of the most important aspects in making teaching an attractive profession (Eurydice, 2016).

Knowing more about the conditions of the teaching profession in the five participating countries is relevant for the evaluation of the project. This information will allow us to draw comparisons, which will be useful in better understanding the differences and similarities observed among the countries in the survey data. The most important source here was *Education at a Glance*, published by the Organisation for Economic Co-operation and Development (OECD) in 2014. In addition, information was taken from *The Teaching Profession in Europe: Practices, Perceptions, and Policies* (Eurydice, 2015) and *Teachers' and School Heads' Salaries and Allowances in Europe* (Eurydice, 2016). Further information was retrieved from the *Teaching and Learning International Survey (TALIS) 2013* (OECD, 2014b) and some data was taken from World Bank reports (World Bank, 2010; World Bank, 2012)¹⁵.

Section 4.1 provides an overview of the average age of the teacher, salary, weekly teaching hours and job satisfaction in the participating countries.

Section 4.2 describes the structure, duration, and requirements (ETCS points) of teacher education in the participating countries as well as the induction phase at the beginning of the teaching career and support structures at schools.

4.1 Socioeconomic Factors and Working Conditions of Teachers in Participating Countries

A first consideration is the average age of the teachers in each participating country. This is very important for the recruitment planning of new teachers; the higher the average age, the higher the importance of recruitment to reduce the risk of teacher shortages. According to OECD statistics from 2014 (b) and 2016, the average age of teachers, regardless of gender, is between 46 and 49 years. Teachers in Austria and Bulgaria are on average 47 years old. Teachers in Spain are on average 46 years old. Teachers in Latvia are the oldest, with an average age of 48 years, while teachers in Romania are the youngest, with an average age of 42 years. This data applies to lower-secondary as well as upper-secondary level teachers¹⁶.

¹⁵ There is no data available in the reports specifically relating to the Basque Country; all data is for Spain.

¹⁶ The OECD 2016 study only shows this data for the upper-secondary school teachers in Austria, Latvia and Spain. Data from OECD (2014b) focuses on lower-secondary school teachers.

Considering that the expected retirement age is 65 in Austria and Spain, 63.5 in Latvia, and 60 (for female teachers) or 65 (for male teachers) in Romania and Bulgaria (Eurydice, 2015), it can be predicted that in less than 20 years, these countries will face severe teacher shortages.

The second aspect to consider is the range of teacher salaries in participating countries. A higher status of a profession in society does not depend solely on the respective average salary, but it is surely a factor that contributes to status and may therefore make it more or less attractive to become a teacher.

According to a report from Eurydice (2016), there can be immense differences in teachers' annual basic gross statutory salary between countries. The minimum statutory salary indicates the lowest salary paid to fully-qualified teachers at the start of their career, whereas the maximum statutory salary includes the highest salary of a fully-qualified teacher after a certain number of years in the profession or at retirement. *Figure 7* shows that the level of salary is the same for ISCED Levels 2 and 3 in each country, except for the *Allgemeinbildende Höhere Schule* in Austria (Min. = €33,157; Max. = €58,813; cf. Eurydice (2016, p. 15f.)). The maximum statutory salaries for teachers in Bulgaria and Latvia are not fixed. Moreover, in Latvia, a teacher's salary does not depend on the school type but rather on the school size. Teachers working at schools with only up to 400 students, for example, receive the minimum salary.

In most of the countries, the salary for teachers at primary school level is very similar to the salary for teaching at level 2 or 3. Exceptions here are Romania and Austria which have a lower minimum salary (RO: €3,583; AUS: €33,157), while the maximum limit is the same. Spain is the only country where the minimum and maximum salary for the primary level (Min: €28,431; Max: €40,289) is lower than for levels 2 and 3.

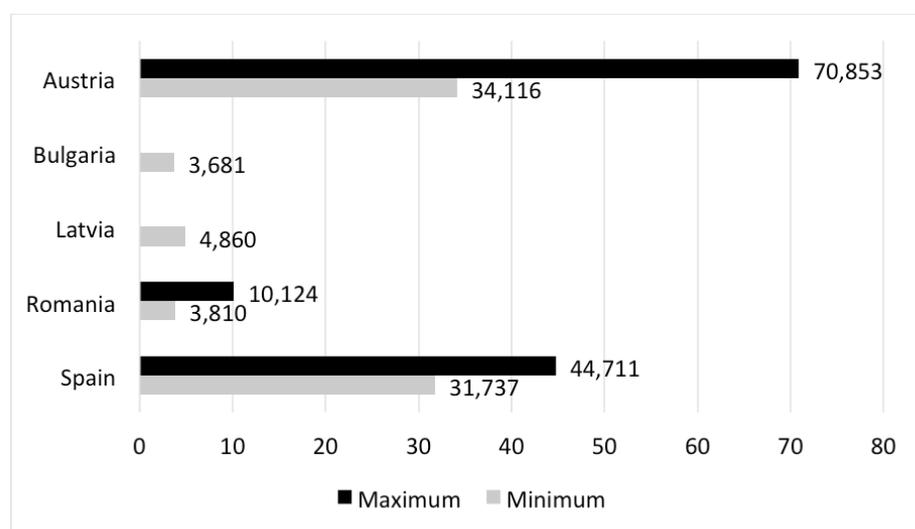


Figure 7: Minimum and Maximum Annual Basic Gross Statutory Salaries for Full-Time Teachers in Public Schools (ISCED 2/3) per Year, in Euros, 2015/16

Due to different costs of living, for the purpose of comparison the salaries need to be put in relation with the average annual gross salary¹⁷ of each country. The annual gross salary in Austria amounts to approximately €43,593, whereas the lowest income for teachers starts at €33,157 and can increase up to €70,853. The minimum salary of teachers in Bulgaria is significantly less than the annual gross salary of approximately €7,202 but can increase considerably because maximum wages are not fixed. In the recent past, Bulgaria passed new legislation increasing teachers' salaries with the objective of motivating young professionals to become teachers; enhancing teachers' professional development; and improving the quality of teacher education in the long term (Eurydice, 2016, p. 9). Teachers in Latvia receiving the minimum income earn almost two-thirds less than the annual gross salary of approximately €13,843; higher salaries are possible and are not fixed. In Romania, teachers' minimum salary is also almost two-thirds less than the annual gross salary of approximately €9,007, but can exceed by roughly €1,000, with the highest possible income being €10,124. Whereas in the countries presented above, the average annual gross salary lies between the minimum and maximum teachers' salary, the minimum salary of teachers in Spain is already higher than the average annual gross salary (approximately €26,205). This also applies to the salary for primary school teachers in Spain.

The third factor, which is an important working condition for teachers, is the number of teaching hours. However, it must be taken into account that teachers also work when they are not physically teaching in class. Such non-classroom tasks include, for example, preparing lessons, correcting exams, and attending meetings with parents. A high number of teaching hours per week means that teachers have to dedicate more time to lesson preparation and have little time to dedicate to other tasks, let alone their private life and leisure activities. Data from Eurydice (2015, p. 25) shows that out of all the observed countries, Austria and Romania have the least number of teaching hours per week, with 17 to 18 hours and 18 hours respectively. In Latvia, teachers have an average teaching time of 21 hours per week, while in Spain they teach on average 20 to 23 hours per week. Teachers in Bulgaria have the highest teaching hours, with 22 to 26 hours per week.

To conclude the overview of the working conditions of teachers with a view to job satisfaction in the five participating countries, results of the TALIS survey 2013 were closely examined. Unfortunately, Austria did not take part in this survey, so Table 3 contains only information for the four other participating countries.

¹⁷ Salaries listed in US Dollars (German Federal Statistical Office, 2018). An exchange rate from US Dollar to Euro for 31.12.2016 was applied.

Statement	Bulgaria	Latvia	Romania	Spain
The advantages of being a teacher clearly outweigh the disadvantages.	62.8%	60.7%	64.3%	79.5%
If I could decide again, I would still choose to work as a teacher.	70.2%	67.6%	78.5%	88.2%
I regret that I decided to become a teacher.	14.6%	12%	10.9%	6.3%
I wonder whether it would have been better to choose another profession.	42.6%	36.5%	29.4%	21.2%
I think that the teaching profession is valued in society.	19.6%	22.8%	34.7%	8.5%
All in all, I am satisfied with my job.	94.6%	91%	91.1%	95.1%

Table 3: Percentage of Lower-Secondary School Teachers who 'Agree' or 'Strongly Agree' with the Statements

Although teachers in Spain tend to agree more with positive statements about their careers and jobs than their Eastern European counterparts do, less than 10% of Spanish teachers agree that the teaching profession is valued in society. Teachers in Bulgaria and Latvia are the most unsure about their career choice; these are the countries with the highest percentage of teachers stating that they regret their career choice and wonder if it would have been better to choose another profession. Romania is the only country in which more than a third of teachers agree that the teaching profession is valued in their society.

4.2 Process of Teacher Education – Alternative vs. Traditional Routes

In the following section, traditional teacher education programmes of the participating countries and the alternative teacher training based on the Teach For All approach will be described according to characteristics such as general requirements to enter teacher training, duration of the programme, or practical parts of the training.

4.2.1 Overview of Academic Teacher Education in the Participating Countries

Gathering information about academic teacher education programmes in the participating countries is important for understanding the background of the control group participants who graduated from these programmes. Furthermore, it allows comparisons to be drawn between the Teach For All training units and facilitates an assessment of the division between theory and practice at the universities in these five countries.

Based primarily on the previously mentioned international studies, the evaluation team developed a list of crucial aspects to consider when comparing teacher education programmes in different countries. These can be summarised as follows: selection of eligible candidates; duration of the programme; pedagogical content of the programme; mandatory teaching practicum; degree required in order to teach; and possible additional requirements to start teaching after graduation (see Table 4).

Steps of Teacher Education	Route into Teaching	
	Traditional	Alternative
Selection of Participants	General requirements	Complex recruitment process
Duration of programme	Primary school: 3 years Secondary school: 4-5 years (varies between countries)	2 years
Type of training	Bachelor's degree Master's degree	Pre-Institute Summer Institute Ongoing training
Teaching practicum	1 - 17 weeks (varies between countries)	Intensive mentoring during 1 st and 2 nd year at school (ongoing training)
Additional requirements after graduation in order to start teaching	No	In most countries teaching after the Teach For All programmes is not possible

Table 4: Steps of Teacher Education by Traditional and Alternative Route into Teaching

General requirements must be met in all countries in order to enter traditional teacher training. Within the alternative-pathway programmes of the Teach For All partner organisations however, there is a complex multi-stage recruitment and selection process which participants have to complete in order to be admitted to the programmes. Detailed information on the selection process is given in chapter 5.1.

In many of the participating countries, the duration of the study programme varies depending on the school form the future teacher may wish to teach, as shown in Table 5.

School Type	Austria	Bulgaria	Latvia	Romania	Spain
Primary	3	3	4	3	4
Lower-secondary	4.5	4	4	3	5
Upper-secondary	4.5	4	4	5	5

Table 5: Duration of Study Programme for Different School Types in Years

Students wishing to teach at primary schools in Austria attend university for three years, while those wishing to teach at secondary schools must complete a study programme of 4.5 years (OECD 2014a, p. 508-510). A similar pattern is observed in Spain, where the study programme for primary school lasts four years and the one for secondary schools lasts five years (OECD, 2014a, p. 508-510). In Bulgaria, students wishing to teach at primary schools must attend university for three years, while those intending to teach at secondary schools must complete a four-year study programme (Eurydice, 2013, p. 26-28). The greatest difference is observed in Romania, where the study programme for primary school and lower-secondary education has a duration of three years, while the study programme for upper-secondary education lasts five

years (ibid.). In Latvia, there is no difference in the duration of study programmes among school types; for primary to upper-secondary school, the duration of the study programme is four years (ibid.).

As part of the study programme, it is often required that the students complete a teaching practicum, which is similar to an internship. Students are expected to gain their first teaching experience by supporting teachers at schools. This is important because it is often the only opportunity for student teachers to gain practical experience before graduating and starting work as official teachers. Academic teacher education programmes, unlike the Teach For All programme, are often viewed as very theoretical with little time dedicated to practice. To determine whether this is true for the five participating countries, information regarding the duration of the practical part of the teacher education programmes was collected.

In the Eurydice report on the teaching profession in Europe (2015, p. 34) the duration of the teaching practicum in the different countries is measured in European Credit Transfer and Accumulation System (ECTS) credits. The ECTS was created to standardise the study attainment and performance of students in higher education in Europe. One ECTS credit equals 25-30 hours.

Teaching Practicum	Austria	Bulgaria	Latvia	Romania	Spain
ECTS credits	4.8	10	39	5	12

Table 6: Duration of the Teaching Practicum in ECTS Credits by Participating Countries

Austria and Romania have similar standards, according to which students are required to complete 4.8 and 5 credits as a practicum, respectively. Students in Bulgaria must complete 10 credits of teaching practice, while students in Latvia are required to complete 39 ECTS credits of teaching practice at schools. Eurydice Network did not provide information on the duration of the teaching practicum in Spain in ECTS credits; however, it was possible to obtain this information in whole days from the *Education at a Glance* (OECD, 2014a, p. 513) report. According to this report, the teaching practicum in Spain lasts 40 days. Considering that a working day has 8 hours and one ECTS credit is 25 hours, the working time would correspond to 12.8 ECTS credits. However, the university websites in Spain report only 12 ECTS credits for the teaching practicum (Basque Country University, 2018; Deusto University, 2018; UNED, 2018; URJC, 2018) and expert interviews have confirmed this number.

Requirements for Teaching	Austria	Bulgaria	Latvia	Romania	Spain
Bachelor's degree	Primary school	Primary + sec. school	Primary + sec. school	Primary school + lower sec. school	Primary school
Master's degree	Secondary school			Upper sec. school	Secondary school
Extra requirements	Secondary school			Primary + sec. school	Primary + sec. school

Table 7: Requirements for Teaching by Participating Countries

As shown in Table 7, the degree required to teach at primary schools is a bachelor's degree in all of the participating countries (OECD, 2014a; Eurydice, 2013). For secondary schools, the required degree varies. In Austria and Spain, a master's degree is required (OECD, 2014a, pp. 509-510). In Bulgaria and Latvia, a bachelor's degree suffices (Eurydice, 2013, pp. 26-28). In Romania, there is again a difference between upper-secondary and lower-secondary schools: while teachers for lower-secondary schools need a bachelor's degree, teachers for upper-secondary schools must have a master's degree (Eurydice, 2013, p. 28).

In some countries, completion of the study programme does not mean the graduate can start teaching immediately. In Austria, graduates of the academic study programme for secondary school must apply for a credential, or licence, to begin teaching after graduation, whereas graduates in Spain must take part in a competitive examination before they can officially work as teachers (OECD, 2014a, p. 514). Graduates in Romania must pass a national examination in order to get a teaching position at a school. In Bulgaria and Latvia, this is not necessary.

In conclusion, the data presented shows huge differences in various aspects of teacher education among the countries investigated. For example, while applicants in Austria must go through an interview and a standardised test to be accepted onto a teacher education programme, there are no specific criteria in Romania. The duration of a teaching practicum in teacher education programmes also varies from 4.8 ECTS credits in Austria and Romania to up to 39 ECTS credits in Latvia. This shows that each of the participating countries is unique in its teacher education system, therefore comparisons must be undertaken with caution as contexts can be very different.

4.2.2 Overview of Teacher Education Within the Teach For All Programme

To interpret results of the intervention groups, it is important to take a closer look at the NEWTT alternative pathway. It is based on the Teach For All approach but has been adapted to each country's specific needs¹⁸.

¹⁸ Source of information: Skype calls with and documents from each Teach For All partner organisation.

The alternative teacher training and induction programmes in the five participating countries are structured very similarly as they are all based on the Teach For All approach. The complete training programme lasts for a period of two years for each cohort of participants and encompasses three phases: Pre-Institute/Online Campus, Summer Institute/Summer Academy and ongoing training/professional development (in-service courses for participants) (Table 8).

The alternative training programme begins with a Pre-Institute or, as it is called in Austria, an Online Campus. In all countries except Latvia, this phase of blended learning lasts four to six weeks. In Bulgaria, the phase is longer as participants enter the programme over a period of several months. In the Basque Country, Pre-Institute does not have a fixed duration. It consists of a series of readings, reflections and exercises that every fellow must carry out before the start of Summer Institute. However, the teaching load of these readings and exercises is around 15-20 hours. The estimated time to complete the work load is 4-6 weeks. However, depending on when the recruiting campaign ends or when the fellow has been recruited (at the beginning of the campaign or on the last day of it) this time period can vary.

During the blended learning phase, participants are expected to complete a series of readings that aims to provide fellows with some context on educational inequity and different approaches to teaching and learning. They must also work on reflection exercises. The purpose of the blended learning phase is to prepare participants for the in-person sessions during the Summer Institute. In Latvia, two in-person orientation meetings, each of which lasts a full day, replace Pre-Institute. Participants are introduced to the structure and aims of the programme. In contrast to the other countries, participants in Latvia are not given preparatory learning input for the Summer Institute. The Basque Country trialled meetings between new fellows and second-year fellows (or alumni) before new fellows join the Summer Institute, so that they can share their experiences and get to know each other. Depending on the availability of the second-year fellow, this could be a classroom observation, a post-conversation, or an informal meeting. In Bulgaria, all of the theoretical coursework is completely aligned with the national requirements for obtaining teaching credentials.

Summer Institute is the theoretical and practical training phase. It lasts six weeks in all countries except the Basque Country, where it is five weeks. During this time, participants receive carefully-designed training, which combines intensive theoretical training with practical exercises (role playing) and reflection. It also includes a practical part during which participants have the opportunity to teach pupils at Summer Schools, which are organised by the Teach For All partner organisations and provide pupils with additional classes (e.g. remedial mathematics or languages) during the summer break. Summer School lasts two weeks in all countries except Bulgaria, where it lasts three weeks, and the Basque Country, where it lasts four weeks. Subjects are taught in the morning while projects and activities take place in the afternoon. Fellows are able to gain

valuable practical teaching experience during Summer School as well as additional practice of planning lessons and of leading groups during the afternoon activities. While the fellows teach, experienced colleagues observe them, who are then able to provide feedback based on real-life situations and challenges. Both, Pre-Institute and Summer Institute constitute the preparatory teacher training. This pre-service training is the beginning of the two-year ongoing training programme that encompasses full support via trainers from the Teach For All partner organisations and professional development courses. The idea of ongoing training is already introduced during the pre-service training phase.

Training Structure	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Pre-Institute	5 weeks	4-6 weeks	5.5 months	2 meetings (two full days)	4-5 weeks
Summer Institute (incl. Summer School)	6 weeks	5 weeks	6 weeks	6 weeks	6 weeks
Ongoing training/ prof. development	1 st and 2 nd school year				

Table 8: Duration of Different Phases of the Alternative Training Programme Phases by Teach For All Partner Organisation

After completion of the Summer Institute, participants are placed at schools as teachers. However, Basque Country participants are placed at schools as teaching assistants. The alternative training and induction programme requires participants to teach for two successive school years. During this time, participants are provided with ongoing training and professional development courses by the Teach For All partner organisations. In most countries, those training sessions take place on Fridays and weekends once a month. That said, in Latvia, the sessions take place twice a month on two consecutive days. In the Basque Country, they normally happen on Fridays and sometimes on the weekend; and in Austria, they take place regularly during the week and as blocked sessions on weekends.

The training workload of the entire programme varies across countries comprising from 334 lessons¹⁹ in Austria to 650 lessons in Latvia. The overall teaching practice participants obtain during their two-year training is the sum of their teaching time at Summer Institute and their teaching hours at school. In general, most participants teach roughly 10 lessons at Summer Institute. The only exceptions are Bulgaria, where participants teach 30 lessons, and the Basque Country with 20 lessons. The amount of teaching practice obtained at the placement school depends on participants' weekly teaching obligations (15 lessons per week in the Basque Country

¹⁹ One standard lesson lasts 45 minutes.

to up to 30 lessons per week in Bulgaria) and actual school days in the country. Overall, participants teach between 1,200 and 1,800 lessons at schools during their two-year training.

Training Workload	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Academic lessons (lessons on pedagogy)	279	250			
Academic lessons (lessons on leadership)	55	90			
Academic lessons (total)	334	340	480	650	523
Teaching practice at Summer Institute (peer week)	9	20	30	10	8.5
Teaching practice at school 1 st year	774	540	864	774	648
Teaching practice at school 2 nd year	774	648	864	774	648
Teaching practice (total)	1,557	1,278	1,758	1,558	1,305

Table 9: Training Workload During Alternative Training Programme (in Lessons) by Teach For All Partner Organisation

In addition to their training workload, participants receive ongoing training and professional development courses, which vary depending on the national Teach For All network organisation (Table 10). A large part of these ongoing courses is needs-based training, including theoretical topics, workshops and expert talks, as well as the organisation and participation of conferences. It should be underlined that the content of these interventions is closely aligned with teacher needs and stems from the diagnostic activity in which the support team and the teachers engaged. Aligning interventions with needs in this manner does not occur in general teacher training.

Furthermore, participants have an assigned trainer²⁰ from the organisation who visits them at school for classroom observation and reflection sessions. The frequency of school visits varies from four times per year in Latvia and Romania to six times per year in Austria and up to eight times per year in Bulgaria and the Basque Country. If participants need additional support, school visits can be more frequent in all countries. In all countries, participants have virtual contact with their trainer at least every two weeks. In Latvia, participants have weekly virtual meetings during which they reflect on a personal goal. Those additional support meetings include, for example, individual meetings for continuous evaluation. The additional support meetings for participants from Empieza por Educar in the second year include individual advice on design, implementation

²⁰ The term depends on the Teach For All partner organisation. The trainers are also referred to as mentors or tutors.

and evaluation of projects and written feedback. In Austria, the contact with trainers takes place virtually as well as in-person on a regular basis.

Ongoing Training and Professional Development Courses		Teach For All Partner Organisations				
		Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
School visits	1 st year	6 times	8 times	6-8 times	4 times	4 times
	2 nd year	2-4 times	6-9 times	5-6 times	4 times	4 times
Needs-based training	1 st year	47 hours	15 times	8-10 weekends	Every 2 nd week 1,5 days	5 days
	2 nd year	43 hours	24 times	8-10 Weekends	Every 2 nd week 1,5 days	4 days
Additional support meetings	1 st year	6h	3 times	2 Weekends	3 days	4 times
	2 nd year	6h	3 times	2 Weekends	3 days	twice
Reflection meetings		6h per year	After-school visits	Weekly (tutor)	Every week (virtual, tutor)	10 per year (virtual, mentor)

Table 10: Ongoing Training and Professional Development Courses Offered by Teach For All Partner Organisation

Most participants are placed at secondary or middle schools. Therefore, participants in general teach grades 5 and up. Only in Bulgaria and Romania are participants placed at primary schools as well (Table 11).

School Type	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Primary school (grade level 1-4)			x		Grade level 0-4
Middle school (grade level 5-8)	x		x		x
Polytechnic school (grade level 9)	x				
Secondary school (grade level 5-12)		x	x	x	
Vocational School			x	Grade level not known	

Table 11: School Type and Teaching Grades of Placement School by Teach For All Partner Organisation

Since the alternative teacher training programmes adhere to the Teach For All approach, which aims to counter educational inequalities, participants in all countries except Latvia²¹ are placed at vulnerable schools. Those schools are often characterised as being located in poor areas with ethnically diverse demographics. In countries where it is possible to obtain information on pupils' results on external assessments (Romania, Bulgaria, and the Basque Country), placement schools are in general those schools where pupils achieve below average results in external assessments.

Characteristics of Placement School	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Urban areas	x	x	x	x	
Ethnically diverse communities	x	x	x		x
Poor areas	x		x		x
Rural or disadvantaged communities		x	x		x
Low average student results on external assessments	x	x	x		x
School size	200-600 students	200-700 students	100-300 students	Not known	Not known

Table 12: Characteristics of Placement School by Teach For All Partner Organisation

School sizes vary not only among countries but also within countries — the smallest hosts 100 pupils, the largest 700 pupils (Table 12). Once participants are placed at their assigned school, they have the same full responsibilities as regular teachers: they assess pupils, give grades, teach, correct tests and homework, have parent-teacher meetings, etc. Some participants are the main teacher for their class, i.e. they are the teacher responsible for that one class, going on field trips, discussing internal conflicts, being the contact person for parents, and so on. In Romania, all participants working at primary schools hold the role of main class teacher. Only in the Basque Country are participants placed at schools as teaching assistants. They are not solely responsible for the pupils they teach, but rather they support the respective teacher in the class by teaching small groups within the class or by team-teaching. In addition to assisting teachers, they support the board of directors with the development and implementation of new projects. Most extra-curricular activities take place in the afternoon (e.g. journalist club in Latvia). However, in Romania these activities also take place during the summer vacation (Table 13).

²¹ In Latvia, participants are placed at average schools in urban areas.

Function/ Tasks of Fellows at School	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Administering examinations, grading pupils	x		x	x	x
Acting as main class teachers	x		x	x	x
Tutoring classes after school (preparation for examination)	x		x	x	x
Running extra-curricular activities	x	x	x	x	x
Developing community-based projects	x	x	x		x
Running community outreach programmes			x		
Assisting board of directors with design and development of new projects		x			

Table 13: Function/Tasks of Fellows at Placement School by Teach For All Partner Organisation

The variety of subjects taught is quite vast, ranging from mathematics and sciences to languages and humanities (e.g. history, philosophy), physical education, and, in some countries, even vocational subjects. In Austria, some participants facilitate workshops such as woodworking. Being placed as teaching assistants rather than teachers, the range of subjects taught by participants from Empieza por Educar is not as wide as that of participants from the other alternative teacher education programmes (Table 14).

Subjects Taught	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
National language	x	x	x	x	x
Foreign languages	x	x	x	x	x
Mathematics	x	x	x	x	x
Sciences	x	x	x	x	x
Geography	x		x		x
History	x		x		x
Physical education	x				x
Vocational subjects (economics, marketing etc.)	x		x	x	
Art					x
Wood working	x				

Table 14: Subjects Taught at Placement School by Teach For All Partner Organisation

Most of the participants are involved in school activities beyond their teaching obligations. They run clubs in the after-school programme, such as a sports, music, or journalism clubs. Some offer tutoring to individual pupils or small groups, for instance to help prepare them for final examinations.

Macro-Level Results – Summary

Even though the five participating countries vary in terms of their socioeconomic factors, working conditions, and their ways of educating future teachers, all countries face teacher shortages — apart from the Basque Country. Teach For All partner organisations, through this project, aimed to address these shortages and inform European policy reform in this area.

In general, teachers are on average between 46 and 49 years old. Teachers in Romania are the youngest, with an average age of 42, while teachers in Latvia are the oldest, with an average age of 48 years. In Latvia, teachers retire at 63.5 years. In Romania, it is 60 years (for females) or 65 years (for males). Teachers in Austria and Bulgaria are on average 47 years of age. In Spain, they are 46 years old. The expected retirement age in Austria and Spain is 65, and 60 (for females) or 65 (for males) in Bulgaria.

The greatest differences that were found related to the respective annual basic gross statutory salary in each country. Teachers in Austria receive the most, with an average salary of at least €34,116 up to a maximum of €70,853. The minimum annual salary of teachers in Spain is slightly less at €31,737, while it can only increase to a maximum of €44,711. Teachers in Latvia, Romania, and Bulgaria earn the least, with average salaries of €4,860 in Latvia, €3,810 to €10,124 in Romania, and €3,681 in Bulgaria. While these differences seem huge, the salaries need to be put in context of the average annual gross salary of each country. In four of the five participating countries, the average annual gross salary is between the minimum and maximum level of teachers' salaries. Spain is an exception here; the minimum salary of teachers is already higher than the average annual gross salary (€26,205).

The teaching hours in the five participating countries range from 17 to 18 hours in Austria and 18 hours in Romania, to 22 to 26 hours per week in Bulgaria. Teachers in Latvia teach on average 21 hours per week, while teachers in Spain have an average teaching time of 22 to 23 hours per week. Additionally, teachers complete non-classroom tasks, which are not included in the average teaching hours, such as preparing lessons, correcting exams, and attending meetings with parents.

Regarding the prerequisites for entering the education programmes at university, there are great differences among the five countries. While in Austria, applicants must go through an interview and a standardised test, there are no prerequisites for applicants in Romania. In Latvia and Spain, the grade average in final school examinations is taken into account, while applicants in Spain also need to go through a standardised test. In Bulgaria, the grades in state matriculation examinations or in a university entrance examination (depending on the school type for which a candidate wants to train) are taken into account.

Concerning traditional teacher education in the participating countries, the duration of the study programme mostly depends on the school type the future teacher may wish to teach. In Austria, Bulgaria and Romania, students wishing to teach at primary school attend university for three years, while in Spain their education lasts for four years. In Romania, a differentiation is made between lower and upper-secondary school; the duration of the study programme is three years for lower-secondary and four years for upper-secondary schools. In Austria, Bulgaria, and Spain, such a distinction is not made, but the duration of teacher education for secondary school in general amounts to 4.5, 4 and 5 years respectively. Latvia is an exception here because the teacher education programme takes four years regardless of school type. Furthermore, student teachers are required to gain practical experience before starting work as official teachers through teaching practicums. The duration of teaching practicums varies greatly among the five countries. In Austria and Romania, a teaching practicum amounts to the equivalent of five ECTS; the duration is considerably higher in the other three countries. While the teaching practicum in Bulgaria and Spain amounts to the equivalent of 10 ECTS and 12 ECTS respectively, student teachers in Latvia gain the most practical experience before starting work at school with 39 ECTS.

In all five countries, a bachelor's degree is required to teach at primary school. For secondary schools, the required degree varies. In Austria and Spain, a master's degree is required, while in Bulgaria and Latvia, a bachelor's degree suffices. In Romania, there is, again, a difference between lower-secondary and upper-secondary school: while teachers for lower-secondary school need a bachelor's degree, teachers for upper-secondary school must have a master's degree.

The alternative teacher training and induction programmes in the participating countries are structured very similarly as they are all based on the Teach For All approach. The complete training programme lasts for two years and encompasses three phases: Pre-Institute, Summer Institute/Summer Academy, and ongoing training/professional development. The alternative teacher training starts with the Pre-Institute, which is a blended learning phase and lasts for two meetings in Latvia, four weeks in Austria, the Basque Country and Romania, and 5.5 months in Bulgaria. The Summer Institute is the theoretical and practical training phase. It lasts six weeks in all countries except the Basque Country, where it lasts five weeks. It also includes a Summer School during which participants have the opportunity to teach pupils during the summer break before starting work at school. Summer School lasts between two to four weeks depending on the country. After completion of the Summer Institute, participants are placed at schools as teachers and provided with ongoing training and professional development courses by the national Teach For All partner organisations. Additionally, participants are assigned a trainer by the organisation who visits them for classroom observation and reflection sessions.

Since the alternative teacher training programmes adhere to the Teach For All approach, which aims to counter educational inequalities, participants in all countries except Latvia are placed at vulnerable schools. Once participants are placed at their assigned school, they have the same full responsibilities as regular teachers, except in the Basque Country, where participants are placed at schools as teaching assistants and are not solely responsible for a class.

5 Meso-Level Results

The contextual implementation of the traditional and alternative pathway of teacher education in the five participating countries is also relevant for the evaluation of the project. This information enables comparisons at the meso level, which are useful for a better understanding of the differences and similarities between the institutions and the formalised curricula in the participating countries (e.g. section 5.2). Important sources were *Education at a Glance* (OECD, 2014a) and information taken from interviews with the Teach For All staff as well as the national websites of each participating Teach For All organisation.

Section 5.1 includes an overview of the selection process for participants in the traditional and alternative pathways of teacher training. The selection process for the traditional pathway focuses on specific prerequisites of teacher candidates, whereas selection for the alternative pathway is a complex recruitment process. It was necessary to gather information about the recruitment of fellows for the Teach For All programmes to better understand how the Teach For All partner organisations were involved in the recruitment process and what criteria they used to select candidates for training and placement in vulnerable schools.

Section 5.2 outlines the content of the teacher education programmes within the traditional and alternative teacher training pathways in the participating countries. The content of the alternative teacher training pathway will be presented in particular detail because every aspect of the training, such as the Pre-Institute, Summer Institute and Summer School, as well as the ongoing training, has a special content.

Section 5.3 describes the school as a context for professional development. One important factor here is the collaboration between schools and Teach For All partner organisations. Both partners have to work together to achieve the most effective placement of fellows in schools. This section further presents a description of the placement process during the induction phases of the alternative and traditional routes. In this context, mentoring strategies for both pathways are illustrated. Lastly, the tasks performed by the fellows at school are examined more closely. To this end, data is presented from the third survey administered to the fellows at the end of their first school year. To provide an additional perspective, data from the head teacher survey conducted in Austria and Bulgaria is reported. This data gives an insight into the tasks and responsibilities of the fellows as perceived by head teachers.

5.1 Selection Process

This section presents an overview of the selection process for participants in the traditional and alternative pathways of teacher training. Regarding the traditional pathway, the overview focuses on specific prerequisites of teacher candidates. For the alternative pathway, the recruitment and selection process is described in detail.

5.1.1 Prerequisites for Traditional Academic Teacher Education

Even though the selection criteria for traditional academic teacher education programmes are not as complex as the recruitment process within the Teach For All programme, certain prerequisites must be satisfied (see Table 15).

Prerequisites	Participating Countries				
	Austria	Bulgaria	Latvia	Romania	Spain
Interview	x				
Standardised test	x				x
Grade average in final school examination			x		x
Grades in state matriculation examinations		x			
Grades in a university entrance examination		x			

Table 15: Prerequisites for Academic Teacher Education by Participating Country

Applicants in Austria must go through an interview and a standardised test when applying for a teacher education programme for upper-secondary and lower-secondary school, as well as for primary schools (OECD, 2014a, pp. 496-510). In Spain, all applicants, regardless of the intended school type, must pass a standardised test, and their grade average is taken into account (OECD, 2014a). In Bulgaria, the prerequisites depend on the type of teacher education programme. For future primary school teachers, the prerequisites are applicants' grades in state matriculation examinations or in a university entrance examination. For future teachers of lower-secondary and upper-secondary schools, the prerequisites are grades in state matriculation examinations plus grades in university entrance examinations in the specific subject they wish to study. In Latvia, the only prerequisites are grades in a centralised final secondary school examination. The grades taken into account are always those in the Latvian language examination and those in the examination in one of the subjects²² the student wishes to study at university. For example, if he or she wants to become a biology teacher, his or her grade in the final examination in biology will

²² Alternatively, it can be a related subject. For instance, the mathematics grade would be taken into consideration if an individual wanted to study informatics.

also be taken into account. In Romania, there are no special criteria for accessing a teacher education programme.

5.1.2 Recruitment Process for the Teach For All Programme

To obtain information about the complex recruitment process for the Teach For All Programme, data was collected in three stages. The first stage encompassed thorough website research. The information was then revised and completed by Teach For All partner organisations. Finally, guided interviews were conducted with heads of training of Teach For All partner organisations (for a detailed description of the information gathering process, see Table 107 in the Annex).

One important aspect prior to the start of the recruitment process was advertising for the Teach For All programme. The different advertising strategies of the five organisations are shown in Table 16. This information was gathered through interviews with employees of the Teach For All partner organisations. As can be seen, collaboration with universities was very important for all five Teach For All organisations in advertising their programmes. The internet also played a big role in advertising, with most of the Teach For All organisations making use of social media websites or placing banners about the programme on websites. Important advertising avenues are marked with an **x in bold font**. Aspects mentioned in two or more interviews are marked with two xx, while less relevant aspects are marked with a single x in normal font.

Type of Advertising	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Collaboration with student organisations	x	x		xx	xx
Promotion during university lecture			x		
University events		xx		xx	xx
Social media	xx	xx		xx	xx
Posters in the city	x	x			
Career fairs	xx	x	xx		
Radio spots	xx		xx		
TV spots	xx		xx		xx
Online job portal		x			
Internet banners			x		
Collaboration with NGOs			xx	xx	xx
Newspaper					x

Table 16: Advertising Strategies by Teach For All Partner Organisation

Applicants for the Teach For All programme had to meet formal as well as social requirements. Table 17 displays information about formal application requirements taken from the websites of the participating Teach For All organisations. ‘x’ indicates that an aspect is important and ‘-’ indicates that an aspect is irrelevant; blank boxes mean that aspects are not mentioned.

Application Requirements	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Bachelor’s degree	x	x	x	x	x
Grade/academic performance	x	x	x	x	
Skills in the official language of the country	x	x	-	x	
Skills in English	x	x	x		
Working permit/citizenship	x	x	x		x
Achievements in professional life		x	x	x	
Age		-	-	-	-
Teaching licence as exclusion criterion	x	x	-	-	
Teacher education at university as exclusion criterion	x		-	-	

Table 17: Overview of Application Requirements by Teach For All Partner Organisation

Although some information is missing for some countries, it is possible to see many similarities in the application requirements of the five countries. In all countries, a bachelor’s degree was required and the candidates’ academic performance was taken into account. In Austria, there is no official grade point average of academic performance. During interviews, Teach For Austria informed us that the grade point average of candidates was generally 2.5. The grade point average of candidates with a migration background, i.e. of candidates of the preferred target group, was a little lower (2.7).²³ Candidates for Empieza por Educar needed a grade point average of 6 or 7 out of 10.

English skills are important in most of the countries. In the Basque Country, candidates needed a level C1 or B2 in English. In 2016, all participating countries except Austria had no age limit for applicants; at that time, Teach For Austria preferred candidates up to the age of 35, but this limit no longer applies. Only Austria considered experience in teacher education at university as an exclusion criterion, specifically if the candidate had completed more than 60 ECTS point in a teacher education programme at university.

²³ The higher values indicate lower competences in Austria, since the grading system ranges from 1 (outstanding) to 5 (fail). However, in the Basque Country, higher grades indicate higher competences.

Alongside formal aspects, social aspects were also relevant for identifying suitable applicants. All of the participating Teach For All organisations rated their candidates on a scale of 1 to 5 on various aspects, which were mainly social in nature. Overall, all five countries used very similar rating criteria for their candidates as depicted in Table 18²⁴. Rating criteria, which were more important than others, are marked with an **x in bold font**.

Rating Criteria	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Identification with goals	x	x	x	x	x
Social engagement	x	x			
Communication skills	x	x	x	x	x
Motivation	x	x		x	x
Perseverance	x	x		x	x
Leadership	x		x		x
Excellent grades in bachelor's degree	x	x			
Professional engagement	x	x			x
Empathy		x			
Engagement with diversity			x		
Willingness to learn			x	x	
Skills needed to work in challenging environment		x	x		
Organisational and planning skills		x	x		x
Emotional stability			x		
Effort in the application					x
Grammatical accuracy		x			x
Self-reflection		x			x
Ability to build relationships		x			x
Analytical thinking		x	x		x
Achievements (academic and professional)		x		x	

Table 18: Candidate Rating Criteria by Teach For All Partner Organisation

Table 19 was developed using information gathered through the interviews with employees of the Teach For All organisations. Phases that are more important, are marked with an **x in bold font**. As the table shows, the selection phases in all five countries involved an online application and an assessment centre including a mini-class held by the candidates. For the mini-class, each candidate prepared a seven-minute lesson on a topic of his or her choice and assumed the role

²⁴ When asked about the characteristics of the ideal fellow, interviewees at the Teach For All partner organisations frequently mentioned similar traits. Results of these interviews are included in Table 108 in the Annex.

of teacher. The other candidates played the part of his or her pupils. The organisation of the assessment centre differed a little from country to country. In Austria, the assessment centre included the mini-class, role-playing activities, reflection, and an interview. In the Basque Country, an individual case analysis and an analytic test were included alongside the mini-class, the interview and the role-playing activity. In Bulgaria, three aspects were relevant: mini-class, role-playing activity, and interview. In Latvia, the assessment centre included the mini-class, group work analysing problems, role-playing activities, and reflection. These aspects applied to Romania, too, but with the addition of an interview. Usually, a final interview was conducted at the end of the seven-minute mini-class, but in some countries, candidates were interviewed later. In the Basque Country, an analytic test was administered at the assessment centre itself, whereas in Bulgaria, candidates were tested before being admitted to the assessment centre. Some countries omitted the phone interview or conducted it only when information from the online application needed clarification.

Selection Phases	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Online application (CV and essays)	x	x	x	x	x
Phone interview	x	x	x	x	
Assessment centre	x	x	x	x	x
Analytical test (questions about pedagogy and data analysis)		x	x		
Final interview		x		x	

Table 19: Selection Phases by Teach For All Partner Organisation

Table 20 provides an overview of the selection process that took place in the Teach For All partner organisations in 2016. The duration of the selection procedure for each participating Teach For All network organisation took between two and eight weeks, with the exception of Romania, where it took five months. The candidates selected through this process constituted the NEWTT intervention groups. In Austria, the Basque Country and Bulgaria, 10.5% or less of all applicants were accepted onto the programme. The highest numbers of applicants were in Spain, Bulgaria and Austria, where the selection rate was lower. In Romania and Latvia, the selection rate was a little higher at 14.25% and 12.2%, respectively. Teach For Romania was founded in 2014 and is the youngest, which might explain the still relatively small number of applicants in comparison to the other countries. The Bulgarian and Spanish Teach For All organisations were founded in 2011, while Teach For Austria was founded in 2012. Iespējamā Misija, the oldest, was founded in 2008.

Teach For All Partner Organisations	Length of the Selection Process	Number of Applicants in 2016	Number of Fellows Accepted in 2016	Selection Rates in Percent (average for the last three years 2014-2016)
Teach For Austria	3-7 weeks	939	51	6.7 %
Empieza por Educar	2 months each round (there are 3 rounds altogether)	<ul style="list-style-type: none"> • 400 in the Basque Country • 2,710 in Spain 	<ul style="list-style-type: none"> • 20 in the Basque Country • 68 in Spain 	<ul style="list-style-type: none"> • 5% in the Basque Country • 2.5 % in Spain
Teach For Bulgaria	5 weeks	2,464	149	2015-2016: 8.6% 2014-2015: 10.5% 2013-2014: 7.4%
Iespējamā Misija	2-3 weeks for each of the 4 phases	164	20	12.2%
Teach For Romania	5 months	407	58 (but only 43 signed the contract)	14.3%

Table 20: Candidate Selection Process in 2016 by Teach For All Organisation

Several questions of the head teacher survey in Austria and Bulgaria focused on the head teacher's general perception of new teachers who entered the teaching profession via alternative educational pathways. The majority of the head teachers (92.3%) of both countries agreed that schools should be able to recruit teaching staff from alternative pathways as full teachers after two years of service. The majority (72.9%) also agreed that more persons who do not study teaching should have the opportunity to work in schools. Most head teachers (84.6%) considered Fellows to be an important addition to their schools, while 27.3% indicated that they should remain an exception.

Item		Head Teachers		
		Austria	Bulgaria	Total
Schools should be able to recruit teaching staff with alternative education paths (e.g. Fellows of Teach For Bulgaria/Austria) as full teachers after two years of service.	Answer Options	Percentage		
	I agree	60%	73.7%	66.7%
	I partially agree	30%	21.1%	25.6%
	I partially disagree	5%	5.3%	5.1%
	I disagree	5%	0%	2.6%
	N	20	19	39
More persons who did not study teaching should have the opportunity to work in schools for two years.	Answer Options	Percentage		
	I agree	5.3%	0%	2.7%
	I partially agree	31.6%	16.7%	24.3%
	I partially disagree	36.8%	50%	43.2%
	I disagree	26.3%	33.3%	29.7%
	N	19	18	37
Persons who did not study teaching are an important addition to the teaching profession.	Answer Options	Percentage		
	I disagree	5%	5.3%	5.1%
	I partially disagree	15%	5.3%	10.3%
	I partially agree	25%	47.4%	35.9%
	I agree	55%	42.1%	48.7%
	N	20	19	39
Persons who did not study teaching should remain an exception in the teaching profession.	Answer Options	Percentage		
	I disagree	58.8%	56.3%	57.6%
	I partially disagree	11.8%	18.8%	15.2%
	I partially agree	23.5%	18.8%	21.2%
	I agree	5.9%	6.3%	6.1%
	N	17	16	33

Table 21: Head Teacher Survey — Head Teachers' General Perception of Alternately-Trained Teachers

5.2 Content of Teacher Education

The following sections give an overview of the content of teacher education in the participating countries. For the traditional teacher education pathway, only the pedagogical content is reported. For the alternative training programmes, the content is presented in more detail.

5.2.1 Overview of the Content of Traditional Teacher Education Programmes

In the context of the traditional pathway of teacher education, it is not crucial to report on the subject-specific content, which depends on the teaching subject(s) chosen by the students, but rather to report on the pedagogical content taught to all students regardless of their chosen subject(s). For students training to become teachers in lower-secondary schools in Austria, Bulgaria, Latvia, Romania and Spain, pedagogical studies, educational science, and child development studies are mandatory (OECD, 2014a, p. 512).

5.2.2 Overview of the Content of Alternative (Teach For All) Teacher Education Programmes

The overview of the content of the alternative pathway of teacher education starts with a detailed description of the Pre-Institute. In the next step, the content of the Summer Institute and the Summer School are presented. Finally, the content of the ongoing training will be described.

As shown in section 4.2.2, the Pre-Institute is a blended learning phase during which participants are expected to study various materials and work on reflection exercises in preparation for the Summer Institute. It starts with a kick-off meeting during which the aims and values of the Teach For All training programme are presented. This serves the purpose of orientation, so participants get to know each other and the people involved in their training (tutors/mentors/trainers, etc.). The orientation meeting also provides candidates with a more detailed overview of the structure and content of the training programme.²⁵

During the remaining four to six weeks of the Pre-Institute, participants read about background topics such as inequalities in the country's school system, the situation of pupils, and the educational context of the country. Most countries require participants to visit schools to get a first-hand impression of the actual situation. One focus of the alternative teacher training programmes is leadership, therefore teaching as leadership is a topic that is covered in most countries during the Pre-Institute phase. Participants are expected to reflect on teachers' roles, their own attitudes toward teaching, and their motives for becoming a teacher.

Bulgaria, the Basque Country and Austria include most of the topics during the Pre-Institute. Participants receive materials regarding learning theory, assessment and understanding the environment of pupils. Regarding the latter, school visits are compulsory. In Bulgaria and Austria, participants study the history of pedagogy, methodologies and child psychology. In Bulgaria and Latvia, participants are required to observe lessons (online) or analyse the structure of lessons. All countries except Austria, emphasise the core principles of teaching as leadership. Apart from these similarities, each national Teach For All organisation has its own focal points. For a complete overview of the topics covered during the Pre-Institute/Online Campus, see Table 22.

²⁵ In Latvia, there is no Pre-Institute; there is only the kick-off meeting, which lasts two days.

Training Content – Pre-Institute/Online Campus	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
TFA Leadership Wheel and Values	x			x	x
Understanding reality of students and school (school visits)	x	x	x	x	x
Teachers' roles	x				
Motivation and purpose	x	x			
Conflict defaults and conflict matrix	x				
Metacognition	x				
Learning theory	x	x			
SMARTi goals	x				
Assessment	x	x	x		x
Pygmalion effect	x	x			
Success criteria for learning	x				
Backwards planning	x				
Introduction to the history of pedagogy / methodology / psychology	x		x		
Developing functional literacy /language competence	x		x		
Classroom management	x				
Understanding educational context in the specific country		x			x
Teaching as leadership core principles		x	x	x	x
Theory of change		x	x		x
Online lesson observation			x		
Tracking			x		
Lesson planning				x	
Analysing lessons structures				x	

Table 22: Content of Training at Pre-Institute/Online Campus by Teach For All Partner Organisations

Summer Institute is a five-to-six-week intensive interactive training phase, which takes place in person. Trainers of the alternative training programme spend those weeks with participants activating and deepening the knowledge participants have gained during their self-studies (Pre-Institute). The starting point is the situation of pupils in the country, education-related inequalities, the goals of the programme relating to changing the opportunities available for disadvantaged pupils, and ways of involving the community (see Table 23 and Table 24).

Training Content – Summer Institute	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Introductory topics					
Programme overview/ support structures after Summer Institute		x			
TFB 20-year plan and goals		x	x		
Cycle of poverty		x	x		x
Educational inequality, PISA	x			x	
Equity in education		x			
Achievement gap	x	x			
Teach For All goals/ values	x	x	x	x	x
School policies and legal requirements for teachers	x				

Table 23: Content of Training During the Summer Institute by Teach For All Partner Organisations – Introductory Topics

Training Content – Summer Institute	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Community involvement		x	x		
Involving parents	x	x	x		
Community activities		x	x		x
Field visits to the students		x	x		

Table 24: Content of Training During the Summer Institute by Teach For All Partner Organisations – Topics on Community Involvement

However, the focus of the training content is mostly on learning- and instruction-related topics (e.g., backwards planning, setting learning goals, lesson and unit planning, teaching methods, assessment and tracking, and subject methodology) as well as topics related to classroom management, rules, routines, and conflict resolution. All topics on teaching methods and teaching tools are presented in Table 25. The theoretical sessions are combined with practical exercises, such as role-playing or drama workshops, and reflection exercises with tutors and peers. Participants also learn about self-assessment and some forms of stress management or emotional intelligence in order to help them cope with their challenging tasks and foster their professional development. For a detailed overview of topics on professional development covered during Summer Institute, see Table 26.

Training Content – Summer Institute	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Teaching Methods and Tools					
Introduction of competency matrix	x	x			
Backwards planning	x	x	x	x	x
Teaching methods	x	x		x	
Motivational strategies	x	x	x		
Classroom management	x	x	x	x	x
Rules, routines, classroom rituals	x	x	x		x
Assessment	x	x		x	x
Tracking/ documentation	x	x			
Subject-specific methodology	x	x	x	x	x
Lesson openings/ endings	x	x			x
Memorising techniques for pupils	x				
Solution-oriented feedback	x	x			
Language sensitivity	x	x			
Learning circles	x	x			x
Dealing with violence	x				
5-step lesson plan		x	x		
Learning and lesson goals		x	x		
Special educational needs			x	x	
Differentiation			x		
Learning theories				x	
Lesson observation tools		x		x	
Subject curriculum exploration		x		x	
Use of ICT in the classroom				x	

Table 25: Content of Training During the Summer Institute by Teach For All Partner Organisations – Topics on Teaching Methods and Tools

Training Content – Summer Institute	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Professional Development					
Leadership matrix/ holistic leadership develop. programme	x		x		
Setting personal goals	x	x			
Teacher roles	x	x			
Reflection and coaching	x	x		x	x
Drama workshop/ role-playing exercises	x	x			x
Preparation for Summer School		x	x	x	x
Vision for professional development			x		
Community building across cohorts		x	x		

Table 26: Content of Training During the Summer Institute by Teach For All Partner Organisations – Topics on Professional Development

Summer School, which is included in the Summer Institute, gives participants the opportunity to teach real pupils before they start working at their assigned placement school. Participants are required to teach classes in the morning and observe lessons and reflect with their tutors and peers afterwards. In the afternoon, they organise recreational activities or projects for the pupils. The focus of the training at Summer School is on lesson planning, instruction, lesson observation and reflection. For more details, see Table 27.

Training Content – Summer School	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Classroom management	x	x			
5-step lesson plan/ lesson planning	x	x	x	x	x
Practical instruction (with students)	x	x	x		x
Forms of assessment		x	x		
Planning assessment		x	x	x	
Trackers and solutions, online tracker		x	x		
Check for understanding		x	x		
Rehearsals and practice lessons			x		
Reflection (with tutors)	x	x	x	x	x
Prepare for parent meetings			x		
Leading (learning, self, others)				x	
Evaluating	x	x			x
Class observation	x	x			x

Table 27: Training Content of Summer School by Teach For All Partner Organisation

After participants have been placed at their assigned schools and start teaching, they receive ongoing training and support by the Teach For All partner organisations as well as through the professional development courses. In all countries, the content of the ongoing training covers topics which have already been taught before but which are reviewed to give participants the opportunity to deepen their understanding and reflect on issues which they might be struggling with. Those topics revolve around learning and instruction, such as backwards planning, teaching methods, motivation strategies for pupils, tracking, assessment, and differentiation. Classroom management and conflict resolution are recurring topics as well (see Table 28).

Training Content – Ongoing Training	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Competence matrix	x	x			
Involve and activate	x	x		x	
Backwards planning	x	x			x
Execute effectively	x	x			
Setting meaningful goals	x	x			x
Vision setting for the class	x	x			x
Classroom management	x	x	x	x	
Teaching methods	x	x	x	x	
Lesson planning	x	x	x		
Subject-specific teaching techniques	x				
Assessment for learning	x	x	x	x	x
Differentiation	x	x	x		
Learning circles for collegial case study reflection and goal setting	x	x	x		
Techniques of assessment	x	x	x	x	x
Student motivation		x			
Socio emotional skills development		x			
Leadership development plan		x			x
School visits		x			
Child psychology (children’s development)			x	x	
Providing pupils with access to more opportunities			x		
Develop functional literacy			x		
Tracking		x		x	

Table 28: Content of Ongoing Training Offered by Teach For All Partner Organisations

Fellows are also offered professional development. In Romania, those meetings are actually called professional development days. The topics covered during these meetings focus on the development of the fellows, their personal goals, and their emotional wellbeing. There is a focus

on reflection of personal goals and mindfulness. Participants are trained in self-assessment and provided with techniques for, among other things, reducing stress. For a detailed overview of the topics covered by the different alternative training programmes, see Table 29.

Training Content –Professional Development	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Stress management	x		x	x	
Reflection	x	x	x	x	
Observation		x		x	
Supervision			x	x	
Leading self	x	x	x	x	
Set personal goals		x	x	x	
Mindfulness	x	x			x
Planning and management of collaborative projects		x			
Emotional wellbeing			x		x
Positive psychology					x
Conflict management at school		x			x
Meetings with people working in the field of social entrepreneurship		x	x		

Table 29: Content of Professional Development Offered by Teach For All Partner Organisations

5.3 Schools as a Context for Professional Development

The following section examines the school as a learning environment for professional development of beginning teachers. First, the relationship and collaboration between the Teach For All partner organisations and the respective placement schools is described. Second, an overview is given of mentoring and support structures as well as teacher induction in a more general sense. The information is presented separately for alternatively-trained and traditionally-trained teachers. Lastly, the tasks of the alternatively-trained teachers are examined more closely to gain a better understanding of their responsibilities compared to traditionally-trained teachers.

