Education Partnerships for Development: Sustaining Teacher Quality in Context

Project Report

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The project team thanks the teachers who generously shared their time and insights in responding to the survey. The richness of the findings would not be possible without their participation.

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1. EXECUTIVE SUMMARY

1.1 Project overview

The 'Education Partnerships for Development: Sustaining Teacher Quality in Context' project set out to establish a proof of concept for investigating teacher quality in Bhutan, India, Mexico, Moldova and Papua New Guinea[1], as they make progress towards the United Nation's Sustainable Development Goal (SDG) 4 *Ensuring inclusive, equitable and good-quality education and lifelong learning for all*. The research investigated country-relevant issues related to effective teacher education (training [2]) in collaboration with researchers and policymakers in Bhutan, India, Mexico, Moldova and Papua New Guinea. It was funded by the John Fell Fund at the University of Oxford, UK and included i) a mapping of relevant policies and teacher training programmes in each country, and ii) a pilot study in which a convenience sample of schoolteachers in each country was surveyed to investigate their perceptions of their preparedness for teaching by their teacher training and their effectiveness as teachers. To do this, a survey used in Australia to investigate teacher preparedness and effectiveness (Mayer et al., 2015; Mayer et al., 2017) was pilot tested with minor adaptations and adjustments after in-country partner consultation. This report provides the findings of the mapping and the survey, by country. An overall aim of the project was to develop a survey suitable for future investigations of teacher quality in low- and middle-income countries.

The investigation was guided by the following questions:

1. How well-prepared by their teacher training are teachers for teaching?
2. What characteristics of teacher training are considered most effective?

1 The original research design also included Malawi and Timor-Leste. However, due to the Covid-19 pandemic (as well as political changes in the case of Timor-Leste), it was not possible to collect data in these research locations. The project team acknowledges the support of the in-country partners Dixie Maluwa-Banda (Malawi), Dulce de Jesus Soares and Deborah Katzman (Timor-Leste) and thanks them for their engagement with the project.

2 For ease of reading and understanding across countries, the term 'teacher training' will be used throughout this report.

3. How effective do teachers perceive themselves to be in their teaching?
4. What school support and induction is valued by teachers?

A multi-lingual, cross-sectional survey adapted from the Studying the Effectiveness of Teacher Education (SETE) survey was employed (Mayer et al., 2015; Mayer et al., 2017). That study used surveys to track the perceptions of around 5,000 graduate teachers and 1,000 school principals over four years and also followed 197 graduate teachers and 52 school leaders in 29 case study schools. In this STQ project, the data was collected online in Bhutan, India, Mexico and Moldova and on paper in Papua New Guinea (PNG). In total, 237 primary and secondary school teachers completed the questionnaire in the participating countries (Bhutan - 64, India - 50, Mexico - 38, Moldova - 57, PNG - 28). Following analysis of the responses, an evaluation assessed i) the suitability of the survey for use in future research on effective teacher training in low- and middle-income countries, ii) the adequacy of the statistical properties of the survey, and iii) the usefulness of the findings for in-country stakeholders.

1.2 Key findings

1.2.1 How well-prepared by their teacher training are teachers for teaching?

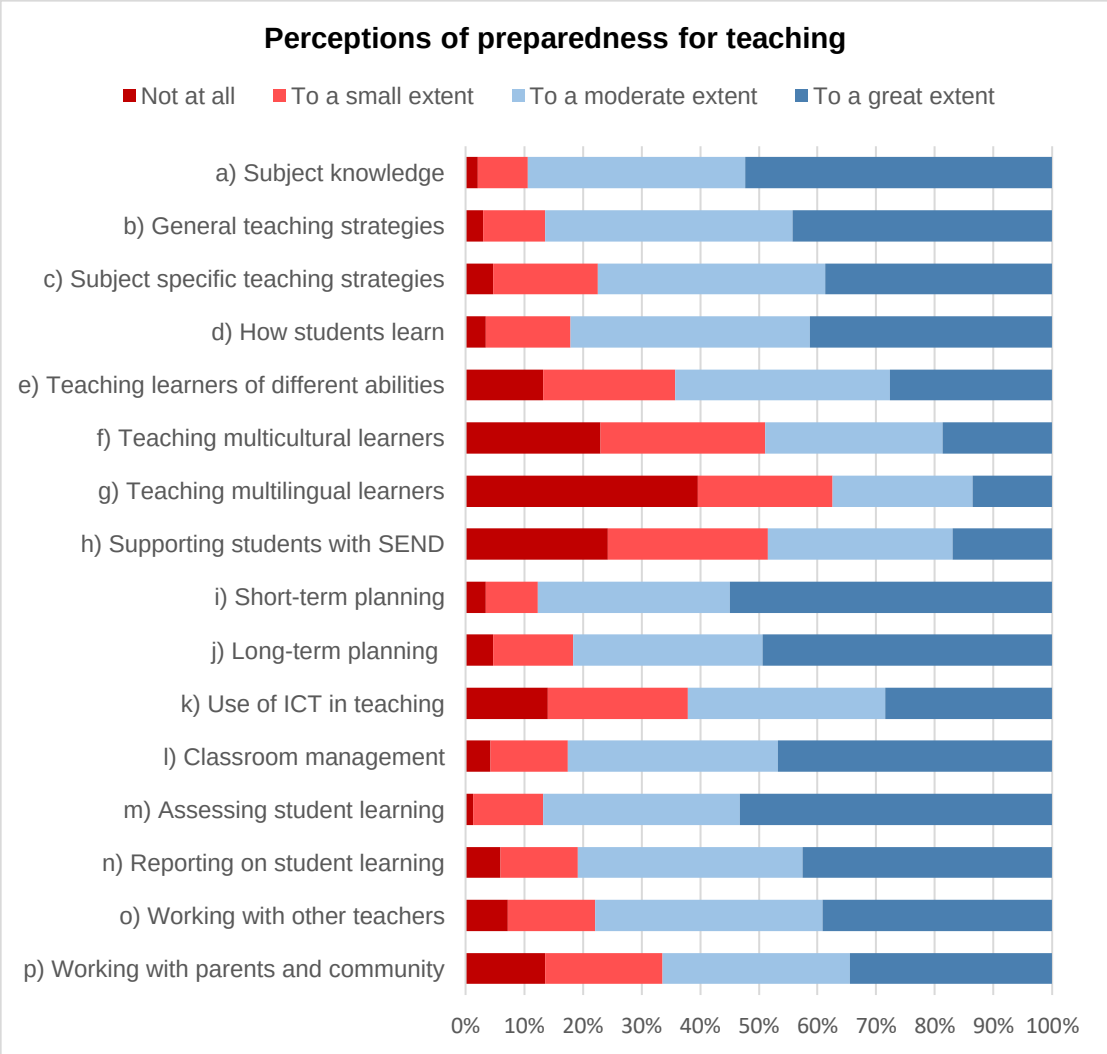
The surveyed teachers reported the extent to which their teacher training programmes prepared them for the following aspects of teaching:

a) Subject knowledge
b) General teaching strategies
c) Subject specific teaching strategies
d) How students learn
e) Teaching learners of different abilities
f) Teaching multicultural learners
g) Teaching multilingual learners
h) Supporting students with special education needs or disabilities
i) Short-term planning
j) Long-term planning
k) Use of ICT in teaching
l) Classroom management
m) Assessing student learning
n) Reporting on student learning
o) Working with other teachers
p) Working with parents and community
q) Applying GNH values and principles[3]

3 Additional item included in the Bhutanese version of the questionnaire as requested by partner.

Overall, subject knowledge, short-term planning and assessing student learning were among the areas in which the teachers felt better prepared across the study countries. Teaching multicultural and multilingual learners and supporting students with special education needs were consistently highlighted as the areas in which teachers felt less well-prepared after completing their teacher training programmes (see Figure 1.1).

Figure 1.1 Perceptions of preparedness for teaching (all countries)



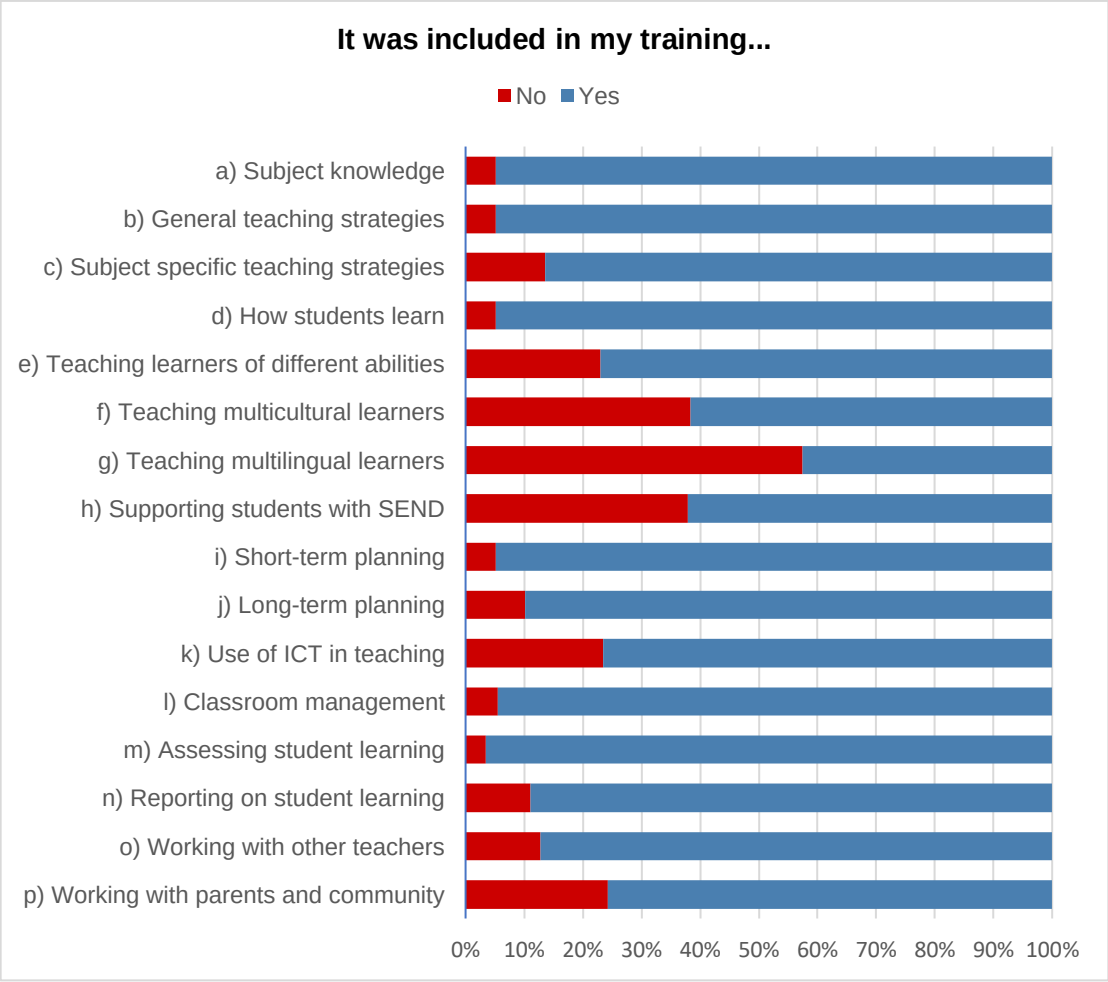
The teachers' perceptions of preparedness were considered alongside the types of training programmes, years since completing training, years of teaching experience and time spent in schools during training to understand if these factors had a bearing on their overall sense of preparedness for teaching. However, due to small subsample sizes,

it was not possible to establish meaningful links. This could be investigated further with larger sample sizes in the future.

1.2.2 What characteristics of teacher training are considered most effective?

The value of teacher training can be linked to the teachers' perceptions of their preparedness for teaching and their effectiveness as teachers. On average, the teachers felt more prepared and more effective in those areas of teaching that were included in their training programmes. For example, teaching multicultural and multilingual learners and supporting students with special education needs were less often identified as part of the respondents' training in each study country (see Figure 1.2). Consequently, the teachers felt they were not adequately prepared in these areas of teaching and reported themselves least effective in these areas (see Figure 1.4).

Figure 1.2 Aspects included in teacher training programmes (all countries)



1.2.3 How effective do teachers perceive themselves to be in their teaching?

The teachers generally perceived themselves more effective in all aspects of teaching than they felt prepared after completing their teacher training programmes. The areas where the teachers found themselves on average most effective across the study countries were: subject knowledge and assessing student learning.

Figure 1.3 Perceptions of effectiveness as teachers (all countries)