5.3.1 Collaboration Between Teach For All Organisations and Schools

The collaboration between the Teach For All partner organisations and the placement schools is rooted in particular in the fact that both need a perfect match between school and fellow. Achieving the perfect match is not as easy as it may seem. Granted, the young professionals (candidates/fellows) want to realise equal opportunities in the education sector, and the placement schools, which have a very high level of socially disadvantaged children, expect the fellows to help promote these equal opportunities. Nevertheless, it is not easy to combine all these expectations. Rather, candidate placement is a complex process involving different

responsible people at different times during the school year. In this chapter, the different ways of placement used by all Teach For All partner organisations except Romania²⁶ are presented.

The placement process is different in each participating Teach For All organisation. Whereas fellows in Austria and the Basque Country are placed by the national Teach For All network organisation and the government, fellows in Bulgaria and Latvia are allowed to choose their school under certain conditions. Even though the placement process differed between the Teach For All organisations, it is common that one to two fellows are placed at one school, most frequently in two different school years (see Table 30).

Placement	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
Fellows allowed to choose school	no	no	Yes	yes	
Number of fellows at any one school	2	2	1-2	1-2	

Table 30: Placement Strategy by Teach For All Partner Organisation

In Austria, the placement process begins in autumn. At that time, members of the recruiting, selection and matriculation team discuss the maximum number of fellows for the next school year. Then, a complex, three-level process begins. First, the Vienna School Council (VSC) takes some important decisions regarding the placement process. Second, school head teachers register their needs with the school inspectors. And third, the persons responsible for the placement process register their needs with school head teachers and the school inspectors. The process is structured chronologically at every level, although the levels do interact with each other.

The complex placement process involves different persons and institutions with different responsibilities and different times of involvement. Results of meetings with one partner often have an effect on other parts of the placement process.

The aim is to conclude the placement process before the beginning of the summer holidays so that fellows, head teachers, and teachers still have an opportunity to meet each other. This timing is also important for the subject-specific education in the context of the summer academy: fellows need to know which subjects they will teach (German, English or maths).

In the Basque Country, placement schools are chosen by the Basque government based on a series of vulnerability criteria among the schools that are part of Hamaika Esku. Hamaika Esku is

²⁶ No information about the placement process was received from Teach For Romania.

an institutional programme aimed at reducing the percentage of pupils who perform poorly²⁷ in the different external evaluations (PISA, Diagnostic Evaluation (ED)) carried out in the schools.

The Hamaika Esku programme provides participating schools with the kinds of resources and measures that have already proved their worth in other initiatives and have shown to be effective at improving educational outcomes. The name Hamaika Esku ('eleven hands') references the fact that the lines of intervention and follow-up are many and varied, and that it needs many professionals and agents to join forces.

The Basque Government evaluates a host of indicators to determine whether a school should be included in the Hamaika Esku programme, including the following items:

Indicators for Inclusion in the Hamaika Esku programme	
a. ISEC-Level	b. Academic results
c. Percent of immigrant students	d. Results of external evaluations
e. Geographical situation	f. Number of repeaters
g. Peculiarities of the context	h. Educational reinforcements
i. Scholarship holders	j. Stable or not addresses
k. Number of students	l. Relations with Berritzegune (support services, are educational instruments for innovation and improvement of education)
m. Ratios	n. Collaborations with other external agents
o. Instability of the teaching staff	p. Problems of coexistence
q. Number of classes that ceased to be taught last year	r. Number of cases of abuse between peers
s. Level of absenteeism	

Table 31: Indicators for a School's Inclusion in the Hamaika Esku Programme

The first phase of the programme is to develop the skills of its pupils. For this purpose, the programme aims to end the negative trend in student performance and, subsequently, to raise learning gains to an intermediate level. For the development of this programme, it is necessary to involve different agents who have significant contact with the pupils, such as:

1. The school, which provides a standardised context for educational intervention;
2. Families, which are an essential link for action in a non-formal setting;
3. The different units and services of the Basque Educational Administration, such as Support Services, Inspection;
4. The different departments of the Basque Government (Health, Social Policy, etc.).

²⁷ Pupils whose results rank on the lowest level of the achievement tests.

The Department of Education, Language Policy and Culture makes a clear commitment to support schools whose students obtain results more than 5% lower than the average obtained by schools in the Autonomous Community of the Basque Country.

In Bulgaria, fellows are allowed to choose their school under certain conditions. All available target openings are shared with them three times during the placement season (20th April, 15th May, and 10th June). Teach For Bulgaria tries to share as much information as possible. Apart from the basic information about the position (region, school, subject, number of students, etc.), the organisation also provides additional information on their partnership with the head teacher and the regional stakeholders, and whether other fellows have taught at the school before.

As part of the matriculation process, Teach For Bulgaria organises four group meetings to explain how target schools are selected, how to read the data provided, and how to choose the position that will best suit each fellow.

In Latvia, the placement process consists of several stages. First, schools submit an application in which they indicate the school's vacancies; explain their motivation to partner with the Teach For Latvia programme; and describe the support system for new colleagues at the school. Then, the Teach For Latvia programme team selects the schools that will be offered to the fellows according to the previously set criteria. Next, the fellows are offered a shortlist of a maximum of three schools they can choose to visit and attend a job interview at. The shortlist of schools considers fellows' personal preferences as stated in their applications to the programme (region, school type, age groups, etc.).

After visiting the school and taking part in the job interview at one of the shortlisted schools, the fellow and the school's administration team are given two to three days to make a decision about whether to sign the contract. Mostly, decisions are positive, and both parties begin discussions about the work contract. In cases where either of the parties does not agree to sign a work contract, the programme invites the fellow to visit another school from the shortlist.

The programme selects schools according to the following criteria:

1. The vacancy: the position has to be in one of the obligatory school subjects (maths, English, science, etc.). The number of lessons to be taught has to be between 15 and 21 lessons per week.
2. Motivation to become a partner organisation of Iespējamā Misija and to employ a fellow of the programme: Even though there are no strict criteria as to the type of school, preference is given to mainstream (upper and lower) secondary schools which face high-risk challenges in terms of student academic achievements, school attendance, and local community social issues, etc.

3. Support system for new teachers: It is essential that schools have at least begun designing or implementing a support system that allows new colleagues to adapt to a school environment. The Teach For Latvia programme is looking for schools that would like to improve or to develop a support system that would attract new teachers to continue working at the school after graduating from the programme.

The strategy for school partnerships is developed by one of the core team members of the Teach For Latvia programme. The training and support team and the recruitment and selection team are responsible for the selection of schools. The individual who developed the strategy for the school partnership in any given year conducts all school visits and communication with the fellows and school representatives.

5.3.2 Overview of Mentoring/Teacher Induction in the Teach For All Programme

Alongside the Summer Institute, fellows receive ongoing training and professional development courses depending on the national Teach For All network organisation (Table 32). The greater part of this development is the needs-based training, which includes theoretical topics, workshops and expert talks as well as organising and participating in conferences. It should be underlined that the content of these interventions is aligned with fellows' needs and stems from the diagnostic exercise that the support team and the teachers themselves are engaged in which is not a given in traditional teacher training.

The Teach For All network organisation also assigns participants a tutor/mentor/trainer²⁸ who visits them at their school for classroom observation and reflection sessions. The frequency of school visits by the tutor/mentor/trainer varies from four times a year in Latvia and Romania, to six times a year in Austria and up to eight times a year in Bulgaria and the Basque Country. If participants need additional support, school visits can be more frequent in all countries. In all countries, participants stay in contact with their tutor/mentor/trainer virtually at least every two weeks. In Latvia, participants have weekly virtual meetings during which they reflect on a personal goal. These additional support meetings include, for example, individual meetings for continuous evaluation. The additional support meetings for participants from *Empieza por Educar* in the second year include individual advice on the design, implementation, and evaluation of projects (plus one written piece of feedback). In Austria, the contact between fellows and their tutor/mentor/trainer takes place on a regular basis virtually as well as personally.

²⁸ The specific term used depends on the national Teach For All organisation.

Ongoing Training and Professional Development Courses	Teach For All Partner Organisations				
	Teach For Austria	Empieza por Educar	Teach For Bulgaria	Iespējamā Misija	Teach For Romania
School visits (1 st year)	6 times	8 times	6-8 times	4 times	4 times
School visits (2 nd year)	2-4 times	6-9 times	5-6 times	4 times	4 times
Needs-based training (1 st year)	47 hours	15 times	8-10 weekends	Every 2 nd week 1.5 days	5 days
Needs-based training (2 nd year)	43 hours	24 times	8-10 weekends	Every 2 nd week 1.5 days	4 days
Additional support meetings (1 st year)	6 hours	3 times	2 weekends	3 days	4 times
Additional support meetings (2 nd year)	6 hours	3 times	2 weekends	3 days	2 times
Reflection meetings	6 hours per year	After-school visits	Weekly (tutor)	Every week (virtual, tutor)	10 per year (virtual, mentor)

Table 32: Ongoing Training and Professional Development Courses by Teach For All Partner Organisation

5.3.3 Overview of Mentoring/Teacher Induction in Traditional Routes into Teaching

Teacher induction is an important phase at the beginning of the professional career of first-time teachers. The aim of the induction phase is to support first-time teachers by giving them additional training, personalised help, and advice. Unlike during a teaching practicum or internship, the beginning teachers carry out all or many of the tasks of experienced teachers and are financially compensated for their work. The induction phase lasts at least several months and usually ends with an assessment, either confirming their recruitment or enabling them to register as teachers (Eurydice, 2015).

According to Eurydice (2015, p.43), an induction phase is compulsory for teachers in three of the participating countries: Austria, Romania, and the Basque Country. In Bulgaria and Latvia, there are no central regulations for fully-qualified teachers. In Austria and Romania, the duration of the induction phase is one year, while in Spain, it lasts between three months and one year, depending on the region. In certain countries, the introduction of an induction phase is very recent. In Romania, it was introduced in 2012/2013; in Austria, an obligatory induction phase for upper-secondary education was introduced for all beginning teachers in 2015/2016. In September 2019, this will be broadened to include also lower-secondary schools (Europäische Kommission/EACEA/Eurydice, 2018). In Spain, induction is limited to permanent teaching staff only.

Eurydice and TALIS 2013 surveyed teachers with no more than five years' teaching experience in lower-secondary education and asked them whether they had taken part in formal induction

programmes when they were newcomers to teaching. In Bulgaria and Romania, 80% and 49% respectively of the surveyed group answered 'yes' to this question. Only 35% of the surveyed teachers in Spain and 25% in Latvia said they had participated in formal induction programmes. As Austria did not take part in TALIS 2013, unfortunately it was not possible to retrieve data.

Even though induction programmes are not compulsory or centrally regulated in Bulgaria, a greater proportion of beginning teachers in Bulgaria took part in such programmes than in countries where it is compulsory, such as Romania and Spain. In Romania and Spain, induction programmes were offered to permanent — not occasional — staff recruited as civil servants only.

The Eurydice Network also investigated whether various factors influenced first-time teachers' participation in induction programmes. In Bulgaria, being under 40 years of age had a positive predictive impact, while in Spain having less than five years' teaching experience did the same. Both factors hint at a recent introduction of induction programmes. In Latvia, however, both factors (age under 40 and experience of less than five years) had a negative predictive impact, indicating that older teachers with more experience took part in such programmes. It is interesting to find that in Romania, the teacher's age (under 40) also had a negative predictive impact, even though induction programmes were introduced only recently in the country, as previously stated (Eurydice, 2015, pp. 43-47).

It is also important to analyse the support offered and other activities organised by schools in order to gain a better understanding of the support structure for beginning teachers during their induction period. Therefore, TALIS 2013 included questions for school head teachers about induction programmes. Head teachers were asked whether their school had an induction programme and, if so, what its main activities were. Table 33 presents the percentage of school head teachers in each country who mentioned induction-related activities at their schools. The most common activities for teachers in induction programmes in four of the participating countries involved taking part in mentoring sessions and scheduled meetings with the head teacher and/or colleagues. Some activities were more common in some countries than in others, such as keeping a diary/journal or being observed by peers. Having scheduled meetings with the head teacher and/or colleagues was the most frequently mentioned activity in Latvia, Romania and Spain, while the most frequently mentioned activity in Bulgaria was mentoring.

Activity	Bulgaria	Latvia	Romania	Spain
Mentoring	95%	75%	79%	60%
Scheduled meetings with the head teacher and/or colleagues	90%	85%	98%	99%
Courses/seminars	57%	63%	78%	79%
Team-teaching	55%	70%	70%	50%
Networking/virtual communities	19%	40%	40%	30%
Peer observation	18%	50%	62%	28%
Collaboration with other schools	25%	41%	70%	23%
Diaries/journals	0%	70%	70%	24%

Table 33: Percentage of Teachers in Lower-secondary Education with Access to Various Types of Induction Activity, as Reported by Head Teachers in 2013

The head teacher survey conducted in Austria and Bulgaria provides additional insights into the induction phase. Head teachers were asked whether a new beginning teacher at their school undertakes a formal induction process. This question was taken from TALIS (2008). Answer options can be found in Table 34. In Bulgaria, head teachers reported more frequently that all new teachers at school (52.6%) went through an induction process, while in Austria head teachers claimed that only 21.1% of all new teachers went through such a process.

Offered Induction Process	Head Teachers					
	Austria		Bulgaria		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Yes, for all teachers who are new to this school.	4	21.1%	10	52.6%	14	36.8%
Yes, but only for teachers for whom this is their first teaching job.	3	15.8%	7	36.8%	10	26.3%
No, there is no induction process for teachers who are new to this school.	12	63.2%	2	10.5%	14	36.8%
N	19	19	19	19	38	38

Table 34: Head Teacher Survey — Information on Existence of Induction Process

Furthermore, head teachers were asked about the organisation of the induction process. Again, this question was also included in TALIS (2008). In both countries, the greater part of the process was organised by the school alone (83.3%), while most schools in both countries (59%) were responsible for formally consulting with agencies or institutions outside of the school.

Organisation of Induction Process	Head Teachers					
	Austria		Bulgaria		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
The school alone.	6	85.7%	14	82.4%	20	83.3%
The school together with agencies or institutions outside of the school.	0	0%	3	17.6%	3	12.5%
Outside agencies or institutions alone.	1	14.3%	0	0%	1	4.2%
N	7	7	17	17	24	24

Table 35: Head Teacher Survey — Information on Organisation of Induction Process

The head teacher survey included a question from TALIS (2013) on the different structures and activities included in the induction programme.

Structure and Activities Included in Induction Programme	Head Teachers					
	Austria		Bulgaria		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Mentoring by experienced teachers	7	100%	17	100%	24	100%
Courses/seminars	4	57.1%	5	29.4%	9	37.5%
Scheduled meetings with head teacher and/or colleague teachers	5	71.4%	15	88.2%	20	83.3%
A system of peer review	1	14.3%	14	82.4%	15	62.5%
Networking/virtual communities	4	57.1%	10	58.8%	14	58.3%
Collaboration with other schools	0	0%	0	0%	0	0%
Team teaching (together with more experienced teachers)	7	100%	6	35.5%	13	54.2%
A system of diaries/journals, portfolios, etc. to facilitate learning and reflection	3	42.9%	4	23.5%	7	29.2%
None of the above	0	0%	0	0%	0	0%
N	7	7	17	17	24	24

Table 36: Head Teacher Survey — Information on Structures and Activities Included in Induction Process

The majority of head teachers in both countries stated that the following structures and activities were included in the induction process: mentoring by experienced teachers (100%), scheduled

meetings with head teacher and/or colleague teachers (83.3%), a system of peer review (62.5%), networking/virtual communities (58.3%), and team-teaching (54.2%).

The head teacher survey included questions on the cost of teacher induction. Head teachers were asked to state their agreement to the statements: "...A new, qualified teacher would cost us less time and effort to introduce to the system than a Fellow." and "Our administrative expenses are higher for a Fellow than for a new, qualified teacher.", using a scale of 1 (I disagree) to 4 (I agree). Results show that the majority of head teachers believe that the induction for a traditionally-trained beginning teacher would not require less time and effort than the induction for a TFA fellow (84.6%). They also stated that administrative costs are not higher for a fellow than for a traditionally-trained beginning teacher (92.3%).

Costs of Induction	Head Teachers					
	Austria		Bulgaria		Total	
Time and Effort	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
I disagree	11	55%	2	10.5%	13	33.3%
I rather disagree	6	30%	14	73.7%	20	51.3%
I rather agree	2	10%	3	15.8%	5	12.8%
I agree	1	5%	0	0%	1	2.6%
N	20	20	19	19	39	39
Administrative Expenses	Austria		Bulgaria		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
I disagree	15	75%	8	42.1%	23	59.0%
I rather disagree	3	15%	10	52.6%	13	33.3%
I rather agree	0	0%	1	5.3%	1	2.6%
I agree	2	10%	0	0%	2	5.1%
N	20	20	19	19	39	39

Table 37: Head Teacher Survey — Beliefs on Costs of Induction

The Eurydice Network also investigated centrally regulated mentoring. In Austria, Romania, and Spain, there was compulsory, centrally regulated mentoring as part of the induction programme. Not coincidentally, these are the countries where induction programmes are compulsory. In Bulgaria and Latvia, mentoring was left to schools themselves. Between 2011 and 2015, 1,000 teacher mentors were trained in Latvia as part of the Innovative and Practice-Based Teacher-training and the Mentors' Professional Development project financed by the European Social Fund. In Romania, the selection of teacher mentors was based on results of a competition that included both theoretical and practical tests (Eurydice, 2015, p. 48).

TALIS 2013 asked beginning teachers whether they currently had a mentor. In this case, the question was not posed to teachers taking part in induction programmes only. However, the survey separated the positive answers by age group, allowing for an analysis of whether

mentoring was used mainly to assist newcomers in transition to the profession, or to support more experienced teachers as an aspect of life-long learning. Table 38 shows the data for the four countries who took part in the TALIS 2013 study.

Age Group	Bulgaria	Latvia	Romania	Spain
Under 30 years	20%	22%	17%	12.5%
30-39 years	9%	4%	8%	4%
40-49 years	6%	2.5%	6.5%	3%
50-59 years	4%	3.5%	5%	4%
60 years and more	5%	3%	3.5%	6%

Table 38: Percentage of Teachers in Lower-secondary Education Who Had a Mentor in 2013 at the Time of the Survey (by Age Group)

In all of the countries investigated, the proportion of teachers under 30 years of age who had a mentor at the time that the survey was conducted is distinctly larger than the proportion of teachers in the other age groups. This indicates that in these countries, mentoring was used as a way to support beginning teachers. Again, in TALIS 2013 predictive factors were investigated, with the results indicating that less than five years' teaching experience had a positive predictive impact on the assignment of a mentor to teachers in Latvia, Romania, and Spain. In Bulgaria however, being on a fixed-term employment contract had a positive predictive impact. School characteristics such as the availability of a mentoring system at the school and the location in a city of over 15,000 inhabitants also had positive predictive impact in Bulgaria and Spain. However, having more than 400 pupils at the school had a negative predictive impact in Romania, meaning that teachers working at bigger schools were not usually assigned a mentor.

Regarding the results of the head teacher survey, the majority of head teachers in Austria (65%) and Bulgaria (68.4%) indicated that they observed new teachers' lessons once or twice a month.

Frequency of Hospitations with New Teachers per Month	Head Teachers			
	Austria		Bulgaria	
	Frequency	Percentage	Frequency	Percentage
Never	0	0%	0	0%
Once or twice	13	65%	13	68.4%
Thrice or four times	4	20%	2	10.5%
Five or six times	2	10%	0	0%
Seven or eight times	0	0%	2	10.5%
Eight times and more	1	5%	2	10.5%
N	20	100%	19	100%

Table 39: Head Teacher Survey — Frequency of Hospitations with New Teachers per Month

The same is true for lesson observations with fellows. The majority of Austrian (75%) and Bulgarian (73.7%) head teachers reported to have observed lessons once or twice a month.

Frequency of Hospitations with Fellows per Month	Head Teachers			
	Austria		Bulgaria	
	Frequency	Percentage	Frequency	Percentage
Never	3	18.8%	14	0%
Once or twice	12	75%	1	73.7%
Thrice or four times	0	0%	3	5.3%
Five or six times	0	0%	1	15.8%
Seven or eight times	0	0%	0	5.3%
Eight times and more	1	6.3%	19	0%
N	16	100%	14	100%

Table 40: Head Teacher Survey — Frequency of Hospitations with Fellows per Month

Planned meetings between new teachers and/or pedagogical staff in Bulgaria took place at least once a week or two to three times a week (58.8%), which was more frequent than in Austria, where meetings occurred at least once a week (50%).

Frequency of Planned Meetings for New Teachers and/or Educational Staff to Communicate with Each Other	Head Teachers			
	Austria		Bulgaria	
	Frequency	Percentage	Frequency	Percentage
Never	5	27.8%	0	0%
Less than once a month	3	16.7%	0	0%
At least once a month	1	5.6%	7	41.2%
At least once a week	9	50%	7	41.2%
At least two or three times a week	0	0%	3	17.6%
N	18	100%	17	100%

Table 41: Head Teacher Survey — Frequency of Planned Meetings with New Teachers / Educational Staff

The head teacher survey adapted a scale on pre-set times for collaborative meetings from PIRLS (Progress in International Reading Literacy Study) by Bos et al., 2010). According to the head teachers of both countries, planned meetings for new, traditionally-trained teachers to communicate with fellows took place mainly once a week (46.2%) or once a month (35.9%). Furthermore, according to the head teachers of both countries, opportunities for fellows and traditionally-trained teachers to exchange materials regarding lessons and methods occurred mainly once a week (50%) or once a month (26.3%).

Frequency of Cooperative Meetings Between New Teachers and Fellows	Head Teachers					
	Austria		Bulgaria		Total	
Communication	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Never	3	15%	1	5.3%	4	10.3%
Less than once a month	1	5%	0	0%	1	2.6%
Once a month	5	25%	9	47.4%	14	35.9%
Once a week	10	50%	8	42.1%	18	46.2%
At least twice or thrice a week	1	5%	1	5.3%	2	5.1
N	20	20	19	19	39	39
Exchange of Materials	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Never	3	15.8%	1	5.3%	4	10.5%
Less than once a month	2	10.5%	0	0%	2	5.3%
Once a month	3	15.8%	7	36.8%	10	26.3%
Once a week	10	52.6%	9	47.4%	19	50%
At least two or three times a week	1	5.3%	2	10.5%	3	7.9%
N	19	19	19	19	38	38

Table 42: Head Teacher Survey — Frequency of Meetings between New Traditionally-Trained Teachers and Fellows for Communication and Exchange of Materials

The head teacher survey included questions adapted from TIMSS (Trends in Mathematics and Science Study), Bos et al. (2007) on different areas of collaboration between teachers and fellows. The head teachers of both countries (97.3%) predominantly affirmed the statement that teachers and fellows cooperated in ‘handling interdisciplinary lesson themes’, while 94.7% affirmed that teachers and fellows cooperated in ‘implementing new teaching concepts and methods’. The majority of the head teachers of both countries (92.1%) affirmed that teachers and fellows cooperated in ‘interdisciplinary discussions about students’ performance’. Lastly, 92.1% of head teachers affirmed that teachers and fellows cooperated in ‘aiding students with learning disabilities together’. More descriptive statistics can be found in Table 128 - Table 130 in the Annex.

Cooperation Between Fellows and Teachers	Head Teachers					
	Austria		Bulgaria		Total	
Handling Interdisciplinary Lesson Themes	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Completely false	0	0%	0	0%	0	0%
Mostly false	0	0%	1	5.6%	1	2.6%
Mostly true	9	47.4%	12	66.7%	21	56.8%
Completely true	10	52.6%	5	27.8%	15	40.5%
N	19	19	18	18	37	37
Implementing New Teaching Concepts and Methods	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Completely false	0	0%	0	0%	0	0%
Mostly false	1	5.3%	1	5.3%	2	5.3%
Mostly true	7	36.8%	12	63.2%	19	50%
Completely true	11	57.9%	6	31.6%	17	44.7%
N	19	19	19	19	38	38
Interdisciplinary Discussions About Pupils' Performances	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Completely false	0	0%	0	0%	0	0%
Mostly false	2	10.5%	1	5.3%	3	7.9%
Mostly true	6	31.6%	12	63.2%	18	47.4%
Completely true	11	57.9%	6	31.6%	17	44.7%
N	19	19	19	19	38	38
Aiding Pupils with Learning Disabilities Together	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Completely false	0	0%	2	10.5%	2	5.3%
Mostly false	1	5.3%	0	0%	1	2.6%
Mostly true	6	31.6%	6	31.6%	12	31.6%
Completely true	12	63.2%	11	57.9%	23	60.5%
N	19	19	19	19	38	38

Table 43: Head Teacher Survey – Cooperation Between Teachers and Fellows

In conclusion, the data presented shows that the use of induction programmes was widespread in the five participating countries, even though they are not compulsory in all of them. In four of the five countries, teachers taking part in induction programmes had access to a wide range of activities at their schools, predominantly mentoring and meetings with head teachers and colleagues. In these countries, non-beginning teachers could also be assigned to a mentor as part of a life-long learning strategy.

5.3.4 Tasks of Fellows at School

This section examines in detail the tasks performed by the Fellows at their schools in order to clarify their role and responsibilities. Data presented was taken from the third survey conducted at the end of the first school year. All questions regarding teacher tasks were taken from the TALIS study (teacher questionnaire). Of the 42 participants in the Teach For Austria programme at the time of the third survey, one did not answer the questions on teacher tasks. Of the 39 participants of *Empieza por Educar*, four participants did not answer the questions in the third survey. In Bulgaria, eight of the 101 participants of Teach For Bulgaria did not give answers to the questions on teacher tasks in the third survey. In Latvia, all participants of *Iespējamā Misija* answered the questions on teacher tasks. For Teach For Austria and Teach For Bulgaria, an additional insight is available through the head teacher survey. The questions presented in the head teacher survey were originally taken from TALIS (head teacher questionnaire) as well.

Head teachers in both countries were asked to categorise the fellows by comparing their tasks and responsibilities to those of other personnel at the school. They had to rank different types of personnel in order to clarify the extent to which fellows can be viewed as similar to those groups. The exact wording of the question was: ‘To which part of your staff could the tasks for the fellows be compared to?’ The categories for ranking included: teacher, beginning teacher, administrative staff, intern, school management assistant, lateral entrant, educational staff, and confidant for the students. In the overall profile of both countries, fellows are equated dominantly with beginning teachers (52.8% of head teachers ranked this term first) and teachers (42.1% of head teachers ranked it second).

Perception of Alternatively-Trained Personnel	Austrian and Bulgarian Head Teachers			
	Teacher		New Teacher	
	Frequency	Percentage	Frequency	Percentage
1 st rank	16	42.1%	19	52.8%
2 nd rank	15	39.5%	11	30.6%
3 rd rank	5	13.2%	5	13.9%
4 th rank	2	5.3%	1	2.8%
5 th rank	0	0%	0	0%
6 th rank	0	0%	0	0%
7 th rank	0	0%	0	0%
8 th rank	0	0%	0	0%
N	38	38	36	36

Table 44: Head Teacher Survey — Perception of Alternatively Trained Personnel (Total of Head Teachers)

At the end of the first school term, fellows were asked how they generally spent their weekly hours of teacher tasks. The question asked was: ‘During your most recent complete calendar week, approximately how many 60-minute hours did you spend in total on teaching, planning

lessons, marking, collaborating with other teachers, participating in staff meetings and on other tasks related to your job at this school?'. In Austria, Latvia, and Bulgaria, approximately 70% of fellows reported to have spent 40 hours or more per week on teacher tasks (Austria: 68.3%; Bulgaria: 71%; Latvia: 68.4%). In Romania, this was true for almost 80% of the fellows (78.1%). In the Basque Country, this percentage was much lower (14.3%). Most fellows in the Basque Country reported to have spent 30 hours a week (25.7%), while approximately half of the fellows reported to have invested 28 hours or less in weekly teacher tasks (48.6%). The detailed descriptive statistics can be found in Table 123 - Table 127.

Fellows were also asked to report on hourly commitments to specific teacher tasks. The precise question was: 'As a teacher of this school, during your most recent complete calendar week, how many 60-minute hours did you spend on the following tasks? Also include tasks that took place during weekends, evenings or other off classroom hours.'. As can be seen in Table 45, lesson planning and preparation took up most of the fellows' weekly time in all countries. Time spent on these tasks ranged from approximately 7 hours in the Basque Country to 12 hours in Romania. Correcting student work was another time-consuming task for fellows in all countries. Fellows in Latvia reported the highest weekly hours here. Fellows reported to have spent three hours or more per week on teamwork and collaboration with colleagues in all countries except Latvia, where fellows attributed only one and a half hours per week to this specific teacher task. On average, between two and three hours were spent on counselling pupils. Only in Austria was this number slightly lower. Fellows did not seem to participate very frequently in school management; this was the teacher task with the lowest reported weekly time commitment for all countries. Only in the Basque Country, where fellows reported to have spent small amounts of time on several other teacher tasks, was school management not the task with the lowest time commitment overall. General administrative work, communication with parents, and involvement in extracurricular activities all showed rather low levels of weekly time commitment.

Variable	Item	Participating Countries									
		Austria		Basque Country		Bulgaria		Latvia		Romania	
		M	SD	M	SD	M	SD	M	SD	M	SD
SC14_01	Individual planning or preparation of lessons either at school or out of school	7.7	3.46	6.6	4.17	11.3	11.0	9.89	5.96	12.0	7.25
SC14_02	Teamwork and dialogue with colleagues within this school	3.02	2.36	2.91	1.98	4.36	4.79	1.5	1.31	3.19	3.18
SC14_03	Marking/correcting of pupils' work	3.76	1.93	2.66	2.71	4.78	6.08	5.53	4.22	4.45	2.86
SC14_04	Pupil counselling (including pupil supervision, virtual counselling, career guidance and delinquency guidance)	1.48	1.59	2.17	2.29	2.26	2.32	3.26	2.23	2.87	1.96
SC14_05	Participation in school management	0.98	1.37	1.16	1.39	1.74	4.14	0.47	1.02	0.7	1.44
SC14_06	General administrative work (including communication, paperwork and other clerical duties you undertake in your job as a teacher)	1.55	1.08	0.71	1.22	5.12	5.22	1.97	1.43	3.03	2.82
SC14_07	Communication and collaboration with parents or guardians	1.15	0.75	0.44	0.75	2.72	6.48	0.74	0.92	2.33	1.84
SC14_08	Engaging in extracurricular activities (e.g. sports and cultural activities after school)	1.48	1.72	0.71	1.66	3.08	3.96	1.32	1.57	3.13	4.1
SC14_09	Other tasks	2.21	2.71	1.88	4.0	3.7	7.96	2.67	5.57	1.97	2.47
	N	41		35		93		19		31	

Table 45: Weekly Teacher Tasks of Fellows at School by Country (in 60-Minute Hours)

However, fellows in Bulgaria and Romania reported more hours spent on these tasks than fellows from the other countries.

Data from the head teacher survey provides an additional perspective on the teacher tasks performed by fellows in Austria and Bulgaria. Questions differed slightly in both surveys; therefore, the results of the head teacher survey can further inform the results presented above.

Most head teachers in Austria and Bulgaria stated that teaching (97.3%), planning a lesson (97.3%), and support (94.6%) were the core daily tasks of the fellows. In addition, 82.9% of head teachers in both countries stated that documenting their work was one of the tasks completed by each fellow at least once a week. Other than that, most head teachers (72.2%) stated that fellows did not perform administrative tasks; if performed at all, these were a monthly or rare activity. These results are in line with the data reported by the fellows.

The majority of head teachers in Austria (88.9%) saw the correction and evaluation of student work as a daily task for teachers. Bulgarian head teachers (63.2%) tended to think that this should be a rare task, if performed at all. This is interesting, since Bulgarian fellows reported to having spent approximately five hours a week on correcting and marking pupils' work. When it comes to the task of implementing projects with students outside of lessons, there was no majority trend for this activity reported by the Austrian head teachers, while 79% of the Bulgarian head teachers saw it as at least a monthly recurring task for the fellows. The same applied to the task of individual support for pupils outside of the classroom. Here, too, the majority of head teachers in Austria did not report a majority trend, while 84.2% of Bulgarian head teachers viewed it as at least a weekly task for the fellows. Most head teachers in both countries (Bulgaria 84.2%, and Austria 77.8%) stated that the task of collaborating with parents was at least a monthly recurring task for the fellows. The task of supporting other teachers in their teaching was considered by the majority of Austrian head teachers (64.7%) to be a daily task, while the Bulgarian head teachers (63.2%) saw it as a rarely recurring activity, if performed at all. Most head teachers in both countries (Bulgaria 63.2%, and Austria 88.9%) stated that the task of participating in the planning and implementation of projects was at least a monthly recurring task for the fellows. While in Bulgaria this task only recurred monthly and weekly, in Austria it was also seen as a daily task. All descriptive results can be found in Table 131 - Table 133 in the Annex.

Meso-Level Results – Summary

Although the recruitment strategies of each national Teach For All network organisation were different, it was found that all organisations depended on collaboration with local universities in order to promote their programmes (e.g. during lectures or through student organisations) and to attract applicants. TV and radio spots were also popular strategies for making the organisation known to the public, but not for attracting potential candidates directly. As far as selection procedures are concerned, it is clear that all Teach For All partner organisations followed the same model, albeit with minor adaptations to make it appropriate for their local context.

The greatest differences among national approaches could be found in the selection rating criteria. The only criterion mentioned by all of the five organisations was perseverance. Most organisations used a rating system to assess candidate competence on a five-point scale, with 1 as the worst score and 5 the best. Each national Teach For All network organisation was directly responsible for the selection of its fellows; none of them hired external companies or psychologists to perform candidate selection. Some Teach For All partner organisations offered a scholarship to their fellows because the regular teacher salary was regarded as insufficient to cover the costs of living, studying, and travelling. Finally, a trait or mindset that was highly valued in fellows was a certain idealism about changing the school system.

From the analysis, it is possible to conclude that the selection procedure for programme applicants consisted of diverse phases during which the Teach For All partner organisations observed and rated a large number of criteria. By employing such a complex selection procedure, the organisations intended to find the most eligible and motivated fellows to participate in their two-year programmes.

The selection criteria for acceptance onto traditional academic teacher education programmes are not as complex as the recruitment process for the Teach For All programme. Nevertheless, depending on each country, certain prerequisites must be satisfied. These include: interview, standardised test, grade average in final school examination, grades in state matriculation examinations, and grades in a university entrance examination.

In the context of the traditional pathway of teacher education, it is not crucial to report on the subject-specific content of the programme, which will depend on the teaching subject(s) chosen by the students, but rather to report on the pedagogical content taught to all students regardless of their chosen subject(s).

The overview of the content of the alternative teacher education programme includes a detailed description of the Pre-Institute, the Summer Institute and the Summer School. Next, the content of the ongoing training is described. In this context, mentoring proved to be one of the most important aspects in the professional development of the alternatively-trained Fellows, and one

essential point which differentiates the alternative pathway programme from traditional programmes. Finally, the complex process for placing fellows in schools is described.

Regarding the responsibilities of Fellows at school, results show that their most time-consuming weekly tasks included individual planning or preparation of lessons and marking/correcting pupils' work.

The additional perspective provided by the survey of head teachers in Austria and Bulgaria revealed that the majority of head teachers considered the fellows' task profile comparable to that of teachers or beginning teachers. Results of the head teacher survey were mostly in line with the data reported by the fellows themselves. However, Bulgarian head teachers saw correction of pupils' work as a rare task, whereas Bulgarian fellows claimed to spend approximately five hours a week on marking and corrections. Further to the data collected from fellows, head teachers reported additional weekly tasks that fellows had to complete, such as documenting their own work or participating in the planning and implementation of projects.

6 Micro-Level Results

In the following section, results will be presented for the four hypotheses underlying this evaluation. Chapter 6.1 presents results on baseline characteristics of traditionally-trained and alternatively-trained teachers. Those include inherent characteristics such as gender and age, data on the educational background of participants as well as their prior experiences relevant to teaching, and their motives for becoming teachers. Chapter 6.2 examines the development of the teaching competences and pedagogical knowledge of alternatively-trained teachers, while Chapter 6.3 compares the teaching competences and pedagogical knowledge of traditionally-trained and alternatively-trained teachers. Finally, Chapter 6.4 explores indicators of job satisfaction and inclination to stay in the teaching profession for both groups.

6.1 Characteristics of Traditionally-Trained and Alternatively-Trained Teachers at the Beginning of Their Teaching Careers

In the following section, selected data regarding the characteristics of participants (NEWTT intervention groups, and control groups of traditionally-trained beginning teachers) is presented in detail for each country in turn. Specifically, this data includes: inherent characteristics, prior education, prior experiences relevant for teaching, and motives for becoming a teacher. For the intervention groups, all questions apart from those regarding job motives were included in the first survey wave. Questions regarding job motive were included in the second questionnaire. For the control group, all questions were included in the first survey.

6.1.1 Participant Characteristics: Austria

Sample description. The Austrian sample consists of two groups: one intervention group of beginning teachers taking part in the Teach For Austria training programme, and one control group of beginning teachers who followed the university-based teacher training path. In accordance with the selection criteria defined for the control groups in this experiment, the first priority was to select candidates with no previous teaching experience. However, since several countries had difficulties finding sufficient candidates for the control groups, this criterion was relaxed so that teachers with teaching experience of up to two years were also accepted as participants. In Austria, the majority of control group participants had no teaching experience. Only five individuals had previously worked as teachers, with an average teaching experience of 1.7 years.

Participants in the intervention group were surveyed four times. First, in May 2016, before their training programme at Teach For Austria began; second, in June 2016, after completing the Online Campus and Summer Academy but before they started working at their placement schools; third, in June 2017, towards the end of their first year working at school; and finally, in June 2018, after the second year working at school.

Participants in the control group were surveyed three times: once in September 2016 during their first weeks working at school; and again after the first and second year working at school, in June 2017 and June 2018 respectively. To increase the sample size, it was decided to add a second cohort to the control group. Due to the timeline of the entire project, the second cohort could only be surveyed twice: once during the first weeks working at school (September 2017) and once at the end of the first school year in June 2018. For this reason, sample sizes for the control group vary notably between the first two waves and the last wave. Figure 8 shows the survey design with the actual survey periods for the NEWTT intervention and control group cohorts for Austria. T₀ refers to the measurement period before any training had taken place. This measurement only exists for the intervention group. T₁ refers to the measurement period before participants started to work at school. T₂ and T₃ refer to the measurement periods after the first and second years working at school respectively. In comparison, the lengths of the survey periods for the control group are distinctly longer than those of the intervention group. This indicates that there was a problem with participants' faltering motivation to take part in the survey.

		May 2016	Aug / Sep 2016	June 2017	September 2017	June 2018
Austria	Intervention Group	May 26 – Jun 01	Aug 24 – Sep 02	Jun 12 – Jul 05		May 24 – Jul 02
	Control Group _{1st Cohort}		Sep 07 – Oct 11	Jun 12 – Aug 04		May 24 – Jul 15
	Control Group _{2nd Cohort}				Sep 06 – Dec 11	May 31 – Jul 15
		T ₀	T ₁	T ₂		T ₃
	Intervention Group	TFA Trainees	TFA Trainees	TFA Trainees		TFA Trainees
	Control Group _{1st cohort}		Beginning Teachers	Beginning Teachers		Beginning Teachers
	Control Group _{2nd Cohort}				T ₁	T ₂
					Beginning Teachers	Beginning Teachers

Figure 8: Austria — Survey Design

Of the NEWTT intervention group, 51 fellows participated in the first survey and 45 fellows participated in the second. The description of the Austrian sample takes into account the 51 participants for those scales measured during the first wave and the 45 participants for those scales measured during the second wave. For this reason, the number of participants in the intervention group varies slightly.

As for the control group, 94 participants completed the first survey. The first cohort of October 2016 included 62 individuals; the second cohort of October 2017 included 34 participants.

However, eight members of the first cohort and four members of the second cohort reported to have entered the teaching profession via an alternative route. As the control group must consist of traditionally-trained teachers, those cases were deleted. Of the remaining participants, three people from the first cohort and one from the second reported to have already had prior teaching experience of more than two years. Those participants did not therefore fit the definition of beginning teachers and were eliminated from the sample as well. This left 51 participants in the sample for the first cohort and 29 in the sample for the second, comprising a combined sample of 80 participants for the first survey wave T₁.

6.1.1.1 Inherent Characteristics

Age. Figure 9 illustrates the age distribution for both groups. The age range of participants in the intervention group was rather small, with the youngest participant being 21 and the oldest 35.

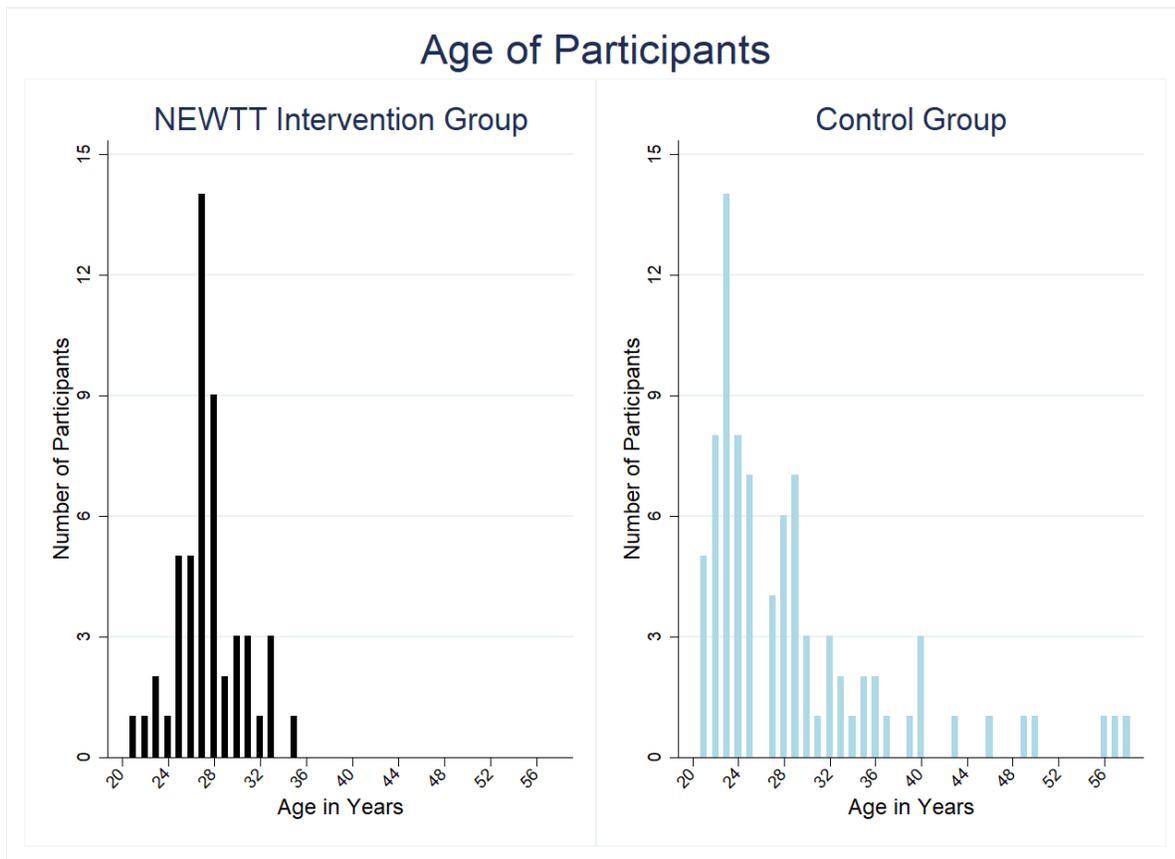


Figure 9: Austria — Age Distribution in Years by Group

Most participants were 27 and 28 years old. The age of the control group was more varied in that the age range was greater overall, with three outliers over 50 years of age. However, most participants in the control group were 23 years old. Both groups had a similar average age

(intervention group: 27.5 years; control group: 29 years). For further descriptive statistics, see Table 113 in the Annex.

Gender. 62.8% of the Teach For Austria fellows were women. With 70.6%, the sample of the control group had a slightly higher percentage of women than the sample of the intervention group. Two participants in the control group chose not to report their gender. Figure 10 shows the gender distribution of the two groups.

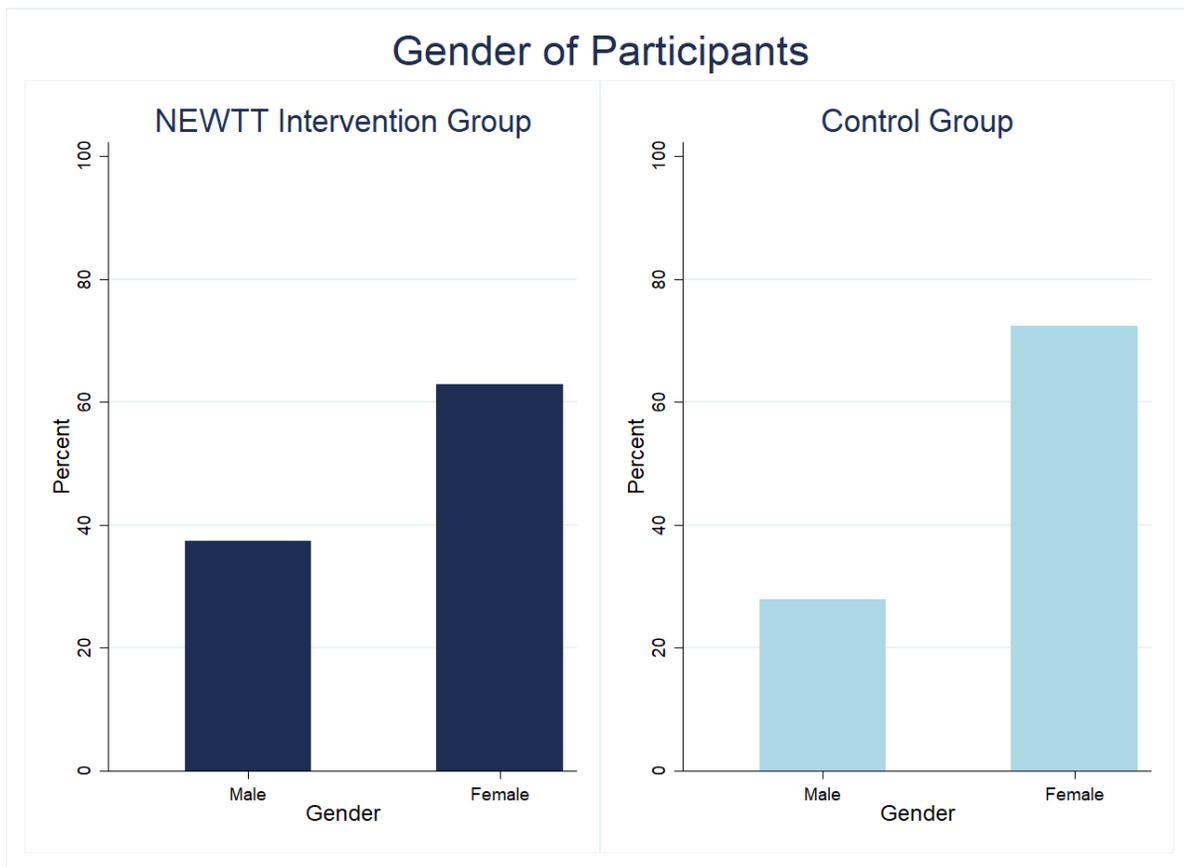


Figure 10: Austria — Gender Distribution by Group

6.1.1.2 Prior Education

Secondary School Examination Grades. Participants were asked to report the grades they received in their final secondary school examinations (called *Matura* in Austria) for three major subjects (mathematics, German, and English as a foreign language). The grading system in Austria ranges from 1 to 5, 1 being the best possible grade and 5 the worst. A grade of at least 4 is needed to pass the final examinations. A very large percentage of the intervention group reported to have achieved the best possible grade (26.5% in mathematics, 38.8% in German, and 40.8% in English

as a foreign language). The overall results of the control group participants were not as good as those of the intervention group; the percentages of subjects with the best possible grade were 17.7% for mathematics, 22.2% for German, and 21% for English as a foreign language. However, there were no significant differences in grade averages between the intervention and control groups. For further descriptive statistics, see Table 114 in the Annex.

Fields of Study. Participants in the intervention group varied greatly in terms of the subjects they had previously studied at university. However, most participants came from the fields of social sciences, or law and business. The fields of study with the next highest number of graduates were the humanities and natural sciences. In fact, the only person in the intervention group who obtained a PhD did so in natural sciences.

Field of Study	Intervention Group			Total	Control Group		
	Bachelor's	Master's	PhD		Bachelor's	Master's	Total
Languages and arts	5	3	0	8	8	3	11
Natural sciences	3	6	1	10	8	0	8
Social sciences	9	7	0	16	0	4	4
Formal sciences	1	0	0	1	8	0	8
Law and business	11	7	0	18	3	1	4
Humanities	6	6	0	12	56	4	60
Engineering	0	3	0	3	0	1	1
Health sciences	0	1	0	1	0	1	1
Other	1	5	0	6	1	0	1

Table 46: Austria — Number of Participants According to Their Field of Study and Degree Obtained

There was less variation in the control group, which was expected since members of the control group were traditionally-trained teachers. The majority had studied humanities, which in our case means teacher education. All other fields of study were represented, but in low numbers. It should be noted that multiple answers were possible here. Participants were asked explicitly to mark all fields of study in which they had obtained a degree. For the control group however, the results are unexpected, since only graduates of teacher education were recruited as control group members. It is possible that participants misunderstood the question. And some, who studied languages or maths as part of their teacher education programme, also checked the boxes for languages and arts and formal sciences respectively. Table 46 compares both groups according to their field of study and degree.

6.1.1.3 Prior Experience Relevant for Teaching

Pedagogical Experience. Participants were asked about their pedagogical experience prior to starting their teacher training. The exact questions were: ‘Have you ever worked with children or adolescents in a school before? (tutor, teacher assistant, social worker, etc.)’ and ‘Have you ever

worked with children or adolescents outside of a school before? (youth group leader, soccer coach, etc.)'. Possible responses were 1 (never), 2 (seldom), 3 (quite often), or 4 (very often). For the control group, only 34 participants answered these questions.

As shown in Table 47, the majority of participants had 'never' or 'seldom' worked with children at a school before. While one third of the participants in the intervention group reported to have worked 'quite often' or 'very often' with children at school, the percentage for the control group was slightly higher still. This is especially true for the percentage of participants who reported to have worked with children at school 'very often'.

Prior Pedagogical Experience at School	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Never	20	39.2%	9	26.5%
Seldom	14	27.5%	12	35.3%
Quite often	11	21.6%	7	20.6%
Very often	6	11.8%	6	17.7%
N	51	100%	34	100%

Table 47: Austria — Prior Pedagogical Experience of Working with Children in School

Of the intervention group, participants had worked more frequently with children or adolescents outside of the school context than within it: 39.2% responded 'never' for pedagogical work at school, whereas more than half of the participants responded that they had been involved 'quite often' or 'very often' with pedagogical work outside of the school context. In the control group, differences are not as prominent between the two forms of pedagogical work. However, the percentages of participants who reported to have been involved with children outside of the school context 'very often' are identical for intervention and control groups. All results are shown in Table 48.

Prior Pedagogical Experience outside of School	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Never	5	9.8%	8	23.5%
Seldom	17	33.3%	12	35.3%
Quite often	17	33.3%	6	17.7%
Very often	12	23.5%	8	23.5%
N	51	100%	34	100%

Table 48: Austria — Prior Pedagogical Experience of Working with Children Beyond the School Context

In summary, although a large percentage of the participants had some kind of previous experience of working with children or adolescents, most of it took place outside school.

Time Spent Abroad. Greater differences between the two groups were identified with regard to other characteristics. Whereas 84% of the participants in the intervention group reported having worked or studied abroad, a very large percentage (69.4%) of control group participants stated that they had ‘never’ worked or studied abroad. When considering only the participants who answered ‘yes’ to this question (84% of the intervention group and 30.6% of the control group), participants in the intervention group had spent a longer time abroad; 40.5% had spent more than 18 months studying or working abroad. In the control group, roughly 20% of the participants reported to have spent more than 18 months abroad. The frequencies and percentages for each answer option are presented in Table 49.

Time Spent Abroad	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Less than 6 months	10	23.8%	8	30.8%
6 to 12 months	11	26.2%	8	30.8%
12 to 18 months	4	9.5%	5	19.2%
More than 18 months	17	40.5%	5	19.2%
N	42	100%	26	100%

Table 49: Austria — Time Spent Studying or Working Abroad

Volunteer Work. Participants were asked how often they engaged in volunteer work such as involvement in social organisations (sports clubs, social projects, or development aid), political organisations or entrepreneurial activities. Differences between the two groups were found, especially with regard to involvement in social and political organisations.

Regarding social organisations, all the intervention group participants reported involvement in social organisations to some extent, whereas 22.6% of control group participants reported to have not been involved in social organisations. The most common response among the intervention group participants (37.3%) was ‘quite often’, among the control group participants (39.3%) it was ‘seldom’, as shown in Table 50. Of the control group, the majority reported to have either ‘never’ (22.6%) or ‘seldom’ (39.3%) been engaged in social organisations, while roughly a third of the participants responded either ‘quite often’ (15.5%) or ‘very often’ (22.6%).

Involvement in Social Organisations	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Never	0	0%	19	22.6%
Seldom	13	25.5%	33	39.3%
Quite often	19	37.3%	13	15.5%
Very often	19	37.3%	19	22.6%
N	51	100%	84	100%

Table 50: Austria — Involvement in Social Organisations

A similar question was asked regarding participants' involvement in political organisations. Participants in the intervention group reported to have been more involved in such activities than participants in the control group, though considerably less often than in social activities: 17.7% of intervention group participants had been involved either 'quite often' or 'very often' in political organisations. Only 2.4% of the control group reported to have been involved with political organisations 'quite often', while no one reported to have been involved 'very often'. 62.7% of the intervention group and 84.2% of the control group had never participated in political organisations. Detailed percentages for all answer options are shown in Table 51.

Involvement in Political Organisations	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Never	32	62.7%	69	84.2%
Seldom	10	19.6%	11	13.4%
Quite often	8	15.7%	2	2.4%
Very often	1	2%	0	0%
N	51	100%	82	100%

Table 51: Austria — Involvement in Political Organisations

However, both groups reported similar levels of entrepreneurial initiative. Approximately 45% of both groups had never been involved in entrepreneurial activities, while only roughly 10% of both groups reported to have undertaken entrepreneurial activities 'very often'. Table 52 shows the detailed percentages for both groups.