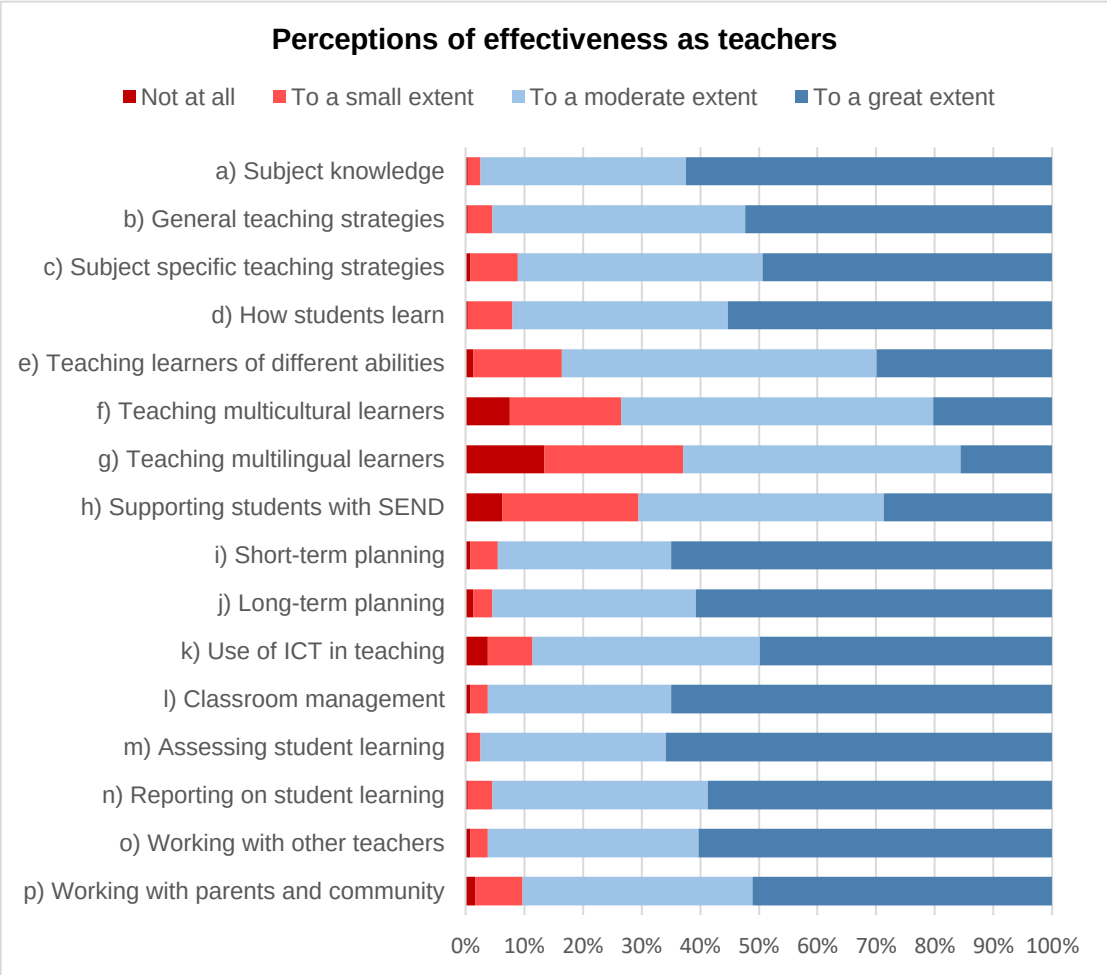
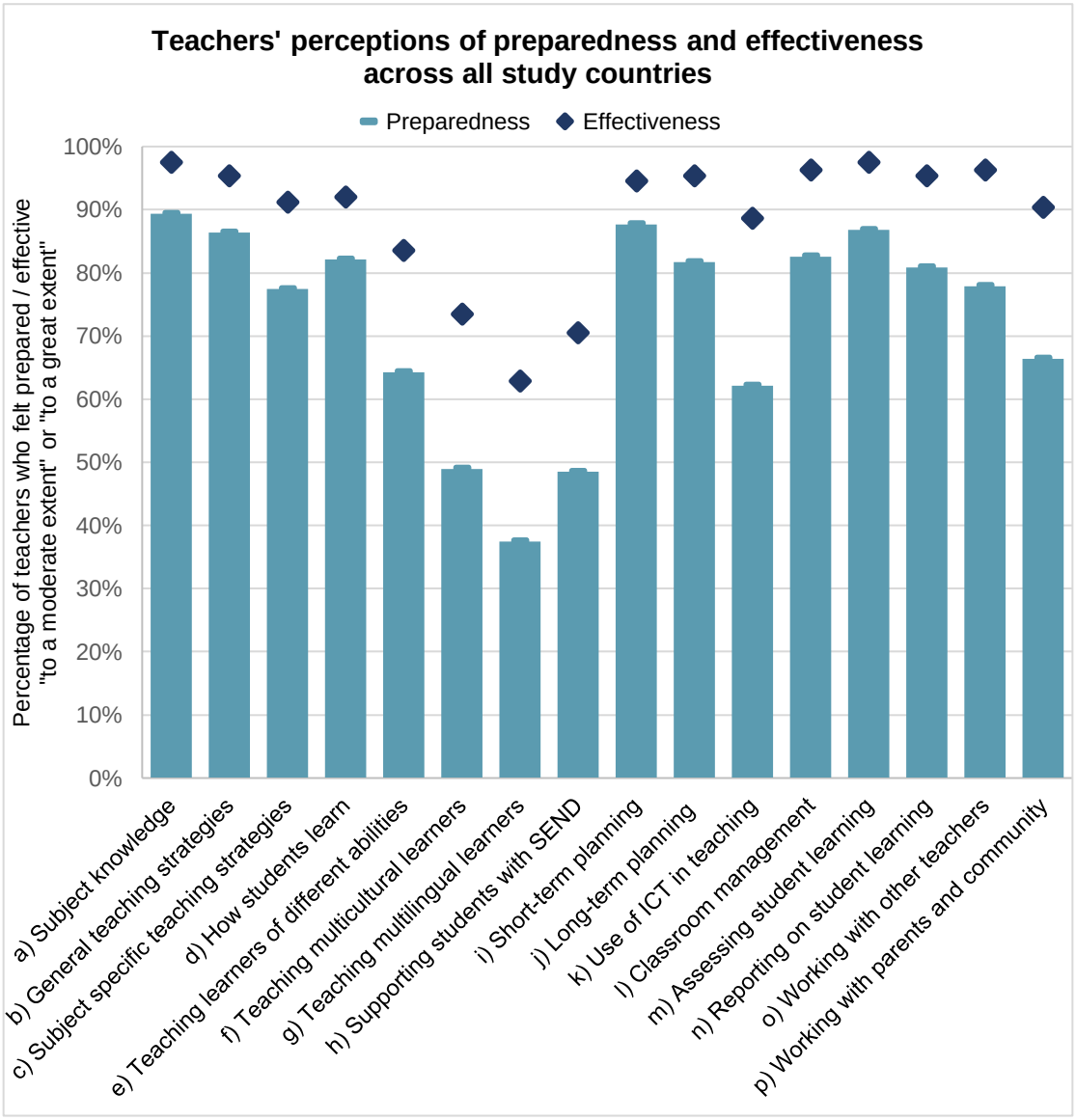


Figure 1.4 displays how the respondents' sense of preparedness compared with their sense of effectiveness as teachers. The graph shows the largest discrepancy (>25%) between the perceptions of being prepared and effective when teaching multilingual learners and using ICT in teaching. The smallest difference (<9%) was found in the areas of subject knowledge and short-term planning.

Figure 1.4: Teachers' perceptions of preparedness and effectiveness (all countries)

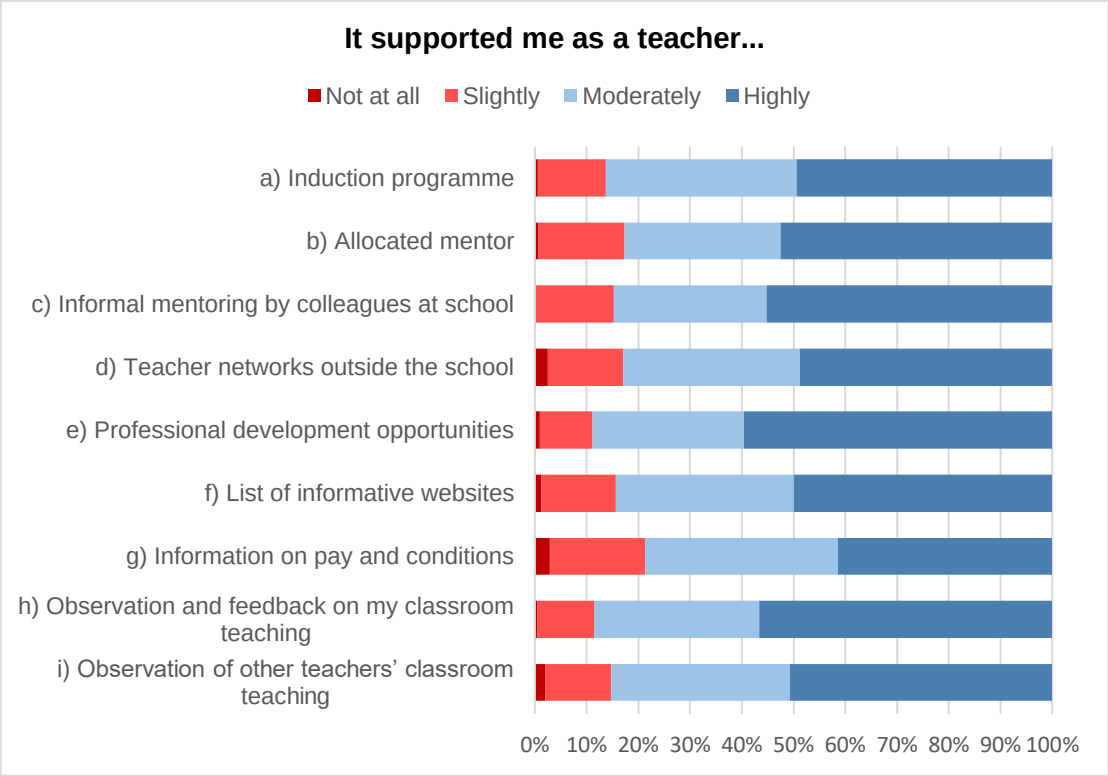


It was considered whether school support provision, type of employment (permanent/ fixed term/ casual) and working hours (full-time/ part-time) could explain a variance in the teachers' overall sense of effectiveness. This framework for analysis could be applied to a larger dataset.

1.2.4 What school support and induction is valued by teachers?

The overall survey results revealed that, on average, teachers mostly valued professional development opportunities and observation and feedback on their own teaching among different types of available school support across all study countries[4]. Information on pay and conditions was considered one of the least helpful (see Figure 1.5).

Figure 1.5: Perceived effectiveness of provided school support (all countries)



However, cross-country analysis showed a discrepancy in the value of various sources of school support provision. For example, while having an allocated mentor was highly valued in India and PNG, it was deemed less useful in Mexico and Moldova (see Appendix G, p. 103).

4 If respondents were not provided with a certain type of school support, their responses assessing the effectiveness of those aspects were excluded from the analysis.

2. CONTEXT FOR THE STUDY

The programme of research involved work with a group of OECD's Development Assistance Committee (DAC) listed countries eligible for official development assistance (ODA) as they strive to meet their ambitions in relation to SDG 4. The partner countries were selected to be representative of a range of the ODA classifications as well as geographical locations and to build on prior and ongoing research and teaching partnerships with the Co-Investigators.

The work answers both a visible gap in the research (e.g., Westbrook et al., 2013) and an urgent developmental need. The 2017 Global Education Monitoring Report notes that in low- and middle-income countries large numbers of teachers are inadequately trained and the gap between those with minimum qualifications and those with adequate training is larger than elsewhere. Given the weakness of administrative data in many of these settings, the report argues for cross-national surveys in building understanding of teacher quality across the contexts. Moreover, the World Bank Service Delivery Indicator (SDI) studies in 20 African Countries has highlighted teacher professional and pedagogical knowledge and teacher effort (as measured by time spent in classrooms) as important issues. This work aims to both inform policies and practices across countries as well as each country specifically.

The teacher is generally recognised as one of the most important in-school factors for student learning (Nilsen & Gustafsson, 2016; OECD, 2005; Tymms et al., 2015) and preliminary consultations with key personnel in participating countries confirmed that improving teacher quality was key to achieving SDG 4. However, teacher quality is not a singular concept with a single meaning. It has come to encompass an array of complex and controversial issues, including teacher recruitment, teacher qualifications, preparation programmes and pathways, induction programmes for new teachers, professional development, teachers' working conditions, teacher assessment and effectiveness, practices regarding hiring and compensation, and the attrition and retention of the teacher workforce (Cochran-Smith & Power, 2010). These issues are relevant in all the participating countries but, because there are different emphases in each, the project can explore a range of understandings of teacher quality in ways that

are informative for each country but also educative across the network of countries. In this project, issues of teacher quality will be investigated in relation to two overarching foci – teacher education and early career teaching, enabling alignments and coherence (World Bank's 2018 World Development Report) to be made between research, policy and practice. The quality of teacher education is decisive for the quality of teachers, and teachers' work in schools in turn contributes to improved quality of teacher education. Thus, to invest in teachers is an investment in continuous system improvement.

The study examined the layers of factors that influence teacher quality in ways that are sensitive to the dynamics between teacher education, the individual teacher, and the workplace in diverse contexts. Teacher education and teachers' work involves different, but related, spatial practices: the conceived space, the perceived space and the lived space (Lefebvre, 1991; Rowan et al., 2015). The conceived space is where policy is articulated and where politically motivated ideas about desirable and effective teacher education and teaching are constructed. The perceived space of teacher education is the space of professional knowledge and its production, while the lived space is where knowledge is acquired and developed in the workplace and where professional knowledge developed during teacher education is enacted.

3. RESEARCH APPROACH

The study combined contextual mapping with a quantitative multi-country survey to build understanding of teacher quality across diverse contexts. The adopted research approach comprised three stages:

Stage 1. Mapping of relevant policies and teacher training programmes in each country. (October 2019 - January 2020)

Stage 2. Questionnaire development and implementation in each country. Data analysis by country. (February - October 2020)

Stage 3. Comparison and feasibility analysis. (November 2020 - February 2021)

4. POLICY AND PROGRAMME MAPPING

Desktop analysis was conducted to map teacher education policies and training programmes in the selected countries.

1) Mapping of relevant policies in partner countries: teacher recruitment, selection, professional education, employment, induction, accountability frameworks.

   Approach: Document analysis and checking the analysis with the relevant partner investigators

2) Mapping of teacher training programmes in partner countries:
   - Programme structures – structure, content, delivery
   - Programme approaches – how discipline-based expertise is developed, how teachers are prepared to teach diverse learners, how teachers are prepared to develop curriculum, pedagogical and assessment knowledge and skills
   - Selection and admission criteria as well as criteria for graduation and credentialing

   Approach: Desktop mapping, document analysis

The following sections provide an overview of the teacher education landscape in the study countries. The school systems are outlined in Appendix A (p. 77) and the teaching workforce profiles are detailed in Appendix B (p. 78).

4.1.1 Teacher education in Bhutan

(With acknowledgement to Yoon Young Lee, University of Oxford)

Bhutan has two Colleges of Education under the Royal University of Bhutan: Samtse in the south and Paro in the west. Samste College of Education offers programmes in secondary teacher education including Masters in Science, Mathematics, Geography, English Education, MA and Diploma courses in Contemplative Counseling Psychology,

Postgraduate Diplomas in Secondary and Higher Education, B.Ed in Secondary Education and BA in Social Work Education.

Paro College of Education offers programmes focussing on areas such as Masters in Primary Education (Social Studies, Science, Mathematics and English), Masters in Inclusive Education, Masters in Educational Leadership, Master in Dzongkha Education, B.Ed in Primary Education (Dzongkha and English), Diploma in Early Childhood and Care, and Diploma in Health and Physical Education.

The issues related to teacher quality include:

- Lack of qualified Bhutanese teachers in Higher Secondary Schools
- Geographical - ongoing CPD for teachers in primary schools who are often 4-5 days' walk from the nearest 'black top' road
- The need for primary teachers to switch from Dzongkha to English in class 3

4.1.2 Teacher education in India

(with acknowledgement to Anay Nangalia, DPhil student at the University of Oxford)

The system of teacher education in India is made up of a network of universities and colleges which offer courses in Education. The network is largely dominated by the private sector, but also comprises of government-run teacher training institutes – such as the Regional Institute for Education (RIE), and District Institute of Education and Training (DIET). Taken together, these institutes act as gatekeeper to the profession of teaching and are colloquially referred to as B.Ed. colleges. This is because the Bachelor of Education (B.Ed.) is the most popular degree, especially since it became a mandatory qualification for teachers in 2014. An alternative pathway is the Diploma in Elementary Education (D.El.Ed.) which is a two-year program for high school graduates that qualifies them to teach in primary or middle school. This system of colleges and courses is administered by the National Council of Teacher Education (NCTE), a statutory government body which governs accountability structures through prescribed curriculums, standardised assessments, and external inspections. The NCTE has created a single comprehensive policy to define the aims and practice teacher education in India – the National Curriculum Framework for Teacher Education.