Entrepreneurial Initiative	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Never	22	44%	38	45.8%
Seldom	12	24%	20	24.1%
Quite often	12	24%	17	20.5%
Very often	4	8%	8	9.6%
N	50	100%	83	100%

Table 52: Austria — Entrepreneurial Initiative

Figure 11 illustrates the mean involvement levels of participants in the three forms of volunteer work. Participants in the intervention group volunteered significantly more often for social organisations and for political organisations. There is no significant difference between these groups regarding entrepreneurial activity. Here, both groups had nearly identical means.

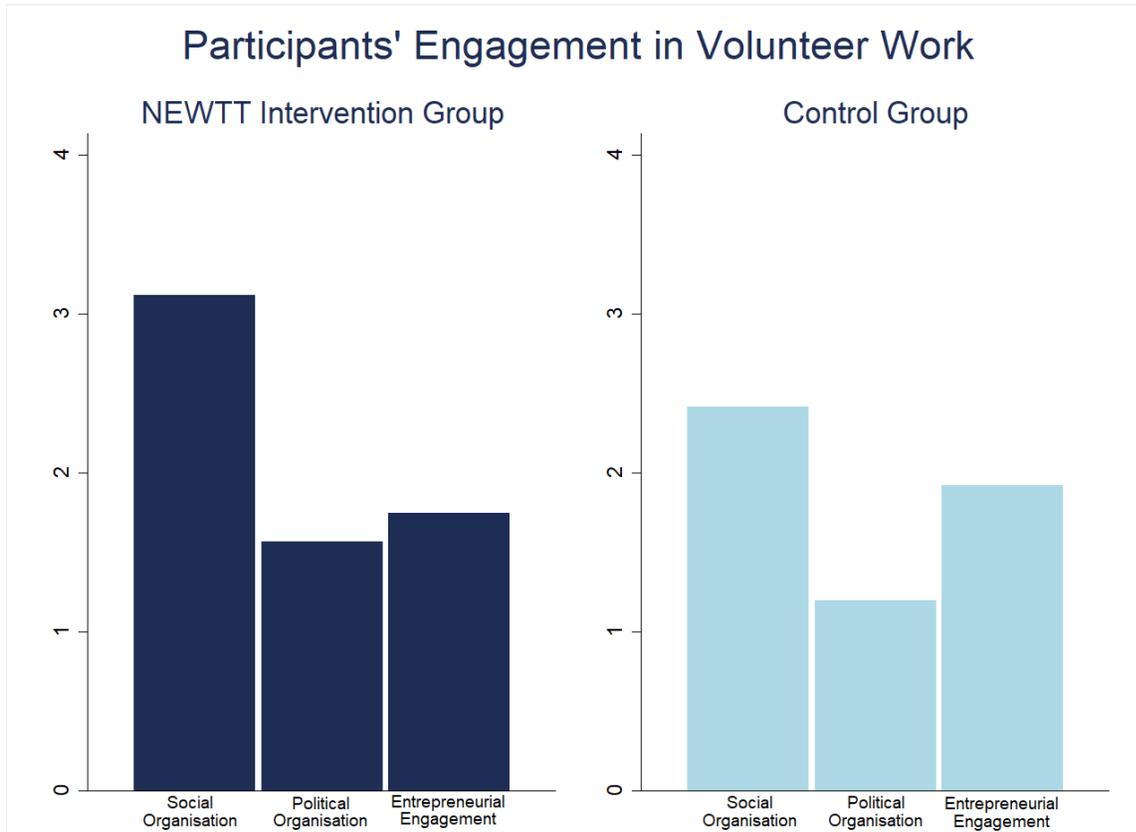


Figure 11: Austria — Involvement in Volunteer Work

6.1.1.4 Motives for Becoming a Teacher

Data on motives for teaching was retrieved from the second survey completed by the intervention group and the first survey completed by the control group. Participants in both groups completed the survey before starting to work as teachers at school.

To determine what motivated participants' decisions to become a teacher (whether as a long-term professional career or for only two years as part of the Teach For Austria programme), participants were asked to complete the *Factors Influencing Teaching-Choice Scale* developed by Watt and Richardson in 2007. This scale has been used in several international studies and has been proven to be a very effective and reliable tool for determining motives for choosing teaching as a profession. The original scale covers 13 motives and comprises 37 items; however, including all of these items was beyond the scope of the NEWTT questionnaire. Therefore, the evaluation

team chose 17 items, which seemed to be the most relevant within the context of the project. The 17 items can be assigned to the following six motives: job security, shaping the future of children and adolescents, reducing social disadvantages, social responsibility, working with children, and subject-specific motivation.

Table 112 in the Annex shows the distribution of items against job motives. The items were preceded by the following instruction: 'Please rate the importance of each of the following influences on your choice for a career in teaching on a scale of 1 (not at all important) to 7 (extremely important). I chose to become a teacher because...'. Participants subsequently rated each of the 17 items on a scale of 1 to 7.

First, results for each item are presented in Table 53. It is possible to see obvious differences between the two groups, for example in responses to items regarding job security. Members of the control group reported that job security was a more important motive for becoming a teacher than participants in the intervention group.

Factor analyses for both groups were calculated in order to replicate the proposed constructs by Watt, Richardson, Klusmann, Kunter, Beyer, Trautwein, & Baumert (2012). Results should be viewed cautiously because the samples were quite small. Factor analyses yielded a 4-factor solution for both groups. In the intervention group and control group, items TB06_01, TB06_02, and TB06_03 loaded on one factor (job security). TB06_15, TB06_16, and TB06_17 also loaded on one factor in both groups (subject-specific motivation). Results were not as clear for the items representing the motive working with children. For the intervention group, item TB06_07 loaded on one factor along with items TB06_11, TB06_12, TB06_13, and TB06_14, whereas in the control group, this item loaded on a factor along with TB06_04, TB06_05, TB06_06, TB06_08, TB06_09, and TB06_10 and TB06_14. For the control group, however, item TB06_05 loaded only weakly on this factor and equally weakly on the factor comprising 'job security'. It was therefore omitted from further analysis. Since items TB06_07 and TB06_14 did not show consistent loadings for both groups, they were omitted from further analysis as well. Furthermore, it was not possible to separate the proposed constructs 'shaping the future of children and adolescents' and 'reduce social disadvantages'. Instead, a larger construct comprising 'social responsibility' was found (TB06_04, TB06_06, TB06_08, TB06_09 and TB06_10).

Next, reliability analyses were performed for each of the factors. Cronbach's alpha value was calculated for each factor to determine how well the items represented the factor or scale. The new scale 'job security' featured a very high Cronbach's alpha value, indicating very good reliability: 0.93 and 0.95 for the intervention group and control group respectively. The results for the control group underlined the decision to omit item TB06_05 as Cronbach's alpha increased considerably after deleting it. The scale '*subject-specific motivation*' had a Cronbach's alpha value of 0.87 for the intervention group and 0.86 for the control group. This can be

considered as good reliability. For the construct ‘working with children’, the Cronbach’s alpha value (0.92 for the intervention group and 0.95 for the control group) indicated very good reliability. The scale ‘social responsibility’ had good reliability, with a Cronbach’s alpha value of 0.81 for the intervention group and 0.88 for the control group.

Variable	Item	Intervention Group		Control Group	
		M	SD	M	SD
TB06_01	...teaching will offer a steady career path.	2.93	1.65	4.9	1.56
TB06_02	...teaching will provide a reliable income.	2.8	1.54	4.58	1.65
TB06_03	...teaching will be a secure job.	2.78	1.7	4.76	1.72
TB06_04	...teaching will allow me to shape child and adolescent values.	6.51	0.81	6.26	1.06
TB06_05	...teaching will allow me to influence the next generation.	6.33	1.06	5.78	1.67
TB06_06	...teaching will allow me to raise the ambitions of under-privileged youth.	6.76	0.7	5.99	1.17
TB06_07	...teaching will allow me to benefit the socially disadvantaged.	6.22	0.99	5.45	1.43
TB06_08	...teaching will allow me to provide a service to society.	6.76	0.53	6.13	1.06
TB06_09	...teachers make a worthwhile social contribution.	6.6	0.65	6.17	1.2
TB06_10	...teaching enables me to give back to society.	6.18	1.09	5.31	1.56
TB06_11	...I want a job that involves working with children and adolescents.	5.18	1.51	5.76	1.42
TB06_12	...I want to work in a child and adolescent-centred environment.	5.16	1.47	5.73	1.33
TB06_13	...I like working with children and adolescents.	5.75	1.38	6.13	1.18
TB06_14	...I want to help children and adolescents learn.	6.29	1.1	6.12	1.06
TB06_15	...I really enjoy the topics that I will teach.	5.58	1.29	6.11	1.01
TB06_16	...I am really interested in the subject(s) that I will teach.	5.36	1.26	6.19	1.14
TB06_17	...I want to share my passion for my subject(s) with others.	5.44	1.51	5.95	1.3
	N	44		75	

Table 53: Austria — Motives for Becoming a Teacher

In Table 54, the mean values and standard deviations are shown for the newly-built scales for the four motives for becoming a teacher: ‘job security’, ‘subject-specific motivation’, ‘working with children’, and ‘social responsibility’. The data reveals that ‘job security’ and ‘subject-specific motivation’ were more important to the control group, whereas ‘social responsibility’ was slightly

more relevant for the intervention group. Both groups had very similar results with respect to the motive ‘working with children’.

Scale	Intervention Group		Control Group	
	M	SD	M	SD
Job security	2.89	1.58	4.75	1.57
Social responsibility	6.51	0.63	5.97	1.0
Working with children	5.34	1.36	5.88	1.25
Subject-specific motivation	5.47	1.19	6.08	1.02
N	47		75	

Table 54: Austria — Job Motive Scales

In Figure 12, a bar graph shows the four motives for becoming a teacher for both the intervention and the control group. As mentioned above, the motives ‘job security’ and ‘subject specific motivation’ were more important for participants in the control group. Results of t-tests indicate that the difference in means was statistically different at a 1% significance level.

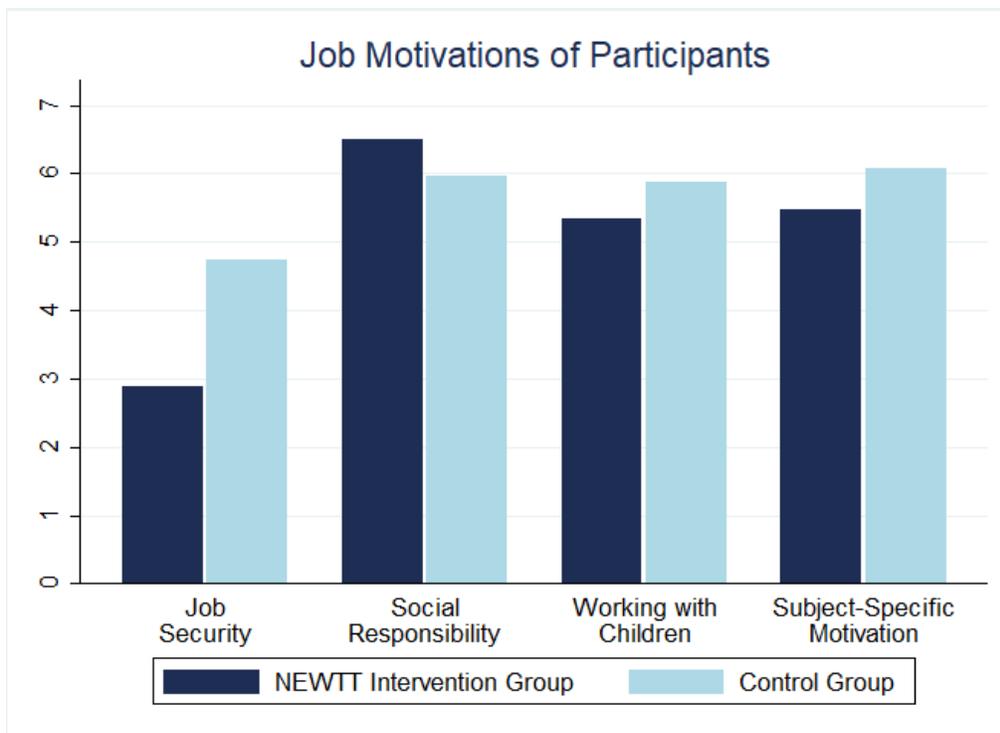


Figure 12: Austria — Job Motives of Participants by Group

The motive ‘social responsibility’ was more important to members of the intervention group. Again, the difference in means was statistically different at a 1% significance level. Of all the motives, participants in both groups rated ‘working with children’ similarly important. That is, no significant difference in means was found here.

6.1.2 Participant Characteristics: Basque Country

Sample Description. The sample analysed for the Basque Country consists of three groups. The first was the intervention group of beginning teachers taking part in the training programme of *Empieza por Educar*. The second was the control group of beginning teachers who followed the traditional path at university (control group I). These participants had just passed a public exam and obtained a permanent position in a public school. In accordance with the selection criteria for the control group, the first priority was to select candidates with no previous teaching experience. However, since several countries had difficulties finding sufficient candidates for the control group, this criterion was relaxed so that teachers with teaching experience of up to two years were accepted as well. In the Basque Country, this criterion was especially hard to meet. Therefore, in order to secure another perspective for comparing results with the intervention group, it was decided to draw a second control group (control group II), comprising students taking part in the university master's programme certifying teachers.

Participants in the intervention group were surveyed four times: once in May 2016, before their training programme at *Empieza por Educar* began, and again in August 2016, after completing the Online Campus and Summer Academy but before they started working at their placement schools. The third survey took place in June 2017, towards the end of their first year working at school. Finally, they were surveyed in June 2018, after the second year working at school.

Participants in control group I were surveyed three times: once in February 2017 after the first months working at school²⁹, and again after the first and the second years working at school in June 2017 and June 2018 respectively. In order to increase the sample size, it was decided to add a second cohort to the control group. Due to the timeline of the entire project, the second cohort could only be surveyed twice: once after the first months working at school, in February 2018, and again at the end of the first school year, in June 2018. For this reason, sample sizes for the control group vary slightly between the first two waves and the last wave.

Participants in control group II, the master's students, began their studies in September 2016. These are students who entered the Master's in Teacher-training at the University of Deusto and UPV/EHU promotion in 2017/2018. They were encouraged to participate in the study by their coordinators of the master's programme. As an additional incentive for participation, *Empieza por Educar* offered them some pedagogical materials and a training session on classroom management. The master's students were surveyed once within the first weeks of their master's programme (November 2016), again after the first year of teaching, and again after the second year of teaching. As for the first control group, an additional cohort was surveyed in September

²⁹ Due to national data protection laws, restricting access to personal data and mailing addresses of the potential control group respondents, data collection was delayed. It was originally planned for the month of September.

2017 and after the first year of teaching in June 2018, enlarging the samples for the first and second surveys.

Figure 13 shows the survey design with the actual survey periods for the NEWTT intervention group and the two control group cohorts for the Basque Country. T_0 refers to the measurement period before any training had taken place. This measurement only exists for the intervention group. T_1 refers to the measurement period before participants started to work at school. This was supposed to be in August 2016 before the start of the school year. Due to structural conditions in the Basque public-school system, it was not possible to gather data on the control group of beginning teachers before they started work. In fact, recruitment of suitable control group members for control group I proved to be rather challenging in the Basque Country, with email addresses not being delivered to the evaluation team until late February 2017. T_2 and T_3 refer to the measurement periods after the first and second year working at school respectively.

For control group II, T_1 marks the measurement point at the beginning of the Master’s in Teaching programme. However, challenges in recruiting suitable candidates again had to be overcome, leading to a prolonged recruitment phase.

		May 2016	August 2016	June 2017	February 2018	June 2018
Basque Country	Intervention Group I	May 26 – Jun 23	Aug 29 – Sep 2	Jun 20 – Jul 4		Jun 3 – Jun 22
	Control Group I _{1st Cohort}		Feb 26 – Mar 8	Jun 20 – Jun 30		Jun 4 – Jun 6
	Control Group II _{1st Cohort}		Nov 18 – Mar 5	Jun 20 – Jun 23		Jun 5
	Control Group I _{2nd Cohort}				Mar 4 – Mar 29	Jun 4 – Jun 14
	Control Group II _{2nd Cohort}				Mar 3 – Mar 7	Jun 5 – Jun 15
	Period					
		T_0	T_1	T_2		T_3
	Intervention Group I	EPE Trainees	EPE Trainees	EPE Trainees		EPE Trainees
	Control Group I _{1st Cohort}		Beginning Teachers	Beginning Teachers		Beginning Teachers
	Control Group II _{1st Cohort}		Masters’ Students	Masters’ Students		Masters’ Students
					T_1	T_2
	Control Group I _{2nd Cohort}				Beginning Teachers	Beginning Teachers
	Control Group II _{2nd Cohort}				Masters’ Students	Masters’ Students

Figure 13: Basque Country — Survey Design

Regarding the NEWTT intervention group, 38 fellows of *Empieza por Educar* participated in the first survey. Only one person left the programme between the first and second surveys, and therefore 37 fellows participated in the second wave of the survey. At 2.63%, the dropout rate was very low. The following descriptive statistics take into account 38 participants for those scales measured during the first wave and 37 participants for those scales measured during the second wave. For this reason, the number of participants in the tables varies.

For the control group I of traditionally-trained beginning teachers, 20 could be recruited in the first cohort and 51 in the second. Of the 20 recruited participants in the first cohort, 13 filled out the first questionnaire. For the second cohort the numbers were higher: 39 filled out the first questionnaire. Unfortunately, even after including the recruited control group members from the second cohort, it was not possible to gain a sufficient number of beginning teachers as participants for control group I. The problem was that the majority of the recruited control group participants had considerable teaching experience of up to 36 years, with an average teaching experience of 19 years. Only seven participants had never worked as teachers before. In line with the selection criteria, all participants with more than two years of teaching experience had to be excluded from the sample. The remaining 11 beginning teachers (five from the first and six from the second cohort) had an average teaching experience of 0.9 years. Based on such low numbers, comparative statistical analysis is futile, i.e. comparisons between the NEWTT intervention group and control group I after the second year of teaching is not feasible due to the sample size of the control group.

Of the 55 recruited participants for control group II (masters' students), only 22 completed the first survey. Therefore, it was decided to survey a second cohort for this group as well. From the 13 recruited participants of the second cohort, seven individuals completed the survey, bringing the sample size up to 29 persons for the first survey. Ten participants of the first cohort and four of the second completed the second questionnaire. Therefore, the number of participants in the tables varies greatly between the results shown for the first and second questionnaire.

6.1.2.1 Inherent Characteristics

Age. The age of intervention group participants ranged from 21 to 37, with a mean of 26.16 and a standard deviation of 3.45. Of the participants, 86.84% were age 28 years or younger, but there were five outliers who were older than 28. Participants in control group I ranged from 23 to 43 years, with a mean of 30.45 and a standard deviation of 6.71, whereas control group II ranged from 21 to 49 years, with a mean of 29.76 and a standard deviation of 8.26. The absolute frequencies of participants' age are shown in Figure 14.

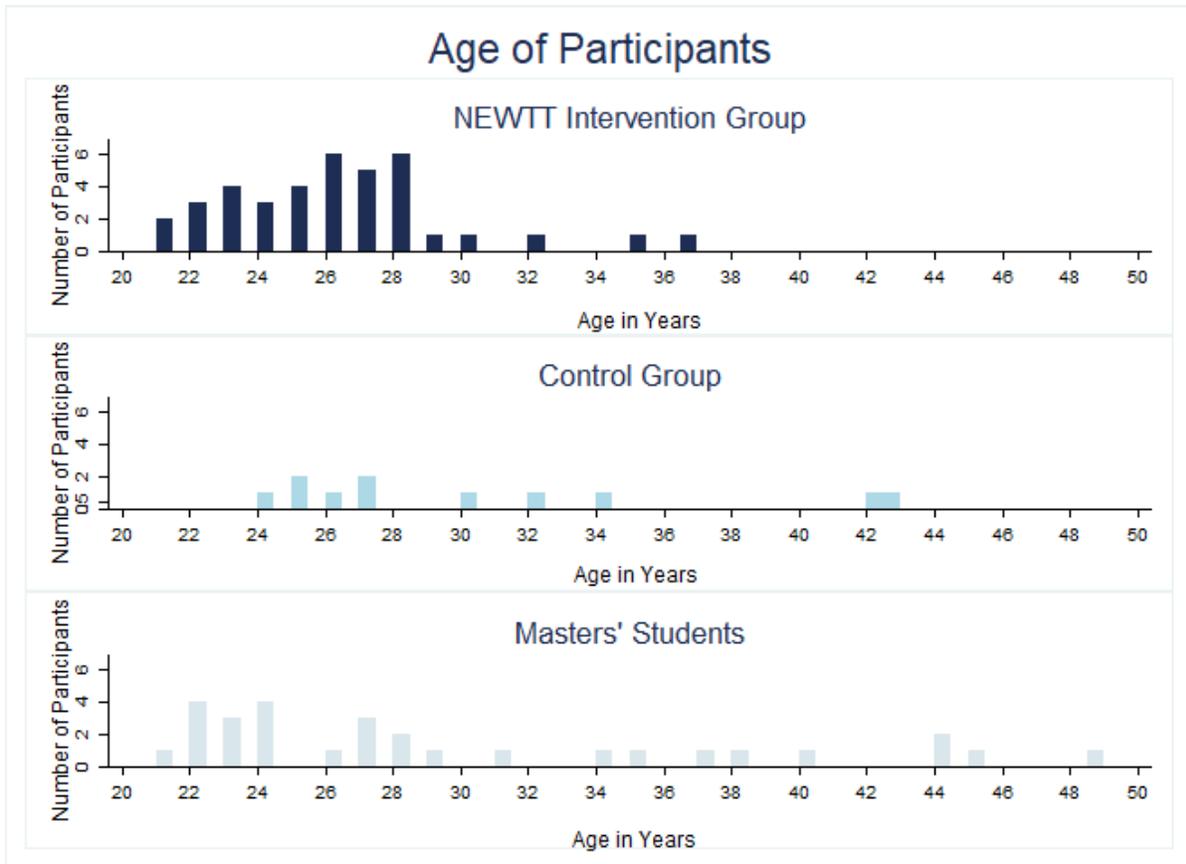


Figure 14: Basque Country — Age Distribution in Years by Group

Gender. Of the participants in the intervention group, 57.89% were female and 42.11% were male. Of control group I, 81.82% were female and 18.18% male. Control group II was 66.67% female and 33.33% male.

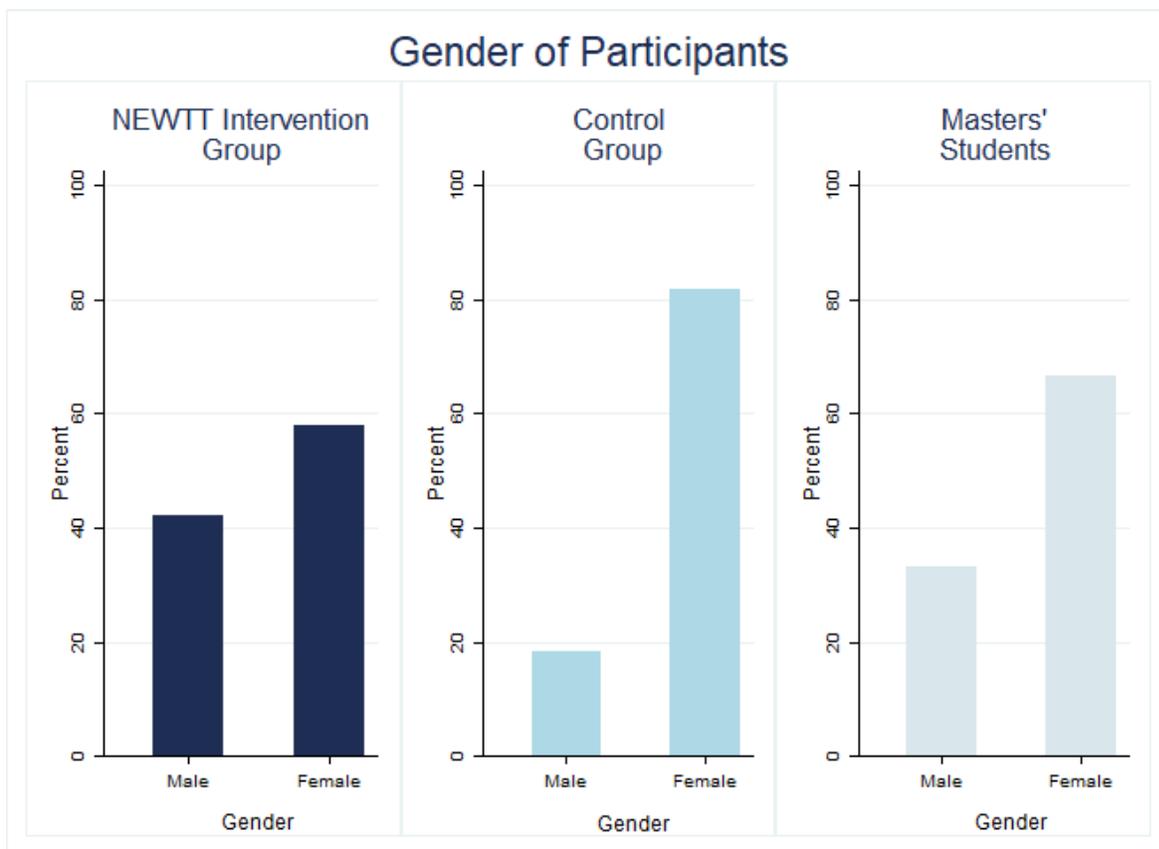


Figure 15: Basque Country — Gender of Participants by Group

Further descriptive statistics can be found in Table 115 in the Annex.

6.1.2.2 Prior Education

Secondary School Examination Grades. Participants were asked to report their average grades in their final secondary school examinations. The Basque grading system ranges from 0 (failing) to 10 (best possible). Grades 0 through 4 are failing grades; 5 is the minimum passing grade. Grades 9 and above are considered excellent. The average grade of the 17 intervention group participants who reported their grade was 7.92, which is considered good. Examination of the frequencies of the average grades revealed that approximately 40% of the participants had a grade average of 8 or higher. Two of the participants had an excellent grade average of 9 or higher. Of the control group of beginning teachers, 5 persons reported their final examination grade. On average, they achieved a significantly lower grade than the intervention group (7.02). Of the 29 master's students 19 reported their final examination grade. They achieved an average grade of 7.68, which is considered good. Descriptive results are presented in Table 115 in the Annex.

Fields of Study. The participants in the intervention group varied greatly in the subjects they studied at university. Their fields of study and the degrees they obtained are presented in Table 55.

Field of Study	Intervention Group				Control Group I				Control Group II			
	Bachelor's	Master's	PhD	Total	Bachelor's	Master's	PhD	Total	Bachelor's	Master's	PhD	Total
Languages and arts	4	2	0	6	5	0	0	5	9	1	0	10
Natural sciences	5	2	0	7	2	1	0	3	2	1	1	4
Social sciences	4	3	0	7	0	0	0	0	2	1	1	4
Formal sciences	1	0	0	1	0	0	0	0	1	0	0	1
Law and business	6	5	0	11	0	0	0	0	2	1	0	3
Humanities	4	0	0	4	2	2	1	5	9	7	1	17
Engineering	12	3	0	15	2	1	0	3	4	2	0	6
Health sciences	0	0	0	0	0	0	0	0	0	0	0	0
Other	4	2	2	8	1	2	0	3	2	1	0	3

Table 55: Basque Country — Number of Participants According to Their Field of Study and Degree Obtained

Most of the participants in the intervention group had a degree in engineering, while many had a degree in law and business. Few participants had degrees in formal sciences (e.g. mathematics) and the humanities. No participant had a degree in health sciences. While 31 participants had a bachelor's degree, three had two bachelor's degrees, and one had three bachelor's degrees. Overall, 35 participants (92.11%) had at least one bachelor's degree, 17 (44.74%) had a master's degree, and two had a PhD. In control group I, most participants had a degree in languages and arts, or humanities. Three individuals had a degree in natural sciences and engineering each. None of the participants had a degree in social, formal, or health sciences, or law and business studies. While 11 participants had a bachelor's degree, six had a master's degree and one had a PhD. Among control group II, most participants had a degree in humanities (17), and languages and arts (10). Only one participant had a degree in formal sciences, while none had a degree in health sciences.

6.1.2.3 Prior Experience Relevant for Teaching

Pedagogical Experience. Participants were asked about their pedagogical experience prior to starting their teacher training. The exact questions were as follows: 'Have you ever worked with children or adolescents at school before? (Tutor, teacher assistant, social worker, etc.)' and 'Have you ever worked with children or adolescents outside of school before? (Youth group leader, soccer coach, etc.)'. Participants could respond with 1 (never), 2 (seldom), 3 (quite often), or 4 (very often). As shown in Table 56, the majority of participants in the intervention group had 'never' (39.47%) or 'seldom' (28.95%) worked with children at school before. Only roughly 30% stated to have had pedagogical experience of working with children 'quite often' or 'very often'.

This lack of prior pedagogical experience was even more pronounced for control group II. The majority of the master’s students reported to have little experience of working with children at school; 37.93% reported they had ‘never’ worked with children at school before and 37.93% reported they had done so only ‘seldom’. However, the percentage of master’s students who reported to have worked with children at school ‘very often’ is almost twice as high as for the intervention group. Only six participants in control group I answered the questions about prior pedagogical experiences. Therefore, results are not reported.

Prior Pedagogical Experience at School	Intervention Group		Control Group II	
	Frequency	Percentage	Frequency	Percentage
Never	15	39.47%	11	37.93%
Seldom	11	28.95%	11	37.93%
Quite often	9	23.68%	3	10.34%
Very often	3	7.89%	4	13.79%
N	38	100%	29	100%

Table 56: Basque Country — Prior Pedagogical Experience of Working with Children at School by Group

Experience of working with children beyond the school context was more common for both the intervention group and control group II. More than 60% of the participants in the intervention group reported to have had pedagogical experiences outside of school ‘quite often’ or ‘very often’. Only 5.26% of the participants had ‘never’ worked with children outside of the school context. All results are shown in Table 57. Of control group II, over 40% reported to have worked with children outside of the school context ‘quite often’ or ‘very often’.

Prior Pedagogical Experience Outside of School	Intervention Group		Control Group II	
	Frequency	Percentage	Frequency	Percentage
Never	2	5.26%	7	24.14%
Seldom	12	31.58%	10	34.48%
Quite often	13	34.21%	6	20.69%
Very often	11	28.95%	6	20.69%
N	38	100%	29	100%

Table 57: Basque Country — Prior Pedagogical Experience of Working with Children beyond the School Context by Group

The descriptive statistics show that participants reported to have had more pedagogical experience with children outside of the school context than at school itself. Almost 40% of both groups reported to ‘never’ have worked with children in the school context. However, almost two thirds of intervention group participants had some kind of previous experience of working with children or adolescents outside of the school context. In control group II, more than 40% had worked with children beyond the school context ‘quite often’ or ‘very often’.

Time Spent Abroad. When asked whether they had studied or worked abroad, 32 participants in the intervention group (84.21%) answered ‘yes’. Those who answered ‘yes’ were asked how much time they had spent abroad. Almost 80% of the participants in the intervention group had spent six months or longer abroad. In fact, most of the participants (40.63%) had spent more than 18 months abroad. Table 58 presents the results. Of control group I, eight (72.73%) reported to have spent time abroad. In comparison, slightly fewer participants in control group II had studied or worked abroad (68.97%).

Time Spent Abroad	Intervention Group		Control Group II	
	Frequency	Percentage	Frequency	Percentage
Less than 6 months	7	21.88%	10	50%
6 to 12 months	8	25%	3	15%
12 to 18 months	4	12.5%	2	10%
More than 18 months	13	40.63%	5	25%
N	32	100%	20	100%

Table 58: Basque Country — Time Spent Studying or Working Abroad

Volunteer work. Participants were asked how often they had been involved in social organisations such as sports clubs, social projects and development aid. Most of the participants of the intervention group (42.11%) answered ‘quite often’ while 31.58% answered ‘very often’. Of control group I, half of the participants answered that they had ‘never’ or ‘seldom’ been involved in social organisations, while the other half answered ‘quite often’ or ‘very often’. Of control group II, almost two thirds had ‘never’ (20.69%) or ‘seldom’ (44.83%) been involved in social organisations. Only one third had been involved in social organisations ‘quite often’ (24.14%) or ‘very often’ (10.34%). All results are shown in Table 59.

Involvement in Social Organisations	Intervention Group		Control Group I		Control Group II	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Never	1	2.63%	2	20%	6	20.69%
Seldom	9	23.68%	3	30%	13	44.83%
Quite often	16	42.11%	2	20%	7	24.14%
Very often	12	31.58%	3	30%	3	10.34%
N	38	100%	10	100%	29	100%

Table 59: Basque Country — Involvement in Social Organisations

A similar question was asked regarding involvement in political organisations; the majority of participants in the intervention group (70.27%) had ‘never’ been engaged in activities related to political organisations. Overall, the level of participation in political organisations was not very high. Only 8.11% reported to have been involved in political organisations ‘very often’. Of control group I, all of the participants ‘had never’ (77.78%) or ‘seldom’ (22.22%) been involved in political

organisations. Of control group II, most of the participants had ‘never’ (89.29%) or ‘seldom’ (7.14%) been involved in political organisations, and only one participant answered ‘very often’ (3.57%). All results are shown in Table 60.

Involvement in Political Organisations	Intervention Group		Control Group I		Control Group II	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Never	26	70.27%	7	77.78%	25	89.29%
Seldom	3	8.11%	2	22.22%	2	7.14%
Quite often	5	13.51%	0	0%	0	0%
Very often	3	8.11%	0	0%	1	3.57%
N	37	100%	9	100%	28	100%

Table 60: Basque Country – Involvement in Political Organisations

Regarding entrepreneurial initiative, the results were quite similar to those of the previous question regarding involvement in political organisations. These are reported in Table 61.

Entrepreneurial Initiative	Intervention Group		Control Group I		Control Group II	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Never	12	33.33%	6	54.55%	17	60.71%
Seldom	13	36.11%	4	36.36%	9	32.14%
Quite often	7	19.44%	0	0%	1	3.57%
Very often	4	11.11%	1	9.09%	1	3.57%
N	36	100%	11	100%	28	100%

Table 61: Basque Country – Entrepreneurial Initiative

The majority of participants in the intervention group had ‘never’ (33.33%) or ‘seldom’ (36.11%) been involved in entrepreneurial activities. Only four participants (11.11%) had ‘very often’ invested time in entrepreneurial activities. Of control group I, 54.55% had ‘never’ or ‘seldom’ (36.36%) performed entrepreneurial activities. Only one of the participants reported to have done so ‘very often’. Of control group II, more than 92% had ‘never’ (60.71%) or ‘seldom’ (32.14%) performed entrepreneurial activities, and only one participant each reported to have done so ‘quite often’ (3.57%) or ‘very often’ (3.57%) respectively.

Figure 16 shows the mean involvement levels in volunteer work in the three areas. On average, participants were committed mostly to social organisations. They were distinctly less involved in entrepreneurial activities and least active in political organisations.

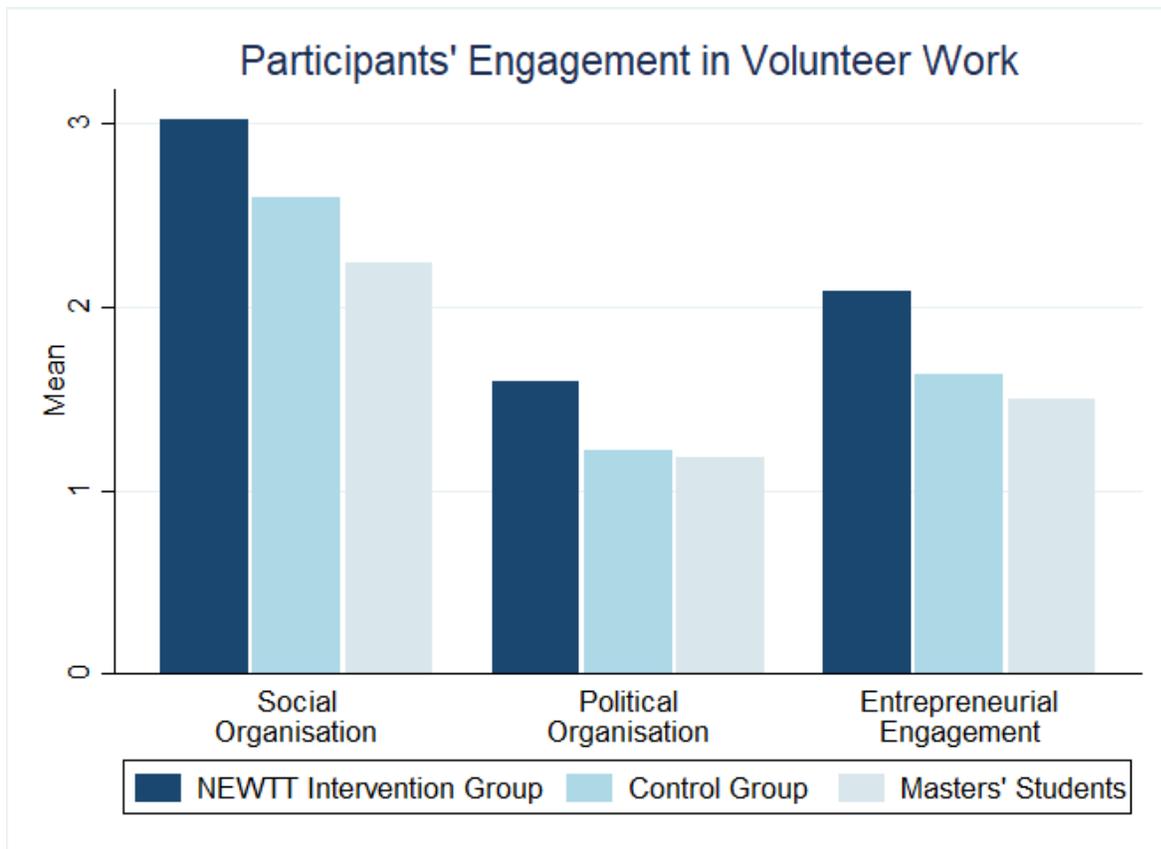


Figure 16: Basque Country — Involvement in Volunteer Work by Group

6.1.2.4 Motives for Becoming a Teacher

Data on motives for teaching was retrieved from the second survey completed by intervention group participants before they started working as teachers at school, and from the first survey administered to members of control group I. No data is available for control group II.

To determine what motivated participants to become a teacher, participants completed the Factors Influencing Teaching-Choice Scale developed by Watt and Richardson in 2007. This scale has been used in several international studies and has proved to be a very effective and reliable tool for determining motives for choosing teaching as a profession. The original scale covers 13 motives and comprises 37 items; however, including all of these items would have gone beyond the scope of the NEWTT questionnaire. The evaluation team therefore chose 17 items which seemed to be the most relevant within the context of the project. The 17 items can be assigned to the following six motives: job security, shaping the future of children and adolescents, reducing social disadvantages, social responsibility, working with children, and subject-specific motivation. An overview of all the items and their respective categories is provided in Table 112 the Annex. The different items were preceded by the following instruction: 'Please rate the importance of each of the following influences on your choice for a career in teaching on a scale of 1 (*not at all*

important) to 7 (extremely important). I chose to become a teacher because...'. Participants subsequently rated each of the 17 items using the scale of 1 to 7. Results for each item are presented in Table 62.

Variable	Item	Intervention Group		Control Group I	
		M	SD	M	SD
TB06_01	...teaching will offer a steady career path.	3.48	1.35	4.8	1.55
TB06_02	...teaching will provide a reliable income.	3.05	1.37	5.09	1.22
TB06_03	...teaching will be a secure job.	3	1.33	4.36	1.03
TB06_04	...teaching will allow me to shape child and adolescent values.	6.76	0.43	6.55	0.69
TB06_05	...teaching will allow me to influence the next generation.	6.59	0.64	6.18	0.87
TB06_06	...teaching will allow me to raise the ambitions of under-privileged youth.	6.54	0.73	6.09	0.94
TB06_07	...teaching will allow me to benefit the socially disadvantaged.	6.42	0.81	5.91	1.22
TB06_08	...teaching will allow me to provide a service to society.	6.62	0.64	6.45	0.69
TB06_09	...teachers make a worthwhile social contribution.	6.73	0.56	6.36	0.81
TB06_10	...teaching enables me to give back to society.	6.57	0.77	6.55	0.69
TB06_11	...I want a job that involves working with children and adolescents.	5.38	1.14	5.55	0.93
TB06_12	...I want to work in a child and adolescent-centred environment.	4.92	1.4	5.09	1.14
TB06_13	...I like working with children and adolescents.	5.84	1.24	5.91	0.94
TB06_14	...I want to help children and adolescents learn.	6.54	0.61	6.55	0.69
TB06_15	...I really enjoy the topics, that I will teach.	5.35	1.42	5.82	1.08
TB06_16	...I am really interested in the subject(s) that I will teach.	5.65	1.42	6.0	0.89
TB06_17	...I want to share my passion for my subject(s) with others.	5.92	1.14	6.0	1.0
N		37		11	

Table 62: Basque Country — Motives for Becoming a Teacher

For the intervention group, the items regarding 'job security' were generally rated as the least important. However, standard deviations were quite high, indicating that participants' ratings of these items varied greatly. Items regarding subject-specific motivation and items regarding interest in working with children were rated as important on average. However, participants were motivated to become teachers because they would be able to act socially responsible and they would have the opportunity both to shape the future of children and reduce social disadvantages.

Overall, the items rated most important were ‘...teaching will allow me to shape child and adolescent values’ (M=6.76) and ‘...teachers make a worthwhile social contribution’ (M=6.73).

Even though the sample for control group I is small, some differences in job motives can be observed. While items regarding job security were rated the lowest overall, control group members rated them on average significantly higher than members of the intervention group did. They also showed a higher subject-specific motivation, rating all items related to this motive more important than the intervention group did. Interestingly, the items rated highest overall are identical to those items rated highest by the intervention group. Therefore, the control group is also motivated to become a teacher due to a need to ‘...give back to society’ (M=6.55) and to ‘...shape children and adolescents’ values’ (M=6.55). Furthermore, control group members are motivated to become teachers because they want to facilitate and foster learning in young people (‘... I want to help children and adolescents learn’ (M=6.55)).

6.1.3 Participant Characteristics: Bulgaria

Sample Description. The sample analysed for Bulgaria consists of three groups. Firstly, one intervention group of beginning teachers taking part in the Teach For Bulgaria training programme (intervention group I). Secondly, a group of master's students from Plovdiv University (intervention group II). This group can be viewed as a second intervention group because students were taking part in a newly-developed master's programme at Plovdiv University; the programme combines theoretical input at the university with practical experiences at school. And lastly, there was a control group of beginning teachers who followed the traditional university path to become teachers. In accordance with the selection criteria for the control group, the first priority was to select candidates with no previous teaching experience. However, since several countries had difficulties finding sufficient candidates for the control group, this criterion was relaxed so that teachers with teaching experience of up to two years were accepted as well. For Bulgaria, the majority of control group participants had no teaching experience. Only five participants had previously worked as teachers, with an average teaching experience of 1.7 years.

Participants in intervention group I were surveyed four times. Firstly, when they were selected by Teach For Bulgaria before their training programme started. The period of selection stretched over several weeks, so participants were surveyed in line with the selection process in successive waves. Secondly, they were surveyed after completing the Online Campus and Summer Academy in June 2016, before they started working at their placement schools. The third survey took place towards the end of their first year working at school in May/June 2017. Finally, they were surveyed after the second year working at school in May 2018.

Participants in intervention group II were surveyed three times: once before their master's programme started in May 2017, again before they started working at schools in August 2017, and again after the first year working at school in May 2018. Since the University of Plovdiv was not able to find a sufficient number of candidates for this new master's programme, in May 2017 some of the vacancies were filled with 21 participants from the Teach For Bulgaria programme. This means that those participants can be treated as a second cohort of intervention group I. They were therefore merged to the 2016 group of NEWTT participants in order to enhance the sample size of intervention group I further. Survey times for the second Teach For Bulgaria cohort in intervention group I were identical to those of intervention group II.

Participants in the control group were surveyed three times as well: once during the first weeks working at school in September 2016, again after the first, and again after the second year working at school in June 2017 and June 2018 respectively. In order to increase the sample size, it was decided to add a second cohort to the control group. Due to the timeline of the entire project, the second cohort could only be surveyed twice: once in the first weeks working at school in September 2017, and again at the end of the first school year in June 2018. For this reason,

sample sizes for the control group vary notably between the first two waves and the last wave. Figure 17 shows the survey design with the actual survey periods for the NEWTT intervention group and the control group cohorts for Bulgaria. T_0 refers to the measurement period before any training had taken place. This measurement does not exist for the control group of beginning teachers. T_1 refers to the measurement period before participants started to work at school. T_2 and T_3 refer to the measurement periods after the first and second year working at school respectively³⁰.

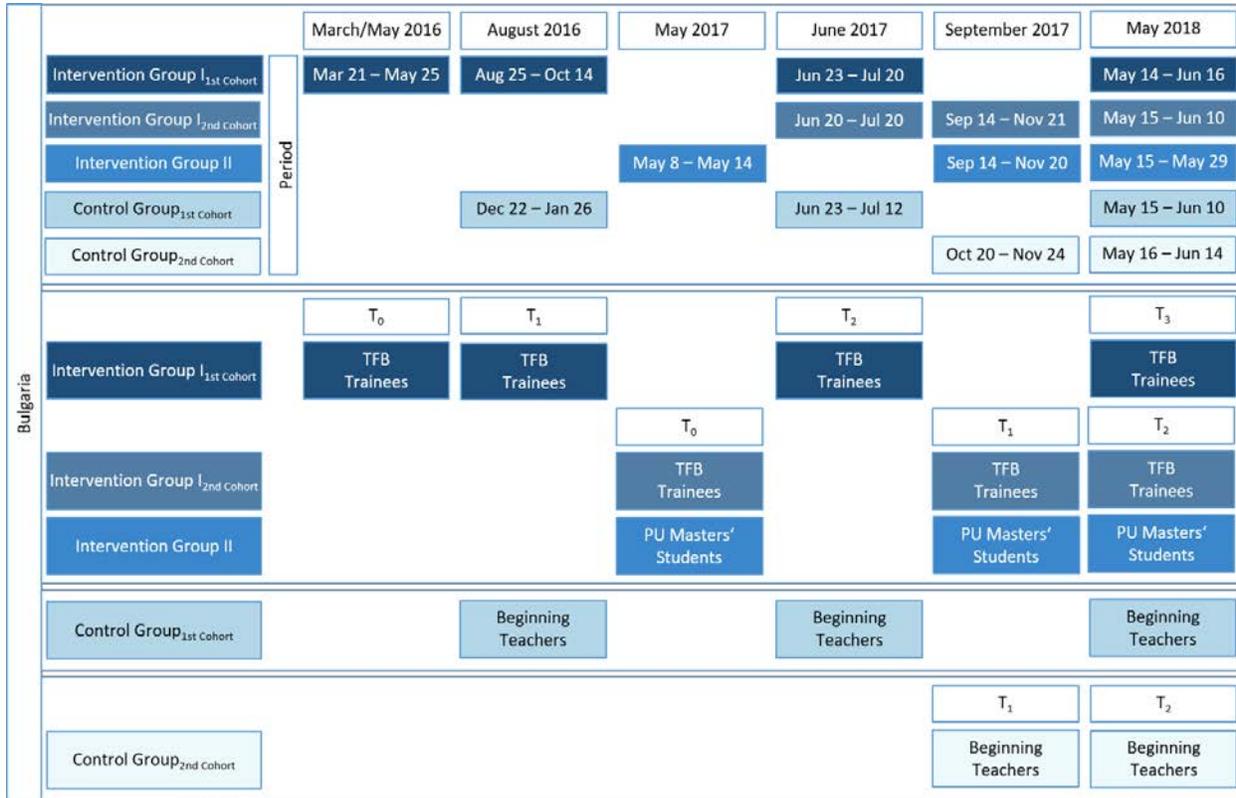


Figure 17: Bulgaria — Survey Design

Of intervention group I, 149 fellows from the first cohort and 21 participants from the second took part in the first survey. 117 participants from the first cohort and 19 participants from the second completed the second survey. This means the dropout rate between the first and second survey for intervention group I was 20%. This description of the sample takes into account the 170 participants for those scales measured during the first wave and the 136 participants for those scales measured during the second. For this reason, the number of participants in intervention group I varies slightly.

³⁰ T_3 does not exist for intervention group II (masters' students from the University of Plovdiv) or the second cohort of intervention group I due to the overall design of the project.

As for the control group, 90 participants completed the first survey. The first cohort of October 2016 comprised 54 members, while the second of October 2017 included 36 participants. However, four members of the first cohort and one participant of the second reported to have entered the teaching profession via an alternative route. One person did not give any information. Since the control group must consist of traditionally-trained teachers, those cases were deleted. Of the remaining participants, five members of the first and four members of the second cohort reported to have already had prior teaching experience of more than three years. Therefore, those participants did not fit the definition of beginning teachers and were eliminated from the sample as well. This left 46 participants in the sample for the first cohort and 30 in the sample of the second, for a combined sample of 76 participants for the first survey wave T₁.

Of the master's students of the University of Plovdiv (intervention group II), 22 participants completed the first questionnaire.

6.1.3.1 Inherent Characteristics

Age. The age of participants in intervention group I ranged from 22 to 53 years of age, with a mean of 31.22 and a standard deviation of 7.32 (one participant did not provide information on their age). Even though more than half of the participants were 29 years of age or younger, a third of the participants were between 30 and 40, while 12% were 40 old or older.

Among participants in the control group of traditionally-trained beginning teachers, ages ranged from 23 to 48 with a mean of 30.88. On average, participants were slightly younger than in the intervention group. As was true for the intervention group, more than half of the participants were 29 or younger, 38% were between 30 and 40, and roughly 10% were older than 40.

Interestingly, members of intervention group II were older than participants in the other two groups; on average, they were 34.14 years old. The youngest student was 24 and the oldest was 56. Approximately one third of the students were 29 or younger, while were between 30 and 40, and three were older than 40. One person did not report their age.

The absolute frequencies of participants' ages are shown in Figure 18. Further descriptive statistics can be found in Table 116 in the Annex.

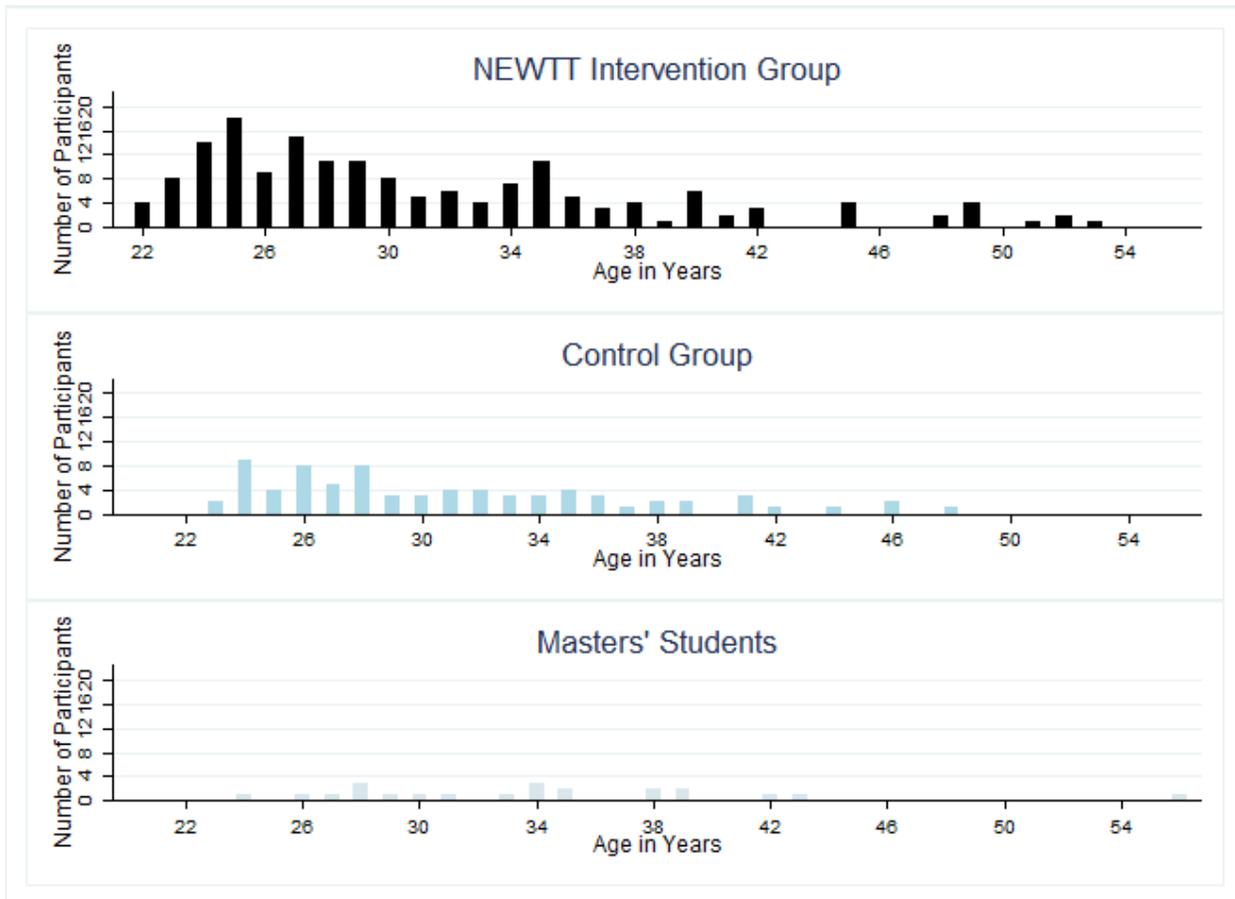


Figure 18: Bulgaria — Age Distribution in Years by Group

Gender. 73.96% of the participants in intervention group I were women; 26.04% were men. One participant did not report their gender. Of the control group, 22.67% were male and 77.33% were female, while one person did not report their gender. Of intervention group II, 4.76% were male and the majority (95.24%) were female. Two participants did not report.

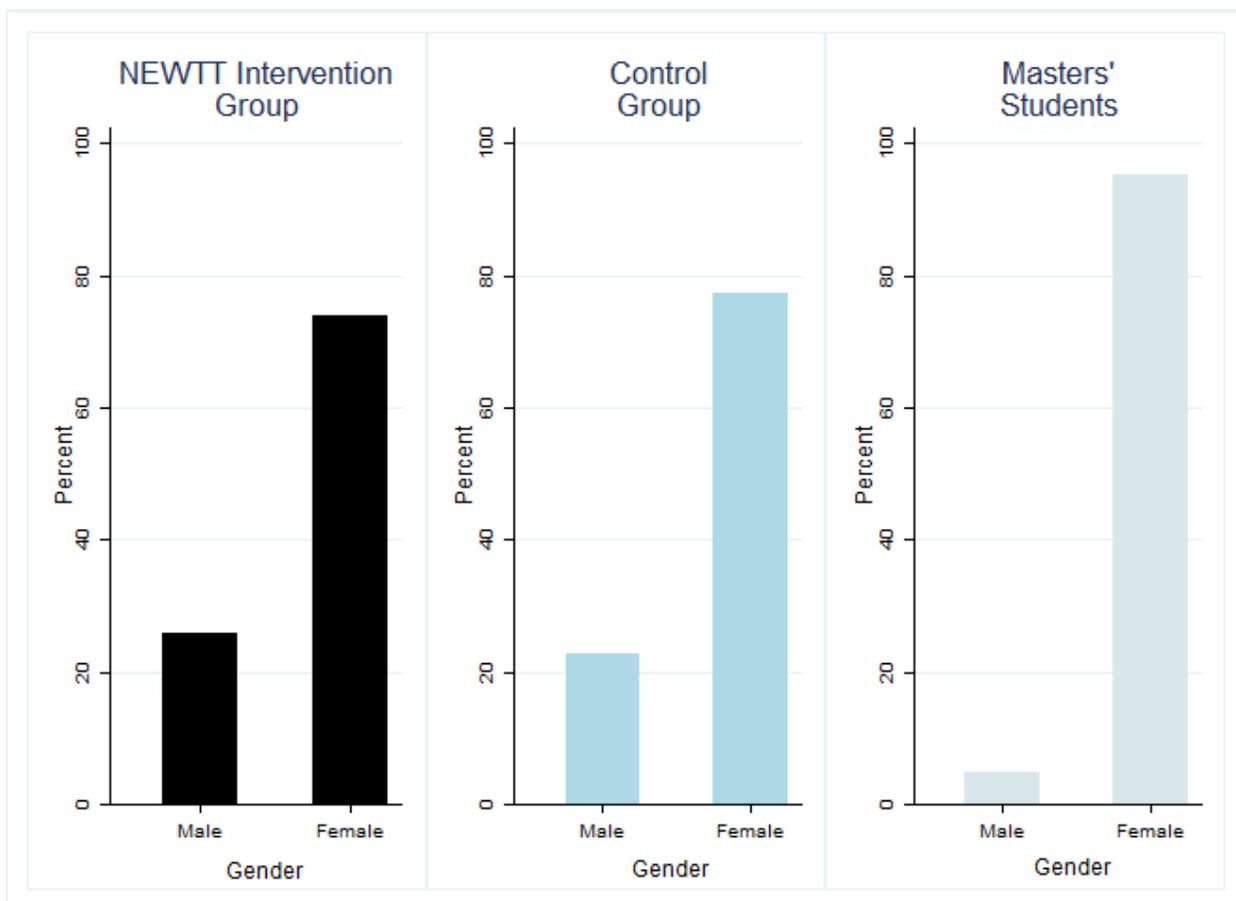


Figure 19: Bulgaria — Gender Distribution by Group

6.1.3.2 Prior Education

Secondary School Examination Grades. Participants were asked to report their average grades in their final secondary school examinations. The grading system in Bulgaria ranges from 2 (failing) to 6 (best possible). An average grade above 5.5 is considered excellent. In intervention group I, only approximately half of the participants (49.4%) stated their average grade. This is probably due to the fact that quite a few of the fellows were older and therefore could not remember their grades (some participants had taken those examinations 30 or 35 years ago). The average grade of the 84 participants who reported their grade was 5.45, which is very close to the excellent grade point average of 5.5. Examination of the frequencies of the average grades revealed that exactly two thirds of the 84 participants had an average grade of 5.5 or higher. In the control group also, less than half of participants reported their grade. The average grade of the 36 participants who did report their grade was a little lower (5.24) than that of intervention group I. Exactly half reached an average grade between 4 and 5, while half had an average grade above 5 or higher. One third reached an average grade of 5.5 or higher.

Of intervention group II, slightly more than half of participants reported their final secondary school examination grade. The average grade of the twelve people who stated their grade was 5.44, which is comparable to the average grade achieved in intervention group I. Half of the respondents achieved a grade of 5.5 or higher. Further descriptive statistics can be found in Table 116 in the Annex.

Fields of Study. The participants in the intervention group varied greatly in the subjects they studied at university. The participants' fields of study and degrees obtained are presented in Table 63.

Field of Study	Intervention Group I				Control Group			Intervention Group II			
	Bachelor's	Master's	PhD	Total	Bachelor's	Master's	Total	Bachelor's	Master's	PhD	Total
Languages and arts	24	13	1	38	15	4	19	3	3		6
Natural sciences	10	4	1	15	4	1	5	3	2		5
Social sciences	8	8	0	16	0	0	0	0	0		0
Formal sciences	3	3	0	6	5	1	6	3	0	1	4
Law and business	22	21	2	45	5	4	9	2	2		4
Humanities	48	17	3	68	36	22	58	6	2		8
Engineering	4	2	0	6	1	2	3	0	0		0
Health sciences	1	1	1	3	1	0	1	0	1		1
Other	14	6	0	20	7	5	12	5	3		8

Table 63: Bulgaria — Number of Participants According to Their Field of Study and Degree Obtained

Most participants in intervention group I had a degree in the humanities, which is not surprising since the group of certified teachers was included. Many had a degree in languages and arts, or law and business studies. A few had a degree in engineering, health sciences, or formal sciences (e.g. mathematics), and 25 had no degree. While 116 participants had a bachelor's degree, six had two bachelor's degrees, and two had three bachelor's degrees. Overall, 124 participants (83.22%) had at least one bachelor's degree, 61 had a master's degree, and seven had two master's degrees. Overall, 68 (45.46%) had at least one master's degree. Eight had a PhD.

In the control group, 88% had at least one bachelor's degree, 8% had two bachelor's degrees, while one person reported to have obtained three bachelor's degrees. Nine participants reported to have a master's degree but no bachelor's degree. Overall, 46.67% had obtained at least one master's degree, two had two master's degrees, and none of the control group participants had a PhD.

Of intervention group II, 86.36% of respondents already had a bachelor’s degree, while one person had three bachelor’s degrees. Of the participants who had a bachelor’s degree, eight also had a master’s degree. Two reported to have no bachelor’s degree, but two master’s degrees. Overall, 50% had at least one master’s degree. One person had a PhD.

6.1.3.3 Prior Experience Relevant to Teaching

Pedagogical Experience. Participants were asked about their pedagogical experience before starting their teacher training with the organisation. The exact questions were as follows: ‘Have you ever worked with children or adolescents at school before? (Tutor, teacher assistant, social worker, etc.)’ and ‘Have you ever worked with children or adolescents outside of school before? (Youth group leader, soccer coach, etc.)’. Participants could choose from 1 (*never*), 2 (*seldom*), 3 (*quite often*), or 4 (*very often*). As shown in Table 64, the majority of participants in intervention group I had ‘never’ (43.53%) or ‘seldom’ (33.53%) worked with children at school. Of the control group, more than half of the participants had ‘never’ (40.79%) or ‘seldom’ (13.16%) worked with children at school while, compared to intervention group I, considerably more participants had ‘quite often’ (26.32%) or ‘very often’ (19.74%) worked with children at school. In contrast, more than 85% of respondents in intervention group II answered that they had ‘never’ (54.55%) or ‘seldom’ (31.82%) worked with children at school.

Prior Pedagogical Experience at School	Intervention Group I		Control Group		Intervention Group II	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Never	74	43.53%	31	40.79%	12	54.55%
Seldom	57	33.53%	10	13.16%	7	31.82%
Quite often	17	10%	20	26.32%	2	9.09%
Very often	22	12.94%	15	19.74%	1	4.55%
N	170	100%	76	100%	22	100%

Table 64: Bulgaria — Prior Pedagogical Experience of Working with Children at School

Regarding prior experience of working with children beyond the school context, only 10.06% of the participants in intervention group I answered ‘very often’. In the control group, this is true for only 2.63% of the participants, while in intervention group II, none chose this answer. All results are shown in Table 65.

The descriptive statistics show that participants in intervention group I reported to have had slightly more pedagogical experience of working with children outside of the school context than at school. However, for the participants in the control group and of intervention group II, this is reversed: they report more prior experiences with children at school than outside of school.

Prior Pedagogical Experience Outside of School	Intervention Group I		Control Group		Intervention Group II	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Never	61	36.09%	51	67.11%	16	72.73%
Seldom	56	33.14%	10	13.16%	4	18.18%
Quite often	35	20.71%	13	17.11%	2	9.09%
Very often	17	10.06%	2	2.63%	0	0%
N	169	100%	76	100%	22	100%

Table 65: Bulgaria — Prior Pedagogical Experience of Working with Children Beyond the School Context

Time Spent Abroad. When asked whether they had studied or worked abroad, 68 participants (40%) of intervention group I answered ‘yes’. Most of the 68 participants (45.59%) had spent less than six months abroad, and 27.94% had spent 18 months or longer abroad. Of the control group, 86.84% answered to have not studied or worked abroad. Of those who did go abroad, 80% spent 12 months or less abroad. In intervention group II, 81.82% answered ‘no’ when asked whether they had studied or worked abroad. Only four reported to have worked or studied abroad, while only one had spent more than 18 months abroad.

The frequencies and percentages for each answer are presented in Table 48.

Time Spent Abroad	Intervention Group I		Control Group		Intervention Group II	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Less than 6 months	31	45.59%	4	40%	1	25%
6 to 12 months	16	23.53%	4	40%	2	50%
12 to 18 months	2	2.94%	2	20%	0	0%
More than 18 months	19	27.94%	0	0%	1	25%
N	68	100%	10	100%	4	100%

Table 66: Bulgaria — Time Spent Studying or Working Abroad

Volunteer Work. Participants were asked how often they had been involved in social organisations such as sports clubs, social projects, and development aid. Most members (35.88%) of intervention group I answered ‘seldom’. However, almost as many (32.94%) reported to have been ‘quite often’ involved in social organisations. Approximately 20% were ‘very often’ engaged in social organisations.

In the control group, most of the participants had ‘never’ (26.32%) or ‘seldom’ (42.11%) been involved in social organisations. Almost one third answered that they had been involved ‘quite often’ (22.37%) or ‘very often’ (9.21%).

Of Intervention group II, most participants (36.36%) answered ‘seldom’. 27.27% had ‘never’ or ‘quite often’ been involved in social organisations. Only two had been involved ‘very often’ in social organisations.

All results are shown in Table 67.

Involvement in Social Organisations	Intervention Group I		Control Group		Intervention Group II	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Never	20	11.76%	20	26.32%	6	27.27%
Seldom	61	35.88%	32	42.11%	8	36.36%
Quite often	56	32.94%	17	22.37%	6	27.27%
Very often	33	19.41%	7	9.21%	2	9.09%
N	170	100%	76	100%	22	100%

Table 67: Bulgaria — Involvement in Social Organisations by Group

A similar question regarding involvement in political organisations was asked. The majority of the intervention group (72.35%) had ‘never’ been engaged in such organisations. Only four (2.35%) reported to have been involved in political organisations ‘very often’.

In the control group, most ‘had never’ (77.63%) or ‘seldom’ (15.79%) been involved in political organisations. Only five reported to have been involved in political organisations ‘quite often’ (3.95%) or ‘very often’ (2.63%).

Of intervention group II, more than 90% answered that they had ‘never’ (86.36%) or ‘seldom’ (4.55%) been involved in political organisations. Only two (9.09%) answered to have been involved ‘quite often’ in political organisations.

All results are shown in Table 68.

Involvement in Political Organisations	Intervention Group I		Control group		Intervention Group II	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Never	123	72.35%	59	77.63%	19	86.36%
Seldom	36	21.18%	12	15.79%	1	4.55%
Quite often	7	4.12%	3	3.95%	2	9.09%
Very often	4	2.35%	2	2.63%	0	0%
N	170	100%	76	100%	22	100%

Table 68: Bulgaria — Involvement in Political Organisations

Regarding entrepreneurial initiative, results were quite similar to those of the previous question. The majority of intervention group I had ‘never’ (41.76%) or ‘seldom’ (38.82%) been engaged in

entrepreneurial activities. Only eleven (6.47%) ‘very often’ invested time in entrepreneurial activities.

In the control group, more than 90% of had ‘never’ (54.05%) or ‘seldom’ (39.19%) been engaged in entrepreneurial activities. Only five reported to have been involved ‘quite often’ (5.41%) or ‘very often’ (1.35%) in entrepreneurial activities.

Among intervention group II, the majority again reported to have been engaged ‘never’ (63.64%) or ‘seldom’ (13.64%) in entrepreneurial activities. Similar to the intervention group, 13.64% had been involved quite often in entrepreneurial activities and two (9.09%) answered ‘very often’.

All frequencies are shown in Table 69.

Entrepreneurial Initiative	Intervention Group I		Control Group		Intervention Group II	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Never	71	41.76%	40	54.05%	14	63.64%
Seldom	66	38.82%	29	39.19%	3	13.64%
Quite often	22	12.94%	4	5.41%	3	13.64%
Very often	11	6.47%	1	1.35%	2	9.09%
N	170	100%	74	100%	22	100%

Table 69: Bulgaria — Entrepreneurial Initiative

Figure 20 depicts the mean involvement levels in volunteer work in the three different areas. On average, participants were involved mostly in social organisations. They were distinctly less involved in entrepreneurial activities. Those in intervention groups I and II were least involved in a political organisation. For the control group, political or entrepreneurial engagement was almost equally low.

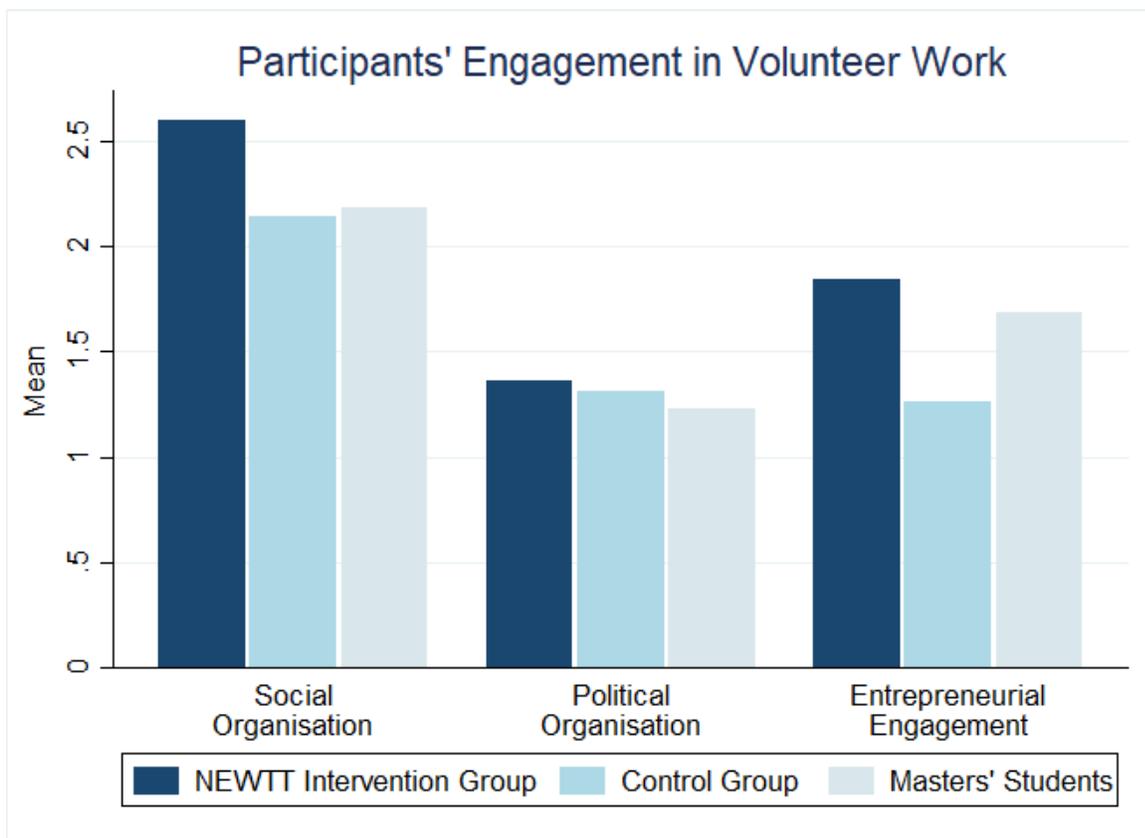


Figure 20: Bulgaria — Involvement in Volunteer Work

6.1.3.4 Motives for Becoming a Teacher

Data on motives for teaching was retrieved from the second survey completed by the intervention group before participants started teaching at school.

To determine what motivated participants to become teachers, participants were asked to complete the *Factors Influencing Teaching-Choice Scale* developed by Watt and Richardson in 2007. This scale has been used in several international studies and has proved to be a very effective and reliable tool to determine motives for choosing the teaching profession. The original scale covers 13 motives and comprises 37 items; however, including of all of these items would have gone beyond the scope of the NEWTT questionnaire. Therefore, the evaluation team chose 17 items, which seemed to be the most relevant in the context of the NEWTT project. The 17 items can be assigned to the following six motives: job security, shaping the future of children and adolescents, reducing social disadvantages, social responsibility, working with children, and subject-specific motivation. The different items were preceded by the following instruction: 'Please rate the importance of each of the following influences on your choice for a career in teaching on a scale of 1 (not at all important) to 7 (extremely important). I chose to become a

teacher because...'. Participants subsequently rated each of the 17 items on a scale of 1 to 7. An overview of all items and their respective categories is provided in Table 112 in the Annex.

Table 70 presents results for each item for the three groups. All participants generally rated the items regarding job security as the least important. However, standard deviations were quite high, so the underlying ratings varied greatly on those items. The data also shows that participants in intervention group I rated the items regarding job security the least important compared to the ratings of the control group and intervention group II. All items except those concerning subject-specific motivation were rated 6 and higher. The highest-rated items overall were '...teaching will allow me to shape children and adolescents' values' (M=6.83) and '...I want to help children and adolescents learn' (M=6.69). Interestingly, on average all groups rated this last item the most important in their decision to become teachers (control group: M=6.6; intervention group II: M=6.61). For intervention group II and the control group, the second most important item related to a wish to work with children. For the control group, this item was: '...I like working with children and adolescents'. (M=6.42); for intervention group II it was: '...I want a job that involves working with children and adolescents'. (M=6.61). The control group and intervention group II rated the importance of subject-specific motivation for becoming teachers slightly higher than intervention group I.

For intervention group I and the control group, factor analyses were calculated. In both cases, factor analysis yielded four factors fulfilling the Kaiser-Gutmann criterion (Eigenvalue > 1). Regarding intervention group I, items TB06_05, TB06_06, and TB06_11 to TB06_14 loaded on the first factor, comprising the construct 'working with children'. Items TB06_07 to TB06_10 had high factor loadings on the second factor, comprising the construct 'social responsibility'. Items TB06_01, TB06_02, and TB06_03 loaded on the third factor, representing the construct 'job security', and items TB06_15, TB06_16, and TB06_17 loaded on the fourth factor, comprising the construct 'subject-specific motivation'. Items TB06_05 and TB06_06 were excluded from the first factor because they had the lowest factor loadings. Reliability analysis revealed that Cronbach's alpha value did not decrease when those two items were excluded. Reliability was excellent with a Cronbach's alpha of 0.9. Reliability for the items of the second factor was acceptable, with a value of 0.77 for Cronbach's alpha. The values for the items of the third and fourth factors were both 0.8, indicating good reliability. Overall, it was possible to replicate the factor structure for four of the theoretical six constructs.

The factor loadings for the control group differed from those of intervention group I. Items TB06_11 – TB06_14 loaded on one factor including the construct 'working with children'. Items TB06_04 – TB06_08 and TB06_10 loaded on another factor, which included the construct 'social responsibility'. However, items TB06_04 and TB06_05 had the lowest factor loadings (0.52 – 0.55). Items TB06_15 – TB06_17 showed the same loading pattern as for the intervention group,

comprising the construct ‘subject-specific motivation’. However, only two items loaded on one factor comprising the construct ‘job security’: TB06_01 and TB06_03. Because of the sample size, no factor analysis could be calculated for intervention group II.

Variable	Item	Intervention Group I		Control Group		Intervention Group II	
		M	SD	M	SD	M	SD
TB06_01	...teaching will offer a steady career path.	4.31	1.75	4.64	1.79	5.06	1.71
TB06_02	...teaching will provide a reliable income.	3.21	1.69	3.42	1.84	4.28	1.74
TB06_03	...teaching will be a secure job.	3.08	1.56	4.0	1.93	3.94	1.95
TB06_04	...teaching will allow me to shape child and adolescent values.	6.83	0.62	6.6	0.92	6.61	0.61
TB06_05	...teaching will allow me to influence the next generation.	6.52	0.94	6.0	1.37	6.41	0.8
TB06_06	...teaching will allow me to raise the ambitions of under-privileged youth.	6.52	0.98	5.69	1.13	5.94	1.11
TB06_07	...teaching will allow me to benefit the socially disadvantaged.	6.3	1.07	5.52	1.29	5.28	1.5
TB06_08	...teaching will allow me to provide a service to society.	6.35	0.98	5.94	1.19	5.61	1.42
TB06_09	...teachers make a worthwhile social contribution.	6.31	1.12	6.37	1.15	6.06	1.06
TB06_10	...teaching enables me to give back to society.	6.34	1.1	5.97	1.13	5.67	0.97
TB06_11	...I want a job that involves working with children and adolescents.	6.57	0.83	6.28	1.36	6.61	0.78
TB06_12	...I want to work in a child and adolescent-centred environment.	6.5	0.98	6.28	1.01	6.35	0.86
TB06_13	...I like working with children and adolescents.	6.6	0.85	6.42	1.2	6.5	0.79
TB06_14	...I want to help children and adolescents learn.	6.69	0.8	6.37	1.15	6.33	0.77
TB06_15	...I really enjoy the topics that I will teach.	5.14	1.6	5.56	1.13	5.06	1.6
TB06_16	...I am really interested in the subject(s) that I will teach.	5.71	1.58	6.31	1.26	5.72	1.18
TB06_17	...I want to share my passion for my subject(s) with others.	5.77	1.57	5.77	1.5	6.0	1.08
	N	131		67		18	

Table 70: Bulgaria — Motives for Becoming a Teacher

For intervention group I, new variables were generated by calculating the mean of the sum of the single items for each factor respectively. Descriptive statistics for the newly-constructed variables ‘job security’, ‘social responsibility’, ‘working with children’, and ‘subject-specific motivation’ are presented in Table 71. In terms of comparing the different job motives of intervention and control groups, two variables can be calculated for the control group on the same item basis as for

intervention group I: ‘subject-specific motivation’ (Cronbach’s alpha: 0.81) and ‘working with children’ (Cronbach’s alpha: 0.87).

Scale	Intervention Group I		Control Group	
	M	SD	M	SD
Job security	3.6	1.4	-	-
Social responsibility	6.38	0.76	-	-
Working with children	6.64	0.66	6.34	1.0
Subject-specific motivation	5.62	1.31	5.88	1.18
N	131		67	

Table 71: Bulgaria — Job Motive Scales

The data shows that ‘job security’ was the least important motive for becoming a teacher for participants in intervention group I, and that ‘working with children’ and ‘social responsibility’ were, on average, the most important. Compared to intervention group I, the data underlines the results found on item level: subject-specific motivation is slightly higher for members of the control group, whereas the prospect of working with children is slightly more important in the decision to become a teacher for intervention group I than for the control group.

6.1.4 Participant Characteristics: Latvia

Sample Description. The analysed sample consists of participants in Iespējamā Misija³¹ (intervention group) and traditionally-trained beginning teachers (control group). Participants in the intervention group were surveyed four times over the course of their two-year training programme: firstly before their training programme at Iespējamā Misija began; secondly after the completion of the Pre-Institute and the Summer Institute but before they started working at their placement schools; thirdly after the first year of teaching in school; and lastly after their second year of teaching in school. The control group was surveyed three times: a few months after participants started teaching at school, again after the first year, and again after the second year of teaching in school. However, due to difficulties recruiting the desired number of participants for the control group in 2016, a second cohort was drawn in 2017. Thus, it was possible to gain a larger sample for survey wave one (shortly after school start) and survey wave two (after the first year of teaching). Due to the timeline of the NEWTT project as a whole, it was not possible to add a second cohort to the last survey wave (after the second year of teaching). Figure 21 shows the complete survey design for all groups.

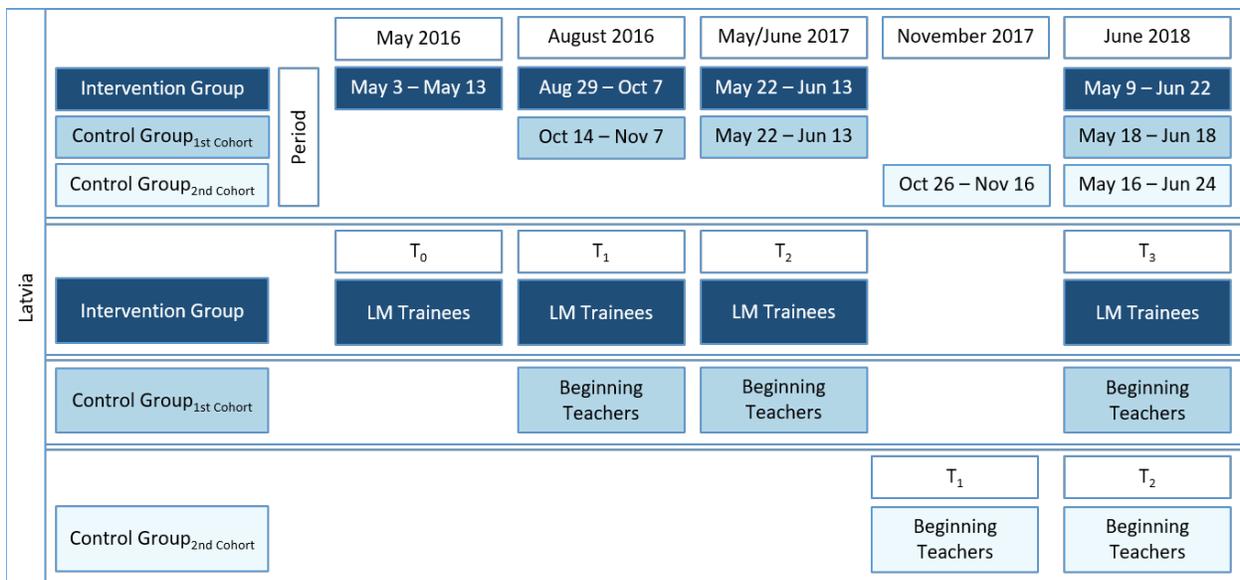


Figure 21: Latvia — Survey Design

However, even with the renewed recruitment of members for the control group, the sample size was still very small. Comparisons between the intervention and control groups after the second year of teaching are therefore not feasible due to the small sample size of the control group. After the second year, only five traditionally-trained teachers participated in the survey. Based on such low numbers, statistical analysis is futile.

³¹ Iespējamā Misija translates to ‘Mission Possible’ and is the name of the Latvian Teach For All programme.

Data relating to the characteristics of participants was taken from the first two survey waves. In the first and second wave, the same 20 fellows of Iespējamā Misija participated; the dropout rate was 0%. In the control group, 15 participants participated in the first survey; ten participants were from the 2016 cohort, and five from 2017. All were traditionally-trained teachers, and most started to work at school for the first time in the year of the survey. Four had already worked as teachers before, with an average teaching experience of 1.75 years.

6.1.4.1 Inherent Characteristics

Age. The age of the participants in the intervention group ranged from 22 to 45, with a mean of 25.75 and a standard deviation of 4.95. All participants were 29 or younger except one outlier, who was 45. As seen in Figure 22, participants in the control group were younger than the participants in the intervention group, with a very small age range of 22 to 24. The mean was 23.27 with a standard deviation of 0.59.

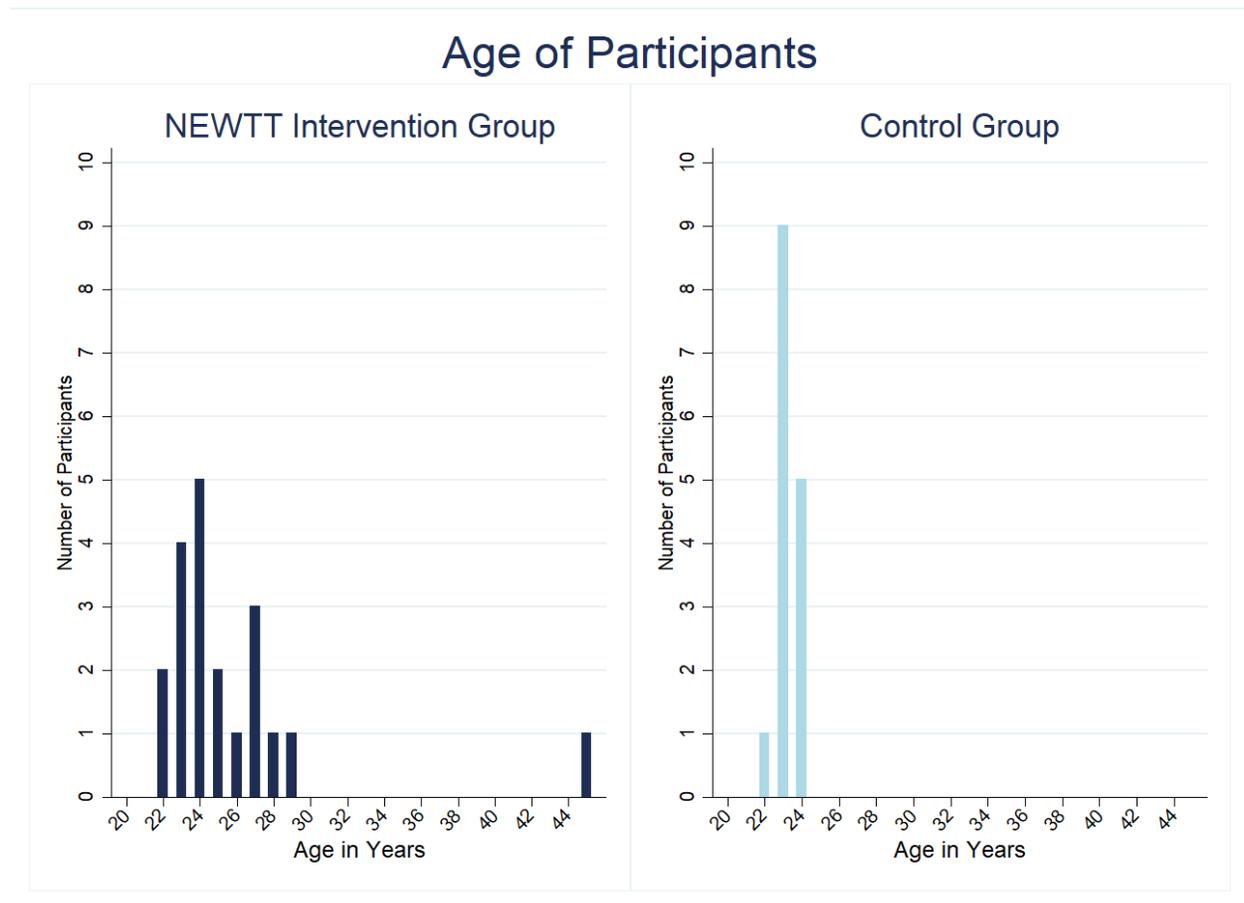


Figure 22: Latvia — Age Distribution in Years by Group

Gender. For both the intervention group and the control group, the percentage of females in the sample is much higher than the percentage of males. This gender imbalance is even more

pronounced in the control group. Of the NEWTT participants, 70% were female and 30% were male, whereas in the control group, 87% were female and only 13% were male. These details are shown in Figure 23.

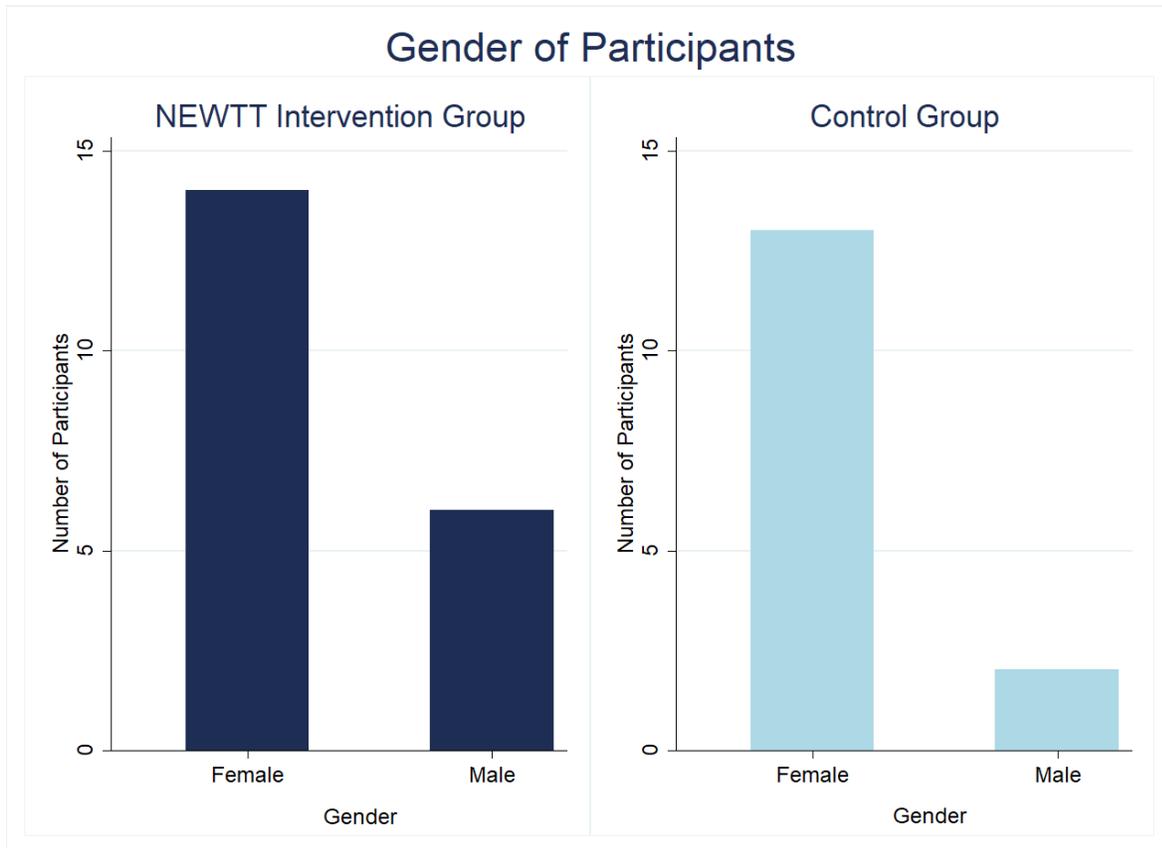


Figure 23: Latvia — Gender Distribution by Group

6.1.4.2 Prior Education

Secondary School Examination Grades. Participants were asked to state their grades in the Latvian final national examination. Due to changes in the Latvian grading system, questions regarding these grades differed for participants who had sat their examination before 2005 — when grades ranged from 1 (worst) to 10 (best) — and for participants who had sat their examination in 2005 or later, when grades were reported in percentages (with 100% being the best possible result). Only one participant of the intervention group had taken the examination before 2005, achieving a grade of 7 in mathematics and a grade of 9 in Latvian. All other participants stated their grades in percent. In the intervention group, the average grade in mathematics was 73.08 with a standard deviation of 17.57. In Latvian, the average grade was 77.77 with a standard deviation of 11.41, and in English as a foreign language, the average grade was 79.92 with a standard

deviation of 10.95. Six participants did not answer this question. The grades of the control group are significantly lower for mathematics (M=55.54; SD=15.43) and Latvian (M=67.0; SD=21.59) compared to the NEWTT intervention group. However, for English as first foreign language, the average grades of the control group are almost identical (M=72.15, SD=16.39). Two participants did not answer this question. For more descriptive statistics see Table 117 in the Annex.

Fields of Study. Participants in the intervention group varied greatly in the subjects they studied at university. Many had a degree in the fields of languages and arts, natural sciences, and humanities; no participant had a degree in health sciences. Of the participants in the intervention group, 30% had a master’s degree.

Predictably, the majority of the traditionally-trained teachers reported to have a degree in the humanities. Only one participant had a master’s degree. None of the alternatively-trained or traditionally-trained teachers had a PhD. All participants’ fields of study and degrees are presented in Table 55.

Field of Study	Intervention Group			Control Group		
	Bachelor’s	Master’s	Total	Bachelor’s	Master’s	Total
Languages and arts	4	0	4	0	0	0
Natural sciences	3	0	3	1	0	1
Social sciences	2	3	5	0	0	0
Formal sciences	0	1	1	1	0	1
Law and business	1	2	3	0	0	0
Humanities	3	0	3	12	1	13
Engineering	2	0	2	0	0	0
Health sciences	0	0	0	0	0	0
Other	3	0	3	2	0	2

Table 55: Latvia — Number of Participants According to Their Field of Study and Degree Obtained

6.1.4.3 Prior Experience Relevant for Teaching

Pedagogical Experience. Participants in the Iespējamā Misija programme were asked about their prior pedagogical experience before starting their teacher training. The exact questions were: ‘Have you ever worked with children or adolescents at school before? (tutor, teacher assistant, social worker, etc.)’ and ‘Have you ever worked with children or adolescents outside of school before? (youth group leader, soccer coach, etc.)’. Possible responses were 1 (never), 2 (seldom), 3 (quite often), or 4 (very often). Results are shown in Table 56 and Table 57. Unfortunately, only five participants in the control group answered the questions on prior pedagogical experiences, therefore the results will not be reported.

Prior Pedagogical Experience at School	Intervention Group	
	Frequency	Percentage
Never	9	45%
Seldom	8	40%
Quite often	2	10%
Very often	1	5%
N	20	100%

Table 56: Latvia — Prior Pedagogical Experience of Working with Children or Adolescents at School

Prior Pedagogical Experience Outside of School	Intervention group	
	Frequency	Percentage
Never	3	15%
Seldom	5	25%
Quite often	8	40%
Very often	4	20%
N	20	100%

Table 57: Latvia — Prior Pedagogical Experience of Working with Children or Adolescents beyond the School Context

The descriptive statistics show that participants worked more frequently outside of school with children or adolescents than they did at school. 45% replied 'never' regarding work at school, whereas 40% replied 'quite often' in response to the question regarding work outside of the school context. Only 15% answered 'never' to the second question, making it the least chosen option, whereas the least chosen option for the first question was 'very often' with only one respondent, i.e. 5% of the total sample. Although almost half had some kind of previous experience of working with children or adolescents, most of this took place outside the school environment. Therefore, teaching and working with children as part of the *Iespējamā Misija* programme will be a completely new experience for at least 45% (n = 9) of these participants.

Time Spent Abroad. When asked whether they had studied or worked abroad, 15 (75%) of the intervention group answered 'yes'. Those who answered 'yes' were asked how much time they had spent abroad. Answers varied greatly, with five spending six months or less abroad, and five spending 18 months or more abroad. The frequencies and percentages for each answer option are presented in Table 58.

Time Spent Abroad	Intervention Group	
	Frequency	Percentage
Less than 6 months	5	33.33%
6 to 12 months	3	20%
12 to 18 months	2	13.33%
More than 18 months	5	33.33%
N	15	100%

Table 58: Latvia — Time Spent Studying or Working Abroad

Of the control group, one third reported that they had studied or worked abroad. Only five answered the in-depth question about time spent abroad, so results cannot be shown.

Volunteer Work. Participants were asked how often they had been involved in social organisations such as sports clubs, social projects, and development aid. Most of the intervention group (45%) chose the option ‘quite often’ as can be seen in Table 59. However, the majority of the control group had ‘never’ been involved in social organisations.

Involvement in Social Organisations	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Never	2	10%	5	33.33%
Seldom	1	5%	4	26.67%
Quite often	9	45%	3	20%
Very often	8	40%	3	20%
N	20	100%	15	100%

Table 59: Latvia — Involvement in Social Organisations

A similar question regarding involvement in political organisations was asked; unlike the responses to the previous question, the majority of the intervention group had never been involved in such organisations. Most in the control group also reported to never have been involved in a political organisation. This tendency is even more pronounced for this group than for the intervention group.

Involvement in Political Organisations	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Never	12	60%	13	86.67%
Seldom	5	25%	2	13.33%
Quite often	3	15 %	0	0%
Very often	0	0%	0	0%
N	20	100%	15	100%

Table 60: Latvia — Involvement in Political Organisations

Regarding entrepreneurial initiative, results were similar to those for the previous question because the majority of the intervention and control groups had also never engaged in such activities. Again, this pattern is slightly more pronounced for the control group.

Entrepreneurial Initiative	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Never	8	40%	10	66.67%
Seldom	7	35%	2	13.33%
Quite often	4	20%	2	13.33%
Very often	1	5%	1	6.67%
N	20	100%	15	100%

Table 61: Latvia — Entrepreneurial Initiative

In the mean levels of involvements in volunteer work, three areas are represented. Overall, participants in the intervention group were more engaged in volunteer work than those in the control group. This is especially true for involvement in social organisations. On average, participants in both groups were mostly involved in social organisations. They were distinctly less engaged in entrepreneurial activities and least involved in political organisations. This pattern is more pronounced for the intervention group than for the control group.

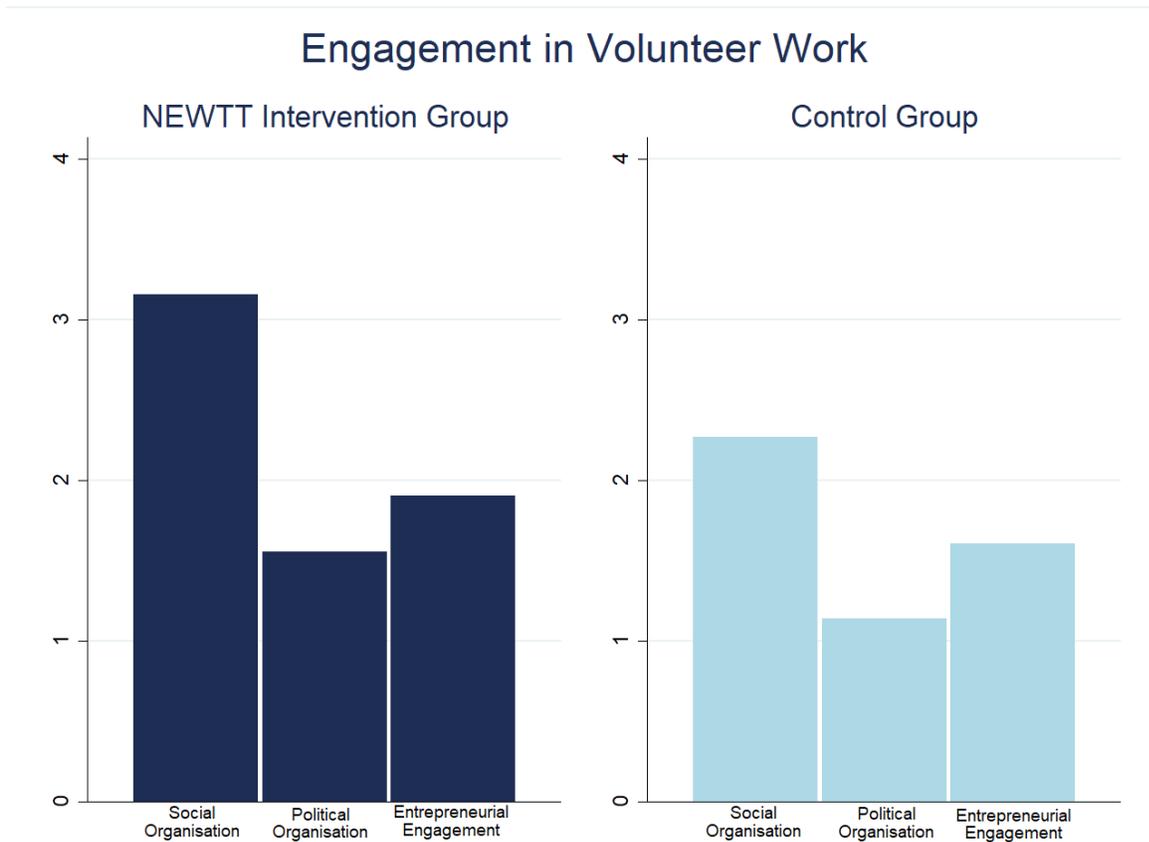


Figure 24: Latvia — Involvement in Volunteer Work by Group

6.1.4.4 *Motives for Becoming a Teacher*

Data on motives for teaching was gathered before the participants started teaching at school. This means that the questions were included in the first survey for the control group and in the second survey for the NEWTT intervention group.

To determine what motivated the participants to become a teacher, participants were asked to complete the *Factors Influencing Teaching-Choice Scale* developed by Watt and Richardson in 2007. This scale has been used in several international studies and has proved to be a very effective and reliable tool to determine motives for choosing the teaching profession. The original scale comprises 13 motives and overall 37 items; however, including all of these items would have gone beyond the scope of the NEWTT questionnaire. Therefore, the evaluation team chose 17 items, which seemed to be the most relevant taking into account the context of the project. The 17 items can be assigned to the following six motives: job security, shaping the future of children and adolescents, reducing social disadvantages, social responsibility, working with children, and subject-specific motivation. An overview of all the items and their respective categories is provided in Table 112 in the Annex.

The different items were preceded by the following instruction: 'Please rate the importance of each of the following influences on your choice for a career in teaching on a scale of 1 (*not at all important*) to 7 (*extremely important*). I chose to become a teacher because...'. Participants subsequently rated each of the 17 items using the scale of 1 to 7. Results are presented in Table 62. One participant of the intervention group and four participants in the control group did not answer this question. With such a small sample, it was not possible to calculate factor or reliability analyses. Therefore, results are presented at the item level.

For the intervention group, the motive 'job security' was rated least important. All other aspects were rated higher than 5, with the exception of the item '...teaching will allow me to help the socially disadvantaged'. Nine of the 17 items were rated higher than 5.5, with '...teaching will allow me to shape children and adolescents' values' having the highest rating of all (M=6.26). Therefore, on average, all motives except 'job security' were important to participants for choosing a career in teaching. Interestingly, standard deviations were generally quite high, ranging from 0.93 to 2.03. This means that ratings varied quite a lot among the 19 participants.

Variable	Item	Intervention Group		Control Group	
		M	SD	M	SD
TB06_01	...teaching will offer a steady career path.	2.58	1.46	5.09	1.58
TB06_02	...teaching will provide a reliable income.	2.79	1.54	4.45	1.75
TB06_03	...teaching will be a secure job.	2.68	1.66	4.82	1.78
TB06_04	...teaching will allow me to shape child and adolescent values.	6.26	0.93	5.55	1.29
TB06_05	...teaching will allow me to influence the next generation.	5.79	1.22	5	1.34
TB06_06	...teaching will allow me to raise the ambitions of under-privileged youth.	5.22	1.73	4.73	1.27
TB06_07	...teaching will allow me to benefit the socially disadvantaged.	4.58	2.03	3.82	1.33
TB06_08	...teaching will allow me to provide a service to society.	5.84	1.57	6.18	0.87
TB06_09	...teachers make a worthwhile social contribution.	5.68	1.45	5.45	1.69
TB06_10	...teaching enables me to give back to society.	5.95	1.58	6	1.18
TB06_11	...I want a job that involves working with children and adolescents.	5	1.85	5.18	1.33
TB06_12	...I want to work in a child and adolescent-centred environment.	5.21	1.61	5.27	1.27
TB06_13	...I like working with children and adolescents.	5.26	1.59	5.73	1.35
TB06_14	...I want to help children and adolescents learn.	5.63	1.46	5.91	1.04
TB06_15	...I really enjoy the topics that I will teach.	5.79	1.47	5.73	1.19
TB06_16	...I am really interested in the subject(s) that I will teach.	5.68	1.37	5.91	0.94
TB06_17	...I want to share my passion for my subject(s) with others.	5.68	1.56	5.18	1.66
	N	19		11	

Table 62: Latvia — Motives for Becoming a Teacher

For the control group, the motive ‘job security’ was much more important in making their decision to become teachers than it was for the intervention group. However, with the exception of the motive ‘reducing social disadvantages’, the motive ‘job security’ had the least importance for the control group. Still, the control group rated all the motives as rather important, the most important item being the motive ‘social responsibility’, with the highest rated item: ‘...teaching will allow me to provide a service to society.’ (M=6.18). Standard deviations for the control group did not vary as much as for the intervention group, meaning that participants in the control group answered more homogeneously. This is especially true for the rating of importance regarding the job motives ‘subject-specific motivation’ and ‘social responsibility’.

6.1.5 Participant Characteristics: Romania

Sample Description. The sample analysed for Romania consists of two groups: one intervention group of beginning teachers taking part in the training programme Teach For Romania, and one control group of beginning teachers who followed the traditional university path. In accordance with the selection criteria for the control group, the first priority was to select candidates with no previous teaching experience. However, since several countries had difficulties finding sufficient candidates for the control group, this criterion was relaxed so that teachers with teaching experience of up to two years were accepted as well.

Participants in the intervention group were surveyed four times. Once in May 2016 before their training programme at Teach For Romania began and again in June 2016, after completing the summer training but before they started working at their placement schools. The third survey took place towards the end of their first year working at school in June 2017. Finally, they were surveyed in June 2018, after the second year working at school.

Participants in the control group were surveyed three times: during the first weeks working at school in September 2016, and again after the first and second years working at school, in June 2017 and June 2018 respectively. In order to increase the sample size, it was decided to add a second cohort to the control group. Due to the timeline of the entire project, the second cohort could only be surveyed twice: once during the first weeks working at school in September 2017, and once at the end of the first school year in June 2018. For this reason, sample sizes for the control group vary notably between the first two waves on the one hand and the last wave on the other. Figure 25 shows the survey design with the actual survey periods for the NEWTT intervention group and the control group cohorts for Romania.

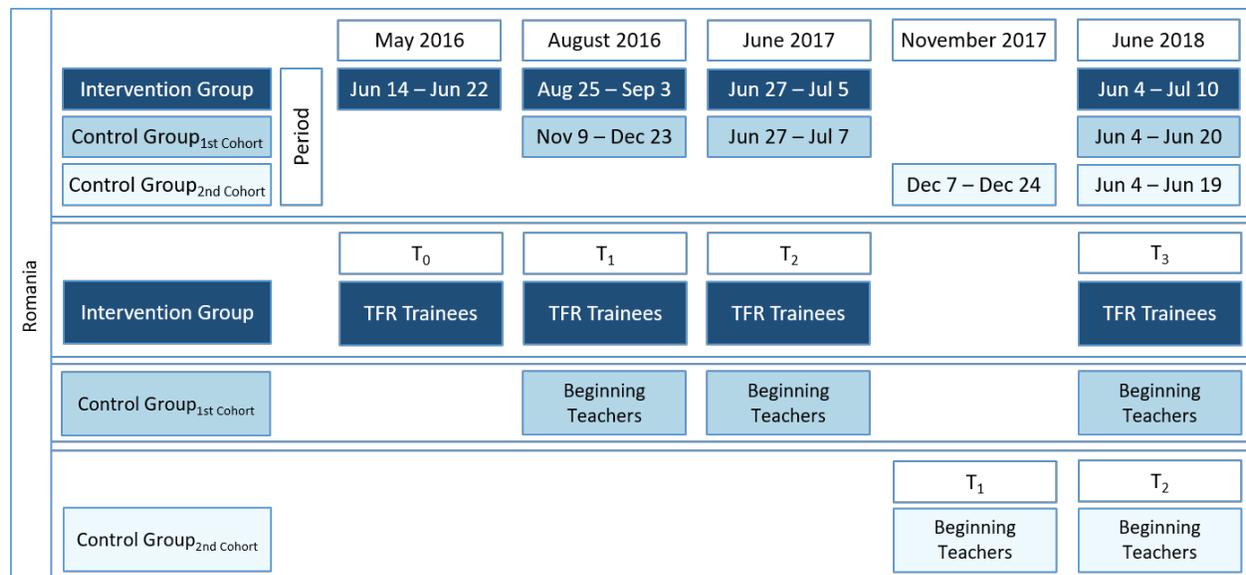


Figure 25: Romania — Survey Design

T₀ refers to the measurement period before any training had taken place. This measurement only exists for the intervention group. T₁ refers to the measurement period before participants started to work at school. T₂ and T₃ refer to the measurement periods after the first and second year working at school respectively.

The results presented throughout this report take into account the number of participants in the respective waves. Therefore, sample sizes vary for different results. Expectedly, dropout rates increased with the number of data collection waves, resulting in a progressively condensed panel. In the first wave of the project, 43 NEWTT fellows participated; in the second wave, 40 fellows participated. The dropout rate was rather low at approximately 7%. In the third survey, 32 fellows took part. Compared to the first survey, this represents a dropout rate of roughly 25%. In the last survey, 31 fellows took part, meaning only one additional participant dropped out of the panel during the last year. Compared to the first wave, the overall dropout rate for the intervention group was 28%. However, participation was 100% for each wave, i.e. every continuing participant of the NEWTT intervention group completed the questionnaire.

As for the control group, 61 participants completed the first survey. The first cohort of October 2016 comprised 31 participants, while the second cohort in October 2017 had 30. However, 18 members of the first cohort and 12 members of the second cohort reported to have entered the teaching profession via an alternative route. As the control group had to consist of traditionally-trained teachers, those cases were deleted. Of the remaining participants, two members of the second cohort reported to have already had prior teaching experience of more than two years. Therefore, those participants did not fit the definition of beginning teachers and were excluded from the sample as well. Thus, 13 participants remained in the sample for the first cohort and 16 in the sample of the second, making a combined sample of 29 participants for the first survey wave T₁. For the second survey wave T₂, six participants remained from the first cohort and ten from the second, making a combined sample of 16 control group participants. For the last survey wave T₃, only four participants remained from the first cohort. Due to this low number of participants in the third wave, comparisons between intervention and control groups regarding results at the end of the two-year programme are not feasible. However, the high numbers of participants who claimed to have entered teaching via an alternative pathway seemed very unlikely to the people responsible for recruitment. They thought it possible that participants might have misunderstood the question about their qualification process. Therefore, this question was posed to participants of the control group a second time. The updated results will be available in due course.