4.1.3 Teacher education in Mexico

(With acknowledgement to Yazmín Cuevas, Universidad Nacional Autónoma de México and Maria Teresa Tatto, Arizona State University)

In Mexico, the main protagonists in preparing primary school teachers between 1946 and 1984 were the Normal Schools for Teachers (technical level) which later obtained the rank of higher education institutions able to offer bachelor's degrees to their graduates. In contrast, secondary school teachers' training has been offered in two ways, the first in the Normal Superior School that, until 1984, only allowed entrance to teachers who had been trained in the basic normal schools. After 1984, the only entrance requirement was to have a high school diploma. The second path that has prevailed since the beginning of secondary education preparation for teachers involves granting a teacher qualification to those who graduate with bachelor's degrees linked to the study plan's subjects. Although there is a significant presence of teachers with higher education training in the country, there are cases of teachers who lack the academic credentials for the profession.

Mexico has a significant indigenous population. In teacher training for primary education, preparation is offered in the specific languages of each population that includes 793,566 students at this level (SEP, 2019). The initial teacher training plan prepares teachers with an equitable, inclusive, and intercultural perspective. 23 normal schools follow bilingual intercultural education programs, where teachers in training need to master at least one of the indigenous languages spoken in the country. The 2018 teacher training plan also notes that one of the bases in the preparation of teachers is that they can work with students with special educational needs.

The issues related to teacher quality include:

The retirement scheme for teachers (age + years of service) leads to them being able to retire from the primary education profession at age 54 and in secondary education at 57. The system is problematic for the country since it is projected that by 2023 a greater number of teachers will retire compared to graduates of initial teacher training (INEE, 2015). At this point, the country's only measure to mitigate this situation would be to

allow graduates of degrees related to teaching without specialised training to be recruited as teachers.

4.1.4 Teacher education in Moldova

(With acknowledgement to O. Dandara, N. Nuseibeh and A. Oancea)

In Moldova, teacher training consists of a highly diverse mix of providers. Professional colleges prepare staff for kindergartens and primary schools. After finishing college, the graduates can enroll at university faculties of preschool education, or primary education, or they can directly enroll at a university after finishing high school. Thus, both high school and college graduates can go to universities offering teacher training programmes, but the university graduates are paid higher salaries according to the salary laws. Subject teachers from secondary education can teach in schools only with a faculty diploma. Although it was not necessary to get a college degree, there is a certain number of school teachers who first went to college (they got qualifications in teaching at preschool and primary education levels), after which they went to a university for a subject study (history, mathematics ...). Traditionally, it is considered that teachers who finish college have more practical skills related to educational technologies. At colleges, students learn more by doing because there are more hours of pedagogical practice/internships in schools. By studying subjects from preschool and primary levels, they are taught all the subject didactics (communication, Romanian, arts, mathematics, sciences, sports, etc.) and this training positively influences their training as a teacher. In addition, the colleges focus more on extracurricular activities, while the study plans from universities are related to more complicated academic subjects in the field.

According to the Education Code, 2014 of the RM, teachers cannot teach in high schools if they do not have a master's degree, so there are high school teachers with college, bachelor's and master's degrees and high school teachers with a bachelor's and master's degree. It is also common for primary school teachers to have a master's degree. The problem of Moldovan teachers does not lie in their qualification (there are very few cases of teachers without qualification), but in the lack of teachers, especially teachers of exact sciences (physics, mathematics, etc.) and other subjects because other fields of

professional activity are more attractive both in terms of salary and in terms of difficulties in communicating with students and their parents.

As part of the Moldova Education Reform Project (MERP), the Ministry of Education has initiated new in-service training programs for teachers based on defined professional competencies and standards. The new teachers' training comprises of five modules: (i) educational design in the context of the curriculum centered on competences, (ii) inclusive educational environment, (iii) teaching and evaluation in the context of active education, (iv) professional development of teaching framework for quality assurance in education, and (v) partnership for education. The Ministry of Education is also considering a move towards a performance-based teacher remuneration system.

One of the Education 2020's strategic objectives is to develop, support, and motivate teachers to ensure quality education by making the teaching profession more appealing, balancing the supply and demand of teachers, improving initial teacher training, and creating an efficient system of continuous training. It also aims to "design and institutionalize an effective system of evaluation, monitoring, and quality assurance of the education system through developing national standards and creating an institutional framework for quality assurance."

The issues related to teacher quality include:

According to the SABER-World Bank report, there is a shortage of qualified teachers, particularly in rural areas. For instance, 16% of students in rural areas lack qualified maths teachers, according to responses from principals to the 2009 PISA survey, and 14% of students in rural areas lack qualified science teachers.

4.1.5 Teacher education in Papua New Guinea

Teacher education programmes in PNG are delivered by teachers' colleges and universities. Minimum qualification requirements for teachers include a certificate for elementary school, a diploma for primary school and a degree for secondary school (GPE, 2019).

The issues related to teacher quality include:

- Unsuitable classrooms for teaching and learning (lack of sanitation, functional water facilities)
- Not enough people willing to become teachers
- Bureaucracy preventing the timely recruitment of qualified teachers
- Shortage of female maths and science teachers at secondary schools
- Limited facilities and instructors to train pre-service teachers
- Limited in-service teacher professional development
- Insufficient budget to produce and distribute necessary learning materials to schools and teachers
- Teachers' lack of awareness of the new Standards Based Curriculum

Other issues:

The enrolment rate is 50.9% for primary school, lowest in the Pacific region and 28.1% for secondary school (UNDP, 2014). A large proportion of students is average and a higher-than-average number have disabilities because of poor health. Disabled students tend to be excluded from school, particularly in remote areas and higher grades. Males and first-born children receive better education than females and later born siblings. Inequalities in female education can be attributed to cultural and economic barriers that include early marriage, safety issues for girls' travelling to school and a preference to support boys' education (GPE, 2019).

5. QUESTIONNAIRE

The STQ questionnaire was adapted from the SETE survey used in Australia to investigate teacher preparedness and effectiveness (Mayer et al., 2015; Mayer et al., 2017). The original SETE items were developed based on a review of the relevant research literature and previous surveys on graduate teachers' experiences and perceptions of their teacher training. The survey instruments that informed the SETE question construction included:

- Australia Government Department of Education, Science and Training (DEST) survey of final year teacher education students, 2006 (DEST, 2006);
- Australian Council for Educational Research Staff in Australia's Schools

teacher questionnaire, 2007, 2010 (McKenzie et al., 2008; McKenzie et al., 2011);

- Australian Education Union (AEU) New Educators Survey, 2008 (AEU, 2009);
- Teaching Australia - Study of the effectiveness of teacher education, 2008-2010 (Louden *et al*., 2010).

The adapted STQ questionnaire elicited information related to: demographics (such as highest level of formal education, country where education was completed, current employment status, years of teaching experience, age, gender and first language), teacher training programme characteristics (type of training, country where training was completed, mode of study, main area of training, time spent in schools during training, areas of teaching included in training), reasons for becoming a teacher, perceptions of preparedness and effectiveness, value of school support and plans for a future career. It also included a free-text response option for additional comments at the end of the questionnaire (see Appendix J: Questionnaire, p. 111).

The questionnaire adaptation and translation in local languages was carried out in consultation with the in-country partners. Table 5.1 outlines minor modifications made to each country's version of the questionnaire.