6.1.5.1 Inherent Characteristics

Age. The age of the participants in the intervention group ranged from 21 to 55, with a mean of 29.12 and a standard deviation of 7.26. Half were 27 or younger (22 people); five outliers were older than 35. The absolute frequencies of participants' age are shown in Figure 26. The age of the participants in the control group ranged from 21 to 49, with a mean of 29.12. Half were 25 years of age or younger. Three did not report their age.

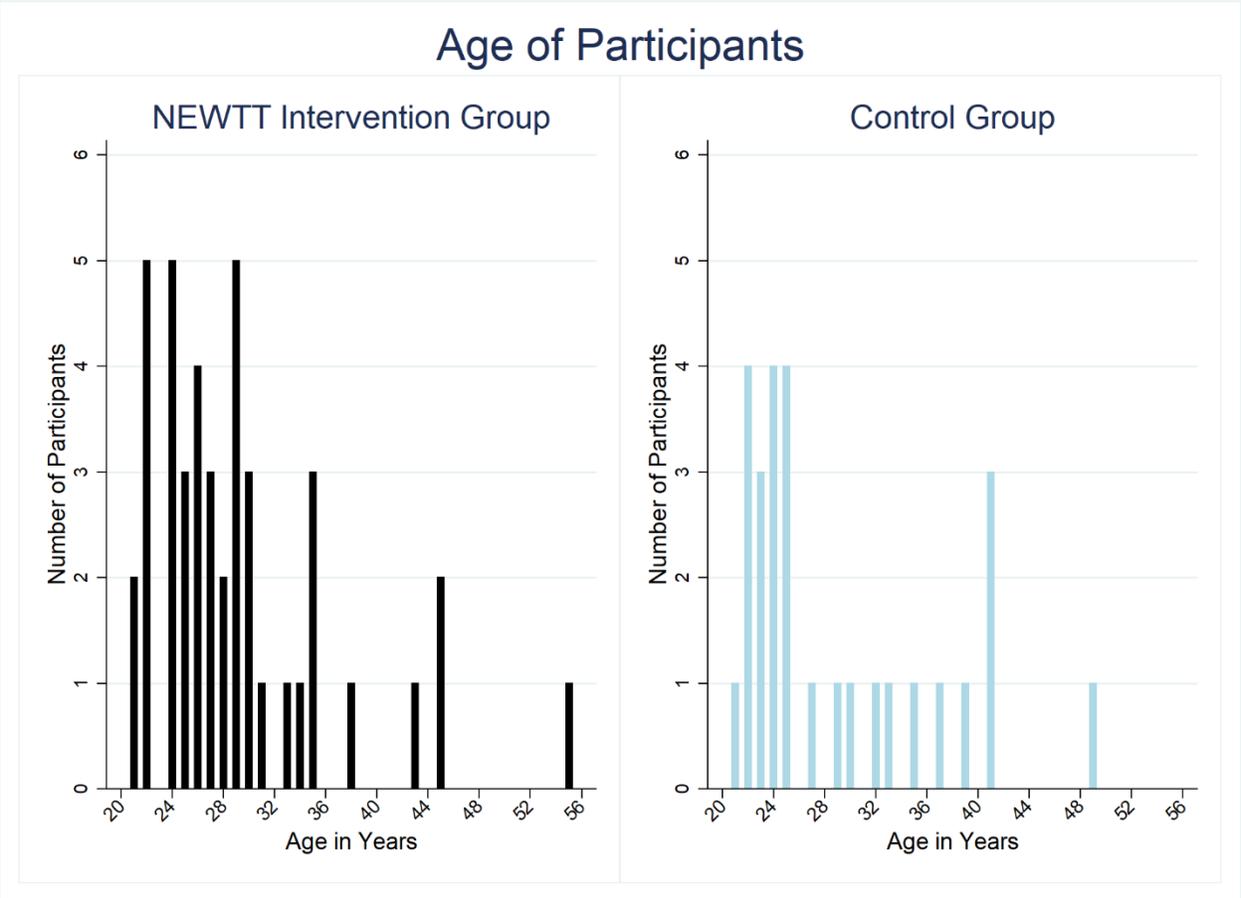


Figure 26: Romania — Age Distribution in Years by Group

Gender. Of the intervention group participants, 74.42% were female and 25.58% were male. In the control group, the percentage of males was significantly lower. Here, only 10.71% were male, and almost 90% were female.

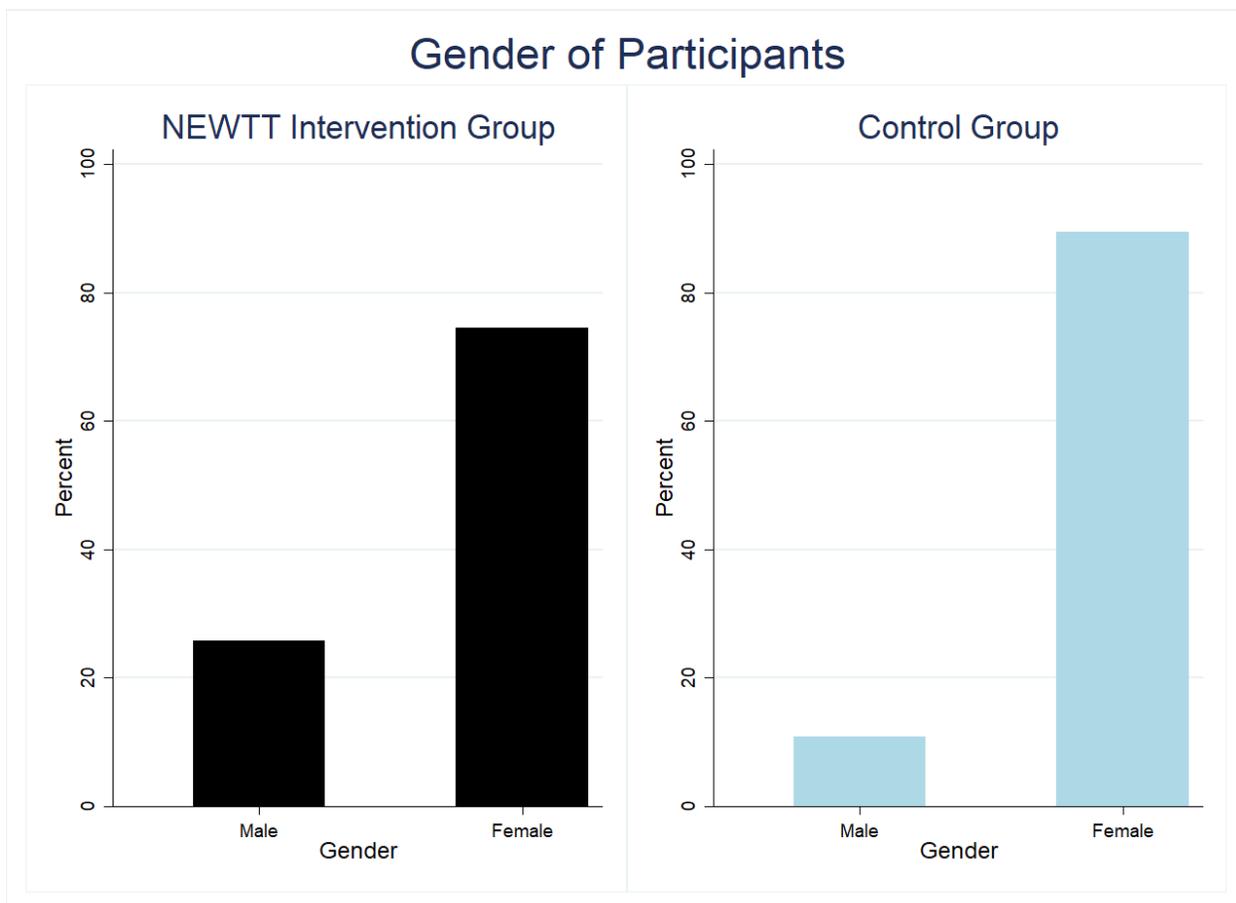


Figure 27: Romania — Gender Distribution of Participants by Group

6.1.5.2 Prior Education

Secondary School Examination Grades. Participants were asked to state their average grades in the baccalaureate (final secondary school examinations). The Romanian grading system ranges from 1 (worst) to 10 (best). Grades 1 through 4 are failing grades, 5 is the minimum passing grade. However, to pass the baccalaureate, an average of 7 or higher is needed. The average grade on the baccalaureate of the 39 NEWTT participants who stated their grades was 8.81, which is considered very good. Examination of the frequencies of the average grades revealed that approximately half of the participants achieved an average grade of 9 or higher. The same holds true for the control group; the average grade in the baccalaureate was 8.80. However, only half of the participants in the control group reported their grade. Of those, 57% reported to have achieved an average grade of 9 or higher. Descriptive results are presented in Table 118 in the Annex.

Fields of Study. Participants in the intervention group varied greatly in the subjects they studied at university. The participants' fields of study and degrees obtained are presented in Table 63.

Field of Study	Intervention Group				Control Group		
	Bachelor's	Master's	PhD	Total	Bachelor's	Master's	Total
Languages and arts	7	3	0	10	5	1	6
Natural sciences	7	4	2	13	2	1	3
Social sciences	2	1	0	3	1	0	1
Formal sciences	3	2	0	5	4	2	6
Law and business	9	4	0	13	3	0	3
Humanities	12	6	2	20	9	4	13
Engineering	0	1	0	1	0	1	1
Health sciences	0	0	0	0	1	0	1
Other	3	4	0	7	4	3	7

Table 63: Romania — Number of Participants According to Their Field of Study and Degree Obtained

Most of the participants in the intervention group had a degree in the humanities. Many had a degree in natural sciences or law and business studies. Few had a degree in engineering or social sciences. None had a degree in health sciences. While 37 had a bachelor's degree, three had two bachelor's degrees. While 40 (93.02%) had at least one bachelor's degree, 23 had a master's degree, and one had two master's degrees. Overall, 24 participants (55.81%) had at least one master's degree. Four had a PhD.

In the control group, most participants had a bachelor's degree in the humanities such as education, which is to be expected. However, just as many reported to have obtained a bachelor's degree in languages and arts or mathematics. As for the master's degrees, most of these were obtained in the humanities. Overall, the majority (89.3%) of participants had a bachelor's degree, while one had two bachelor's degrees, and one other reported to have two master's degrees but no bachelor's. Of the 96.5%, who reported to have obtained at least one bachelor's degree, ten also reported to have obtained a master's degree. None of the participants had obtained a PhD. For descriptive statistics see Table 119 in the Annex.

6.1.5.3 Prior Experience Relevant for Teaching

Pedagogical Experience. The following questions were posed to participants as part of the first survey. All participants were asked about their prior pedagogical experience. The exact questions were as follows: 'Have you ever worked with children or adolescents at school before? (Tutor, teacher assistant, social worker, etc.)' and 'Have you ever worked with children or adolescents outside of school before? (Youth group leader, soccer coach, etc.)'. Participants could choose a response from 1 (never), 2 (seldom), 3 (quite often), or 4 (very often). As can be seen in Table 64, the majority of intervention group participants had 'never' (39.53%) or 'seldom' (32.56%) worked

with children at school before. This percentage is even higher in the control group, where over 87% of the participants had ‘never’ or ‘seldom’ worked with children at school, and only 12.5% had done so quite often.

Prior Pedagogical Experience at School	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Never	17	39.53%	9	56.25%
Seldom	14	32.56%	5	31.25%
Quite often	7	16.28%	2	12.5%
Very often	5	11.63%	0	0%
N	43	100%	16	100%

Table 64: Romania — Prior Pedagogical Experience of Working with Children at School

Experience of working with children beyond the school context was more common. Almost half of the participants in the intervention group claimed to have had pedagogical experience outside of school ‘quite often’ or ‘very often’. 20.93% claimed to have never worked with children outside of the school context. In the control group, more than two thirds answered that they had ‘never’ (31.25%) or ‘seldom’ (37.5%) worked with children beyond the school context; one third answered ‘quite often’. Results are presented in Table 65.

Prior Pedagogical Experience Outside of School	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Never	9	20.93%	5	31.25%
Seldom	13	30.23%	6	37.5%
Quite often	16	37.21%	5	31.25%
Very often	5	11.63%	0	0%
N	43	100%	16	100%

Table 65: Romania — Prior Pedagogical Experience of Working with Children Beyond the School Context

The descriptive statistics show that participants reported more pedagogical experience with children outside of the school context than at school. Less than 30% of the participants had frequently worked with children or adolescents at school. Yet, approximately half of the participants had some kind of previous experience of working with children or adolescents outside of school. Still, teaching and working with children as part of the Teach For Romania programme will be a completely new experience for at least 50% of the participants.

Time Spent Abroad. When asked whether they had studied or worked abroad, 19 participants (44.19%) in the intervention group answered ‘yes’. Those who answered ‘yes’ were asked how much time they had spent abroad. Most (42.11%) had spent less than six months abroad. Four

participants had spent 18 months or longer abroad. Of the 28 in the control group who answered this question, exactly one quarter had spent time working or studying abroad. Of those seven, most had spent 12 months or longer abroad. Only two participants had spent less than six months abroad. The frequencies and percentages for each answer are presented in Table 66.

Time Spent Abroad	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Less than 6 months	8	42.11%	2	28.57%
6 to 12 months	4	21.05%	0	0%
12 to 18 months	3	15.79%	2	28.57%
More than 18 months	4	21.05%	3	42.86%
N	19	100%	7	100%

Table 66: Romania — Time Spent Studying or Working Abroad

Volunteer Work. Participants were asked how often they had been involved in social organisations such as sports clubs, social projects, and development aid. Most of the participants in the intervention group (34.88%) selected the option ‘quite often’. However, almost as many (30.23%) had ‘seldom’ been involved in social organisations. Of the participants, 30.23% had ‘very often’ been engaged in social organisations. In the control group, the majority had ‘never’ (21.43%) or ‘seldom’ (39.29%) been involved. However, almost 40% reported to have been involved in social organisations ‘quite often’ (35.71%) or ‘very often’ (3.57%). All results are shown in Table 67.

Involvement in Social Organisations	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Never	2	4.65%	6	21.43%
Seldom	13	30.23%	11	39.29%
Quite often	15	34.88%	10	35.71%
Very often	13	30.23%	1	3.57%
N	43	100%	28	100%

Table 67: Romania — Involvement in Social Organisations

A similar question regarding involvement in political organisations was asked, and the majority of participants (76.19%) had ‘never’ been involved in such organisations. None had been involved in political organisations ‘quite often’ or ‘very often’. The same can be said regarding the control group. Here, 88.46% had ‘never’ been involved in political organisations and 11.54% ‘seldom’. None answered ‘quite often’ or ‘very often’. All results are presented in Table 68.

Involvement in Political Organisations	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Never	32	76.19%	23	88.46%

Seldom	10	23.81%	3	11.54%
Quite often	0	0%	0	0%
Very often	0	0%	0	0%
N	42	100%	26	100%

Table 68: Romania — Involvement in Political Organisations

Regarding entrepreneurial initiative, results were quite similar to the results of the previous question. All frequencies are shown in Table 69.

Entrepreneurial Initiative	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
Never	16	38.1%	14	50%
Seldom	17	40.48%	11	39.29%
Quite often	6	14.29%	3	10.71%
Very often	3	7.14%	0	0%
N	42	100%	28	100%

Table 69: Romania — Entrepreneurial Initiative

The majority of the participants in the intervention group had ‘never’ (38.1%) or ‘seldom’ (40.48%) engaged in entrepreneurial activities. Only three participants (7.14%) had engaged ‘very often’ in entrepreneurial activities. Of the control group, almost 90% of the participants had ‘never’ (50%) or ‘seldom’ (39.29%) engaged in entrepreneurial activities. Only three of the participants (10.71%) answered ‘quite often’ when asked about their entrepreneurial initiative.

Figure 28 shows the mean levels of involvement in volunteer work in the three areas. On average, participants were involvement mostly in social organisations. They were distinctly less engaged in entrepreneurial activities and least engaged in political organisations.

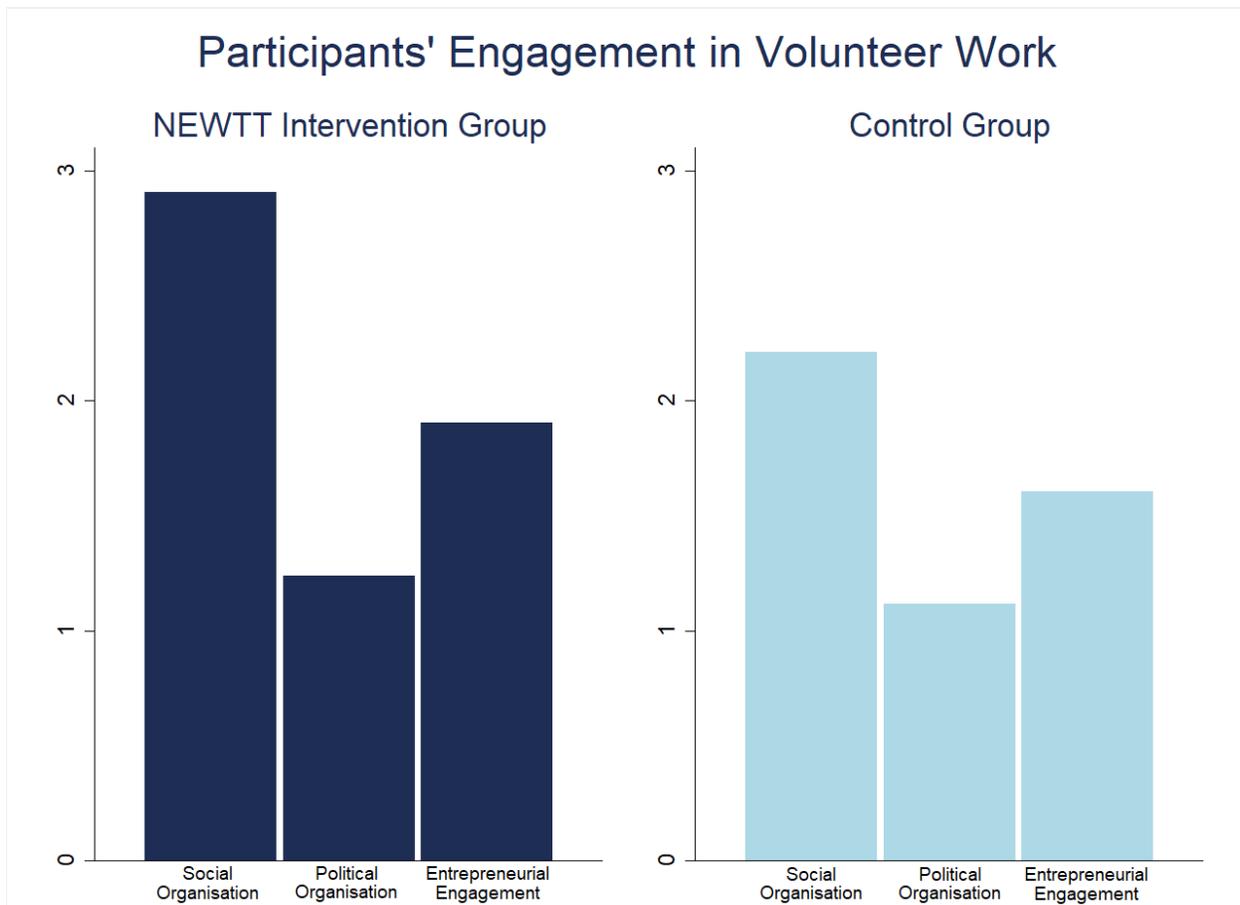


Figure 28: Romania — Involvement in Volunteer Work by Group

6.1.5.4 Motives for Becoming a Teacher

Data on motives for teaching was retrieved from the second survey completed by the participants in the intervention group before they started teaching at school.

To determine what motivated participants to become a teacher, participants were asked to complete the *Factors Influencing Teaching-Choice Scale* developed by Watt and Richardson in 2007. This scale has been used in several international studies and has proved to be a very effective and reliable tool to determine motives for choosing the teaching profession. The original scale comprises 13 motives and overall 37 items; however, including all of these items would have gone beyond the scope of the NEWTT questionnaire. Therefore, the evaluation team chose 17, which seemed to be the most relevant to the context of the project. The 17 items can be assigned to the following six motives: job security, shaping the future of children and adolescents, reducing social disadvantages, social responsibility, working with children, and subject-specific motivation. An overview of all the items and their respective categories is provided in Table 112 Annex. The items were preceded by the instruction: ‘Please rate the importance of each of the

following influences on your choice for a career in teaching on a scale of 1 (*not at all important*) to 7 (*extremely important*). I chose to become a teacher because...’ Participants subsequently rated each of the 17 items on a scale of 1 to 7. Results at the item level are presented in Table 70.

Variable	Item	Intervention group		Control group	
		M	SD	M	SD
TB06_01	...teaching will offer a steady career path.	5.14	1.56	5.54	1.42
TB06_02	...teaching will provide a reliable income.	3.32	1.52	3.77	2.07
TB06_03	...teaching will be a secure job.	3.95	1.34	4.35	1.87
TB06_04	...teaching will allow me to shape child and adolescent values.	6.55	0.81	6.62	0.7
TB06_05	...teaching will allow me to influence the next generation.	6.49	0.84	6.12	1.4
TB06_06	...teaching will allow me to raise the ambitions of under-privileged youth.	6.63	0.73	6.5	0.81
TB06_07	...teaching will allow me to benefit the socially disadvantaged.	6.54	0.87	6.04	1.24
TB06_08	...teaching will allow me to provide a service to society.	6.41	0.92	6.31	0.84
TB06_09	...teachers make a worthwhile social contribution.	6.34	0.91	5.88	1.24
TB06_10	...teaching enables me to give back to society.	5.44	1.53	5.65	1.47
TB06_11	...I want a job that involves working with children and adolescents.	6.05	1.18	6.46	0.81
TB06_12	...I want to work in a child and adolescent-centred environment.	6.12	1.25	6.5	0.95
TB06_13	...I like working with children and adolescents.	6.29	1.12	6.62	0.8
TB06_14	...I want to help children and adolescents learn.	6.61	0.83	6.56	0.82
TB06_15	...I really enjoy the topics that I will teach.	5.71	1.21	6.15	1.19
TB06_16	...I am really interested in the subject(s) that I will teach.	5.8	1.23	6.46	0.9
TB06_17	...I want to share my passion for my subject(s) with others.	5.93	1.17	6.58	0.81
	N	41		26	

Table 70: Romania — Motives for Becoming a Teacher

In the intervention group, the items regarding job security were rated in general as the least important; however, standard deviations were quite high, so the ratings of participants varied greatly on those items. Most items had ratings of 6 and higher, except for those concerning subject-specific motivation and the item ‘...teaching enables me to give back to society’. The highest-rated items overall were ‘...teaching will allow me to raise the ambitions of under-

privileged youths' (M=6.63) and '...I want to help children and adolescents learn' (M=6.61). Results indicate that all motives were important or very important to participants in the intervention group in their decision to become a teacher. However, to be able to shape the future of children, reduce social disadvantages, and work with children were the most important motives for them.

For the control group, the job motives are very similar. This group rated the items regarding job security the lowest as well. However, on average they rated them as slightly more important than the intervention group. All other motives had a higher mean than 5.6 and were therefore important or very important. For the control group the highest-rated items were: '...I want to share my passion for my subject(s) with others' (M=6.58) — showing a subject-specific motivation to become teachers — as well as '...I like working with children and adolescents' (M=6.62) and '...teaching will allow me to shape child and adolescent values' (M=6.62), which emphasise the motive to engage with children.

Characteristics of Traditionally-Trained and Alternatively-Trained Teachers at the Beginning of Their Teaching Careers – Transnational Summary

The average age of the participants varied across countries. The country with the youngest participants was Latvia (25.75 for the intervention group; 23.27 for the control group). In the Basque Country, the participants of the intervention group were on average only 0.41 years older than in Latvia (26.16 years), while the participants of the control group were on average 30.45. In Austria, the participants of the intervention group varied in age from 21 to 35, with an average of 27.5, while the participants of the control group were on average 1.5 years older (29 years). In Romania, the average age of both the intervention and control groups was 29.12. The oldest participants were in Bulgaria (31.22 for the intervention group; 30.88 for the control group; 34.14 for the group of Plovdiv master's students). Romania, the Basque Country, and Bulgaria recruited university graduates and individuals who were already certified for teaching certain subjects, and they recertified them for other subjects. In general, those participants were older, and therefore contributed to an increase in the average age of the intervention groups in those countries. Regarding the gender distribution of the participants in the five countries, there were more female participants in all groups. For all countries except Austria (62.8%) and the Basque Country (57.89%), the percentage of female participants in the intervention group was 70% or more. In all control groups, the percentage of female participants was at least 70%, with the highest percentage in Romania (89.29%). Overall, the percentage of men was higher in the intervention groups than in the control groups.

Considering final secondary school examination grades, participants of all the intervention groups generally achieved good or very good grades. In all countries except Romania, participants of the intervention group achieved higher grades or at least the same as participants of the control group. While this difference was not significant in Austria, the average grade of the control group in Bulgaria was slightly lower compared to the intervention group and the group of Plovdiv master's students. In Bulgaria and Romania, only half of the participants reported their grades while, in the Basque Country, none of the participants of either the control group or the group of master's students stated their grades. Most of the participants of the intervention and control groups in the five countries had a degree in the humanities, or languages and arts, and many had a degree in law and business. The Basque Country was an exception here as most of the participants of the intervention group had a degree in engineering.

Concerning previous pedagogical experience, participants of both the intervention and control groups in all countries claimed to have more experience of working with children or adolescents outside of the school context (e.g. as a sports coach or youth group leader) than within the school context (e.g. as a tutor or teaching assistant). In general, participants of the intervention groups answered 'quite often' or 'very often' more frequently than the participants of the control

groups. This shows a greater pedagogical experience within or outside the school context for the intervention groups.

In four of the five participating countries, more participants of the intervention group reported to have worked or studied abroad compared to those of the control group; due to the small number of participants of the control group in Latvia (5), these results are not reported. While in Austria, the Basque Country and Latvia, at least 75% of the participants of the intervention groups reported to have worked or studied abroad, in Bulgaria and Romania this was true for significantly fewer participants (Bulgaria: 40%; Romania: 44.19%). Concerning the control group, less than one third of the participants in Austria, Bulgaria and Romania had worked or studied abroad. The Basque Country was an exception here as 72.73% of the participants had spent time abroad.

In all countries, participants of the intervention group were significantly more involved in volunteer work than participants of the control group. Overall, participants of both groups were mostly involved in social organisations. They were distinctly less engaged in entrepreneurial activities and least involved with political organisations.

Regarding participants in the intervention groups, the most important motives for becoming a teacher were the wish to work with children and adolescents as well as a feeling of social responsibility. For participants of the control groups, a passion for their subject and wishing to work with children and adolescents were the predominant motives. While items regarding job security were rated the lowest overall, control group members rated them on average significantly higher than members of the intervention group.

6.2 Development of Teacher Competences and Teacher Knowledge of Alternatively-Trained Beginning Teachers over the First Two Years of Their Teaching Career

This chapter reports data on the development of self-assessed teaching competences and teacher knowledge of alternatively-trained teachers over the course of their two-year training programme. Since the goal is to examine the development of intervention group participants over time, only those participants who completed the respective questionnaires at all three points in time are included in the analysis. The longitudinal panel data set of the intervention groups, that is to say, the data set including all participants who completed all questionnaires for each country, contains 40 participants for Austria, 29 participants for the Basque Country, 84 participants for Bulgaria, 19 participants for Latvia, and 31 participants for Romania. However, not all participants answered every question in each of the questionnaires. Therefore, sample sizes can vary according to the different topics of analysis.

Regarding teaching competences, data was collected at three different points in time. At the end of the initial teacher training phase (T_1), participants were asked to evaluate their current level of proficiency in different areas of teaching expertise, on a scale of 1 (not sufficient) to 5 (excellent). At this point, participants had just finished the Summer School training, gaining first teaching experiences in classrooms. They were asked to assess their competences again at the end of the first year working at school (T_2) and again at the end of the second year working at school (T_3). The scale originally comprised 21 items and was developed by Abs et al. (2009). For the last questionnaire at T_3 , the scale had to be reduced to 16 items due to space and time constraints. Therefore, the final comparison can only take into account those 16 items.

The questionnaires also included two different knowledge tests. The first set of questions was taken from the pedagogical knowledge test (PUW-Test) of the International Teacher Education and Development Study (IEA-TEDS-M) developed by König & Blömeke, 2010. The eight selected questions³² focused on pedagogical knowledge of teaching and learning. Participants were tested with the PUW test twice: once before starting to work at school (T_1), and once at the end of the second year working at school (T_3). The second test was tailored and designed in-house by the NEWTT evaluation team based on the Teach For All training materials. This test was administered three times: once before the initial training started (T_0), again at the end of the first year (T_2), and again at the end of the second year working at school (T_3). The test was shortened for the last questionnaire due to time and space constraints. The original test (administered at T_0 and T_2) included 31 test questions. After eliminating questions that showed a consistent high level of difficulty, 21 questions remained for T_3 . For more information on the construction of the tests,

³² Three questions consisted of further sub-questions.

see section. For analysing participants' development, only the 21 questions included in the questionnaire at T₃ will be considered.

6.2.1 Development of Teacher Competences and Teacher Knowledge: Austria

This section reports data on the development of teacher competences and knowledge of the intervention group of Teach For Austria fellows over the course of their two-year training programme. Data is reported only for the 40 participants who stayed in the training programme over the two-year period. At T₀, the intervention group comprised 51 participants. The overall dropout rate was therefore 21.6%.

6.2.1.1 Teacher Competences

As mentioned above, participants were asked to evaluate their level of proficiency at certain points during their two-year training programme. 35 participants assessed the teaching competences on a scale of 1 (*not sufficient*) to 5 (*excellent*). Overall, participants assessed their teaching competences higher at the end of the second school year (T₃) than before they started to work at school (T₁). They assessed their competences as at least satisfactory for all areas at the end of the second school year. In five areas, they declared good teaching competence, while rating themselves higher than 3.5 in seven out of the 16 items. On average, participants saw their highest competence in preparing lessons time-efficiently.

Regarding competence development, there are several patterns to examine. For most areas of teaching, there was a large competence gain after the first year, which stayed stable over the second year. This is true for teaching competences revolving around pupils' social behaviour (TR57_11-TR57_13), fostering of learning strategies (TR57_01, TR57_02), and activating pupils' previous knowledge during lessons. A second pattern is that means for competence assessments stayed stable over the first year and showed a larger gain after the second year working at school. This is true for 'diagnosing and controlling the learning progress' (TR57_04, TR57_07-TR57_09). One item showed a development of steady growth ('developing realistic week or term plans with pupils') and one remained stable over time. 'Applying a given evaluation tool to a specific context' was assessed as satisfactory over all three measurement points. It received the lowest mean assessment of all assessed teaching competence areas. Lastly, one item showed a great gain in self-assessment after the first year and a decrease after the second year: 'supporting pupils in personal crises or decision-making'.

Variable	Item	Intervention Group					
		T ₁		T ₂		T ₃	
		M	SD	M	SD	M	SD
TR57_01	...help pupils to acquire learning strategies for their future learning.	2.92	0.76	3.3	0.82	3.37	0.97
TR57_03	...show pupils how they can control their learning process.	2.97	0.82	3.4	0.63	3.21	1.04
TR57_04	...how to foster pupils' autonomous learning.	3.39	0.72	3.35	0.7	3.71	0.99
TR57_06	...apply a given evaluation tool (interview, questionnaire, observation) to a specific problem within the school context.	2.83	1.18	2.82	0.97	3.0	0.92
TR57_07	...diagnose and document a pupil's learning progress.	3.32	1.03	3.18	0.98	3.71	1.0
TR57_08	...give pupils differentiated feedback.	3.46	1.02	3.58	0.96	3.97	1.15
TR57_09	...individually foster low-achieving pupils.	3.22	0.98	3.03	0.95	3.54	0.82
TR57_10	...support individual pupils in personal crises or decision-making.	2.92	0.97	3.75	1.10	3.4	1.22
TR57_11	...take on the pupils' perspective when problems occur.	3.38	1.0	3.98	1.03	4.03	1.17
TR57_12	...foster social behaviour (helping, supporting, taking responsibility).	3.64	0.93	3.8	1.18	3.94	1.08
TR57_13	...support pupils so they can solve conflicts rationally and constructively.	2.94	0.79	3.4	1.06	3.47	0.9
TR57_15	...develop clearly laid-out and realistic week or term plans with pupils.	2.46	1.04	2.74	0.75	3.03	1.26
TR57_16	...prepare lessons time-efficiently.	3.27	1.15	3.33	0.83	4.06	1.18
TR57_18	...activate pupils' previous knowledge during the lesson.	3.41	0.96	3.79	0.83	3.97	0.94
TR57_19	...discuss pupils' mistakes in such a way that they can benefit from the discussion.	3.08	0.97	3.73	0.82	3.82	1.1
TR57_20	...determine pupils' achievement progress with different instruments.	3.08	0.92	3.13	0.91	3.49	0.98
	N	35					

Table 71: Austria — Teaching Competences over Time

6.2.1.2 Teacher Knowledge

Participants were presented with two different tests, which were part of the online questionnaires: a pedagogical knowledge test comprising eight questions³³ of the TEDS-M PUW test and an in-house knowledge test based on the Teach For All training materials. Test results are available for all 40 participants.

³³ Three questions consisted of further sub-questions.

Participants' Development as Reflected in PUW Test Results. Figure 29 shows the test results for the questions from the PUW test. The bars in light blue show the results of participants before they started working at school, and the dark blue bars show the results at the end of the second year working at school. There is no significant difference between the two measurement points. The distribution curves look almost identical. In fact, participants achieved slightly better test results the first time they took the test. Overall, the test results stayed stable over time. At both measurement points, more than half of the intervention group participants achieved at least 50% of correct answers. Before working at school, the best participant managed to solve the entire test correctly; at the end of the second school year, the best participant achieved roughly 90% of correct answers.

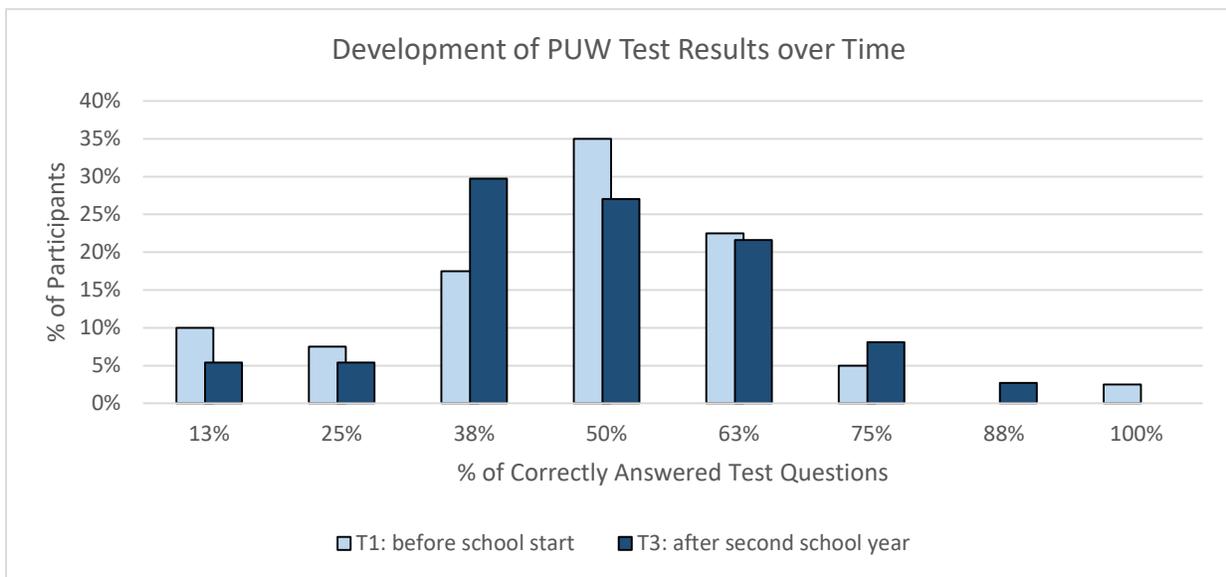


Figure 29: Austria — Participants' Development as Reflected in PUW Test Results over Two Years

Participants' Development as Reflected in In-House Knowledge Test Results. In order to gain a clearer picture of knowledge development as measured through the in-house, training-based test, data is presented separately for the first and second measurement points and then for the second and third measurement points.

Figure 30 shows the development over the course of the first year. Two aspects are observable. First, participants are split into two subgroups: one larger subgroup, which achieved lower results, and one smaller subgroup, which achieved higher results. This is true even for the very first measurement point. This means that a small group of participants was able to achieve more than 57% of correct answers in the test before any training had taken place. For the second measurement point, this pattern is visible again.

Second, participants' positive development is clearly noticeable. The distribution curve for the second measurement point has shifted to the right in the direction of more correctly answered test questions. Therefore, learning occurred for the participants between T_0 (before the training programme started) and T_2 (the end of the first year working at school).

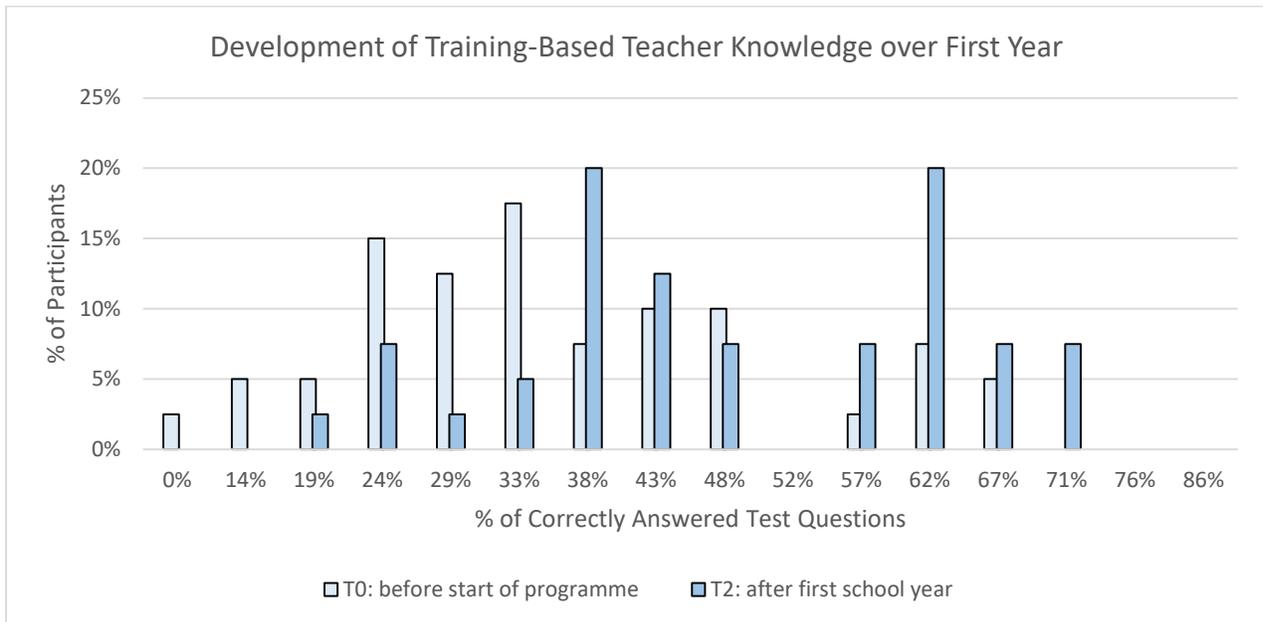


Figure 30: Austria — Participants' Development as Reflected in In-House Knowledge Test Results: First Year

This knowledge gain continued between the end of the first year and the end of the second year working at school. Figure 31 shows that the distribution curve of participants' test results has shifted to the right once more. Moreover, participants' test results are distributed more evenly. This means that more participants of the larger subgroup managed to achieve a better test result in the final test. The sample is no longer visibly split into one smaller group that excels and one larger group that achieves only moderate results. At the end of the second school year, roughly 65% of participants achieved 52% or more correct answers. Whereas after the first school year, the best participant achieved 71% correct answers, at the end of the second school year, the best participants achieved 86% correct answers. Even though participants achieved a noticeable knowledge gain in the in-house, training-based test overall, and a small group did well in the test, average performance was not particularly high.

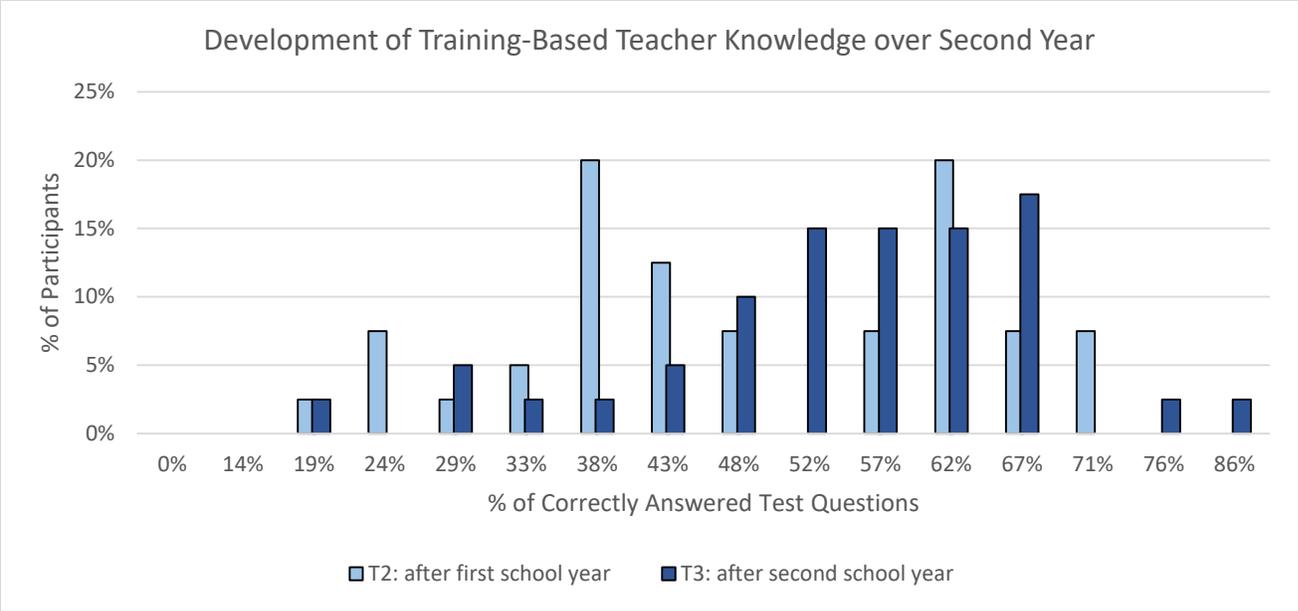


Figure 31: Austria — Participants’ Development as Reflected in In-House Knowledge Test Results: Second Year

6.2.2 Development of Teacher Competences and Teacher Knowledge: Basque Country

This section reports data on the development of teacher competences and knowledge of the intervention group of *Empieza por Educar* fellows over the course of their two-year training programme. Data is reported only for the 29 participants who stayed in the training programme over the two-year period. At T_0 , the intervention group comprised 38 participants. The overall dropout rate was therefore 23.7%.

6.2.2.1 Teacher Competences

As mentioned in section 0, participants were asked to evaluate their level of proficiency at certain points during their two-year training programme. All 29 participants assessed the teaching competences on a scale of 1 (not sufficient) to 5 (excellent). Participants assessed their teaching competences higher at the end of the second school year (T_3) than before they started to work at school (T_1). They assessed their competences as good for 13 out of the 16 competence areas. In three areas, they ascribed to themselves satisfactory or good teaching competence ($M=3.5$, $M=3.65$, $M=3.75$); all other items were rated 3.8 or higher. Participants felt most competent about taking on the perspective of the pupils when problems occur (TR57_11, TR57_19).

Regarding competence development, there are several patterns to examine. The first observable pattern is a strong increase in candidates' assessment of their competence between T_1 and T_2 followed by a decrease between T_2 and T_3 . This means that at the end of the first year, participants felt more competent in half of the assessed teaching competences than they did at the end of the second year. However, compared to their assessment before they started to work at school (T_1), they still felt more competent at the end of the second school year, i.e. overall, there was an increase in competence. This is true for competence areas revolving around fostering pupils' autonomous learning (TR57_01 –TR57_04 and TR57_15) and diagnosing and documenting pupils' learning progress (TR57_07, TR57_20). For competence areas regarding social aspects of teaching, there was a large competence gain after the first year, which stayed stable through the second year (TR57_10 - TR57_13). Competence areas related to giving feedback (TR57_08, TR57_19) showed a steady growth in self-assessment over time. This was also true for fostering low-achieving pupils. Two items show stability over the two-year period: 'prepare lessons time-efficiently' and 'activate pupils' previous knowledge' were assessed as satisfactory at all three measurement points. Another observable pattern is that some means for competence assessments stayed stable over the first year and showed a larger gain after the second year working at school. This was true for only one item here: 'apply a given evaluation tool.'

Variable	Item	Intervention Group					
		T1		T2		T3	
		M	SD	M	SD	M	SD
TR57_01	...help pupils to acquire learning strategies for their future learning.	3.43	0.79	3.29	0.91	3.8	0.89
TR57_03	...show pupils how they can control their learning process.	3.25	1.04	3.13	1.12	3.5	1.05
TR57_04	...how to foster pupils' autonomous learning.	3.43	0.96	3.21	1.06	3.85	0.81
TR57_06	...apply a given evaluation tool (interview, questionnaire, observation) to a specific problem within the school context.	3.12	1.07	3.21	1.14	3.63	1.16
TR57_07	...diagnose and document a pupil's learning progress.	3.36	1.13	3.04	0.95	3.65	1.09
TR57_08	...give pupils differentiated feedback.	3.32	0.86	3.75	0.79	4.3	0.66
TR57_09	...individually foster low-achieving pupils.	3.32	0.98	3.75	0.79	4.05	1.05
TR57_10	...support individual pupils in personal crises or decision-making.	3.22	1.34	4.25	0.74	4.2	0.7
TR57_11	...take on the pupils' perspective when problems occur.	3.41	1.01	4.13	0.80	4.25	0.64
TR57_12	...foster social behaviour (helping, supporting, taking responsibility).	3.63	0.79	4.13	0.85	4.2	0.7
TR57_13	...support pupils so they can solve conflicts rationally and constructively.	2.93	0.98	3.75	0.90	3.8	1.06
TR57_15	...develop clearly laid-out and realistic week or term plans with pupils.	3.82	1.19	3.33	0.82	4.2	0.77
TR57_16	...prepare lessons time-efficiently.	3.86	1.08	3.38	0.82	3.9	1.07
TR57_18	...activate pupils' previous knowledge during the lesson.	3.61	0.92	3.71	0.91	3.75	0.97
TR57_19	...discuss pupils' mistakes in such a way that they can benefit from the discussion.	3.71	0.85	4.08	0.83	4.25	0.85
TR57_20	...determine pupils' achievement progress with different instruments.	3.36	0.91	3.25	0.90	3.95	0.91
	N	29					

Table 72: Basque Country — Teaching Competences over Time

6.2.2.2 Teacher Knowledge

Participants were presented with two different tests, which were part of the online questionnaires: a pedagogical knowledge test comprising eight questions³⁴ of the TEDS-M PUW test and an in-house knowledge test based on the Teach For All training materials. However, test results regarding the PUW test are at this point preliminary, since only questions with closed-answer format could be analysed so far. In due course, answers to the three questions with open-answer format will be translated and coded. Then, they can be included in the analysis as well. Test results are available for all 29 participants in T₃.

Participants' Development as Reflected in PUW Test Results. Figure 32 shows the test results for the questions from the PUW test. The bars in light blue show the results of participants before they started working at school, while the dark blue bars show the results at the end of the second year working at school. There is a significant difference between the two measurement points. The distribution curve of the second measurement has shifted to the right in the direction of more correctly answered test questions. However, participants were already able to achieve rather good test results after their initial training (T₁). Three quarters of participants achieved at least 50% of the correct answers. By the end of the second year working at school, this percentage remained stable. Furthermore, no participants completely failed the test. However, when considering only the participants who solved at least 50% of the test questions correctly, it becomes apparent that participants did better in the first test. At that point, a higher percentage of respondents managed to solve 75% of the test questions correctly. Therefore, a knowledge gain can be observed regarding the entire group of participants. When only considering those who achieved 50% or more correct answers, participants showed higher levels of performance directly after their initial training than at the end of their second year working at school.

³⁴ Three questions consisted of further sub-questions.

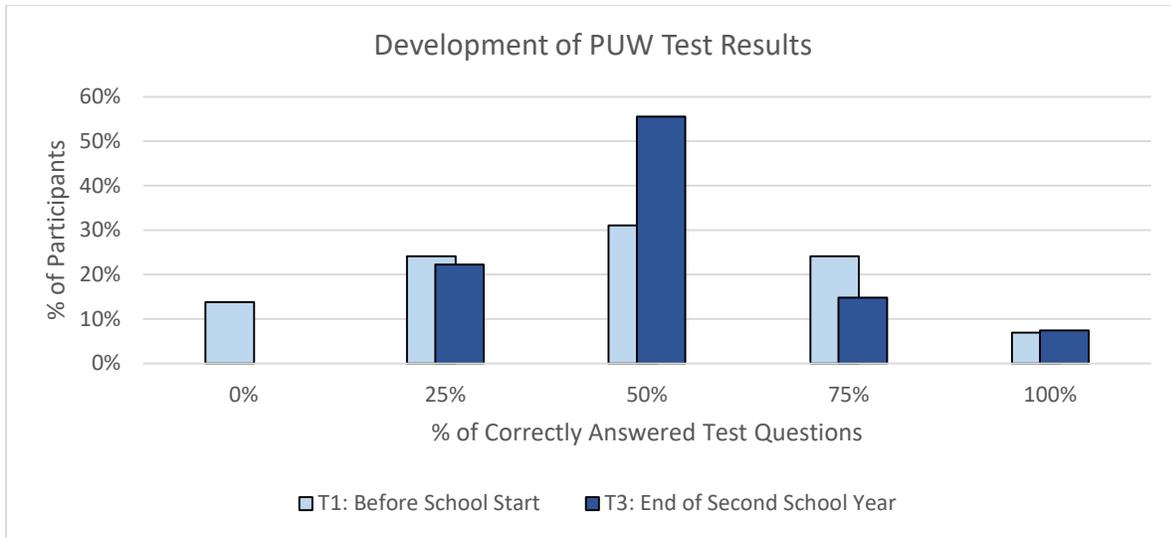


Figure 32: Basque Country — Participants’ Development as Reflected in PUW Test Results over Two Years

Participants’ Development as Reflected in In-House Knowledge Test Results. In order to gain a clearer picture of knowledge development as measured through the in-house, training-based test, data is presented separately for the first and second measurement points and then for the second and third measurement points.

Figure 33 shows the development over the course of the first year. Two aspects are observable. First, participants are widely distributed across the possible range of solving rates. This is true even for the very first measurement point. This means that a small group of participants managed to solve more than 50% of the questions correctly before any training had taken place.

Second, participants’ positive development is clearly noticeable. The distribution curve for the second measurement point has shifted to the right in the direction of more correctly answered test questions. Therefore, learning occurred for the participants between T_0 (before the training programme started) and T_2 (the end of the first year working at school). More than half of the participants were able to solve 52% or more of the test questions correctly at the end of the first school year. The best participants scored 67%.

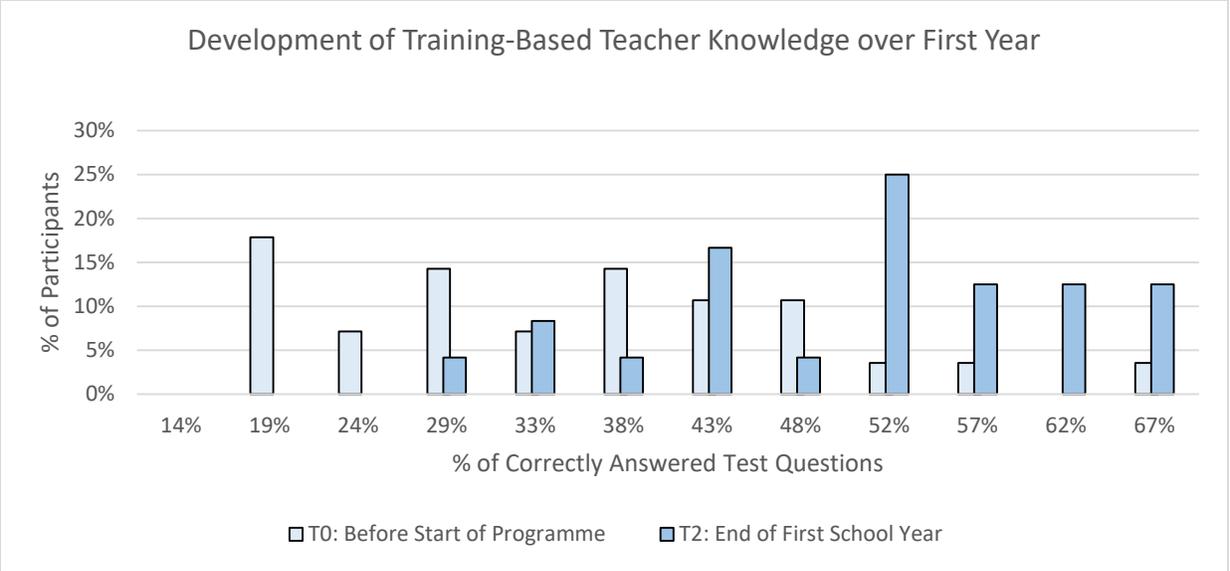


Figure 33: Basque Country — Participants’ Development as Reflected in In-House Knowledge Test Results: First Year

This knowledge gain continued between the end of the first year and the end of the second year working at school, although much more moderately so. Figure 34 shows that a higher percentage of participants were able to solve more test questions correctly at the end of the second year. However, no participant managed to solve more than 67% of the test questions correctly. This is the same rate as at the end of the first school year. Even though participants achieved a noticeable knowledge gain in the in-house, training-based test, average performance in this test was not overly high.