Table 5.1: Questionnaire adaptation and translation

Country	Survey language(s)	Adaptation
Bhutan	English/Dzongkha	A further item "Applying Gross National Happiness (GNH) values and principles" was added to Q10 and Q11 that measured the respondent's perceptions of preparedness for teaching and effectiveness as teachers in different areas of teaching.
India	Hindi	Q24 about gender had the option "Prefer to self-describe" changed to "Other" (अन्य) to make the translation meaningful.
Mexico	Spanish	Minor edits were made in the opening paragraph of the 'Information about the study" page.
Moldova	English/Romanian	Q9 about time spent in schools during a teacher training programme had the minimum number of days changed from 20 to 40 resulting in the following answer choices: a) Less than 40 days, b) 40-60 days, c) More than 60 days
PNG	English	Q26 about the respondent's first language was rephrased as "How many languages do you use with understanding?"

The STQ survey was piloted in Qualtrics via an anonymous link and did not collect any identifying information. All the questions were marked as mandatory (apart from the

final feedback question) and had a display logic applied. The questionnaire was compatible with mobile devices and had an estimated response time of about 15 minutes.

6. DATA COLLECTION

Non-probability sampling strategies (convenience, purposive, snowball) were adopted to recruit primary and secondary school teachers across the study countries (Cohen et al., 2017). Initially, it was planned to pilot the survey both online and on paper, but against the background of the rising global pandemic, the survey had to be implemented solely online in Bhutan, India, Mexico and Moldova. In the case of PNG, administering a paper survey remained the only option. The following sections outline the sampling and respondent recruitment strategies utilised by the partner investigators in their country contexts.

6.1.1 Participant recruitment in Bhutan

A purposive sampling strategy was used to recruit teachers from primary, lower secondary, high secondary and higher secondary levels of schooling in Bhutan. Overall, the respondents were sampled from eastern, western, northern and southern regions to achieve maximum variation sampling. At the primary and lower secondary levels, 60 teachers who had taken part in the curriculum development programme by the Royal Education Council were identified. They were randomly sampled based on the following subject areas: English (10), arts education (10), social studies (7), mathematics (15) and Dzongkha (18). At the high and higher secondary levels, 7 school principals were contacted and asked to send a survey invitation to 4-5 early-career teachers (about 30-35 in total). The survey was open for a month in August 2020 and collected 64 completed responses.

6.1.2 Participant recruitment in India

The researchers partnered with the Room to Read (RtR) team in India who were doing preliminary preparation for a teacher training module and aimed to use the learnings from the STQ project to plan their online content. This partnership made it possible to

collect data online within two weeks in October 2020. When selecting teachers, the following criteria were applied:

- Basic understanding in teaching of literacy in primary grades, including importance of language learning, importance of children's literature and multilingual situation;
- Access to mobile and internet;
- Primary grade teachers with multilingual situation in their classrooms.

The RtR is working with over 2100 schools in Barwani district in Madhya Pradesh. Out of these, teachers from 53 rural primary schools were contacted to fill out the survey, of which 50 responded.

6.1.3 Participant recruitment in Mexico

Initially, the researchers requested permission from the school authorities to apply the questionnaire to Mexican teachers, however, during this process, on March 20, 2020, the health contingency due to COVID-19 was decreed, which led to the closure of schools and the students taking distance classes. Thus, the researchers decided to directly contact the teachers using the snowball method (Tylor and Bogdan, 1987) through graduates of the undergraduate and graduate pedagogy program of the National Autonomous University of Mexico (UNAM) who at that time occupied the function of school principals at the primary and secondary levels in various regions of the country.

One of the challenges of the research process was determining what types of teachers could contribute relevant and pertinent empirical information to achieve the purpose of the study. For this reason, an intentional selection strategy was chosen according to the agreed-upon basic criteria that the study participants would have to meet (Flick et al., 2004; Goetz and Le Compte, 1988), which were:

• Public primary and secondary education teachers since 86.5% are in the public sector (SEP, 2019);

• Two-year seniority in the teaching function since this would allow us to have teachers who have had experience in teacher training and continuous professional development (CPD) offered by the Secretariat of Public Education (SEP);

• Teachers at urban schools, since these teachers are the ones who generally have access to the internet and have computer equipment which would allow them to access the online questionnaire.

It was possible to bring together 29 primary education teachers (17 from Mexico City, 6 from the State of Mexico, 5 Oaxaca and 1 Pachuca City) and 27 secondary education teachers (22 from Mexico City, 4 from the State of Mexico and one City of Pachuca). It should be noted that while all the teachers were working in urban schools, the selected regions were different (Mexico City - a large urban centre; the State of Mexico and Pachuca City - smaller and less wealthy than Mexico City; Oaxaca - one of the poorest states with a large rural population).

Due to the teachers' significant workload caused by having to teach online, the researchers had to send several reminders asking the study participants to answer the online questionnaire. Finally, 19 primary and 20 secondary school teachers participated in the survey between March and July 2020.

6.1.4 Participant recruitment in Moldova

With the in-country partner's support, the survey invitation was emailed to about 300 teachers enrolled in the teacher training programme at Moldova State University. The survey link was also shared for circulation with administrative units in the northern and central parts of the country as well as in Chisinau. The representatives of the administrative units were asked to monitor the survey completion progress in their respective regions. Follow-up phone calls were made to personally remind the identified teachers to complete the survey. As a result, 58 teachers completed the questionnaire in May 2020.

6.1.5 Participant recruitment in Papua New Guinea

Due to issues with the internet access, the survey was implemented on paper to a convenience sample of teachers from 16 schools (12 secondary/2 primary) in the Jiwaka province. In total, 40 teachers (30 secondary/10 primary) were approached to complete the questionnaire. Data was collected over the course of four months (September-December 2020) and resulted in 28 complete responses.

7. DATA ANALYSIS

7.1 Quantitative data

The analysis of the quantitative data involved descriptive statistics observing general patterns in the survey results. Summary frequencies and percentages were visually displayed in tables and graphs. To model the analysis for a larger study, cross-tabulation was carried out to investigate possible relationships between teacher training aspects/school support and teachers' sense of preparedness and effectiveness. A set of 16 items (17 for Bhutan) measuring teacher preparedness and effectiveness both had good internal consistency with Cronbach alpha coefficients greater than 0.7 across the study countries [5]. Regression analysis was also performed to assess the factors influencing how prepared and effective teachers felt, but it was not included in the report as the sample size of the pilot study did not allow a meaningful interpretation.

7.2 Qualitative data

The questionnaire offered an open-ended feedback question at the end inviting comments on respondents' teacher training programmes or professional development opportunities available to them. As there was no word limit placed on answers, the question generated responses ranging from a few words to lengthy paragraphs. The responses were translated to English with the help of the in-country partners where necessary. A thematic analysis was performed to code the data searching for patterns of meaning (Braun & Clarke, 2012). The analysis identified commonalities in the surveyed teachers' experiences and provided additional insights into their training needs. The respondents primarily expressed appreciation of their teacher training programmes and pointed to areas of improvement (see Table 7.1).

5 Cronbach's alpha for the teacher preparedness items was 0.92 (Bhutan), 0.94 (India), 0.92 (Mexico), 0.93 (Moldova), 0.72 (PNG) whereas for the teacher effectiveness items, it was .91 (Bhutan), 0.9 (India), 0.78 (Mexico), 0.95 (Moldova), 0.8 (PNG).

Table 7.1: Thematic coding of free-text responses

Themes & codes	Number of references					Total #
	Bhutan	India	Mexico	Moldova	PNG	
1. Appreciation of training						**57**
Acquired knowledge	8	16	7	8	8	47
Prepared for real classrooms	-	3	2	3	2	10
2. Areas of improvement						**25**
Less theory / more practice	7	-	3	2	-	12
Keeping training up-to-date, relevant and adaptable	3	4	2	2	2	13
3. Importance of / need for CPD	6	2	5	5	4	**22**

8. FINDINGS

8.1 Reporting conventions

To ensure consistency and clarity when reporting on the findings, the following conventions are used throughout the report.

Terminology. When referring to the sample group of a specific country (e.g., 'Bhutanese', 'Indian', 'Moldovan'), respective research locations are implied rather than the ethnic origin of respondents. The term 'subgroup' indicates a specific segment of the sample of a given country such as primary and secondary school teachers.

Percentages and quantifiers. When visualising the survey findings in figures, the frequency data from more than one category are combined to show an overall picture (e.g., 'not at all' and 'to some extent' categories are added up). When quantifiers are used, they imply a defined range of the survey sample percentage shown in Table 8.1. Summary tables in the Appendices give actual counts together with overall and row-percentaged totals to allow a fair comparison between uneven subsample sizes.

Table 8.1: Conventions for using quantifiers

Quantifier	% of sample
A few, some, several	Under 10%
Less than a quarter	11-20%
About a quarter	21-30%
About a third	31-35%
Over a third	36-44%
Around half	45-55%
About two-thirds	56-70%
About three-quarters	71-80%
Most, majority	81-94%
Nearly all	95-99%

8.2 Bhutan

8.2.1 Sample characteristics

The STQ survey was administered online in Bhutan in August 2020. In total, 64 teachers completed the bilingual English/Dzongkha questionnaire. About a third of the respondents were primary school teachers and two-thirds taught at a secondary level. Most had a higher academic degree and were in full-time, permanent/ongoing employment. Their teaching experience ranged from less than a year to 20+ years with over a third being in their first five years of teaching. About three-quarters were currently teaching in at least one of their specialist areas. Around half of the respondents identified as female which was a slightly higher percentage than the gender ratio in the Bhutanese teaching workforce as reported by the UNESCO Institute for Statistics (UIS, 2018; 2020). A detailed profile of the survey sample is provided in Appendix C (p. 81).

8.2.2 Teacher training programme

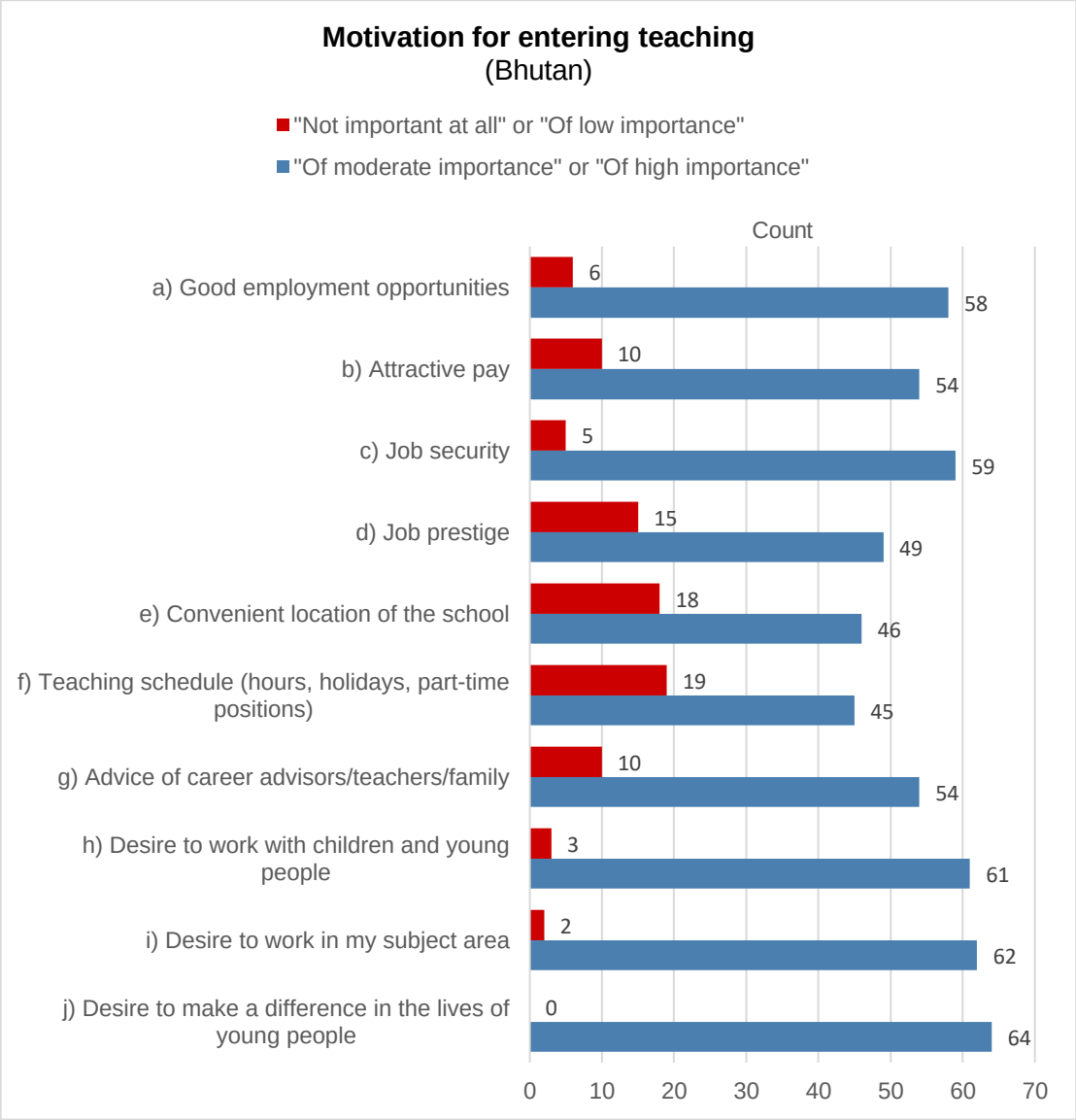
All the respondents had completed their teacher training programmes in Bhutan. A higher proportion had completed it 6-10 years ago (44%), followed by 0-5 years (32%)

and 10+ years (24%). Most had studied full-time in a concurrent programme and were qualified to teach specialist subjects of language and literature, mathematics, science and social studies. About a third had trained in primary school education and two-thirds in secondary school education. Around half had spent 20-60 days and the other half – more than 60 days in schools as part of their training. These programme characteristics are summarised in Appendix D (p. 84).

8.2.3 Motivation for entering teaching

The respondents' decision to become teachers was attributed to internal motivation as well as external factors (see Figure 8.1). The main reasons given for choosing a teaching career were the desire to work in a given subject area, work with children/youth and make a difference in their lives. The least important aspects were job prestige, convenient location of the school and the teaching schedule.

Figure 8.1: Motivation for entering teaching (Bhutan)



8.2.4 Perceptions of preparedness and effectiveness

The extent to which the respondents felt prepared and effective as teachers in different aspects of their role was linked to whether their training programmes included those areas (see Figure 8.2 - Figure 8.4). Nearly all respondents' training programmes incorporated short-term planning and assessing student learning as areas of study, these being areas in which they felt most confident as beginning teachers and also rated their effectiveness highly. The least included aspects in the programmes were: teaching multilingual learners, teaching multicultural learners and supporting students with

special education needs or disabilities. Accordingly, these were the very areas where the teachers found themselves least prepared and least effective.