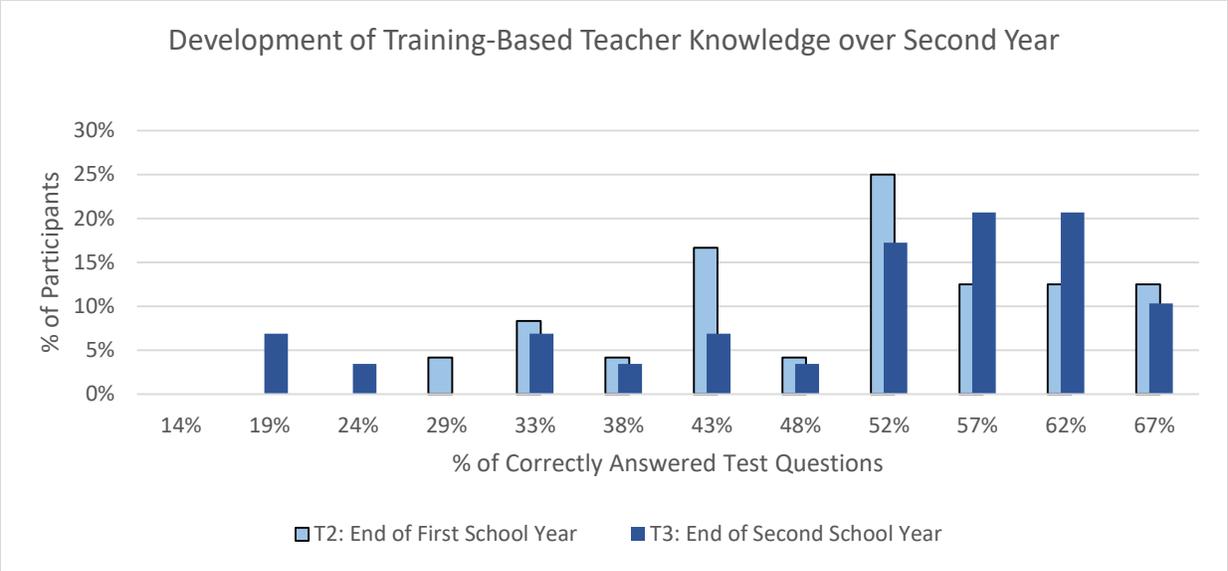


Figure 34: Basque Country — Participants’ Development as Reflected in In-House Knowledge Test Results: Second Year

6.2.3 Development of Teacher Competences and Teacher Knowledge: Bulgaria

This section reports data on the development of teacher competences and knowledge of the intervention group of Teach For Bulgaria fellows over the course of their two-year training programme. Data is reported only for the 84 participants who stayed in the training programme over the two-year period. At T_0 , the intervention group comprised 170 participants. However, this number included the participants from the 2017 Teach For Bulgaria programme, which were merged with the 2016 group in order to enlarge the sample. It was clear from the beginning that this group would only be followed over the course of one year and could not be used for analysis over time. Therefore, only the 84 participants from 2016 will be considered in the following calculations.

6.2.3.1 Teacher Competences

As mentioned above, participants were asked to evaluate their level of proficiency at certain points during their two-year training programme. 54 answered the questions on teaching competences, assessing themselves on a scale of 1 (not sufficient) to 5 (excellent). Overall, participants assessed their teaching competences higher at the end of the second school year (T_3) than before they started to work at school (T_1). They assessed their competences as at least satisfactory for all competence areas. In 12 areas, they ascribed themselves good teaching competence; all 16 items are rated 3.5 or higher. Participants felt most competent in activating pupils' prior knowledge.

Regarding competence development, there are several patterns to examine. The first observable pattern is one of a strong increase in candidates' assessment of their competence between T_1 and T_2 , followed by a decrease between T_2 and T_3 . This is true for half of the items. This means that at the end of the first year working at school, participants felt more competent in half of the assessed teaching competences than they did at the end of the second year. However, compared to their assessment before they started to work at school (T_1), they still felt more competent at the end of the second school year; i.e. overall, there was an increase in competence. For four areas of teaching, there was a large competence gain after the first year, which stayed stable over the second year. This is true for planning, as well as helping pupils to control their learning progress' (TR57_03, TR57_15) and giving feedback (TR57_08, TR57_19). Another observable pattern is that means for competence assessments stayed stable over the first year and showed a larger gain after the second year working at school. This is true for teaching competences revolving around lesson preparation and assessment. One item showed stability over the two-year period: 'diagnose and document a student's learning progress' was assessed as good at all three measurement points. However, in one area, participants' competence assessment continually decreased over time. They felt less competent to apply a given evaluation tool at the end of the second year working at school than at the previous two measurement points. Together with items that revolve around fostering pupils' ability to take responsibility for their own

learning process, this item received the lowest mean assessment of all assessed teaching competence areas. Still, even the lowest levels of competence assessments were between satisfactory and good (3.5 or higher). Lastly, one item showed a great gain in self-assessment at the end of the first year and a decrease at the end of the second year: ‘supporting pupils in personal crises or decision-making’.

Variable	Item	Intervention Group					
		T ₁		T ₂		T ₃	
		M	SD	M	SD	M	SD
TR57_01	...help pupils to acquire learning strategies for their future learning.	3.45	1.11	3.95	0.80	3.74	1.05
TR57_03	...show pupils how they can control their learning process.	3.22	1.15	3.55	0.95	3.49	1.15
TR57_04	...how to foster pupils’ autonomous learning.	3.75	1.10	4.28	0.80	4.09	0.97
TR57_06	...apply a given evaluation tool (interview, questionnaire, observation) to a specific problem within the school context.	3.91	3.30	3.73	0.95	3.69	1.08
TR57_07	...diagnose and document a pupil’s learning progress.	4.00	1.08	4.00	1.00	4.02	1.12
TR57_08	...give pupils differentiated feedback.	3.71	1.05	4.06	0.90	3.91	1.22
TR57_09	...individually foster low-achieving pupils.	3.85	1.13	4.30	0.80	3.93	1.04
TR57_10	...support individual pupils in personal crises or decision-making.	3.84	1.22	4.45	0.77	3.96	1.16
TR57_11	...take on the pupils’ perspective when problems occur.	3.83	1.05	4.43	0.65	4.09	1.03
TR57_12	...foster social behaviour (helping, supporting, taking responsibility).	4.12	1.03	4.68	0.61	4.3	1.04
TR57_13	...support pupils so they can solve conflicts rationally and constructively.	3.85	1.13	4.52	0.61	4.04	1.06
TR57_15	...develop clearly laid-out and realistic week or term plans with pupils.	3.27	1.16	3.43	0.99	3.56	1.21
TR57_16	...prepare lessons time-efficiently.	3.56	1.02	3.65	0.92	3.89	1.06
TR57_18	...activate pupils’ previous knowledge during the lesson.	4.05	1.05	4.30	0.73	4.13	1.05
TR57_19	...discuss student mistakes in such a way that they can benefit from the discussion.	3.94	1.05	4.20	0.71	4.2	1.0
TR57_20	...determine pupils’ achievement progress with different instruments.	3.83	1.13	3.82	0.90	3.98	1.13
	N	54					

Table 73: Bulgaria — Teaching Competences over Time

6.2.3.2 Teacher Knowledge

Participants were presented with two different tests, which were part of the online questionnaires: a pedagogical knowledge test comprising eight questions³⁵ of the TEDS-M PUW test and an in-house knowledge test based on the Teach For All training materials. However, test results regarding the PUW test are at this point preliminary, since only questions with closed-answer format could be analysed so far. In due course, answers to the three questions with open-answer format will be translated and coded. They can be then included in the analysis as well. Test results are available for all 84 participants.

Participants' Development as Reflected in PUW Test Results. Figure 35 shows the test results for the questions from the PUW test. The bars in light blue show the results of participants before they started working at school, while the dark blue bars show the results at the end of the second year working at school. There is a significant difference between the two measurement points. The distribution curve for the second measurement point has clearly shifted towards the right in the direction of more correctly answered test questions. In the first test, the majority of participants managed to answer 25% or less of the test questions correctly. Only a quarter of participants managed to correctly answer 50% or more of the questions after their initial training. At the end of the second school year, all participants answered at least 25% of the questions correctly. One third managed to answer 50% or more correctly. However, the majority of participants only managed to answer a quarter of the test questions correctly, and the best participants achieved 75% in the test at both measurement points. Therefore, even though there is an evident learning effect visible in the test results, the overall test performance of the majority of participants was hardly satisfactory.

³⁵ Three questions consisted of further sub-questions.

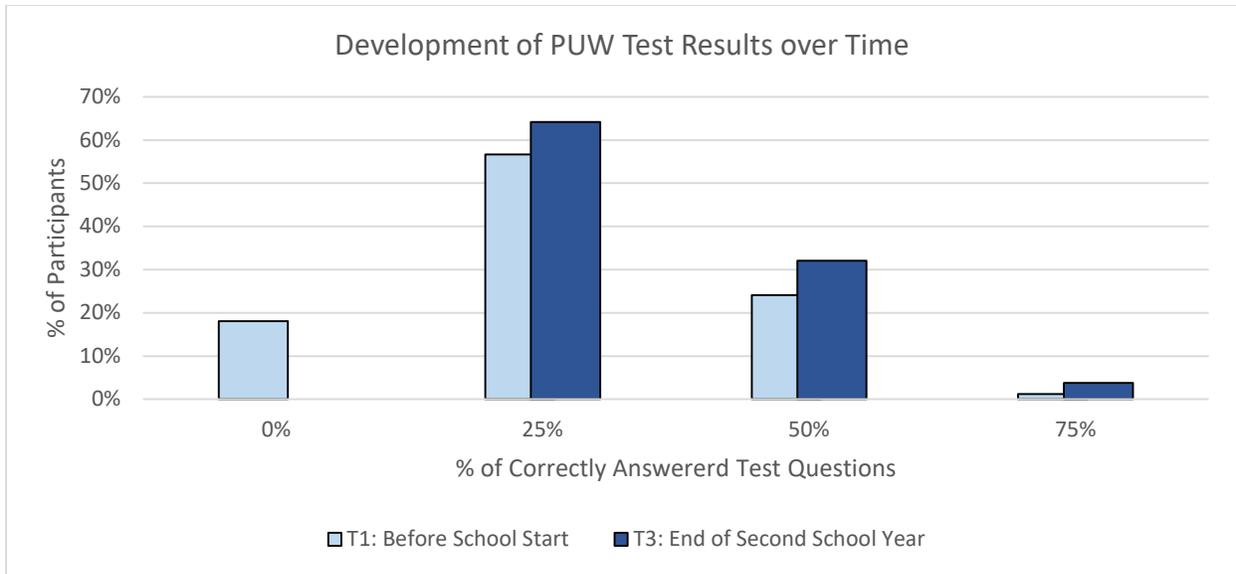


Figure 35: Bulgaria — Participants' Development as Reflected in PUW Test Results over Two Years

Participants' Development as Reflected in In-House Knowledge Test Results. To gain a clearer picture of knowledge development as measured through the in-house, training-based test, data is presented separately for the first and second measurement points and then for the second and third measurement points.

Figure 36 shows the development over the course of the first year. Two aspects are observable. First, participants were a heterogeneous group before their training started in terms of their previous pedagogical knowledge. Most participants achieved 38% correct answers or more before the training had even started. The best participant scored 76% correct answers.

Second, participants' positive development is clearly noticeable. The distribution curve for the second measurement point has shifted to the right in the direction of more correctly answered test questions. Therefore, learning occurred for the participants between T_0 (before the training programme started) and T_2 (the end of the first year working at school). At the end of the first school year, most participants scored between 48% and 67% correct answers. Over 60% of participants answered half or more of the test questions correctly. The best participants solved 86% of the test questions correctly at the end of the first school year.

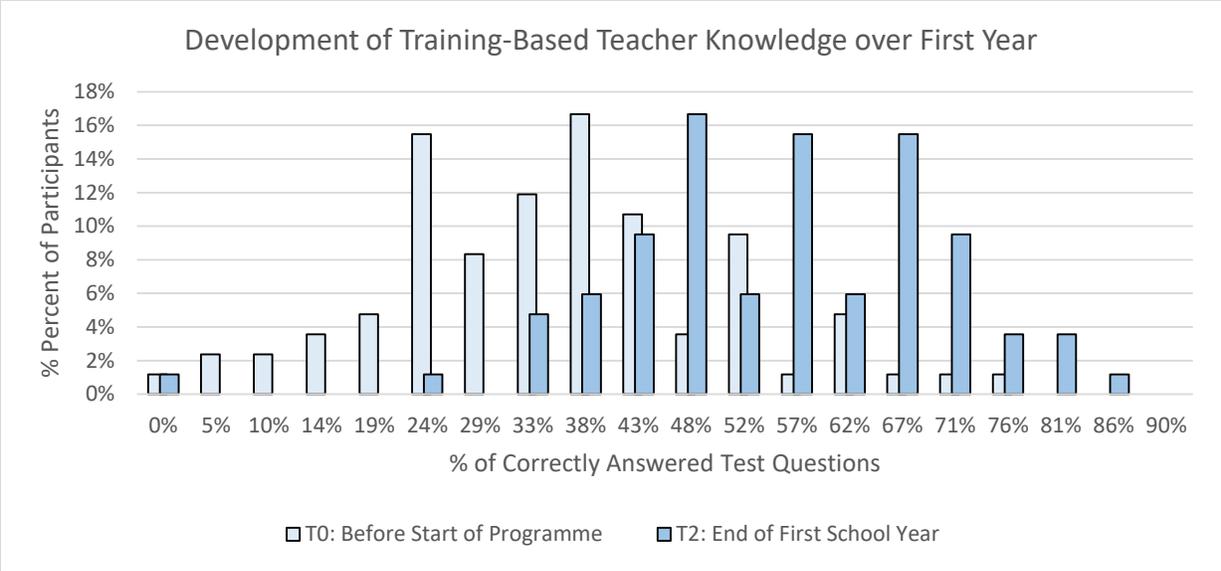


Figure 36: Bulgaria — Participants’ Development as Reflected in In-House Knowledge Test Results: First Year

This knowledge gain continued between the end of the first year working at school and the end of the second year, though not as pronounced. Figure 37 shows that the distribution curve of participants’ test results has shifted to the right once more. Apart from a few outliers, most participants achieved at least 29% correct answers at the end of the second school year, and two thirds achieved 52% or more. The best participants achieved 90%. Overall, participants achieved a noticeable knowledge gain in the in-house, training-based test. Average performance in this test was satisfactory.

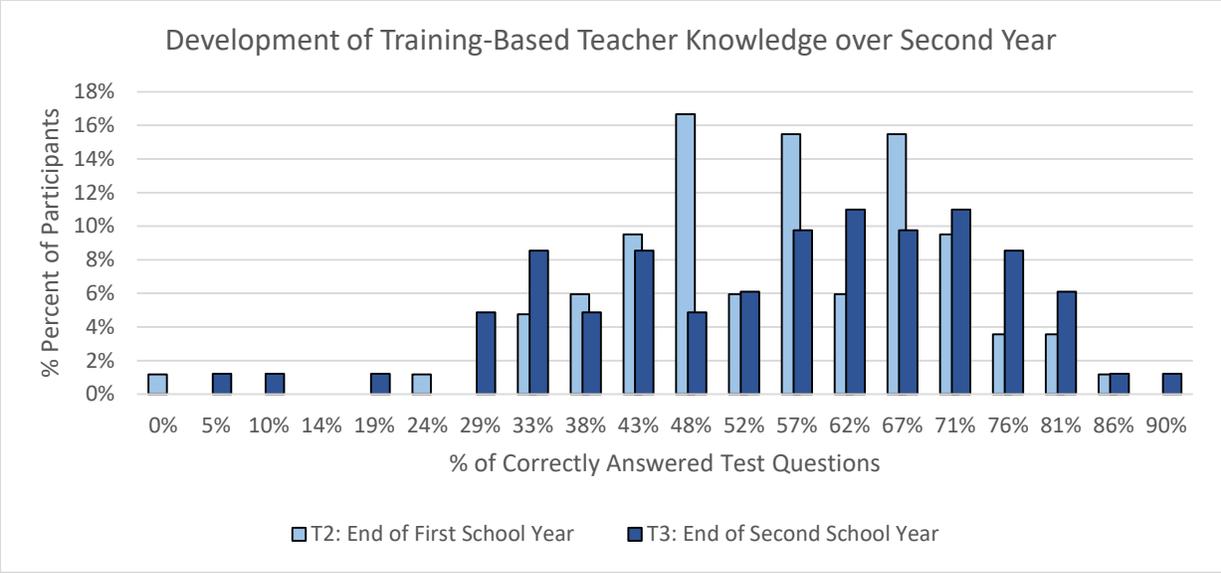


Figure 37: Bulgaria — Participants’ Development as Reflected in In-House Knowledge Test Results: Second Year

6.2.4 Development of Teacher Competences and Teacher Knowledge: Latvia

This section reports data on the development of teacher competences and knowledge of the intervention group of Iespējamā Misija fellows over the course of their two-year training programme. Data is reported only for the 19 participants who stayed in the training programme over the two-year period. At T_0 , the intervention group comprised 20 participants. Therefore, the overall dropout rate was very low at only 5%, which was the lowest of all participating countries.

6.2.4.1 Teacher Competences

As mentioned above, participants were asked to evaluate their level of proficiency at certain points during their two-year training programme. 16 participants answered the questions on teaching competences. Overall, participants assessed their teaching competences higher at the end of the second school year (T_3) than before they started to work at school (T_0). They assessed their competences as at least satisfactory for all competence areas. In four areas, they ascribed to themselves good teaching competence; ten out of the 16 items were rated 3.5 or higher. Participants felt most competent about their lesson preparation and giving differentiated feedback.

Regarding competence development, there are several patterns to examine. The first is one of continuous growth. This is true for a wide variety of the teaching skills (seven out of 16). For areas of teaching revolving around social aspects (TR57_12 –TR57_13) and for ‘fostering autonomous learning’, there was a large competence gain after the first year, which remained stable throughout the second year. Another apparent pattern is that means for competence assessments stayed stable over the first year and showed a larger gain after the second year working at school. This is true for ‘helping pupils to control their learning process’, ‘taking on the pupils’ perspective’, and ‘activating pupils’ previous knowledge during the lesson’. (TR57_04, TR57_07-TR57_09). Two items showed a decrease in self-assessed competence at the end of the first year, and a gain between the first and the second year working at school. In the case of ‘applying a given evaluation tool to a specific context’, the candidates’ assessment of their level of competence increased significantly. The difference in competence assessment between T_2 and T_3 is more than one grade point. Regarding the diagnosis and documentation of pupils’ learning progress, the value stabilised. At the end of the second year, it returned to its original rating at T_1 . Participants showed a negative development regarding their competence assessment only in the area of developing realistic week or term plans with pupils. Here, they rated their competence the lowest of all assessed teaching competence areas at the end of the second year ($M=2.81$).

Variable	Item	Intervention Group					
		T ₁		T ₂		T ₃	
		M	SD	M	SD	M	SD
TR57_01	...help pupils to acquire learning strategies for their future learning.	3.06	1.03	3.39	0.78	3.81	0.54
TR57_03	...show pupils how they can control their learning process.	3.06	0.90	3.22	1.11	3.69	0.70
TR57_04	...how to foster pupils' autonomous learning.	2.94	0.90	3.39	1.14	3.50	0.82
TR57_06	...apply a given evaluation tool (interview, questionnaire, observation) to a specific problem within the school context.	3.14	0.86	2.61	0.92	3.73	0.96
TR57_07	...diagnose and document a pupil's learning progress.	3.00	1.13	2.61	1.04	3.07	0.96
TR57_08	...give pupils differentiated feedback.	3.81	0.83	4.06	0.87	4.31	0.70
TR57_09	...individually foster low-achieving pupils.	2.69	0.79	2.89	1.08	3.13	0.89
TR57_10	...support individual pupils in personal crises or decision-making.	2.50	1.03	2.72	1.18	3.31	0.87
TR57_11	...take on the pupils' perspective when problems occur.	3.13	0.96	3.11	1.18	3.69	0.70
TR57_12	...foster social behaviour (helping, supporting, taking responsibility).	3.44	0.81	3.67	1.08	3.69	0.70
TR57_13	...support pupils so they can solve conflicts rationally and constructively.	2.63	1.02	3.22	1.06	3.38	0.89
TR57_15	...develop clearly laid-out and realistic week or term plans with pupils.	3.00	1.10	3.06	1.00	2.81	1.05
TR57_16	...prepare lessons time-efficiently.	3.50	0.89	3.72	0.96	4.31	0.70
TR57_18	...activate pupils' previous knowledge during the lesson.	3.50	0.82	3.50	1.10	4.00	0.52
TR57_19	...discuss pupils' mistakes in such a way that they can benefit from the discussion.	3.13	0.81	3.44	1.15	3.94	0.57
TR57_20	...determine pupils' achievement progress with different instruments.	2.75	1.13	3.00	1.08	3.31	0.79
	N	16					

Table 74: Latvia — Teaching Competences over Time

6.2.4.2 Teacher Knowledge

Participants were presented with two different tests, which were part of the online questionnaires: a pedagogical knowledge test comprising eight questions³⁶ of the TEDS-M PUW test and an in-house knowledge test based on the Teach For All training materials. However, test

³⁶ Three questions consisted of further sub-questions.

results regarding the PUW test are at this point preliminary, since only questions with closed-answer format could be analysed so far. In due course, answers to the three questions with open-answer format will be translated and coded. They can then be included in the analysis as well. Test results are available for all 19 participants who stayed in the training programme over the two-year period.

Participants' Development as Reflected in PUW Test Results. Figure 38 shows the test results for the questions from the PUW test. The bars in light blue show the results of participants before they started working at school, while the dark blue bars show the results at the end of the second year working at school. There is a significant difference between the two measurement points. The distribution curve for the second measurement point has shifted towards the right in the direction of more correctly answered test questions. In the first test, more than half of participants answered 25% or less of the test questions correctly. However, one participant answered every question correctly after the initial training. At the end of the second school year, more than half of the participants achieved 50% or more correct answers. However, none managed to answer all questions correctly. The best participants achieved 75% correct answers.

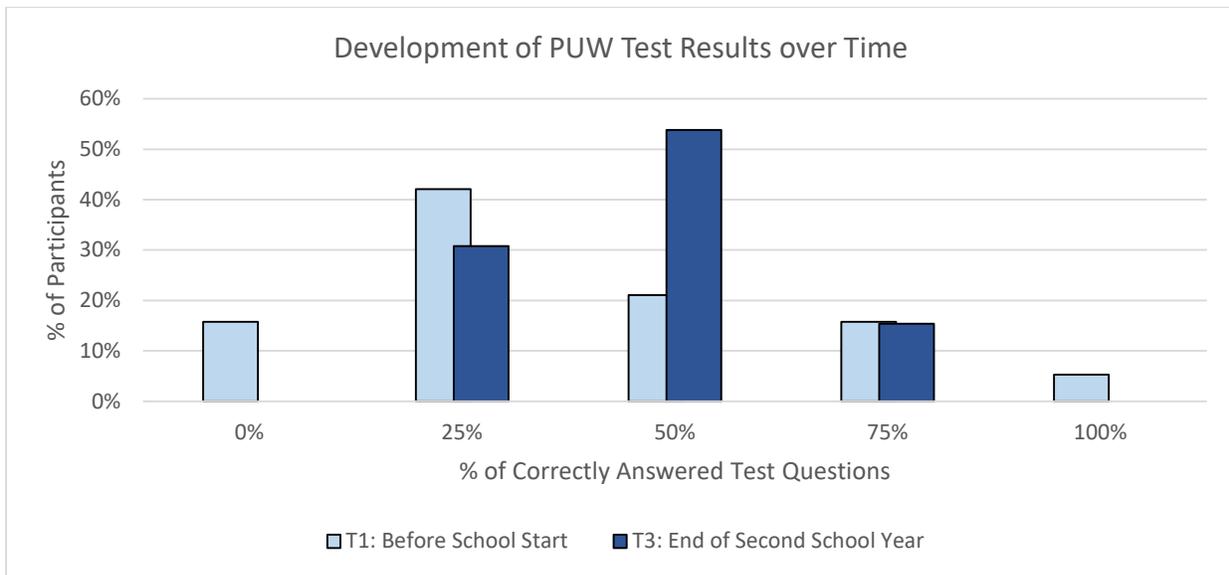


Figure 38: Latvia — Participants' Development as Reflected in PUW Test Results over Two Years

Participants' Development as Reflected in In-House Knowledge Test Results. In order to gain a clearer picture of knowledge development as measured through the in-house, training-based test, data is presented separately for the first and second measurement points and then for the second and third measurement points.

Figure 39 shows the development over the course of the first year. Two aspects are observable. First, participants are split into two subgroups: one larger subgroup, which achieved lower

results, and one smaller subgroup, which achieved higher results. This is true even for the very first measurement point. Approximately 30% of participants were able to achieve more than 50% correct answers in the test before any training had taken place. For the second measurement point, this pattern is not as pronounced. Participants were distributed more evenly over the range of possible success rates. However, the distribution in itself showed a shift towards the right, i.e. on average participants achieved higher results in the test at the end of the first year in school than before the start of the training programme. The best participants achieved 62% of correct answers before the training, whereas after the training the best results were 71% correct answers.

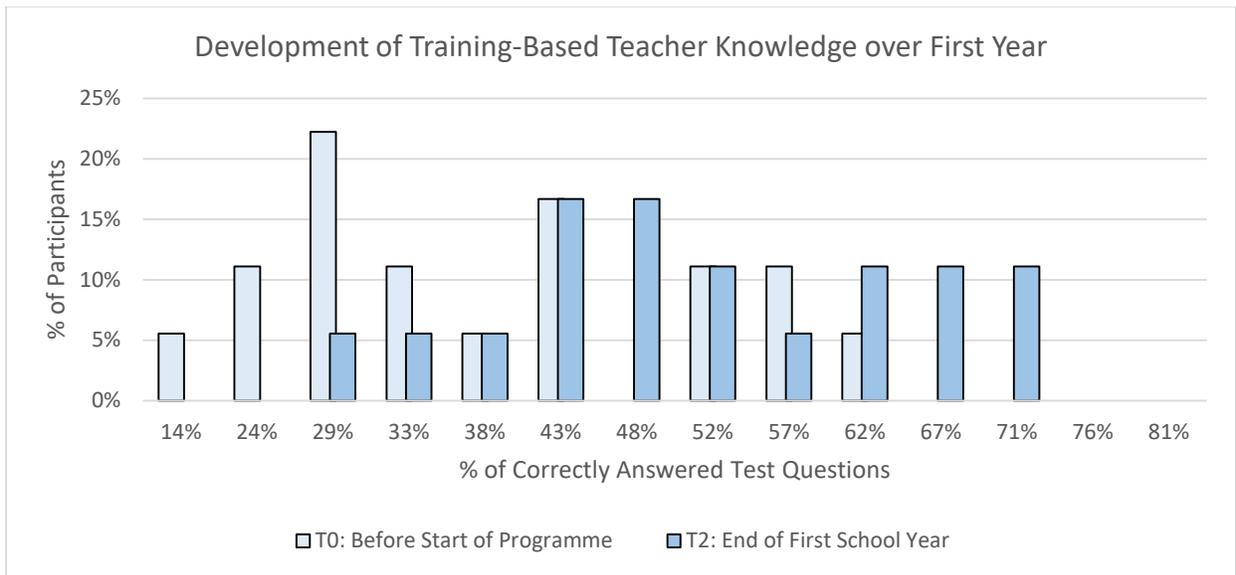


Figure 39: Latvia — Participants’ Development as Reflected in In-House Knowledge Test Results: First Year

This knowledge gain continued between the end of the first year working at school and the end of the second year. Figure 40 shows that the distribution curve of participants’ test results has shifted to the right once more. At the end of the second school year, approximately two thirds of participants achieved 52% or more correct answers, while 16% managed to correctly answer only between 29% and 33% of the questions. However, most participants achieved 62% correct answers. Whereas at the end of the first school year, the best participant achieved 71% correct answers, at the end of the second school year, the best participants achieved 81% correct answers. Participants thus achieved a noticeable knowledge gain in the in-house, training-based test, and average performance in this test was satisfactory overall.

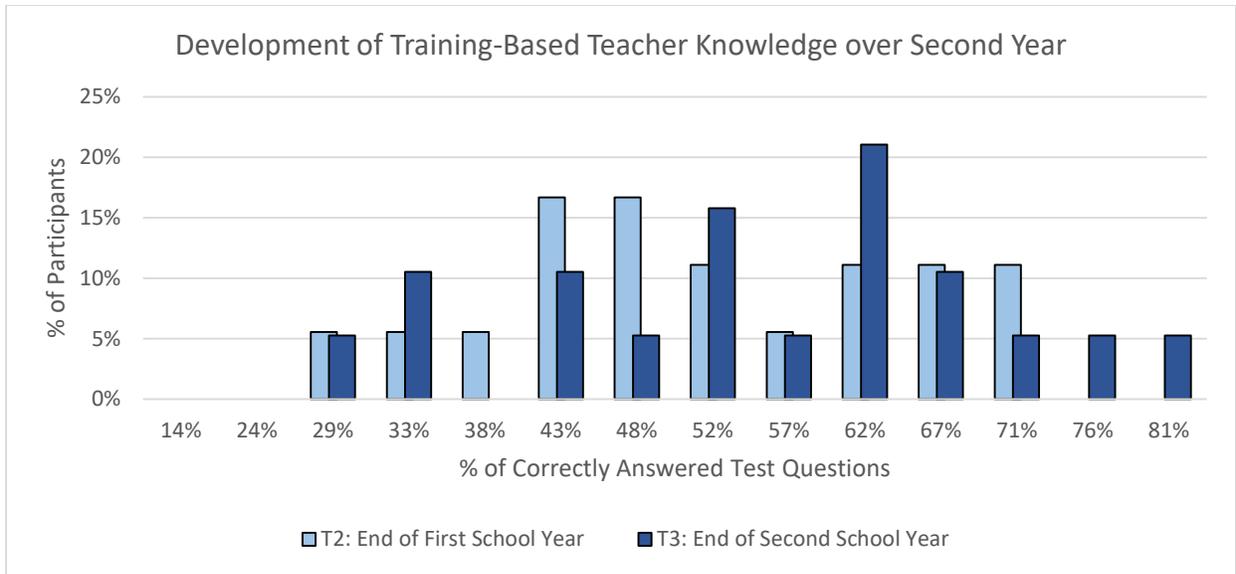


Figure 40: Latvia — Participants’ Development as Reflected in In-House Knowledge Test Results: Second Year

6.2.5 Development of Teacher Competences and Teacher Knowledge: Romania

This section reports data on the development of teacher competences and knowledge of the intervention group of Teach For Romania fellows over the course of their two-year training programme. Data is reported only for the 31 participants who stayed in the training programme over the two-year period. At T_0 , the intervention group comprised 43 participants. The overall dropout rate was therefore 27.9%.

6.2.5.1 Teacher Competences

As mentioned above, participants were asked to evaluate their level of proficiency at certain points during their two-year training programme. 31 participants answered the questions on teaching competences. Overall, participants assessed their teaching competences higher at the end of the second school year (T_3) than before they started to work at school (T_0). They assessed their competences as at least satisfactory for all competence areas at the end of the second school year. In eight areas, they ascribed good teaching competence to themselves; 14 out of the 16 items were rated higher than 3.5. Overall, they felt most competent about fostering low-achieving pupils.

Regarding competence development, there are several patterns to examine. The dominant pattern was a large competence gain after the first year, which remained stable throughout the second year. This is true for teaching competences revolving around pupils' social behaviour (TR57_10 – TR57_11 and TR57_13), activating pupils' previous knowledge during lessons, and discussing pupils' mistakes in a constructive way. Another observable pattern is that means for competence assessments stayed stable over the first year and showed a larger gain at the end of the second year working at school. This is true for teaching competences revolving around diagnosis and assessment (TR57_06-TR57_08) and for 'showing pupils to control their learning process'.

In addition, there is a pattern of stability, i.e. competence assessments remained stable over the two years. This is true for items regarding autonomous learning (TR57_01, TR57_04), fostering low-achieving pupils, and fostering social behaviour. Participants felt that their competence in these areas was on average rather good. Two items regarding planning (TR57_15, TR57_16) showed a decrease in self-assessed competence at the end of the first school year. However, at the end of the second school year, the competence assessment returned to its original level. The last item has only two measurements as no participant answered this particular item in the third questionnaire (T_2). For this item only, there was a notable decrease over the two years. At first, participants felt highly competent about 'determining pupils' achievement progress'. Even though they still felt more than satisfied with their competence in this area, the average assessment dropped one grade point in the second test.

Variable	Item	Intervention Group					
		T ₁		T ₂		T ₃	
		M	SD	M	SD	M	SD
TR57_01	...help pupils to acquire learning strategies for their future learning.	3.51	0.87	3.35	0.75	3.36	1.09
TR57_03	...show pupils how they can control their learning process.	3.24	1.09	3.32	1.08	3.52	0.93
TR57_04	...how to foster pupils' autonomous learning.	3.84	0.83	3.97	0.71	3.95	0.74
TR57_06	...apply a given evaluation tool (interview, questionnaire, observation) to a specific problem within the school context.	3.68	0.94	3.65	1.05	3.86	1.01
TR57_07	...diagnose and document a pupil's learning progress.	3.61	0.87	3.48	0.89	3.71	0.85
TR57_08	...give pupils differentiated feedback.	3.81	0.91	3.77	1.02	4.14	0.96
TR57_09	...individually foster low-achieving pupils.	4.14	0.83	4.29	0.74	4.33	0.97
TR57_10	...support individual pupils in personal crises or decision-making.	3.59	1.09	3.90	0.87	4.00	0.89
TR57_11	...take on the pupils' perspective when problems occur.	3.68	0.85	3.97	0.80	3.95	0.92
TR57_12	...foster social behaviour (helping, supporting, taking responsibility).	4.24	0.80	4.29	0.78	4.14	0.73
TR57_13	...support pupils so they can solve conflicts rationally and constructively.	3.54	0.93	3.84	0.93	3.86	1.24
TR57_15	...develop clearly laid-out and realistic week or term plans with pupils.	3.21	0.95	2.81	0.83	3.21	0.98
TR57_16	...prepare lessons time-efficiently.	3.59	0.93	3.10	0.75	3.55	1.00
TR57_18	...activate pupils' previous knowledge during the lesson.	3.84	0.93	4.26	0.73	4.10	0.72
TR57_19	...discuss pupils' mistakes in such a way that they can benefit from the discussion.	3.70	0.94	4.13	0.76	4.15	0.75
TR57_20	...determine pupils' achievement progress with different instruments.	4.67	0.58	-	-	3.60	0.82
	N	31					

Table 75: Romania — Teaching Competences over Time

6.2.5.2 Teacher Knowledge

Participants were presented with two different tests, which were part of the online questionnaires: a pedagogical knowledge test comprising eight questions³⁷ of the TEDS-M PUW test and an in-house knowledge test based on the Teach For All training materials. However, test

³⁷ Three questions consisted of further sub-questions.

results regarding the PUW test are at this point preliminary, since only questions with closed-answer format could be analysed so far. In due course, answers to the three questions with open-answer format will be translated and coded. They can then be included in the analysis as well. Test results are available for all 31 participants who stayed in the training programme over the two-year period.

Participants' Development as Reflected in PUW Test Results. Figure 41 shows the test results for the questions from the PUW test. The bars in light blue show the results of participants before they started working at school, and the dark blue bars show the results at the end of the second year working at school. There is a slight positive difference between the two measurement points. Overall, more participants achieved better test results at the end of the second school year. The first time, approximately 40% of participants answered 25% or less of the test questions correctly. However, more than half managed to answer 50% or more of the questions correctly after their initial training. One participant even managed to solve the complete test correctly. By the end of the second school year, three quarters of participants achieved 50% or more correctly answered questions. However, no one managed to answer all questions correctly. The best participants achieved 75% correct answers in the test.

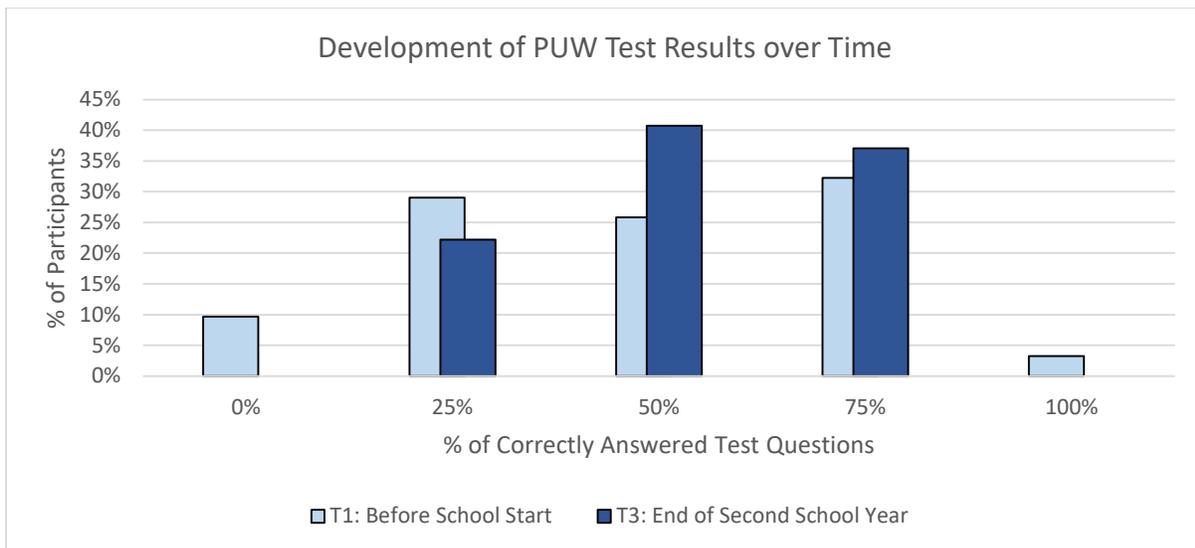


Figure 41: Romania – Participants' Development as Reflected in PUW Test Results over Two Years

Participants' Development as Reflected in In-House Knowledge Test Results. In order to gain a clearer picture of knowledge development as measured through the in-house, training-based test, data is presented separately for the first and second measurement points and then for the second and third measurement points.

Figure 42 shows the development over the course of the first year. Two aspects are observable. First, participants were divided into three subgroups before their training started: one group with hardly any previous knowledge, one group with rudimentary knowledge, and one group which achieved between 33% and 43% correct answers in the first test. One outlier even managed to solve almost 60% of the test questions correctly at the first measurement point. This division of the group was no longer evident at the second measurement point. At the end of the first school year, the majority of participants performed badly in the test, with the best participants achieving only 33% correct answers. This development is rather surprising and might be due to motivational issues.

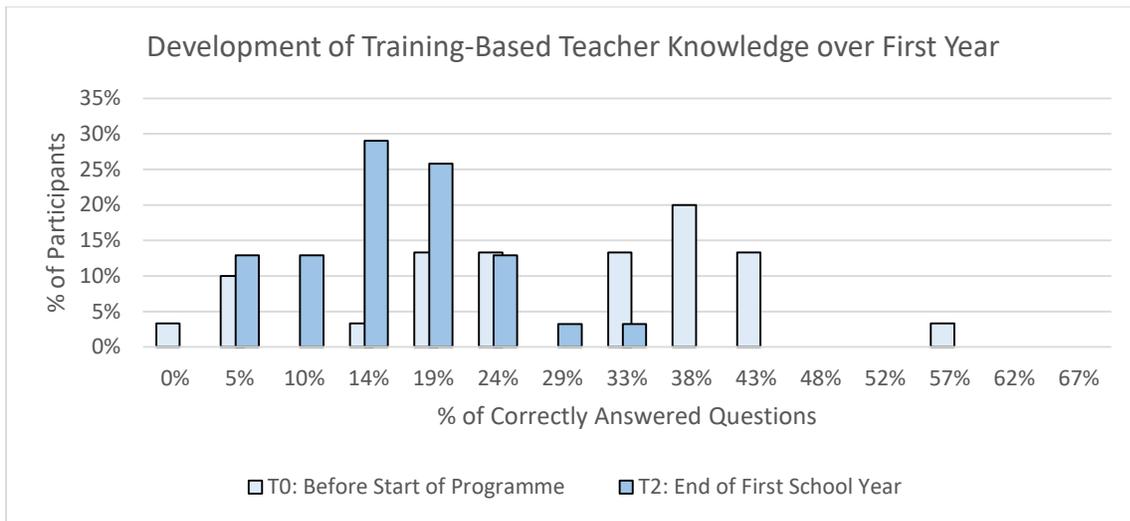


Figure 42: Romania — Participants' Development as Reflected in In-House Knowledge Test Results: First Year

Figure 43 shows the development of participants' test results over the second year in school. Here, a clear positive development can be observed. The distribution curve has shifted to the right in the direction of better test results. However, at the end of the second year, only 30% of participants achieved 52% or more correct answers. Most participants (23%) answered just below half of the questions correctly. Even though there was a clearly visible improvement in the test performance, performance overall was not very high. The best participants achieved 67% correct answers at the end of the second school year.

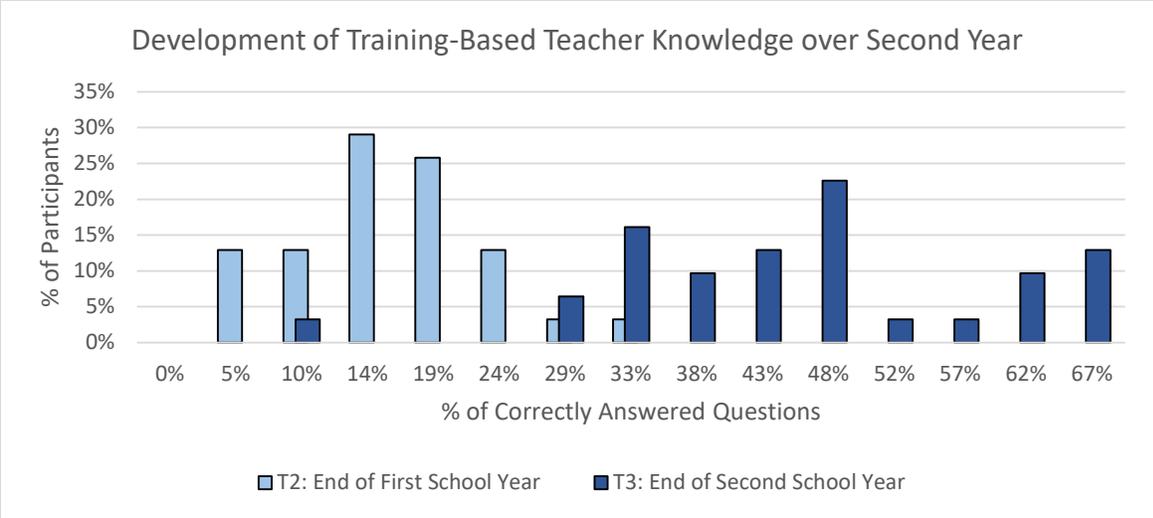


Figure 43: Romania — Participants' Development as Reflected in In-House Knowledge Test Results: Second Year

Development of Teacher Competences and Teacher Knowledge of Alternatively-Trained Beginning Teachers over the First Two Years of Their Teaching Career – Transnational Summary

At the end of the second school year, alternatively-trained teachers in all countries assessed their competence in all 16 areas of teaching competence as at least satisfactory. Overall, participants in each country assessed their competences lower before starting to work at school than at the end of the second year. Participants in Bulgaria and the Basque Country felt most competent by the end of the second year working at school. In general, participants in all countries felt least competent in the competence areas revolving around fostering pupils' autonomous learning and applying a given evaluation tool, such as a questionnaire, to a specific situation. Nonetheless, they felt that their competence in these areas was satisfactory.

Regarding the self-assessed competences, several development patterns were observed. In Austria and Romania, the dominant pattern of competence development was a large gain in competence after the end of the first year working at school, which remained stable throughout the second year. In Bulgaria and the Basque Country, the predominant pattern was a strong increase in candidates' assessment of their competence between T_1 and T_2 , followed by a decrease between T_2 and T_3 . This means at the end of the first year working at school, participants felt more competent in half the areas of teaching competences than they did at the end of the second year. However, compared to their assessment before they started to work at school (T_1), they still felt more competent at the end of the second school year, i.e. overall, there was an increase in levels of competence. Latvia was the only country where the most frequent development pattern was one of steady growth over the two-year period.

Regarding the pedagogical knowledge test (PUW), participants in the Basque Country showed the best average results. Here, participants already performed rather well after their initial training (T_1), with three quarters of them answering at least 50% of the test questions correctly. However, performance regarding the higher test results was better the first time around. This is also true for Austria, Latvia and Romania, where a small percentage of participants managed to score 100% when taking the test for the first time, but fewer or no participants managed to do so the second time. In Bulgaria, one third of participants answered at least 50% or more of the test questions correctly at the end of the second school year. The best participants achieved 75% correct answers in the test at both measurement points. Even though there is an evident learning effect visible in the test results for most countries, the overall test performance of the majority of participants was hardly satisfactory.

Results in the in-house, training-based teacher knowledge test were more positive. Knowledge gains could be observed for participants in all countries between the first and last measurement points. However, even though participants increased their test results over time, in most countries the overall performance in the test was not particularly high. Notably, participants in Bulgaria and Latvia performed best at the end of the second year working at school compared to the other countries.

6.3 Comparison of Teacher Competences, Opportunities to Learn, and Pedagogical Knowledge of Alternatively-Trained and Traditionally-Trained Beginning Teachers at the End of the Second Year Working at School

This section reports data on self-assessed teaching competences, opportunities to learn (OTL), and pedagogical knowledge of alternatively-trained and traditionally-trained teachers at the end of their second year working at school (T_3). Comparative data is available for the countries with a sufficient number of control group members at the end of the second school year, namely Austria and Bulgaria.

Participants were asked to assess their current level of proficiency in different areas of teaching expertise on a scale of 1 (not sufficient) to 5 (excellent). Within the same question, participants of the NEWTT intervention groups were also asked to report the different OTL, which they perceived during their ongoing training with Teach For Austria/Teach For Bulgaria. Participants of the control group were presented with a slightly adapted question. They were asked to report the different OTL during their last year working at school and the question regarding the OTL 'practical exercises in the sessions', since they did not receive ongoing training at a training institution. Also, the item on OTL regarding peer reflection was phrased as 'reflection with colleagues' instead of 'reflection with fellows'. The scale originally comprised 21 items and was developed by Abs et al., 2009. For the last questionnaire at T_3 , the scale had to be reduced to 16 items due to space and time restrictions. Figure 44 shows a screenshot of the presentation of this question in the online survey tool for the control group.

Now, we would like to know what kind of opportunities to learn you had during your last year working in school in specific areas and how competent you feel in those same areas. In column A you can either click on „Not at all“, if you have not been taught anything regarding this area during your training. Or you can mark up to four different opportunities to learn in columns B – E because you have engaged in this area in a certain way:

B: Th. Input (Theoretical Input)

C: Refl. w. T/M (Reflection with Trainer/Mentor)

D: Refl. w. Colleag. (Reflection with colleagues)

E: Exp. w. Pupils (Experiences with Pupils)

Please also assess your competence (current proficiency) regarding the different areas in column F.

1 =not sufficient;

2= sufficient;

3= satisfactory;

4= good;

5= excellent.

By trainers/mentors we refer to the people who support and supervise the practice of beginning teachers.

1. During my teacher education, I have been taught how to...

	A: Not at all	B: Theo. Inp.	C: Refl.w. T/M	D: Refl. w. Peers	F: Exp.w. Pupils	G: Comp.
...help pupils to acquire learning strategies for their future learning.	<input type="checkbox"/>					
...show pupils how they can control their learning process.	<input type="checkbox"/>					
...how to foster pupils' autonomous learning.	<input type="checkbox"/>					

Figure 44: Presentation of Question on OTL and Teaching Competences in Online Survey Tool

Participants also had to complete two different knowledge tests. The first set of questions was taken from the pedagogical knowledge test (PUW test) of the International Teacher Education and Development Study (IEA-TEDS-M) developed by König & Blömeke (2010). The eight selected questions³⁸ focused on pedagogical knowledge of teaching and learning. The second set of questions was taken from a tailored test designed in-house by the NEWTT evaluation team based

³⁸ Three of the eight selected questions consisted of additional sub-questions.

on the Teach For All training materials. The test questions administered to the control group were a subset of the entire set of test questions and did not require knowledge of specific Teach For All terminology. Instead, questions exploring general knowledge of teaching, such as questions on lesson planning, group work, or methods of differentiation, were incorporated. Whereas in section 6.2, the basis of analysis was the entire test for the intervention group, in this section, intervention and control groups are compared based on the same subset of nine questions.

For more information on the construction of both tests, see section 3.5.2.

6.3.1 Comparison of Opportunities to Learn, Teaching Competences, and Pedagogical Knowledge of Alternately- and Traditionally-Trained Teachers: Austria

This section reports the descriptive results of participants' perceived opportunities to learn, their self-assessed teaching competences, and their pedagogical knowledge as measured by two different tests. All data was retrieved from the last questionnaire, which was presented to participants at the end of their second year working at school. At this point, 40 Teach For Austria fellows participated in the programme, and the control group consisted of 38 traditionally-trained teachers. However, due to decreasing levels of participant compliance with completing the last questionnaire, numbers of participants vary notably in the tables and figures. In the intervention group, two participants did not report their perceived OTL, while five individuals did not assess their teaching competences. As for the knowledge tests, two persons did not complete the in-house teacher knowledge test, while four participants did not answer the PUW test questions.

In the control group, all participants answered the questions on perceived OTL. However, only half of participants provided an assessment of their teaching competences. The in-house teacher knowledge test was completed by 36 participants, while 30 persons answered the PUW test questions. Results will be reported at item level as the sample sizes did not allow for factor or reliability analyses.

6.3.1.1 Comparison of Teaching Competences and Opportunities to Learn

As mentioned in section 6.3, participants were asked to report the different types of opportunities to learn (OTL) they perceived during their ongoing training (intervention group) or their last year working at school (control group). Participants were asked about the following types of OTL: theoretical input, reflection with trainer/mentor, reflection with peers, and experiences with pupils (Abs, Döbrich, Gerlach-Jahn, & Klieme, 2009 (adapted version)). Thus, an overall percentage for each type of OTL was calculated, i.e. the percentage of participants who reported at least one OTL of any given type. The first two bars in Figure 30 show the overall percentage of participants who reported that they perceived no OTL in at least one area of teaching expertise. For both groups, all areas were reported at least once as missing OTL. The

areas that were most frequently reported as lacking learning opportunities, are presented in Table 76.

No Perceived OTL Regarding...	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
...applying a given evaluation tool (interview, questionnaire, observation) to a specific problem within the school context.	5	13.16%	14	36.84%
...developing clearly laid-out and realistic week or term plans with pupils.	3	7.89%	10	26.32%
...supporting individual pupils in personal crises or decision-making.	0	0%	7	18.42%
...supporting pupils so they can solve conflicts rationally and constructively.	0	0%	6	15.79%
	N=38 (100%)		N= 38 (100%)	

Table 76: Austria — Areas Most Frequently Reported as Lacking in Opportunities to Learn

The control group in particular reports missing OTL in the area of applying evaluation tools to a specific problem within the school context (36.84%) and developing realistic week or term plans (26.32%). The intervention group also reports a lack of OTL in those areas. However, percentages are three times lower.

The other bars in Figure 30 show the different types of OTL that were perceived by the groups: theoretical input, reflection with trainer/mentor, reflection with peers (Teach For Austria fellows), and experiences with pupils. Figure 45 shows the overall percentage of reported OTL. The data reflects the different training structures of the two groups of beginning teachers. Since participants of the intervention group took part in an ongoing training programme parallel to working at school, it was expected that they would have had more OTL in terms of reflection with their Teach For Austria trainers, and that they would have received more theoretical input during training sessions. This might also explain why a smaller percentage of the intervention group as compared to the control group reported no OTL in the different areas of teaching expertise. Figure 45 shows that the participants of the intervention group all reported at least one OTL of the type ‘theoretical input’ as well as ‘reflection with trainer/mentor’. In addition, all participants except one reported at least one opportunity of the type ‘reflection with other fellows’ and ‘experiences with pupils’. The control group reported significantly fewer OTL than the intervention group regarding all the different types. They reported the most OTL in the categories of ‘reflection with colleagues’ and ‘experiences with pupils’.

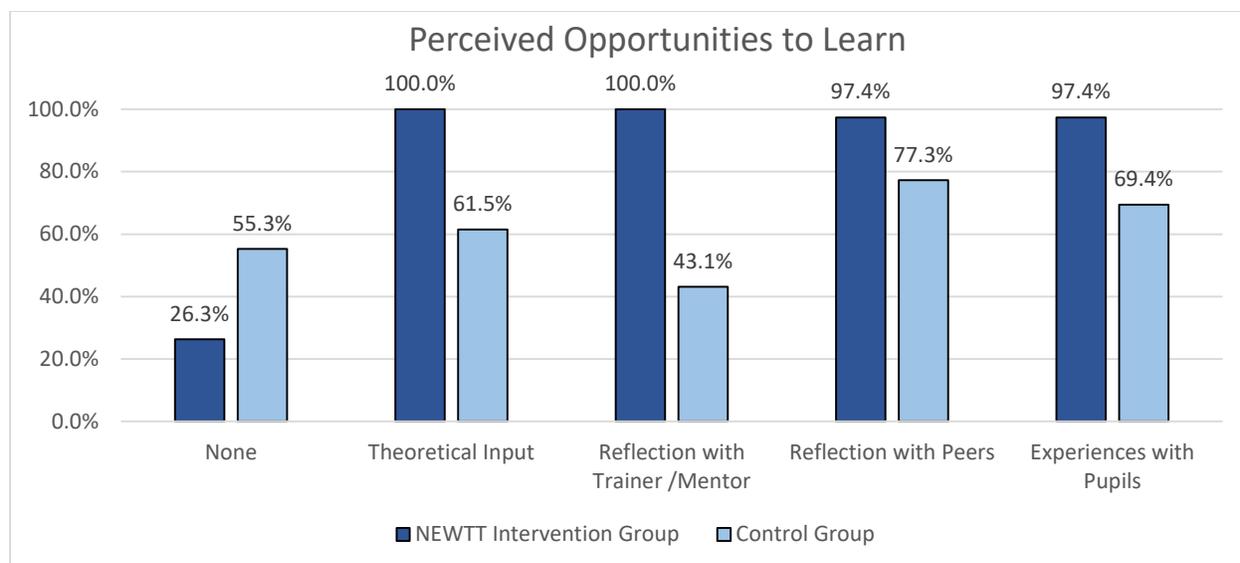


Figure 45: Austria — Perceived Opportunities to Learn

In addition, participants were asked to assess their perceived competence in the same areas of teaching expertise on a scale of 1 (not sufficient) to 5 (excellent). Table 77 shows the means for the self-assessments by group. As mentioned before, only half of the control group participants filled out this part of the questionnaire. The self-assessments reflect the reported OTL. Notably, the competence self-assessments are lowest for those areas in which a higher number of participants reported lacking OTL. Thus, both groups show lower competence self-assessments in the areas of applying evaluation tools and developing realistic week or term plans with pupils.

Regarding the use of evaluation tools, the intervention group reaches a significantly higher mean than the control group. In the case of the category ‘development of week or term plans’, the means of both groups are comparable. Results show that members of the intervention group ascribed to themselves levels of teaching competence that are comparable to those of the control group, if not higher. In general, both groups assessed their competences in the different areas as at least satisfactory. The only exception was the use of an evaluation tool. Here, members of the control group ascribed to themselves a slightly lower competence ($M=2.63$). Apart from this, the groups receive comparable means in the areas of ‘fostering self-regulatory learning of pupils’ (TR57_01, TR57_03, and TR57_15), ‘dealing with conflict’ (TR57_10, TR57_12 and TR57_13) and ‘individually fostering low-achieving pupils’ (TR57_09). In those areas of teaching expertise, both groups ascribed to themselves satisfactory competence. In all other areas, participants of the intervention group ascribed to themselves a good level of competence significantly higher than the control group.

Variable	Item	Intervention Group		Control Group	
		M	SD	M	SD
TR57_01	...help pupils to acquire learning strategies for their future learning.	3.37	0.97	3.37	0.9
TR57_03	...show pupils how they can control their learning process.	3.21	1.04	3.32	0.95
TR57_04	...how to foster pupils' autonomous learning.	3.71	0.99	3.0	1.21
TR57_06	...apply a given evaluation tool (interview, questionnaire, observation) to a specific problem within the school context.	3.0	0.92	2.63	1.31
TR57_07	...diagnose and document a pupil's learning progress.	3.71	1.0	3.0	1.33
TR57_08	...give pupils differentiated feedback.	3.97	1.15	3.55	1.15
TR57_09	...individually foster low-achieving pupils.	3.54	0.82	3.5	1.28
TR57_10	...support individual pupils in personal crises or decision-making.	3.4	1.22	3.25	1.21
TR57_11	...take on the pupils' perspective when problems occur.	4.03	1.17	3.55	1.15
TR57_12	...foster social behaviour (helping, supporting, taking responsibility).	3.94	1.08	3.74	1.15
TR57_13	...support pupils so they can solve conflicts rationally and constructively.	3.47	0.9	3.39	1.09
TR57_15	...develop clearly laid-out and realistic week or term plans with pupils.	3.03	1.26	2.94	1.34
TR57_16	...prepare lessons time-efficiently.	4.06	1.18	3.53	1.22
TR57_18	...activate pupils' previous knowledge during the lesson.	3.97	0.94	3.53	1.26
TR57_19	...discuss pupils' mistakes in such a way that they can benefit from the discussion.	3.82	1.1	3.37	1.21
TR57_20	...determine pupils' achievement progress with different instruments.	3.49	0.98	3.05	1.18
	N	35		19	

Table 77: Austria — Self-Assessed Teaching Competences at the End of the Second School Year by Group

6.3.1.2 Results in Pedagogical Knowledge Tests at the End of the Second Year of Working at School

As mentioned in section 6.3, participants were presented with two different knowledge tests. In the next section, the results of the PUW test of pedagogical knowledge will be reported, followed by the results of the in-house test of general teacher knowledge.

PUW Test Results. Figure 46 depicts the results achieved by intervention and control group participants in the internationally tried and tested PUW test of pedagogical knowledge. Participants of the intervention group achieved significantly better test results than members of the control group. Approximately half of intervention group participants answered 57% or more questions correctly. In the control group, more than half of the participants answered less than 30% of the test questions correctly. Figure 46 illustrates that the distribution of participants is almost identical. Only the bars of the intervention group compared to those of the control group show a shift to the right in the direction of higher test results. In the intervention group, the best participants (8.11%) managed to answer 86% of the questions correctly. The best participants of the control group (6.06%) answered 71% of the questions correctly.

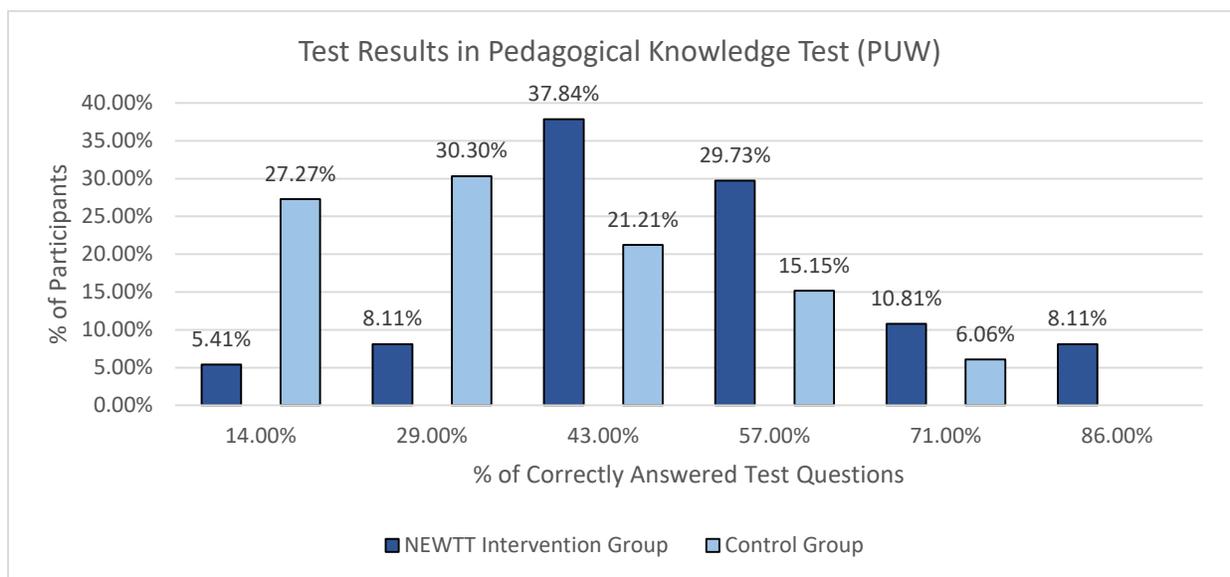


Figure 46: Austria — Comparison of Intervention and Control Groups’ Test Results in the Pedagogical Knowledge Test (PUW) at the End of the Second Year Working at School

In-House Test of Teacher Knowledge. Figure 47 shows a comparison of the test results at the end of the second school year for the intervention and control groups. Test results for the intervention group are significantly higher than those for the control group. The majority of participants managed to answer at least half of the test questions correctly. In the control group, the curve progression of the depicted bars shows two peaks as compared to one peak for the intervention group. This indicates that there is a small subgroup of participants within the control group (shown by the three light blue bars on the far right) which developed in a similar way to the intervention group. However, the majority of participants of the control group (70%) did not achieve satisfactory results in the knowledge test. Respondents gave only between 11% and 33% correct answers.

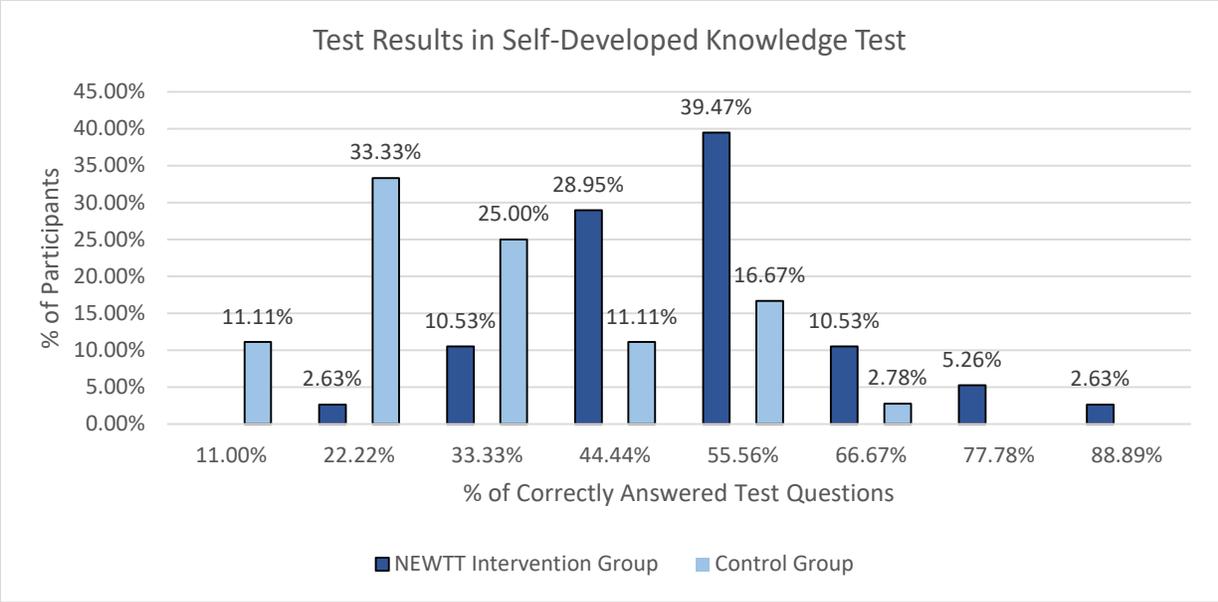


Figure 47: Austria — Comparison of Intervention and Control Groups’ Test Results in In-House Test of Teacher Knowledge at the End of the Second Year Working at School

6.3.2 Comparison of Opportunities to Learn, Teaching Competences, and Pedagogical Knowledge of Alternatively-Trained and Traditionally-Trained Teachers: Bulgaria

This section reports the descriptive results of participants' perceived opportunities to learn (OTL), their self-assessed teaching competences, and their pedagogical knowledge as measured by two different tests. All data was retrieved from the last questionnaire, which was presented to participants at the end of their second year working at school. At this point, 84 Teach For Bulgaria fellows participated in the programme, while the control group consisted of 43 traditionally-trained teachers. However, due to the decreasing levels of participant compliance with completing the last questionnaire, numbers of participants vary notably in the tables and figures. In the intervention group, three participants did not report their perceived OTL, while more than one third of respondents did not assess their teaching competences.

All members of the control group answered the questions on perceived OTL. However, only roughly a quarter of them (15) gave an assessment of their teaching competences. Results will be reported at item level as the sample sizes did not allow for factor or reliability analyses.

At this point only four questions of the posed seven selected PUW test questions could be analysed due to difficulty with translating and coding the open-answer format questions. Results are therefore preliminary. In due course, those questions will be included in the analysis as well.

6.3.2.1 Comparison of Teaching Competences and Opportunities to Learn

As mentioned in section 6.3, participants were asked to report the different types of opportunities to learn (OTL) they perceived during their ongoing training (intervention group) or their last year working at school (control group). Figure 48 shows the overall percentages for each type. The instrument asked about the following types of OTL: theoretical input, reflection with trainer/mentor, reflection with peers, and experiences with pupils (Abs, Döbrich, Gerlach-Jahn, & Klieme, 2009 (adapted version)). Thus, an overall percentage for each type of OTL was calculated, i.e. the percentage of participants who reported at least one OTL of any given type. The first two bars show the overall percentage of participants who reported that they perceived no OTL in at least one area of teaching expertise. For both groups, all areas were reported at least once as missing OTL. The areas that were most frequently reported as lacking OTL, are presented in Table 78. However, this needs to be put into perspective: even though these areas were reported most frequently as lacking OTL, they were only reported as such by a minority of control group participants (16.28%).

No Perceived Opportunities to Learn Regarding...	Intervention Group		Control Group	
	Frequency	Percentage	Frequency	Percentage
...applying a given evaluation tool (interview, questionnaire, observation) to a specific problem within the school context.	3	3.7%	7	16.28%
...developing clearly laid-out and realistic week or term plans with pupils.	8	9.88%	7	16.28%
...supporting individual pupils in personal crises or decision-making.	9	11.11%	6	13.95%
...diagnosing and documenting a student's learning progress.	2	2.47%	7	16.28%
	N=81 (100%)		N=43 (100%)	

Table 78: Bulgaria — Areas Most Frequently Reported as Lacking in Opportunities to Learn

The other bars in Figure 48 show the different areas of OTL that were perceived by the groups: theoretical input, reflection with trainer/mentor, reflection with peers, and experiences with pupils. Furthermore, the data reflects the different training structures of the two groups of beginning teachers. Since the Teach For Bulgaria fellows took part in an ongoing training programme parallel to working at school, it was expected that they would have had more OTL regarding reflection with the Teach For Bulgaria trainers and that they would have received more theoretical input during training sessions. This might also explain why a smaller percentage of fellows overall reported to have had no OTL in the different areas of teaching expertise. Both groups perceived the most OTL in the areas of ‘reflection with peers’ and ‘experiences with pupils’ at school.

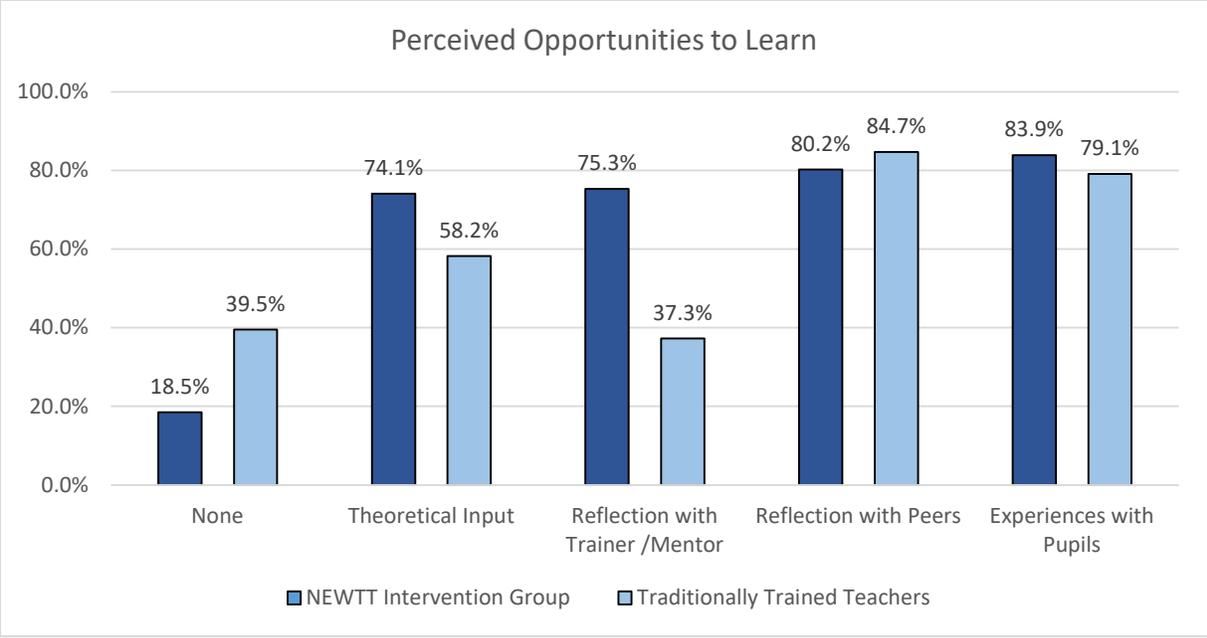


Figure 48: Bulgaria — Perceived Opportunities to Learn

In addition, participants were asked to assess their perceived competence in the same areas of teaching expertise on a scale of 1 (*not sufficient*) to 5 (*excellent*). Table 79 shows the means for the self-assessments by group. As mentioned before, very few of the control group participants filled out this part of the questionnaire. Therefore, the results have to be considered with caution as they represent only a quarter of the members of the control group.

The means for both groups are quite similar for most of the areas of expertise. Overall, participants of both groups ascribed to themselves satisfactory or good levels of teaching competence. Interestingly, the self-assessments do not reflect the reported OTL. Even in the areas in which most participants reported a lack of OTL, they still assessed their competence on average as satisfactory or good. Then again, the percentages of persons who reported a lack in OTL were rather small. The differences in means for intervention and control groups are highest in the area of ‘fostering self-regulatory learning of pupils’ (TR57_01 and TR57_03). Here, participants of the intervention group assessed their competence significantly higher than the control group, ascribing to themselves on average a satisfactory to good level of competence.

Variable	Item	Intervention Group		Control Group	
		M	SD	M	SD
TR57_01	...help pupils to acquire learning strategies for their future learning.	3.74	1.05	3.07	1.16
TR57_03	...show pupils how they can control their learning process.	3.49	1.15	3.0	1.3
TR57_04	...how to foster pupils autonomous learning.	4.09	0.97	3.79	1.05
TR57_06	...apply a given evaluation tool (interview, questionnaire, observation) to a specific problem within the school context.	3.69	1.08	3.36	1.22
TR57_07	...diagnose and document a pupil's learning progress.	4.02	1.12	4.08	1.44
TR57_08	...give pupils differentiated feedback.	3.91	1.22	4.07	1.14
TR57_09	...individually foster low-achieving pupils.	3.93	1.04	4.07	0.83
TR57_10	...support individual pupils in personal crises or decision-making.	3.96	1.16	4.14	1.03
TR57_11	...take on the pupils' perspective when problems occur.	4.09	1.03	3.93	1.14
TR57_12	...foster social behaviour (helping, supporting, taking responsibility).	4.3	1.04	4.43	1.09
TR57_13	...support pupils so they can solve conflicts rationally and constructively.	4.04	1.06	4.14	0.86
TR57_15	...develop clearly laid-out and realistic week or term plans with pupils.	3.56	1.21	3.54	1.27
TR57_16	...prepare lessons time-efficiently.	3.89	1.06	4.14	0.77
TR57_18	...activate pupils' previous knowledge during the lesson.	4.13	1.05	4.38	0.77
TR57_19	...discuss pupils' mistakes in such a way that they can benefit from the discussion.	4.2	1.0	4.43	0.85
TR57_20	...determine pupils' achievement progress with different instruments.	3.98	1.13	4.0	1.36
	N	54		15	

Table 79: Bulgaria — Self-Assessed Teaching Competences at the End of the Second School Year by Group

6.3.2.2 Results in Pedagogical Knowledge Tests at the End of the Second Year of Working at School

As mentioned in section 6.3, participants were presented with two different knowledge tests. In the next section, the results of the PUW test of pedagogical knowledge will be reported, followed by the results of the in-house test of general teacher knowledge.

PUW Test Results. Figure 49 illustrates the test results in the internationally tried and tested PUW test of pedagogical knowledge of intervention and control group participants. The participants of the intervention group show significantly better test results than the control group. However, the majority of both groups answered only 25% of the test questions correctly. For the intervention group this majority comprises two thirds opposed to over 90% of the control group. One third of the intervention group answered at least 50% or more of the questions correctly. The best participants answered 75% of correctly, while in the control group 8% of the participants answered 50% correctly. As mentioned above, these results can only be preliminary, since only the four questions with closed-answer format were analysed here.

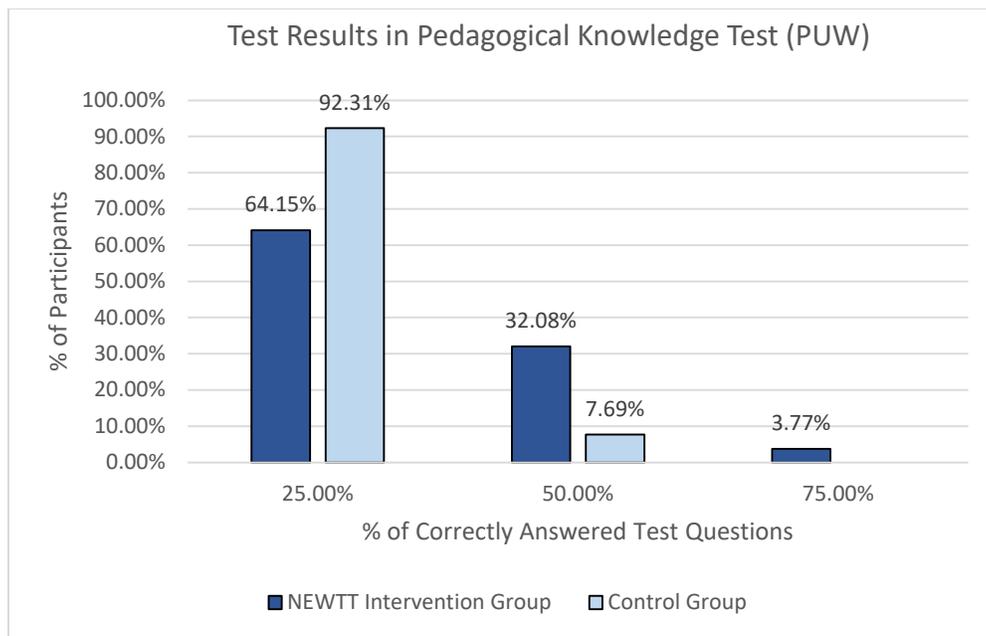


Figure 49: Bulgaria — Comparison of Intervention and Control Groups’ Test Results in the Pedagogical Knowledge Test (PUW) at the End of the Second Year Working at School

In-House Test of Teacher Knowledge. Figure 50 shows a comparison of the test results of the in-house test of teacher knowledge at the end of the second school year for the intervention and control groups. Test results for the intervention group are significantly higher than those for the control group. The majority of the participants managed to answer at least 55% of the questions correctly. The curve progression of the depicted bars shows two peaks. This indicates that participants of the intervention group fall into two sub-samples. Roughly 55% of respondents showed a very positive test result as described above, with a small number of the best participants (5%) achieving almost 90% of correct answers. However, the other sub-sample shows distinctly lower achievement levels, with correct test results ranging between 11% and 44%. In the control group, the majority of participants (87.5%) answered between just 11% and 44%.

44% of questions correctly. The cohort of the best control group participants (7.5%) achieved 67% correct answers.

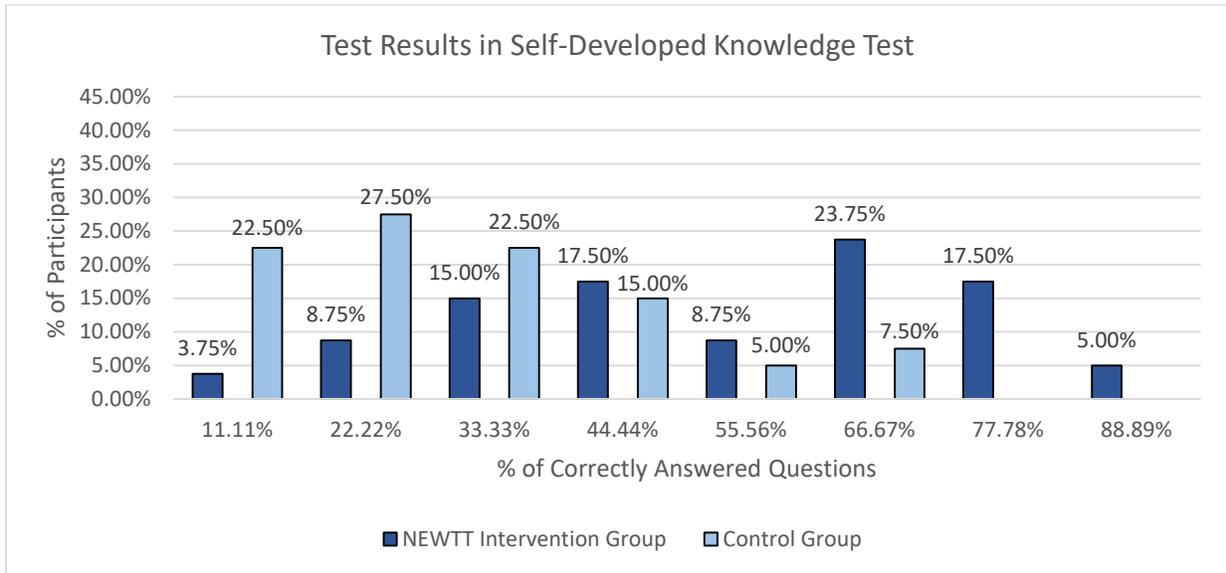


Figure 50: Bulgaria — Comparison of Intervention and Control Groups' Test Results in In-House Test of Teacher Knowledge at the End of Second Year Working at School

Comparison of Teacher Competences, Opportunities to Learn, and Pedagogical Knowledge of Alternatively-Trained and Traditionally-Trained Beginning Teachers at the End of the Second Year Working at School – Transnational Summary

All participants of both intervention and control groups in Austria and Bulgaria perceived a variety of opportunities to learn (OTL). Members of the control groups on average reported fewer OTL overall than members of the intervention groups. This reflects the different training structures of intervention and control groups. Since participants of the intervention groups take part in an ongoing training programme at their respective Teach For All partner organisations, they receive additional OTL through practical and theoretical sessions. In addition, members of the intervention groups have a trainer or mentor who supports them individually and in groups. They receive feedback and reflection opportunities, and are visited by the trainer at school. This explains the amount of perceived OTL with regard to trainers/mentors.

Overall, control groups perceived having the most OTL through reflection with colleagues and experiences with pupils. The same is true for the Bulgarian intervention group. The Austrian intervention group perceived the highest amount of OTL, whereby almost 100% of participants perceived at least one instance of OTL of the different forms. The differences in perceived lack of OTL was in line with these results. Participants of the intervention groups reported fewer missing OTL than the participants of the control groups. However, the areas in which groups reported a perceived lack of OTL were partly the same. All groups in both countries perceived a lack of OTL regarding the application of a given evaluation tool and the development of realistic week or term plans with pupils.

In Austria, the results of the participant self-assessment of teaching competences reflected the OTL results. The competence assessments are lowest for those areas in which a higher number of participants reported lacking OTL. Thus, both groups show lower competence assessments in the areas of applying evaluation tools and developing realistic week or term plans with pupils. Results show that members of the intervention groups ascribe to themselves levels of teaching competence that are comparable to, if not higher than, those of the control groups. In general, both groups assessed their competence in the different areas as at least satisfactory.

In Bulgaria, participants of both intervention and control groups overall assessed their teaching competences slightly higher. In general, both groups assessed their competences concerning the different areas of teaching expertise as good. Even in the areas where a percentage of participants reported a lack of OTL, they still assessed their competence as satisfactory. However, the control group's results regarding self-assessed competences have to be examined with caution since they only represent a quarter of participants.

The test results of both knowledge tests administered to participants — i.e. the internationally tried and tested PUW test of pedagogical knowledge and the in-house designed, tailored test of general teacher knowledge — showed significantly higher results for the intervention groups of both countries. In Austria, approximately half of the intervention group achieved 57% or more correctly answered questions in the PUW test. In the control group, more than half of respondents answered less than 30% of the test questions correctly. Concerning the in-house test of general teaching knowledge, the majority of intervention group participants managed to answer at least half of the questions correctly. For the control group, results indicate that there is a small subgroup of participants within the control group who developed in a similar way to the intervention group. However, the majority of control group participants (70%) do not show satisfactory results in the in-house knowledge test. They gave only between 11% and 33% of the correct answers.

In Bulgaria, participants of the intervention group show significantly better test results than the control group in both tests as well. Two thirds managed to correctly answer at least 50% or more of the PUW test questions, whereas in the control group almost three quarters of the participants answered only 25% correctly. In the in-house test of general teacher knowledge, the majority of the intervention group managed to answer at least 55% of the questions correctly. However, results here indicate that participants of the intervention group fall into two sub-samples. Roughly 55% of respondents show a very positive test result, with the best participants correctly answering almost 90% of the questions. However, the other sub-sample shows distinctly lower achievement. In this sub-sample, correct test results range between 11% and 44%. In the control group, the majority of participants (87.5%) achieved between just 11% and 44% correct answers.

6.4 Indicators of Job Satisfaction and Inclination to Stay in the Profession for Alternatively-Trained and Traditionally-Trained Beginning Teachers After the First Two Years Working at School

In this section, data is presented that sheds light on participants' levels of satisfaction with their working situation as teachers. Detailed data is reported for each country for job satisfaction, inclination to stay in the profession, ability to cope with work-related stress (resilience), and enthusiasm for teaching. Studies show a strong correlation between the ability to cope with work-related stress and occupational wellbeing (Klusman Kunter, Trautwein, Lüdtke, & Baumert, 2008). In addition, a satisfactory work environment increases the inclination to stay in the profession. Furthermore, studies show a correlation between teacher wellbeing and teacher enthusiasm (Kunter et al., 2011). Even though the policy experiment did not include the collection and analysis of student data, other research has shown that teacher enthusiasm affects a variety of student variables such as student performance (Carmichael, Callingham, & Watt, 2017; Marlin, 1991), student behaviour (Mitchell, 2013), or student well-being.

Data for intervention and control groups can only be compared for the two countries with a sufficient number of control group participants: Austria and Bulgaria. For all other countries, data will be reported for the intervention groups only. The data in this chapter was based on the final survey completed by all participants at the end of their second year working at school. Due to space restrictions in the last questionnaire, some of the scales that were measured previously had to be reduced. This applied to the scales regarding job satisfaction and resilience. The job satisfaction scale was taken from the TALIS study and originally included ten items. Two items were excluded in the last questionnaire. The remaining eight items cover two aspects of job satisfaction: four items revolve around satisfaction with the school as a workplace, while four items concern contentment regarding the decision to become a teacher.

The same applied to the scale regarding the ability to cope with work-related stress (resilience). The resilience scale that was used, as developed by Martin and Marsh (2008), originally comprised four items. In the last questionnaire, one item was excluded.

In order to determine to what extent beginning teachers felt enthusiastic about teaching, a scale on teacher enthusiasm (Keller et al., 2014) comprising five items was included. This had proved to be a very effective and reliable tool in numerous previous studies.

6.4.1 Indicators of Job Satisfaction and Inclination to Stay in the Profession: Austria

This section presents data regarding the satisfaction of intervention and control group participants with their working situation as teachers. Detailed data is reported for job satisfaction, inclination to stay in the profession, ability to cope with work-related stress (resilience), and participants' enthusiasm for teaching. All data is based on the last questionnaire, which was presented to participants at the end of their second year working at school. At this point, 40 Teach For Austria fellows participated in the programme. Two individuals did not answer the questions regarding job satisfaction and ability to cope with stress, while one person did not answer the questions on teacher enthusiasm. Of the control group, 38 participants took part in the last survey. Of those, all answered all of the questions presented below. Results for the different indicators will be reported at an item level first of all. Then, results of factor and reliability analyses will be described. Finally the resulting scales will be presented.

6.4.1.1 Job Satisfaction

In order to gain information on participants' contentment with their job situation, they were asked to agree or disagree with statements regarding job satisfaction on a scale of 1 (disagree) to 4 (agree).

Factor analysis showed a three-factor solution for the intervention group. Items TB13_01, TB13_02 and TB13_10 had high factor loadings on the first factor. All items covering satisfaction with the school as a workplace (TB13_03, TB13_05 and TB13_07) loaded on the second factor. The remaining two items (TB13_04 and TB13_06) loaded on the third factor. Because only two items loaded on the third factor, this factor was discarded.³⁹

For the control group, factor analysis yielded a two-factor solution. All items regarding the decision to become a teacher (TB13_01, TB13_02, TB13_04 and TB13_06) loaded on one factor and, as for the intervention group, items TB13_03, TB13_05 and TB13_07 loaded on another factor. However, item TB13_10, which was posed in a general sense ('All in all, I am satisfied with my job'), had a double loading on both factors. It had an almost identical loading and, coincidentally, the lowest factor loading of all items on both factors. Therefore, the item was discarded. Since the factor structures for both groups were only comparable for the items regarding satisfaction with the school as a workplace, reliability analyses were conducted only for this factor. They yielded a very good reliability for the scale *satisfaction with school as a workplace* (Cronbach's alpha: 0.88 and 0.87). On average, all participants rather agreed or agreed with all the positively-phrased items and disagreed or rather disagreed with all the negatively-phrased items. The item that received the highest agreement from all participants was: 'All in all,

³⁹ A minimum of three items must load on a factor in order to proceed with reliability analysis and calculation of scales.

I am satisfied with my job'. The item which most participants disagreed with was: 'I regret that I decided to become a teacher'.

Variable	Item	Intervention Group		Control Group	
		M	SD	M	SD
TB13_01	The advantages of being a teacher clearly outweigh the disadvantages.	3.47	0.76	3.42	0.76
TB13_02	If I could decide again, I would still choose to work as a teacher.	3.58	0.76	3.54	0.80
TB13_04	I regret that I decided to become a teacher.	1.05	0.23	1.18	0.51
TB13_06	I wonder if it would have been better to choose another profession.	1.32	0.53	1.47	0.83
TB13_03	I would like to change to another school if that were possible.	1.79	1.07	1.73	0.95
TB13_05	I enjoy working at this school.	3.32	0.84	3.5	0.73
TB13_07	I would recommend my school as a good place to work.	3.09	1.0	3.16	0.89
TB13_10	All in all, I am satisfied with my job.	3.61	0.59	3.68	0.53
	N	38		38	

Table 80: Austria — Job Satisfaction (Item Level)

Table 81 shows that the intervention group (M=3.2) was slightly less satisfied with their school as a workplace than the control group (M=3.31). However, this difference is not significant.

Scale	Satisfaction with School as a Work Place	Intervention Group		Control Group	
		M	SD	M	SD
		3.2	0.87	3.31	0.76
	N	38		38	

Table 81: Austria — Satisfaction with School as a Work Place

Data from the head teacher survey in Austria are available to give a counter perspective on job satisfaction from the head teachers' point of view. Head teachers were asked whether the profile of the fellow placed at their school was adequate. As Table 94 shows, the majority of Austrian head teachers found the profile of the fellow to be very adequate to their school.

Suitability of Fellow Profile	Austrian Head Teachers	
	Frequency	Percentage
Inadequate	1	5%
Rather inadequate	1	5%
Rather adequate	5	25%
Very adequate	13	65%
N	20	100%

Table 82: Austrian Head Teachers — Suitability of Fellow Profile

Furthermore, 90% of Austrian head teachers answered that they would take another fellow if the current fellow left the school (see Table 83).

Repeated Placement of Fellow	Austrian Head Teachers	
	Frequency	Percentage
Yes	18	90%
No	2	10%
N	20	100%

Table 83: Austrian Head Teachers — Attitude towards Repeated Placement of Fellows at Their School

The head teachers were asked to elaborate on the financial conditions of replacing the current fellow if he/she left the school. As Table 84 shows, 40% of the head teachers are content with the current funding. Furthermore, 30% of the head teachers would place a fellow at their school again even if it meant spending their own resources. In addition, not one of the head teachers finds that the supervision of fellows is too time-consuming. In sum, this data indicates satisfaction with the fellows on behalf of the head teachers.

Financial Conditions of Replacing Current Fellow	Austrian Head Teachers	
	Frequency	Percentage
Yes, under the condition that the school gets additional resources.	3	15%
Yes. Even if we have to use our own resources.	6	30%
Yes. If he is funded like the last one.	8	40%
No, the supervision is too time-consuming in my eyes.	0	0%
Other:	3	15%
N	20	100%

Table 84: Austrian Head Teachers — Financial Conditions of Replacing Current Fellow

6.4.1.2 Teacher Enthusiasm

In order to determine to what extent beginning teachers felt enthusiastic about teaching, participants were asked to agree or disagree with statements on teacher enthusiasm using a scale of 1 (disagree) to 4 (agree). Factor analyses for intervention and control groups showed a one-factor solution. All items had factor loadings of 0.8 and higher. Reliability analyses produced a Cronbach's alpha of 0.83 for the intervention group and 0.92 for the control group, indicating good and excellent reliability.

Variable	Item	Intervention Group		Control Group	
		M	SD	M	SD
TB12_01	I teach with enthusiasm.	3.69	0.52	3.69	0.52
TB12_02	Teaching is one of my favourite things to do.	3.56	0.6	3.56	0.6
TB12_03	Teaching students is fun time and again.	3.79	0.41	3.79	0.4
TB12_04	Teaching gives me joy.	3.77	0.48	3.77	0.48
TB12_05	For me, the interactions with the students are one of the nicest aspects about the teacher's job.	3.82	0.51	3.82	0.5
	N	39		38	

Table 85: Austria — Teacher Enthusiasm (Item Level)

As shown in Table 85, participants were highly enthusiastic about their teaching careers. Interestingly enough, the descriptive statistics for teacher enthusiasm are practically identical for both groups. Four out of the five items have means of 3.7 and higher. Participants agreed most with the statement that interactions with students were the nicest aspects about their job (M=3.82). The overall scale highlights the result that participants of both groups show a high level of teacher enthusiasm. Results are presented in Table 86.

Scale	Teacher Enthusiasm	Intervention Group		Control Group	
		M	SD	M	SD
		3.73	0.39	3.72	0.39
	N	39		38	

Table 86: Austria — Teacher Enthusiasm Scale

6.4.1.3 Ability to Cope with Work-Related Stress

In order to measure how well beginning teachers were able to cope with stress and pressure at work, participants were asked to rate items on a scale of 1 (disagree) to 4 (agree). Two participants of the intervention group did not provide information on this subject. Factor analyses produced a one-factor solution for both groups. The subsequent reliability analyses yielded a Cronbach's alpha of 0.81 for both groups, indicating good reliability. Participants of the intervention as well as the control groups felt rather resilient. Regarding the intervention group,

participants felt most confident about coping well with work pressure (M=3.37) and rather agreed that they were able to cope with setbacks at work (M=3.08). They also rather agreed that they would not be negatively affected by poor performance or bad results (M=3.05). Control group participants thought that they could cope rather well with pressure at work (M=3.08) and would not be affected negatively by poor work results (M=2.97). They felt slightly less confident about coping with setbacks at work, such as negative feedback (M=2.61). All results are presented in Table 87.

Variable	Item	Intervention Group		Control Group	
		M	SD	M	SD
TB14_02	I think that I can cope well with work pressure.	3.37	0.63	3.08	0.67
TB14_03	I will not let my self-confidence be negatively affected by a poor performance or bad results.	3.05	0.7	2.97	0.75
TB14_04	I can cope well with setbacks at work (such as poor achievement or negative feedback).	3.08	0.63	2.61	0.86
	N	38		38	

Table 87: Austria — Ability to Cope with Work-Related Stress — (Item Level)

As can be seen in Table 88, participants of both groups overall reported being rather able to cope with work-related stress. Participants of the intervention group were slightly more confident about this ability than participants of the control group. However, the difference in means is not significant.

Scale	Ability to Cope with Work-Related Stress	Intervention Group		Control Group	
		M	SD	M	SD
		3.17	0.56	2.89	0.65
	N	38		38	

Table 88: Austria — Ability to Cope with Work-Related Stress

6.4.2 Indicators of Job Satisfaction and Inclination to Stay in the Profession: Basque Country

This section presents data regarding the satisfaction of intervention group participants with their working situation as teachers. Detailed data is reported for job satisfaction, inclination to stay in the profession, ability to cope with work-related stress (resilience), and participants' enthusiasm for teaching. All data is based on the last questionnaire, which was presented to participants at the end of their second year working at school. At this point, 29 *Empieza por Educar* fellows participated in the programme. All of them answered the questions, which are presented below.

6.4.2.1 Job Satisfaction

In order to gain information on participants' contentment with their job situation, they were asked to agree or disagree with statements regarding job satisfaction on a scale of 1 (disagree) to 4 (agree). Most of the participants rather agreed or agreed with all the positively-phrased items and rather disagreed or disagreed with all the negatively-phrased items. On average, participants were satisfied with their job ($M=3.72$) and would still choose to work as a teacher if they could decide again ($M=3.64$). The item with which most participants disagreed was: 'I regret that I decided to become a teacher'; this shows an overall satisfaction with their choice of becoming a teacher. All results are presented in Table 89.

Variable	Item	Intervention Group	
		M	SD
TB13_01	The advantages of being a teacher clearly outweigh the disadvantages.	3.41	0.63
TB13_02	If I could decide again, I would still choose to work as a teacher.	3.64	0.56
TB13_04	I regret that I decided to become a teacher.	1.24	0.69
TB13_06	I wonder if it would have been better to choose another profession.	1.45	0.69
TB13_03	I would like to change to another school if that were possible.	2.07	1.0
TB13_05	I enjoy working at this school.	3.34	0.61
TB13_07	I would recommend my school as a good place to work.	2.79	0.86
TB13_10	All in all, I am satisfied with my job.	3.72	0.45
	N	29	

Table 89: Basque Country — Job Satisfaction

6.4.2.2 Teacher Enthusiasm

In order to determine how enthusiastic they felt about teaching, participants were asked to agree or disagree with statements regarding teacher enthusiasm using a scale of 1 (disagree) to 4 (agree). Overall, participants felt highly enthusiastic about their teaching careers and rather agreed or agreed that teaching gives them joy ($M=3.76$). The item with which most participants agreed was: 'For me, the interactions with the students are one of the nicest aspects about the

teacher's job.' (M=3.9). Here, a small standard deviation of 0.3 also shows that the participants' answers are mainly close to the mean. All results are presented in Table 90.

Variable	Item	Intervention Group	
		M	SD
TB12_01	I teach with enthusiasm.	3.72	0.45
TB12_02	Teaching is one of my favourite things to do.	3.55	0.51
TB12_03	Teaching students is fun time and again.	2.83	0.80
TB12_04	Teaching gives me joy.	3.76	0.44
TB12_05	For me, the interactions with the students are one of the nicest aspects about the teacher's job.	3.9	0.3
	N	29	

Table 90: Basque Country — Teacher Enthusiasm

6.4.2.3 Ability to Cope with Work-Related Stress

In order to measure how well beginning teachers were able to cope with stress and pressure at work, participants were asked to rate items on a scale of 1 (disagree) to 4 (agree). Here, they rather agreed that they are able to cope with work pressure (M=3.24) and setbacks at work (M=3.21). They were also rather confident that they would not be negatively affected by poor work results (M=2.93). All results are presented in Table 91.

Variable	Item	Intervention Group	
		M	SD
TB14_02	I think that I can cope well with work pressure.	3.24	0.74
TB14_03	I will not let my self-confidence be negatively affected by a poor performance or bad results.	2.93	0.59
TB14_04	I can cope well with setbacks at work (such as poor achievement or negative feedback).	3.21	0.62
	N	29	

Table 91: Basque Country — Ability to Cope with Work-Related Stress

6.4.3 Indicators of Job Satisfaction and Inclination to Stay in the Profession: Bulgaria

This section presents data regarding the satisfaction of intervention and control group participants with their working situation as teachers. Detailed data is reported for job satisfaction, inclination to stay in the profession, ability to cope with work-related stress (resilience), and participants' enthusiasm for teaching. All data was based on the last questionnaire, which was presented to participants at the end of their second year working at school. At this point, 84 Teach For Bulgaria fellows participated in the programme. Three participants did not answer the questions regarding job satisfaction and ability to cope with stress, while two did not answer the questions on teacher enthusiasm. Of the control group, 43 participants took part in the last survey. Of those, one person did not answer the questions on job satisfaction and enthusiasm, while five did not answer the questions regarding work-related stress. Results for the different indicators will be reported at an item level first of all. Results of factor and reliability analyses will then be described. Finally, the resulting scales will be presented.

6.4.3.1 Job Satisfaction

In order to gain information on participants' contentment with their job situation, they were asked to agree or disagree with statements regarding job satisfaction on a scale of 1 (disagree) to 4 (agree). One member of the intervention and one of the control group did not provide information on this question.

Factor analysis showed a two-factor solution for both groups. For both groups, items TB13_02, TB13_04, TB13_06 loaded on one factor. However, for the intervention group, item TB13_10 also loaded on the same factor. For both groups, all items covering satisfaction with the school as a workplace (TB13_03, TB13_05 and TB13_07) and TB13_01 loaded on one factor. For the control group, item TB13_10 loaded on this factor. For the intervention group, this item and TB13_01 had double loadings. In order to arrive at comparable scales for both groups, reliability analyses were run for items TB13_02, TB13_04, TB13_06 and for TB13_03, TB13_05 and TB13_07. Reliability analyses yielded fruitful results only for the first factor comprising *satisfaction with job choice* (Cronbach's alpha: 0.78 and 0.71).

Results in Table 92 show that, on average, all participants rather agreed with all the positively-phrased items and disagreed or rather disagreed with all the negatively-phrased items. The item which received the highest levels of agreement from participants of the intervention group was: 'If I could decide again, I would still choose to work as a teacher' (M=3.28). Regarding the control group, this item was: 'I enjoy working at this school.' (M=3.34). The item with which all participants disagreed was: 'I regret that I decided to become a teacher.'

Variable	Item	Intervention Group		Control Group	
		M	SD	M	SD
TB13_01	The advantages of being a teacher clearly outweigh the disadvantages.	3.01	0.81	3.0	0.67
TB13_02	If I could decide again, I would still choose to work as a teacher.	3.28	0.67	3.12	0.64
TB13_04	I regret that I decided to become a teacher.	1.37	0.64	1.61	0.54
TB13_06	I wonder if it would have been better to choose another profession.	1.85	0.85	2.27	0.87
TB13_03	I would like to change to another school if that were possible.	2.58	1.0	1.88	0.69
TB13_05	I enjoy working at this school.	3.02	0.85	3.34	0.48
TB13_07	I would recommend my school as a good place to work.	2.89	0.91	3.27	0.59
TB13_10	All in all, I am satisfied with my job.	3.26	0.67	3.2	0.51
	N	81		42	

Table 92: Bulgaria — Job Satisfaction (Item Level)

Table 93 shows that the intervention group (M=3.35) was slightly more content with their job choice than the control group (M=3.08). However, this difference is not significant.

Scale	Satisfaction with Job Choice	Intervention Group		Control Group	
		M	SD	M	SD
		3.35	0.61	3.08	0.53
	N	81		42	

Table 93: Bulgaria — Satisfaction with Job Choice

For Bulgaria, data from the head teacher survey are available to give a counter perspective on job satisfaction from the head teachers' point of view. They were asked whether the profile of the fellow placed at their school was suitable. The exact question was: "Was the Fellow's profile adequate for your school?". As Table 94 shows, close to 80% of Bulgarian Head Teachers found the profile of the fellow to be very adequate for their school.

Suitability of Fellow Profile	Bulgarian Head Teachers	
	Frequency	Percentage
Inadequate	0	0%
Rather inadequate	1	5.3%
Rather adequate	3	15.8%
Very adequate	15	78.9%
N	19	100%

Table 94: Bulgarian Head Teachers — Suitability of Fellow Profile

What is more, all Bulgarian head teachers answered that they would take another fellow if the current fellow left the school (see Table 95).

Repeated Placement of Fellow	Bulgarian Head Teachers	
	Frequency	Percentage
Yes	19	100%
No	0	0%
N	19	100%

Table 95: Bulgarian Head Teachers — Attitude Towards Repeated Placement of Fellows at their School

The head teachers were asked to elaborate on the financial conditions of replacing the current fellow if he/she left the school. As Table 96 shows, 47.4% of the head teachers are content with the current funding. Furthermore, 42.1% of the head teachers would place a fellow at their school again even if it meant spending their own resources. In addition, not one of the head teachers finds that the supervision of fellows is too time-consuming. In sum, this data indicates satisfaction with the fellows on behalf of the head teachers.

Financial Conditions of Replacing Current Fellow	Bulgarian Head Teachers	
	Frequency	Percentage
Yes, under the condition that the school gets additional resources.	2	10.5%
Yes. Even if we have to use our own resources.	8	42.1%
Yes. If he is funded like the last one.	9	47.4%
No, the supervision is too time-consuming in my eyes.	0	0%
Other:	0	0%
N	19	100%

Table 96: Bulgarian Head Teachers — Financial Conditions of Replacing Current Fellow

6.4.3.2 Teacher Enthusiasm

In order to determine to what extent beginning teachers felt enthusiastic about teaching, participants were asked to agree or disagree with statements on teacher enthusiasm using a scale of 1 (disagree) to 4 (agree). Two members of the intervention and one person of the control group did not provide information on this subject.

Factor analyses for the intervention and control groups showed a one-factor solution. For the intervention group, all items had factor loadings of 0.75 and higher. Factor loadings for the control group ranged from 0.62 to 0.86. Reliability analyses produced a Cronbach's alpha of 0.83 for the intervention group and of 0.84 for the control group, indicating good reliability.

Variable	Item	Intervention Group		Control Group	
		M	SD	M	SD
TB12_01	I teach with enthusiasm.	3.4	0.54	3.48	0.59
TB12_02	Teaching is one of my favourite things to do.	3.44	0.59	3.38	0.54
TB12_03	Teaching students is fun time and again.	3.43	0.69	3.36	0.62
TB12_04	Teaching gives me joy.	3.48	0.57	3.38	0.58
TB12_05	For me, the interactions with the students are one of the nicest aspects about the teacher's job.	3.72	0.48	3.57	0.55
	N	82		42	

Table 97: Bulgaria — Teacher Enthusiasm (Item Level)

As shown in Table 97, participants of both groups were highly enthusiastic about their teaching careers. In the intervention group, all five items have means of 3.4 and higher. Participants agreed most with the statement that interactions with students were the nicest aspects about their job (M= 3.72). In the control group, participants were slightly less enthusiastic about their teaching careers, but all items still have means of 3.36 or higher. The overall scale underlines the results: participants of both groups show a high level of teacher enthusiasm. Results are presented in Table 98.

Scale	Teacher Enthusiasm	Intervention Group		Control Group	
		M	SD	M	SD
		3.49	0.47	3.43	0.45
	N	82		42	

Table 98: Bulgaria — Teacher Enthusiasm Scale

6.4.3.3 Ability to Cope with Work-Related Stress

In order to measure how well beginning teachers were able to cope with stress and pressure at work, participants were asked to rate items on a scale of 1 (disagree) to 4 (agree). Three

participants of the intervention group did not provide information on this subject. Factor analyses produced a one-factor solution for both groups. The subsequent reliability analyses yielded a Cronbach's alpha of 0.84 for both groups, indicating good reliability. As for the intervention group, participants felt most confident about coping with setbacks at work (M=3.17). They rather agreed that they would not be affected negatively by poor work results (M=2.72) and thought that they could cope rather well with work pressure (M=2.94). In the control group, participants felt rather resilient. They thought that they could cope rather well with pressure at work (M=3.08) and would not be affected negatively by poor work results (M=2.97). They felt slightly less confident about coping with setbacks at work, such as negative feedback (M=2.61). All results are presented in Table 99.

Variable	Item	Intervention Group		Control Group	
		M	SD	M	SD
TB14_02	I think that I can cope well with work pressure.	2.94	0.87	3.08	0.67
TB14_03	I will not let my self-confidence be negatively affected by a poor performance or bad results.	2.72	0.85	2.97	0.75
TB14_04	I can cope well with setbacks at work (such as poor achievement or negative feedback).	3.17	0.75	2.61	0.86
	N	81		38	

Table 99: Bulgaria — Ability to Cope with Work-Related Stress — (Item Level)

As can be seen in Table 100, participants of both groups overall reported being rather able to cope with work-related stress. Participants of the intervention group were slightly more confident about this ability than participants of the control group. However, the difference in means is not significant.

Scale	Ability to Cope with Work-Related Stress	Intervention Group		Control Group	
		M	SD	M	SD
		2.94	0.72	2.89	0.65
	N	81		38	

Table 100: Bulgaria — Ability to Cope with Work-Related Stress

6.4.4 Indicators of Job Satisfaction and Inclination to Stay in the Profession: Latvia

This section presents data regarding the satisfaction of participants with their working situation as teachers. Detailed data is reported for job satisfaction, inclination to stay in the profession, ability to cope with work-related stress (resilience), and participants' enthusiasm for teaching. All data was based on the last questionnaire, which was presented to participants at the end of their second year working at school. At this point, 19 Iespējamā Misija fellows participated in the programme. One of them did not answer the questions regarding job satisfaction, inclination to stay in the profession, and ability to cope with work-related stress (resilience). All of them answered the questions on enthusiasm for teaching.

6.4.4.1 Job Satisfaction

In order to gain information on participants' contentment with their job, they were asked to agree or disagree with statements on a scale of 1 (disagree) to 4 (agree). One person did not rate the items on job satisfaction. Overall, participants rather agreed with all the positively-phrased items, and disagreed or rather disagreed with all the negatively-phrased items. Participants rather agreed that their school is a good place to work (M=3.06) and that they enjoy working at their school (M=3.0). The item with which participants disagreed most was: 'I regret that I decided to become a teacher.'. Overall, participants are rather satisfied with their job (M=2.83).

Variable	Item	Intervention Group	
		M	SD
TB13_01	The advantages of being a teacher clearly outweigh the disadvantages.	2.56	0.78
TB13_02	If I could decide again, I would still choose to work as a teacher.	2.5	0.79
TB13_04	I regret that I decided to become a teacher.	1.5	0.71
TB13_06	I wonder if it would have been better to choose another profession.	2.39	0.78
TB13_03	I would like to change to another school if that were possible.	2.11	1.02
TB13_05	I enjoy working at this school.	3.0	0.59
TB13_07	I would recommend my school as a good place to work.	3.06	0.73
TB13_10	All in all, I am satisfied with my job.	2.83	0.71
	N	18	

Table 101: Latvia — Job Satisfaction

6.4.4.2 Teacher Enthusiasm

In order to determine how enthusiastic they felt about teaching, participants were asked to agree or disagree with statements on teacher enthusiasm using a scale of 1 (disagree) to 4 (agree). Overall, participants felt rather enthusiastic about their teaching career. Three of five items have means of 3.11. The item with which all participants agreed the most was: 'For me, the

interactions with the students are one of the nicest aspects about the teacher's job.'. All results are presented in Table 102.

Variable	Item	Intervention Group	
		M	SD
TB12_01	I teach with enthusiasm.	3.32	0.67
TB12_02	Teaching is one of my favourite things to do.	2.89	0.66
TB12_03	Teaching students is fun time and again.	2.89	0.81
TB12_04	Teaching gives me joy.	3.11	0.66
TB12_05	For me, the interactions with the students are one of the nicest aspects about the teacher's job.	3.37	0.76
	N	19	

Table 102: Latvia — Teacher Enthusiasm

6.4.4.3 Ability to Cope with Work-Related Stress

In order to measure how well beginning teachers were able to cope with stress and pressure at work, participants were asked to rate items on a scale of 1 (disagree) to 4 (agree). One participant did not provide information on this subject. Overall, participants rather agreed that they are able to cope well with work pressure (M=2.78). However, they felt less confident about coping with setbacks at work (M=2.39) and thought that they might be negatively affected by poor work results (M=2.39). All results are presented in Table 103.

Variable	Item	Intervention Group	
		M	SD
TB14_02	I think that I can cope well with work pressure.	2.78	0.55
TB14_03	I will not let my self-confidence be negatively affected by a poor performance or bad results.	2.39	0.5
TB14_04	I can cope well with setbacks at work (such as poor achievement or negative feedback).	2.39	0.5
	N	18	

Table 103: Latvia — Ability to Cope with Work-Related Stress

6.4.5 Indicators of Job Satisfaction and Inclination to Stay in the Profession: Romania

This section presents data regarding the satisfaction of participants with their working situation as teachers. Detailed data is reported for job satisfaction, inclination to stay in the profession, ability to cope with work-related stress (resilience), and participants' enthusiasm for teaching. All data was based on the last questionnaire, which was presented to participants at the end of their second year working at school. At this point, 31 Teach For Romania fellows participated in the programme. All of them answered the questions, which are presented below.

6.4.5.1 Job Satisfaction

In order to gain information on participants' contentment with their job situation, they were asked to agree or disagree with statements regarding job satisfaction on a scale of 1 (disagree) to 4 (agree). Overall, participants rather agreed or agreed with all the positively-phrased items and disagreed or rather disagreed with all the negatively-phrased items. The item with which participants agreed the most was: 'All in all, I am satisfied with my job.' They also agreed that it was the right decision to choose to work as a teacher (M=3.64) and, by implication, mostly disagreed that they regret their decision to become a teacher (M=1.24). They also thought the advantages of the job clearly outweigh the disadvantages (M=3.41). All results are presented in Table 104.

Variable	Item	Intervention Group	
		M	SD
TB13_01	The advantages of being a teacher clearly outweigh the disadvantages.	2.81	0.60
TB13_02	If I could decide again, I would still choose to work as a teacher.	2.94	0.63
TB13_04	I regret that I decided to become a teacher.	1.48	0.51
TB13_06	I wonder if it would have been better to choose another profession.	1.87	0.76
TB13_03	I would like to change to another school if that were possible.	1.87	0.67
TB13_05	I enjoy working at this school.	2.97	0.61
TB13_07	I would recommend my school as a good place to work.	2.61	0.80
TB13_10	All in all, I am satisfied with my job.	2.87	0.67
	N	31	

Table 104: Romania — Job Satisfaction

6.4.5.2 Teacher Enthusiasm

In order to determine how enthusiastic they felt about teaching, participants were asked to agree or disagree with statements on teacher enthusiasm using a scale of 1 (disagree) to 4 (agree). Overall, participants are highly enthusiastic about their teaching careers: four items of the five have means of 3.55 or higher. The item with which participants agreed the most was: 'For me, the interactions with the students are one of the nicest aspects about the teacher's job.'

Variable	Item	Intervention Group	
		M	SD
TB12_01	I teach with enthusiasm.	3.55	0.62
TB12_02	Teaching is one of my favourite things to do.	3.55	0.62
TB12_03	Teaching students is fun time and again.	3.23	0.63
TB12_04	Teaching gives me joy.	3.61	0.5
TB12_05	For me, the interactions with the students are one of the nicest aspects about the teacher's job.	3.97	0.18
	N	31	

Table 105: Romania — Teacher Enthusiasm

6.4.5.3 Ability to Cope with Work-Related Stress

In order to measure how well beginning teachers were able to cope with stress and pressure at work, participants were asked to rate items on a scale of 1 (disagree) to 4 (agree). As shown in Table 106, on average participants rather agree or agree that they are able to cope with work-related stress. They highly agree that they can cope well with work pressure (M=3.24) and setbacks at work (M=3.21). They also rather think that they will not be negatively affected by poor work results (M=2.93).

Variable	Item	Intervention Group	
		M	SD
TB14_02	I think that I can cope well with work pressure.	3.13	0.62
TB14_03	I will not let my self-confidence be negatively affected by a poor performance or bad results.	3.13	0.5
TB14_04	I can cope well with setbacks at work (such as poor achievement or negative feedback).	3.13	0.5
	N	31	

Table 106: Romania — Ability to Cope with Work-Related Stress

Indicators of Job Satisfaction and Inclination to Stay in the Profession for Alternatively-Trained and Traditionally-Trained Beginning Teachers After the First Two Years Working at School – Transnational Summary

All participants of both intervention and control groups in all countries reported to be rather satisfied or satisfied with their job overall. In Austria, levels of contentment with the working situation and the decision to become a teacher are the highest overall, both in the intervention and control groups. In Latvia and Romania, while participants of the intervention groups are rather satisfied with their job overall, they are the most restrained in their contentment.

For Austria and Bulgaria, the head teacher survey provides an additional perspective on job satisfaction. Almost all head teachers of both countries (94.9%) reported that they would take on another fellow if the current one left their school. Furthermore, the head teachers rated the profile of their fellows overall as predominantly adequate (71.8% very adequate, and 20.5% rather adequate) for their needs. About one third of the head teachers (35.9%) of the two countries would even use their own school resources for another fellow if the current one left their school. These results indicate that the majority of head teachers of both countries are overall satisfied with the work of the fellows at their schools. For more descriptive results see Table 120 — Table 122.

As far as enthusiasm towards the teaching profession is concerned, participants in all countries felt enthusiastic about their teaching careers. Means were as high as 3.97 in Romania. In all five countries, participants agreed most with the statement that interactions with students are the nicest part of a teacher's job.

When asked about their ability to cope with work-related stress, participants of all countries rather agreed or agreed that they were able to cope with work-related stress. There was no significant difference in the ability to cope with stress between the intervention and control groups in either Austria or Bulgaria. Overall, participants in Latvia felt less resilient towards work-related stress than participants in the other countries did.

7 Discussion

Evidence was found that the strategy for attracting and recruiting participants for the alternative teacher training pathway implemented by the five Teach For All network partner organisations enabled the partners to select fellows who were at least as suitable as the traditionally-trained teachers in the control groups. Moreover, the alternatively-trained teachers significantly increased their teaching competences and pedagogical knowledge over the course of the two-year training period. The alternatively-trained teachers' gain in pedagogical knowledge, teaching competences, and teacher self-efficacy was as good as that of traditionally-trained teachers. However, the groups showed different profiles regarding their teaching competences and self-efficacy. For instance, while traditionally-trained teachers showed more confidence in their classroom management ability at the beginning of their teaching career, alternatively-trained teachers felt more confident about their ability to motivate and support pupils. After working in schools for two years, traditionally-trained and alternatively-trained teachers felt equally satisfied with their choice of becoming a teacher, and with their working situation in general.

The starting point of the NEWTT project was the current challenge of teacher shortages in several EU member states. Therefore, the main objective of the NEWTT project was to compare the outcomes of two different pathways into the teaching profession. Specifically, the project compared the innovative approach of the NEWTT alternative pathway with traditional teacher education programmes in order to investigate the contribution of the NEWTT approach to the quality and diversification of the teacher workforce.

Four main hypotheses were tested in five countries:

1. The NEWTT alternative pathway will recruit trainees (called fellows within the NEWTT context) who are at least as suitable for teaching as traditionally-educated teachers.
2. Alternatively-trained teachers will increase their teacher competence over the course of their two-year training programme.
3. Alternatively-trained teachers perform at least as well in their pedagogical knowledge and teaching competence as their traditionally-educated counterparts.
4. The level of teacher engagement exhibited by fellows from the NEWTT national pilots will be at least as stable as that of traditionally-trained beginning teachers.

In addition, two further hypotheses regarding the support structures provided by schools for beginning teachers were tested in Austria and Bulgaria, the two countries with the biggest samples, namely:

1. Alternatively-trained teachers receive a level of acceptance from head teachers that is at least equal to the level of acceptance shown to traditionally-educated teachers.

2. Head teachers perceive no additional burden when integrating alternatively-trained beginning teachers into the school system compared to integrating traditionally-trained beginning teachers.

A quasi-experimental design comprising intervention groups (fellows from national Teach For All organisations) and control groups (traditionally-trained beginning teachers) was developed for all five participating countries. The intervention and control group samples in each country proved to be comparable overall in terms of the inherent quality characteristics and the academic prerequisites for becoming a teacher. Therefore, it was possible to confirm the first hypothesis. However, it should be noted that the participants of the intervention groups constituted a selective sample based on strict recruitment procedures. The special selection criteria for the intervention groups resulted from the Teach For All approach towards selecting strongly motivated, high-potential candidates, and the goal of training them as effective leaders equipped to deal with social inequalities. The intervention group participants mainly showed greater pedagogical experience outside of the school context compared to the control group participants, who had a greater level of pedagogical experience inside schools. Furthermore, the fellows from Teach For All organisations to a greater extent claimed a sense of social responsibility as their motivation for becoming a teacher, while the traditionally-educated teachers claimed a higher interest in the specific teaching subjects.

Although teacher training programmes generally focus on young candidates with little or no previous teaching experience, some outliers aged 40 or over were included in the intervention and control groups. For the control groups, this can simply be explained by the fact that several countries had difficulties finding a sufficient number of control groups participants with the result that those with one or two years of teacher experience were also accepted. By contrast, one reason that explains the presence of older participants in the intervention groups was the greater level of previous academic and/or professional experience of the selected candidates. The inclusion of older candidates highlights that the selection process for the Teach For All pathway is competency-based and that one previous career does not take precedence over another when it comes to evaluating candidate suitability.

Moreover, results show that the alternatively-trained teachers developed their competence as teachers in all areas over the course of their two-year training period. Therefore, it was possible to confirm the second hypothesis. Alternatively-trained teachers attributed to themselves a particular strength in fostering pupil motivation. However, they felt less competent in the area of applying evaluation tools to a specific problem within the school context, and in the area of developing pupils' autonomous learning. This low self-assessment of their own competence by alternatively-trained teachers can be explained by a lack of opportunities to learn (OTL) in these areas. In particular, insufficient opportunities for practicing the development of realistic week or

term plans could be one reason for a perceived lower competence in fostering pupils' autonomous learning (Jürgens, 2018; Klafki, 2003).

Two knowledge tests were conducted with participants of the control and intervention groups in all five countries. Participants of the intervention groups showed lower knowledge gains in the general pedagogical test on teaching knowledge (PUW test) than in the tailor-made knowledge test. This was not unexpected as the tailor-made knowledge test was based on training materials provided to fellows during their initial training. A further explanation might be that only a selection of questions from the PUW test was used due to constraints on the time and length of the questionnaire. The original PUW test impeded a differentiation between action-related and conceptual-analytical knowledge, which is conceptually important for a more detailed analysis of the effects of teacher training (König & Klemenz, 2015).

Due to software issues with the online survey tool, in Bulgaria only the questions using a closed-answer format could be analysed at this time. This constraint prevented a comprehensive analysis of the effects of training on the action-related dimension, which was embedded in the open-ended test questions (König & Klemenz, 2015). However, there was no difference in the development patterns of pedagogical knowledge between participants in Bulgaria and in Austria, where the open-ended questions were included in the analysis.

Even though participants' knowledge gain over eighteen months, as measured by the PUW test, was only moderate in all participating countries, the test results at the first measurement point – after the initial training – were already moderately high. It is possible that the type of knowledge gained during the initial training, as reflected in the PUW test, was simply not nurtured further in the new learning environment provided by the schools. Schools as a workplace and learning environment conceivably foster in beginning teachers the development of more situational action-related, and practical knowledge, which may not be well represented and measured by the test questions of the PUW.

Another factor that might have influenced the training-based test results is the tendency of participants to take a guess at the correct test answers. The issue of differentiating between correctly *answered* questions and correctly *guessed* questions is a well-known problem in testing (Meyerhöfer, 2004). Even though every question included an option of 'I don't know', and even though participants were explicitly instructed to choose this option if they did not know the answer, it is possible that participants guessed anyway. This issue occurs mostly with multiple-choice questions as it is much harder to guess correct answers for open questions. Therefore, this problem might apply in particular to the tailored test, since it consisted only of multiple-choice questions. However, to impede guessing, test questions generally included at least four answer options, and all answers had to be correctly marked with either 'true' or 'false'.

In line with the third hypothesis, the intervention groups showed significantly higher results in both knowledge tests after two years, compared to the control groups. Overall, participants of the control groups showed no knowledge gain in either of the tests. At the same time, the intervention groups reported more OTL than the control groups did, especially in terms of more reflection with trainers and mentors. Moreover, the higher test results for participants of the intervention groups might be explained by the fact that they were highly motivated professionals equipped with suitable academic strategies and higher levels of prior general knowledge, which can lead to a positive interaction effect between content knowledge and teacher training (Minor, Desimone, Lee & Hochberg, 2016).

The results regarding levels of perceived OTL reflected the different training and professional development structures of the intervention and control groups. As participants of the intervention groups took part in an ongoing training programme at their respective Teach For All partner organisations, they received additional OTL through practical and theoretical sessions. Furthermore, members of the intervention groups had a trainer or mentor who supported them individually and in groups. They received feedback and reflection opportunities, and they were visited by their trainer in school. This explains the amount of perceived OTL with regard to trainers/mentors. Additionally, a strong mentoring support structure – especially one that focuses on reflective practice – can lead to higher teacher self-efficacy (Black, 2016).

Finally, in accordance with the fourth hypothesis, all participants of both intervention and control groups in all countries reported being ‘rather satisfied’ or ‘satisfied’ with their job overall. They also showed high levels of enthusiasm for teaching and high resilience. These results can be partly explained by the high values scored by both intervention and control groups for the job motivation, ‘working with children and adolescents’. Other studies show that a desire to work with children is a significant predictor for job satisfaction (Hennessy & Lynch, 2017). This also applies to high levels of teacher enthusiasm; based on longitudinal analysis, Bleck (2019) was able to demonstrate that an intrinsic job motivation had a positive effect on teacher enthusiasm.

Interestingly, both groups of beginning teachers showed high levels of resilience. These results are contrary to existing outcomes of other studies in the field; often, job requirements are perceived as very stressful, in particular at the beginning of the teaching career (keyword: reality shock; cf. Fuller & Brown, 1975; Huberman, 1989). However, in a recent study, Schmidt, Klusmann & Kunter (2016) show effects similar to those reported here. They explain their positive results with candidates’ participation in a mandatory induction programme, which may reduce the stressful effects of the start of the teaching career. This argument may hold true for the intervention groups, which received intensive support during their two years in school. For the control groups, such an intensive and well-organised support structure was uncommon. Another explanation for the high levels of resilience could be the high job satisfaction and enthusiasm in

both the control and intervention groups, because results by Brouskeli, Kaltsi & Loumakou (2018) show a positive correlation between resilience and occupational wellbeing.

The perspectives provided by head teachers in the head teacher surveys in Austria and Bulgaria further underline the high levels of job satisfaction reported by the Fellows. Head teachers in both countries stated that they would use additional funding to hire another fellow if the current one left their school. Some even appreciated the work of the fellows to such an extent that they would use the school's own resources to hire a fellow. In general, they accepted the fellows as an additional resource. Alternatively-trained teachers were perceived as bringing with them a different perspective, and as diversifying the professional staff at schools.

The main limitation of the NEWTT policy experiment lies in the small sample sizes of the participating countries. This is especially true for the control group samples. Countries found it challenging to recruit into the control groups a sufficient number of beginning teachers from the traditional teacher education system. In the end, teachers with prior teaching experience of up to two years were accepted into the control groups in order to achieve acceptable sample sizes for the first measurement point. Since it was predictable that the samples would shrink over time (panel mortality), it was not ideal to start out with only the minimum number of control group participants in most countries. Apart from Bulgaria and Austria, where inferential statistical analysis is possible, sample sizes are too small to compare intervention and control group participants at the end of their second year in school. Therefore, the findings of the current study may not be generalised to apply to teacher populations per se. However, the findings do shed some light on the comparative effectiveness of alternative and traditional teacher training which may inspire further research and analysis with regard to teacher education.

The following caveats need to be kept in mind when interpreting the results of the NEWTT project. At the same time, they could be regarded as starting points for the development of further studies.

- This policy experiment focused on the teacher competences of beginning teachers and the perception of head teachers of the context in which beginning teachers work at their schools. In order to obtain a more holistic view on the development and the impact of teacher competence of both alternatively-trained and traditionally-trained teachers on pupil performance, an analysis including data on pupils' performance and learning outcomes would be more conclusive.
- In this study, the intervention groups comprised purposefully selected groups of high-potential candidates. Accordingly, it is difficult to separate the effect of the selectiveness from the effect of the training programme itself. In further studies, efforts should be made to try the same type of training programme on less selective intervention groups.

Apart from inspiring additional research, further EU projects in other areas can benefit from the insights gained during the NEWTT project. For the European Union goal of convergent development within all policy areas, it is imperative to embed standardised descriptions of implemented practice and to ensure comparability of implementation and testing in all participating countries. For the NEWTT project, involving national ministries in the process of project development, as well as in the (quasi-)experimental implementation was crucial for gaining access to schools and for conducting a dialogue on educational reform. For future policy experiments, an even more explicit and precise commitment of national governments could help policy experiments to be implemented regularly and continuously, even if governments change.

For the implementation of the intervention groups in NEWTT, it was extremely helpful to have one international partner who, to some degree, guaranteed a common language and a common understanding of the innovation at stake. In the case of the NEWTT project, the Teach For All network organisation, which already had experience of managing collaboration between various educational systems, fulfilled this role. In the absence of such an intermediary body, similar projects would likely require additional time for agreeing policies, interventions and performance measures. Next, even if the international core of an intervention is strong, some adaptation will be necessary for each country. In the NEWTT project, such national adaptations were documented but not considered in the analysis presented in this report. To do so would have required bigger samples within the participating countries, and more robust instruments (including the piloting of new instruments).

For the design of the NEWTT survey instruments, it was helpful to use established items and scales from international studies, such as TALIS. Of course, this is only possible to the extent that the content of the innovation at stake has already been assessed by standardised international studies in the participating countries. The development of new survey items is time-consuming and expensive because of the forward-backward translation work and piloting phases they require and which are not accounted for in most EU projects. In such cases, pilot projects testing newly developed instruments could help to increase the quality of policy experiments.

One main challenge within quasi-experiments in real life contexts is guaranteeing the ongoing participation in all surveys of as many respondents as possible. For NEWTT, helpful strategies were that survey participation was contractually mandated (e.g. for the intervention group at Teach For Bulgaria) and the strong and direct involvement of stakeholders (e.g. the control group organised by the Board of Education for Vienna).

Additionally, the formative evolution of educational approaches during the course of the experiment constitutes a challenge to studies such as the NEWTT project. Obviously, it is in the interest of Teach For All partner organisations to introduce changes within their programme

whenever they see potential for improvement. For instance, training contents may be updated after the instruments for external evaluation have been developed because incoming evidence from last year's course shows a need for improvement. However, this change may have negative effects on the evaluation of the project, which was designed upfront; for instance, the close links between a tailor-made knowledge test and the content of training may become somewhat compromised if the training content is changed mid-project. Therefore, in future projects, it might be important to plan for some resources to document potential changes to content and context during the project. In this way, threats to the validity of measurement and evaluation can be reduced.

Looking ahead, further EU projects and policy experiments in the field of teacher education could be especially worthwhile in the following areas:

1. In order to enhance research capacity in the field of teacher education, EU projects focusing on the development of international standardised items and (video)-tests of teacher competences would contribute to a more standardised and statistically invariant comparison of the effect of teacher education in Europe.
2. The high number of applicants for the Teach For All programmes raised the question of how entry into the teaching profession can be designed in a more attractive way. Research could investigate how the current open-door policy into teacher education programmes contributes to a low image of the profession in many countries. It could also investigate what kind of measures could be used for leveraging the entry point as an opportunity for imparting on student teachers the high ethos of the profession.
3. The NEWTT policy experiment provided insights into an approach, which successfully recruited suitable participants from diverse academic fields who would otherwise not have entered the teaching profession. Due to the complex selection process, individuals with various positive qualities, such as problem-solving competence, endurance, high motivation, and social responsibility, were recruited onto the programme. It is yet to be explored in what way the presence of rigorously selected alternatively-trained teachers can contribute to a profound cooperation in, and joint professional development of, schools.
4. In the NEWTT study, it became clear that mentoring and/or opportunity for reflection is an important factor for the professional development of teachers. The innovative mentoring approach trialled in the context of NEWTT could complement traditional teacher training. However, each Teach For All partner organisation implemented the mentoring system in a slightly different way. Further studies need to examine which specific aspects of mentoring and support for beginning teachers are particularly effective. An EU project focusing on the implementation of mentoring systems in

teacher education programmes inside and outside of universities seems extremely promising in this context.

5. In addition, studies on teacher induction at school could provide further insights into the effectiveness of different support structures for beginning teachers and the specific needs of beginning teachers depending on their pathway into teaching.
6. The Teach For All approach to training teachers owes its success at least in part to its high level of coherence. Obviously, it is easier for a small NGO to provide such coherence than it is for the complex, multi-level systems which are generally responsible for teacher education. Therefore, EU studies could further investigate how teacher education programmes deal with the challenges of developing a coherent, consistent framework and implementing it.
7. The Teach For All training uses a considerable amount of time and effort to develop a specific understanding of leadership among its participants. The basic idea is that all professionals working at school should be leaders. Further research will have to analyse how far the leadership mindsets of the Teach For All participants differ from those of traditionally-trained teachers and how this effects their teaching behaviour.
8. Further EU studies could enhance the discourse on the composition of the body of professional staff members needed in today's schools. Teachers' homogeneous professional backgrounds no longer seem to adequately serve the needs of comprehensive schools. As the student body diversifies, the professional workforce in schools also needs to diversify. In this situation, research on existing concepts and the experience of staffing and bringing together various professional backgrounds in schools would be helpful, in order to develop new concepts for diverse professional teams in schools.
9. In order to assess the impact of teacher competence on pupil outcomes and learning, a research design involving pupils as participants would be necessary. However, this kind of research design would require a strict standardisation of the subject taught, the grade(s) of the pupils involved in the experiment, and the teaching unit.
10. Finally, if the Teach For All approach proves to be a good model from various research perspectives, the question arises as to how this small-scale activity by one NGO can be scaled up. Additional organisational research is necessary in order to identify types of public-private partnerships that would be economically viable and practically effective in order to achieve the same professional outcomes with a much higher number of participants.

The evaluation of the NEWTT policy experiment produced valuable data for five countries in the form of a two-year longitudinal panel study. The data provided evidence confirming the underlying hypotheses. Alternatively-trained and traditionally-trained teachers showed at least

comparable baseline profiles in terms of relevant prerequisites for the teaching profession. Alternatively-trained teachers developed their teaching competences and pedagogical knowledge over the course of the two-year Teach For All training programmes. Finally, at the end of the two-year Teach For All training programmes, alternatively-trained teachers had gained at least as much pedagogical knowledge and increased their teaching competences as traditionally-trained teachers, and they were at least as satisfied with their work situation as their traditionally-trained counterparts. The study's results as well as its limitations yield starting points for deeper research into areas such as opportunities to learn, mentoring and other support structures for teachers, or teachers' impacts on pupil outcomes. Moreover, future EU projects in the field of education and policy experiments in other areas can benefit from the experiences gained and the challenges faced by the NEWTT project.

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9 Annex

Code System	LATVIA	SPAIN	ROM...	AUST...	BULG...	SUM
Expectations						0
become official teachers			1	1		2
go to politics	1					1
own organizations			1	1	1	3
become principals			1	1	1	3
work in social and educational initia	1					1
change the system		1		1	1	3
Perfect trainee						0
self-responsibility					1	1
potential to be changing agents		1				1
socially engaged	1					1
good communication skills	1			1		2
open to new things	1					1
potential to impact classrooms		1				1
clear goals and visions for the futur	1					1
good in academic field	1					1
perseverance	1			1	2	4
commitment		1				1
experience with kids			1			1
motivation				1	2	3
idealism about changing lives			2	1	2	5
Lack of teachers			1	1		2
Older trainees					1	1
Incentives						0
salary plus scholarship	1		1		1	3
no salary, only scholarship		1				1
notebook as a gift	1					1
private health insurance			1			1
no incentives				1		1
Responsibility for selection	1	1	1	1	1	5
Rating criteria						0
accept feedback					1	1
analytical thinking			1			1
organisational skills			1			1
achievements (academic, professio	1					1
ability to build relationships		1	1			2
reaction against injustice					1	1
self-reflection			1			1
empathy		1				1
grammatical correctness			1			1
self-responsibility					1	1
willingness to learn	1				1	2
attitude towards minority groups					1	1
professional engagement			1	1		2
great bachelor				1		1
leadership			1	1		2
perseverance	1	1	1	1	1	5
motivation	1		1	1	1	4
communication	1	1	1	1		4
effort in the application			1			1
social engagement				1		1
identification with goals	1	1	1	1		4
score 1 to 5	1		1		1	3
Selection phases						0
assessment center	1	1	1	1	1	5
analytic test		1				1
individual case analysis		1				1
reflection	1		1	1		3
final interview		1	1	1	1	4
group work analyzing proble	1		1			2
role play	1	1		1	1	4
miniclass	1	1	1	1	1	5
analytical test					1	1
phone interview	1			1	1	3
online application	1	1	1	1	1	5
final interview	1					1
Advertising						0
posters		1		1		2
websites for job search		1				1
newspaper			1			1
university events	1		1			2
social media	1	1	1	1		4
collecting individual contacts of peo	1					1
student organisation cooperation		1	1	1		3
ngo cooperation	1		1		1	3
tv spots	1		1	1	1	4
internet banners					1	1
radio spot	1			1	1	3
career fairs		1		1		2
university lectures					2	2
SUM	32	23	35	32	34	156

Figure 51: MAXQDA2 Output of Coded Categories

Interview Guideline
Introduction
<p>Hello, Mrs. /Mr. <i>[insert name of head(s) of training of national Teach For All organisation]</i>, thank you very much for agreeing to this interview. I am Beatriz Matafora and I work for the project NEWTT – A New Way for New Talents in Teaching. One important work package of the NEWTT-project is the documentation of the recruitment process of fellows of Teach For All in each of the five countries taking part in this policy experiment. Therefore, I would like to ask you some questions about the whole process, beginning with the advertisement for potential candidates, then asking about each part of the recruitment and characteristics of the chosen fellows and ending with the perspectives for ex-fellows. The interview will probably take around 45 to 60 minutes. I would like to assure you that there are no right or wrong answers. Every contribution will be helpful for us. First, I would like to inform you that your personal data will be made anonymous in our project. Then, I would like to ask you if you are ok with me recording this interview, so can I fully concentrate on our interview and later can sum up the information more easily. Thank you for your cooperation. My first question is very easy. I am interested in your work in <i>[insert national Teach For All organisation, e.g. Teach For Bulgaria]</i>.</p>
Question 1
<p>So, Mrs. /Mr. <i>[insert name of head(s) of training of national Teach For All organisation]</i>, could you explain to me how you have started your work in <i>[insert national Teach For All organisation, e.g. Teach For Bulgaria]</i>?</p> <p>a) How long have you been working there?</p> <p>b) What are your main tasks?</p>
Question 2
<p>How does <i>[insert national Teach For All organisation, e.g. Teach For Bulgaria]</i> present itself externally, in order to attract more candidates wishing to participate in the programme as a fellow?</p> <p>a) Where do they place advertisements? (Television, newspaper, internet, actions on campus...?)</p>
Question 3
<p>I am aware that the selection procedure of candidates in <i>[insert name of country of national Teach For All organisation, e.g. Bulgaria]</i> consists of 4 phases: the online application, a phone interview, an online test and the assessment centre.</p> <p>I would like to know more about the assessment criteria used in each phase. We can start with the online application.</p> <p>a) What kind of criteria do you use in order to rate the candidate's performance in this phase?</p> <p>b) So we can move to the phone interview. What kind of criteria do you use in order to rate the candidate's performance in the phone interview?</p> <p>c) And what about the online test, what kind of criteria do you use in order to rate the candidate's performance here?</p> <p>d) What is the weight of this test in comparison to the other phases?</p> <p>e) Finally, what kind of criteria do you use in order to rate the candidate's performance in the assessment centre?</p> <p>f) What is the weight of this phase in comparison to the others?</p>
Question 4
<p>Is <i>[insert national Teach For All organisation, e.g. Teach For Bulgaria]</i> 100% responsible for the whole recruitment process or are there other organisations involved?</p>

Interview Guideline
Question 5
<p>After finding out more about the recruitment of candidates, I would like to discover more about the situation of the chosen fellows. According to Eurydice, an Education Information Network in Europe, [insert name of country of national Teach For All organisation, e.g. Bulgaria] is the country in the European Union where teachers get the [insert estimate for payment, e.g. lowest payment].</p> <p>a) In your opinion, how do the incentives offered by [insert national Teach For All organisation, e.g. Teach For Bulgaria] contribute to the candidate's choice of working as a teacher?</p> <p>b) To what extent can we compare the salary of a beginning teacher in [insert name of country of national Teach For All organisation, e.g. Bulgaria] to the salary of a fellow?</p> <p>c) Can the incentives outweigh possible negative aspects of the teacher profession in [insert name of country of national Teach For All organisation, e.g. Bulgaria]?</p>
Question 6 (only asked in Bulgaria)
<p>Our project has also developed an online survey for the fellows of Teach For All in 5 different countries. In this aspect, Bulgaria surprised us with a high number of fellows who were 40 years or older. Is the majority of the candidates usually in this age range?</p> <p>a) How could you explain this situation taking into account the personal biographies of the older fellows?</p> <p>b) How could you explain this situation taking into account socio- and economical aspects of Bulgaria?</p>
Question 7
<p>If you use your imagination, how would the perfect Fellow be?</p> <p>a) What qualities should he or she have?</p> <p>b) What previous knowledge or previous experience should he or she have?</p> <p>c) Is academic performance important?</p> <p>d) Is some kind of idealism related to changing the student's life and the educational system important?</p>
Question 8
<p>Finally, what does [insert national Teach For All organisation, e.g. Teach For Bulgaria] expect from its fellows after the end of the 2-year programme?</p> <p>a) Can you estimate in percent how many of the fellows remain in the schools?</p> <p>b) Are the fellows expected to remain in the teacher profession?</p> <p>c) If so, how does [insert national Teach For All organisation, e.g. Teach For Bulgaria] contribute to it?</p> <p>d) Are the fellows expected to start their own organisations in the educational field?</p> <p>e) If so, how does [insert national Teach For All organisation, e.g. Teach For Bulgaria] contribute to it?</p>

Table 107: Interview Guideline

Country	Code: Perfect fellow
Austria	<ul style="list-style-type: none"> • <u>Idealism about changing the school system and helping underprivileged kids</u> • <u>Motivation to do this</u> • <u>Perseverance because this task is difficult</u> • <u>Good communication skills</u> to inform other (in higher positions) persons about the problems at schools
Basque Country	<ul style="list-style-type: none"> • Commitment • Potential to impact in classrooms <p>Potential to be a changing agent</p>
Bulgaria	<ul style="list-style-type: none"> • <u>Idealism about changing the school system and helping underprivileged kids (2x)</u> • <u>Perseverance because this task is difficult (2x)</u> • <u>Motivation (2x)</u> • Self-responsibility
Latvia	<ul style="list-style-type: none"> • Socially engaged • Good in academic field • Clear goals and visions for the future • <u>Good communication skills</u> • Open to new things
Romania	<ul style="list-style-type: none"> • <u>Idealism about changing the school system and helping underprivileged kids (2x)</u> • Experience with kids

Table 108: Qualitative Content Analysis of the Interviews — Perfect Fellow

Measured Constructs	Intervention Group				Control Group			Source
	T 0	T 1	T 2	T 3	T 1	T 2	T 3	
Individual Characteristics								
Gender, age, grades of university entrance examination, fields of study, university degrees, experience working or studying abroad, time spent working or studying abroad, prior experience working with children and adolescents at school and outside of school, language skills, social engagement, prior participation in teacher preparation programme, completion of programme	x				x			Self-developed
Route into teaching, beginning teacher, teaching experience					x			Self-developed
School track of placement school		x			x			Self-developed
Start of school placement, first language same as language of instruction			x			x		Self-developed
Emotional exhaustion			x		x			Kunter, Anders, Hachfeld, Klusmann, Löwen, Richter, Voss, & Baumert, 2010 adapted by Enzmann and Kleiber, 1989)
Resilience		x		x				Martin & Marsh, 2008
Constructivist beliefs about instruction	x			x	x		x	TALIS 2008/2013
Attitudes toward team-teaching		x		x	x		x	Self-developed
The Self-Reflection and Insight Scale (SRIS)	x			x	x			Grant, Franklin, & Langford, 2002
Motive to become a teacher (Fit-Choice Scale)		x		x	x		x	Watt et al., 2012

Table 109: Measuring Plan of Instruments (Individual Characteristics) by Measurement Point and Group

Measured Constructs	Intervention group				Control Group			Source
	T 0	T 1	T 2	T 3	T 1	T 2	T 3	
Characteristics of the Learning Environment — Training								
Length of training, days absent		x			x			Self-developed
Evaluation of support by trainers/mentors (duration of time spent with trainer/mentor, frequency of: meetings with trainer/mentor, homework assignments, feedback on homework assignments, classroom observation)		x			x			Self-developed
Scientific foundation of learning materials								Self-developed
Opportunities to learn (during the training)		x			x			Abs, Döbrich, Gerlach-Jahn, & Klieme, 2009 (adapted)
Opportunities to teach pupils		x	x		x	x		Self-developed
Opportunities for team-teaching		x	x		x	x		Self-developed
Coherence of the training modules		x			x			Abs et al., 2009 (adapted)
Characteristics of the Learning Environment — School								
Opportunities to learn (job profile at placement school)			x	x		x	x	Abs et al., 2009 (adapted)
Teacher Tasks				x			x	TALIS 2008/2013
Teacher Induction /Mentoring			x			x		TALIS 2008/2013
Feedback Structures at School				x			x	TALIS 2008/2013
Utilisation of the Learning Environment								
Preparation time		x		x	x		x	Self-developed
Reviewing time								Self-developed
Utilisation of learning strategies			x			x	x	Abs et al., 2009
Social support		x		x	x		x	
Frequency of work-related meetings with peers (group work)			x					Self-developed

Table 110: Measuring Plan of Instruments (Learning Environment) by Measurement Point and Group

Measured Constructs	Intervention group				Control Group			Source
	T 0	T 1	T 2	T 3	T 1	T 2	T 3	
Results								
Self-efficacy	x		x	x	x		x	TALIS 2008/2013
Self-assessed teacher competence								Abs et al., 2009 (adapted)
Teacher enthusiasm			x	x		x	x	Keller et al., 2014
Retention			x	x		x	x	
Training-based test questions	x		x	x		x	x	Self-developed
Test questions from TEDS-M (PUW)		x		x	x		x	König & Blömeke, 2010
Number of test questions Teach For All (curricular-valid)	31	3	31	21	3	16	9	
# of test questions TEDS-M (PUW Test)	0	8	0	8	8	0	8	
	31	11	31	28	11	16	17	

Table 111: Measuring Plan of Instruments (Results) by Measurement Point and Group

Variable Name	Item	Construct
TB06_01	...teaching will offer a steady career path.	Job security
TB06_02	...teaching will provide a reliable income.	
TB06_03	...teaching will be a secure job.	
TB06_04	...teaching will allow me to shape children and adolescents' values.	Shaping the future of children and adolescents
TB06_05	...teaching will allow me to influence the next generation.	
TB06_06	...teaching will allow me to raise the ambitions of under-privileged youths.	Reduce social disadvantages
TB06_07	...teaching will allow me to help the socially disadvantaged.	
TB06_08	...teaching will allow me to provide a service to society.	Social responsibility
TB06_09	...teachers make a worthwhile social contribution.	
TB06_10	...teaching enables me to give back to society.	
TB06_11	...I want a job that involves working with children and adolescents.	Working with children
TB06_12	...I want to work in a child- and adolescent-centred environment.	
TB06_13	...I like working with children and adolescents.	
TB06_14	...I want to help children and adolescents learn.	
TB06_15	..I really enjoy the topics I will teach.	Subject-specific motivation
TB06_16	...I am really interested in the subject(s) I will teach.	
TB06_17	...I want to share my passion for my subject(s) with others.	

Table 112: Overview of Items Concerning Motives for Becoming a Teacher

Items	Intervention Group			Control Group		
	M	SD	N	M	SD	N
Age	27.55	2.83	51	28.98	8.46	85
Grade mathematics	2.36	1.07	49	2.66	1.05	79
Grade German	1.86	0.84	49	2.18	0.83	81
Grade English as a foreign language	1.94	0.97	49	2.36	0.97	81

Table 113: Austria – Descriptive Statistics: Age and Grades

Grade Mathematics	Intervention Group		Control Group	
	M	SD	M	SD
	2.36	1.07	2.66	1.05
Answer Options	Frequency	Percentage	Frequency	Percentage
1	13	26.5%	14	17.7%
2	14	28.6%	19	24.1%
3	13	26.5%	26	32.9%
4	9	18.4%	20	25.3%
N	49	100%	79	100%
Grade German	Intervention Group		Control Group	
	M	SD	M	SD
	1.86	0.84	2.18	0.83
Answer Options	Frequency	Percentage	Frequency	Percentage
1	19	38.8%	18	22.2%
2	20	40.8%	32	39.5%
3	8	16.3%	28	34.6%
4	2	4.1%	3	3.7%
N	49	100%	81	100%
Grade First Foreign Language	Intervention Group		Control Group	
	M	SD	M	SD
	1.94	0.97	2.36	0.97
Answer Options	Frequency	Percentage	Frequency	Percentage
1	20	40.8%	17	21%
2	16	32.7%	29	35.8%
3	9	18.4%	24	29.6%
4	4	8.2%	11	13.6%
N	49	100%	81	100%

Table 114: Austria – Descriptive Statistics: Exam Grades by Group

Item	Intervention Group			Control Group			Masters' Students		
	M	SD	N	M	SD	N	M	SD	N
Age	26.16	3.45	38	30.45	6.71	11	29.76	8.26	29
Grade	7.92	1.45	17	7.02	1.67	5	7.68	1.53	19
Have you ever worked with children or adolescents in school before (tutor, teacher assistant, social worker, etc.)?	2.0	0.99	38	2.0	0.89	6	2.0	1.04	29
Have you ever worked with children or adolescents outside of school before (youth group leader, soccer coach, etc.)?	2.87	0.91	38	2.67	1.21	6	2.38	1.08	29

Table 115: Basque Country – Descriptive Statistics: Age, Grade on Final Secondary School Examination, Pedagogical Experience

Item	Intervention Group			Control Group			PU Masters' Students		
	M	SD	N	M	SD	N	M	SD	N
Age	31.11	7.45	170	30.88	6.17	76	34.14	7.19	22
Grade	5.45	0.62	84	5.24	0.5	36	5.44	0.5	12
Have you ever worked with children or adolescents in school before (tutor, teacher assistant, social worker, etc.)?	1.92	1.03	170	2.25	1.19	76	1.64	0.85	22
Have you ever worked with children or adolescents outside of school before (youth group leader, soccer coach, etc.)?	2.05	0.99	169	1.55	0.87	76	1.36	0.66	22

Table 116: Bulgaria — Descriptive Statistics: Age, Grade on Final Secondary School Examination, Pedagogical Experience

Item	Intervention Group			Control Group		
	M	SD	N	M	SD	N
Age	25.75	4.95	20	23.27	0.59	15
Grade mathematics	73.08	17.57	20	55.54	15.43	13
Grade Latvian	77.77	11.41	20	67.0	21.59	13
Grade English as a foreign language	79.92	10.95	20	72.15	16.39	13
Have you ever worked with children or adolescents in school before (tutor, teacher assistant, social worker, etc.)?	1.75	0.85	20	2.4	1.52	5
Have you ever worked with children or adolescents outside of school before (youth group leader, soccer coach, etc.)?	2.65	0.98	20	2.25	0.96	4

Table 117: Latvia — Descriptive Statistics: Age, Grade on Final Secondary School Examination, Pedagogical Experience

Item	Intervention Group			Control Group		
	M	SD	N	M	SD	N
Age	29.12	7.26	43	28.86	7.68	28
Grade	8.81	0.96	39	8.80	0.54	15
Have you ever worked with children or adolescents in school before (tutor, teacher assistant, social worker, etc.)?	2.0	1.02	43	1.5	0.71	18
Have you ever worked with children or adolescents outside of school before (youth group leader, soccer coach, etc.)?	2.4	0.95	43	1.89	0.83	18

Table 118: Romania — Descriptive Statistics: Age, Grade on Final Secondary School Examination, Pedagogical Experience

Intervention Group	Number of Bachelor's Degrees	Number of Master's Degrees			
		0	1	2	Total
0	0 (0%)	0 (0%)	1 (100%)	1 (3.57%)	
1	15 (88.24%)	10 (100%)	0 (0%)	25 (89.29%)	
2	2 (11.76%)	0 (0%)	0 (0%)	2 (7.14%)	
Total	17 (100%)	10 (100%)	1 (100%)	28 (100%)	
Control Group	Number of Bachelor's Degrees	Number of Master's Degrees			
		0	1	2	Total
0	0 (0%)	0 (0%)	1 (100%)	1 (3.57%)	
1	15 (88.24%)	10 (100%)	0 (0%)	25 (89.29%)	
2	2 (11.76%)	0 (0%)	0 (0%)	2 (7.14%)	
Total	17 (100%)	10 (100%)	1 (100%)	28 (100%)	

Table 119: Romania — Distribution of Degrees by Group

Suitability of Fellow Profile	Head Teachers of Both countries	
	Frequency	Percentage
Inadequate	1	2.6%
Slightly inadequate	2	5.1%
Slightly adequate	8	20.5%
Very adequate	28	71.8%
N	39	100%

Table 120: Head Teacher Survey — Suitability of Fellow Profile (Total of Head Teachers)

Repeated Placement of Fellow	Head Teachers of Both countries	
	Frequency	Percentage
Yes	37	94.9%
No	2	5.1%
N	39	100%

Table 121: Head Teacher Survey — Attitude towards Repeated Placement of Fellows at Their School (Total of Head Teachers)

Financial Conditions of Replacing Current Fellow	Head Teachers of Both countries	
	Frequency	Percentage
Yes, under the condition that the school gets additional resources.	5	12.8%
Yes. Even if we have to use our own resources.	14	35.9%
Yes. If he is funded like the last one.	17	43.6%
No, the supervision is too time-consuming in my eyes.	0	0%
Other:	3	7.7%
N	39	100%

Table 122: Head Teacher Survey — Financial Conditions of Replacing Current Fellow (Total of Head Teachers)

Weekly Teacher Tasks in Hours	Intervention Group	
	Frequency	Percentage
2	1	2.4%
14	1	2.4%
15	1	2.4%
30	1	2.4%
34	1	2.4%
35	5	12.2%
38	2	4.9%
39	1	2.4%
40	11	26.8%
42	2	4.9%
44	1	2.4%
45	5	12.2%
48	1	2.4%
49	1	2.4%
50	2	4.9%
55	4	9.8%
60	1	2.4%
N	41	100%

Table 123: Austria – Descriptive Statistics: Weekly Teacher Tasks in 60-Minute Hours

Weekly Teacher Tasks in Hours	Intervention Group	
	Frequency	Percentage
4	1	2.9%
9	1	2.9%
16	1	2.9%
19	1	2.9%
20	2	5.7%
21	2	5.7%
22	2	5.7%
24	1	2.9%
25	2	5.7%
26	2	5.7%
28	2	5.7%
30	9	25.7%
31	1	2.9%
32	1	2.9%
35	1	2.9%
36	1	2.9%
40	1	2.9%
45	1	2.9%
50	1	2.9%
57	1	2.9%
60	1	2.9%
N	35	100%

Table 124: Basque Country – Descriptive Statistics: Weekly Teacher Tasks in 60-Minute Hours

Weekly Teacher Tasks in Hours	Intervention Group	
	Frequency	Percentage
2	1	1.1%
5	1	1.1%
7	1	1.1%
10	3	3.2%
11	1	1.1%
14	1	1.1%
15	1	1.1%
18	1	1.1%
20	4	4.3%
25	1	1.1%
30	7	7.5%
35	4	4.3%
38	1	1.1%
40	9	9.68
42	1	1.1%
45	6	6.5%
48	4	4.3%
50	8	8.6%
52	1	1.1%
55	1	1.1%
56	1	1.1%
60	19	20.4%
65	3	3.2%
66	1	1.1%
70	7	7.5%
72	1	1.1%
80	4	4.3%
N	93	100%

Table 125: Bulgaria – Descriptive Statistics: Weekly Teacher Tasks in 60 Minute-Hours

Weekly Teacher Tasks in Hours	Intervention Group	
	Frequency	Percentage
26	1	5.3%
27	1	5.3%
29	1	5.3%
33	1	5.3%
38	1	5.3%
39	1	5.3%
40	3	15.8%
45	2	10.5%
50	2	10.5%
54	1	5.3%
55	2	10.5%
60	2	10.5%
63	1	5.3%
N	19	100%

Table 126: Latvia – Descriptive Statistics: Weekly Teacher Tasks in 60 Minute-Hours

Weekly Teacher Tasks in Hours	Intervention Group	
	Frequency	Percentage
2	1	3.1%
8	1	3.1%
15	1	3.1%
30	2	6.3%
35	1	3.1%
38	1	3.1%
40	9	28.1%
45	2	6.3%
50	8	25%
60	4	12.5%
70	1	3.1%
90	1	3.1%
N	32	100%

Table 127: Romania– Descriptive Statistics: Weekly Teacher Tasks in 60 Minute Hours

Cooperation Between Teachers and Fellows	Head Teachers					
	Bulgaria		Austria		Total	
	M	SD	M	SD	M	SD
Handling interdisciplinary lesson themes	3.22	0.55	3.53	0.51	3.38	0.55
Implementing new teaching concepts and methods	3.26	0.56	3.53	0.61	3.39	0.60
Interdisciplinary discussions about students' performances	3.26	0.56	3.47	0.70	3.37	0.63
Aiding students with learning disabilities together	3.37	0.96	3.58	0.61	3.47	0.80

Table 128: Head Teacher Survey — Descriptive Statistics on Cooperation Between Teachers and Fellows

Cooperation Between Fellows and Teachers	Head Teachers					
	Bulgaria		Austria		Total	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Preparation of lessons						
Completely false	1	5.3%	0	0%	1	2.6%
Mostly false	1	5.3%	0	0%	1	2.6%
Mostly true	14	73.7%	7	36.8%	21	55.3%
Completely true	3	15.8%	12	63.2%	15	39.5%
N	19	19	19	19	38	38
Planning teaching units and projects together	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Completely false	0	0%	0	0%	0	0%
Mostly false	3	16.7%	0	0%	3	8.1%
Mostly true	8	44.4%	5	26.3%	13	35.1%
Completely true	7	38.9%	14	73.7%	21	56.8%
N	18	18	19	19	37	37
Cooperative teaching	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Completely false	0	0%	0	0%	0	0%
Mostly false	9	47.4%	0	0%	9	23.7%
Mostly true	8	42.1%	4	21.1%	12	31.6%
Completely true	2	10.5%	15	78.9%	17	44.7%
N	19	19	19	19	38	38

Table 129: Head Teacher Survey — Collaborative Teaching Between Fellows and Teachers

Cooperation CS24/35 To what extent do teachers cooperate with Fellows in the following areas?	Bulgarian head teachers		Austrian head teachers		Total	
	M	SD	M	SD	M	SD
Preparation of lessons	3.00	0.68	3.63	0.50	3.32	0.66
Planning teaching units and projects together	3.22	0.73	3.74	0.45	3.49	0.65
Cooperative teaching	2.63	0.68	3.79	0.42	3.21	0.81

Table 130: Head Teacher Survey — Descriptive Statistics on Collaborative Teaching Between Fellows and Teachers

Tasks	Bulgarian Head Teachers					
	Teaching		Lesson planning		Supporting pupils effectively	
Frequency of tasks	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Non authorised task	1	5.3%	0	0%	0	0%
Temporary task	0	0%	0	0%	0	0%
Rare task	0	0%	0	0%	0	0%
Monthly task	0	0%	0	0%	0	0%
Weekly task	0	0%	0	0%	1	5.3%
Daily task	18	94.7%	19	100%	18	94.7%
N	19	100%	19	100%	19	100%
Tasks	Correcting exams		Extracurricular projects		Supporting students outside classroom	
Frequency of tasks	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Non authorised task	1	5.3%	0	0%	0	0%
Temporary task	2	10.5%	2	10.5%	0	0%
Rare task	9	47.4%	2	10.5%	2	10.5%
Monthly task	0	0%	12	63.2%	1	5.3%
Weekly task	6	31.6%	3	15.8%	8	42.1%
Daily task	1	5.3%	0	0%	8	42.1%
N	19	100%	19	100%	19	100%
Tasks	Collaboration with parents		Supporting other teachers		Documentation of work	
Frequency of tasks	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Non authorised task	0	0%	3	15.8%	0	0%
Temporary task	1	5.3%	6	31.6%	2	10.5%
Rare task	2	10.5%	3	15.8%	0	0%
Monthly task	7	36.8%	2	10.5%	1	5.3%
Weekly task	5	26.3%	2	10.5%	7	36.8%
Daily task	4	21.1%	3	15.8%	9	47.4%
N	19	100%	19	100%	19	100%
Tasks	Planning projects		Administrative tasks			
Frequency of tasks	Frequency	Percentage	Frequency	Percentage		
Non authorised task	0	0%	7	36.8%		
Temporary task	5	26.3%	6	31.6%		
Rare task	2	10.5%	2	10.5%		
Monthly task	5	26.3%	1	5.3%		
Weekly task	7	36.8%	0	0%		
Daily task	0	0%	3	15.8%		
N	19	100%	19	100%		

Table 131: Bulgarian Head Teacher Survey — Frequency of Fellows' Tasks at School

Tasks	Austrian Head Teachers					
	Teaching		Lesson planning		Supporting pupils effectively	
Frequency of tasks	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Non authorised task	0	0%	0	0%	0	0%
Temporary task	0	0%	0	0%	0	0%
Rare task	0	0%	0	0%	1	5.6%
Monthly task	0	0%	1	5.6%	0	0%
Weekly task	0	0%	0	0%	0	0%
Daily task	18	100%	17	94.4%	17	94.4%
N	18	100%	18	100%	18	100%
Tasks	Correcting exams		Extracurricular projects		Supporting students outside classroom	
Frequency of tasks	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Non authorised task	0	0%	2	11.1%	4	22.2%
Temporary task	0	0%	3	16.7%	4	22.2%
Rare task	0	0%	5	27.8%	3	16.7%
Monthly task	1	5.6%	5	27.8%	3	16.7%
Weekly task	1	5.6%	0	0%	1	5.6%
Daily task	16	88.9%	3	16.7%	3	16.7%
N	18	100%	18	100%	18	100%
Tasks	Collaboration with parents		Supporting other teachers		Documentation of work	
Frequency of tasks	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Non authorised task	0	0%	0	0%	0	0%
Temporary task	3	16.7%	2	11.8%	0	0%
Rare task	1	5.6%	0	0%	0	0%
Monthly task	5	27.8%	2	11.8%	3	18.8%
Weekly task	6	33.3%	2	11.8%	6	37.5%
Daily task	3	16.7%	11	64.7%	7	43.8%
N	18	100%	17	100%	16	100%
Tasks	Planning projects		Administrative tasks			
Frequency of tasks	Frequency	Percentage	Frequency	Percentage		
Non authorised task	0	0%	3	17.6%		
Temporary task	0	0%	1	5.9%		
Rare task	2	11.1%	4	23.5%		
Monthly task	4	22.2%	2	11.8%		
Weekly task	4	22.2%	3	17.6%		
Daily task	8	44.4%	4	23.5%		
N	18	100%	17	100%		

Table 132: Austrian Head Teacher Survey — Frequency of Fellows' Tasks at School

Tasks	Bulgarian and Austrian Head Teachers					
	Teaching		Lesson planning		Supporting pupils effectively	
Frequency of tasks	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Non authorised task	1	2.7%	0	0%	0	0%
Temporary task	0	0%	0	0%	0	0%
Rare task	0	0%	0	0%	1	2.7%
Monthly task	0	0%	1	2.7%	0	0%
Weekly task	0	0%	0	0%	1	2.7%
Daily task	36	97.3%	36	97.3%	35	94.6%
N	37	100%	37	100%	37	100%
Tasks	Correcting exams		Extracurricular projects		Supporting students outside classroom	
Frequency of tasks	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Non authorised task	1	2.7%	2	5.4%	4	10.8%
Temporary task	2	5.4%	5	13.5%	4	10.8%
Rare task	9	24.3%	7	18.9%	5	13.5%
Monthly task	1	2.7%	17	46%	4	10.8%
Weekly task	7	18.9%	3	8.1%	9	24.3%
Daily task	17	46%	3	8.1%	11	29.8%
N	37	100%	37	100%	37	100%
Tasks	Collaboration with parents		Supporting other teachers		Documentation of work	
Frequency of tasks	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Non authorised task	0	0%	3	8.3%	0	0%
Temporary task	4	10.8%	8	22.2%	2	5.7%
Rare task	3	8.1%	3	8.3%	0	0%
Monthly task	12	32.4%	4	11.1%	4	11.4%
Weekly task	11	29.8%	4	11.1%	13	37.1%
Daily task	7	18.9%	14	38.9%	16	45.7%
N	37	100%	36	100%	35	100%
Tasks	Planning projects		Administrative tasks			
Frequency of tasks	Frequency	Percentage	Frequency	Percentage		
Non authorised task	0	0%	10			
Temporary task	5	13.5%	7			
Rare task	4	10.8%	6			
Monthly task	9	24.3%	3			
Weekly task	11	29.8%	3			
Daily task	8	21.6%	7			
N	37	100%		100%		

Table 133: Bulgarian and Austrian Head Teacher Survey — Frequency of Fellows' Tasks at School