Figure 8.2: Aspects included in the teacher training programme (Bhutan)

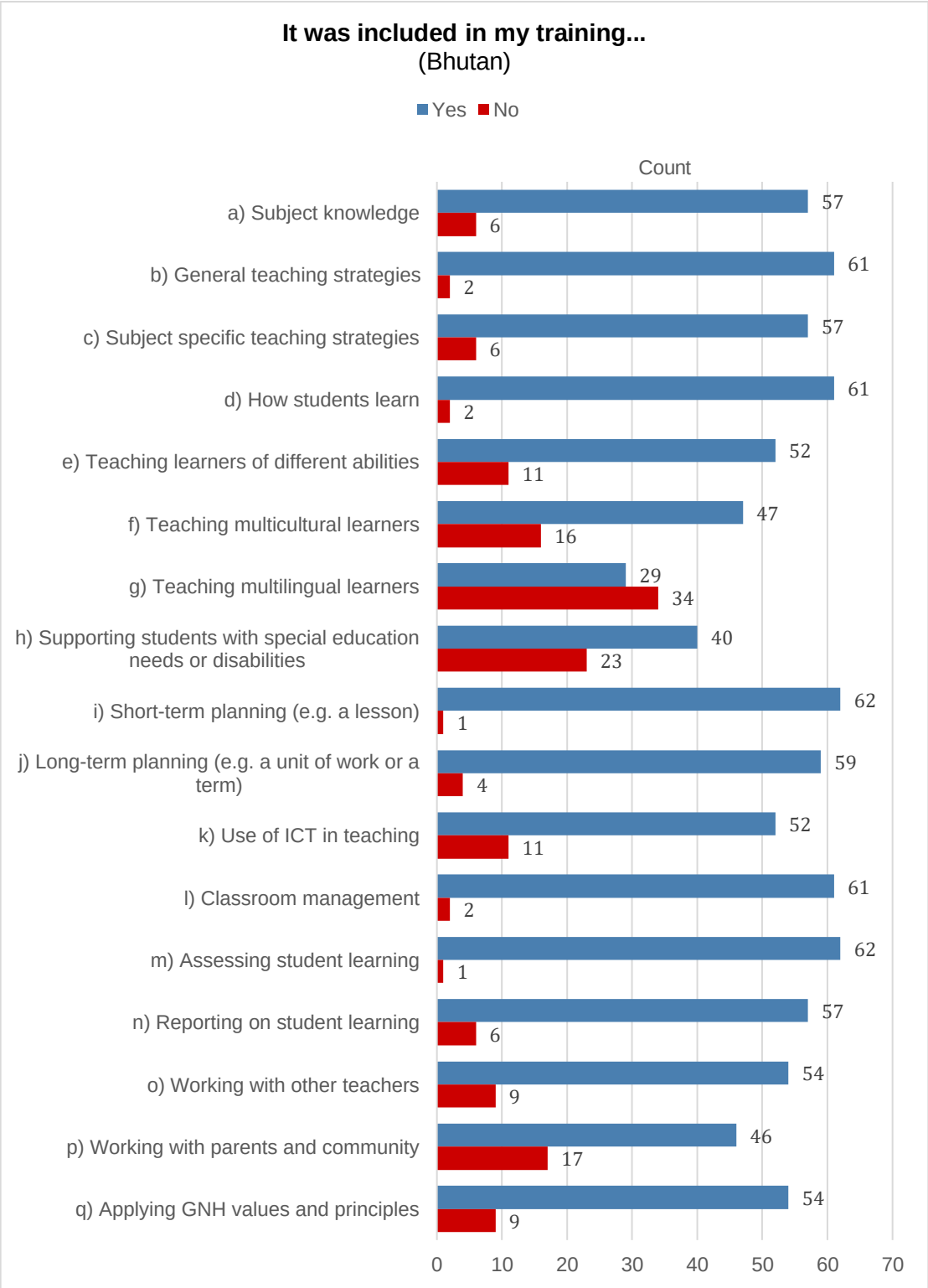


Figure 8.3: Perceptions of preparedness for teaching (Bhutan)

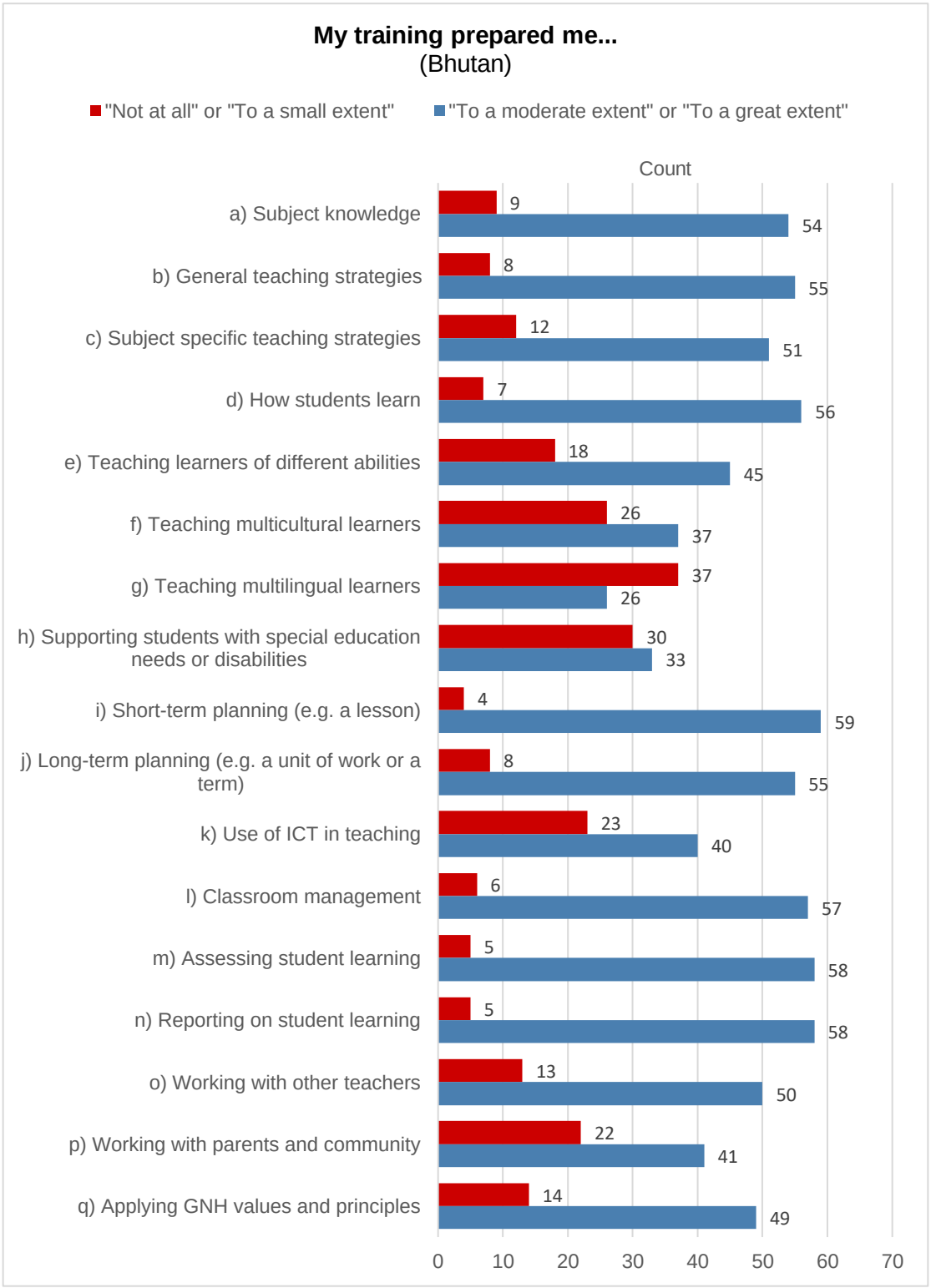
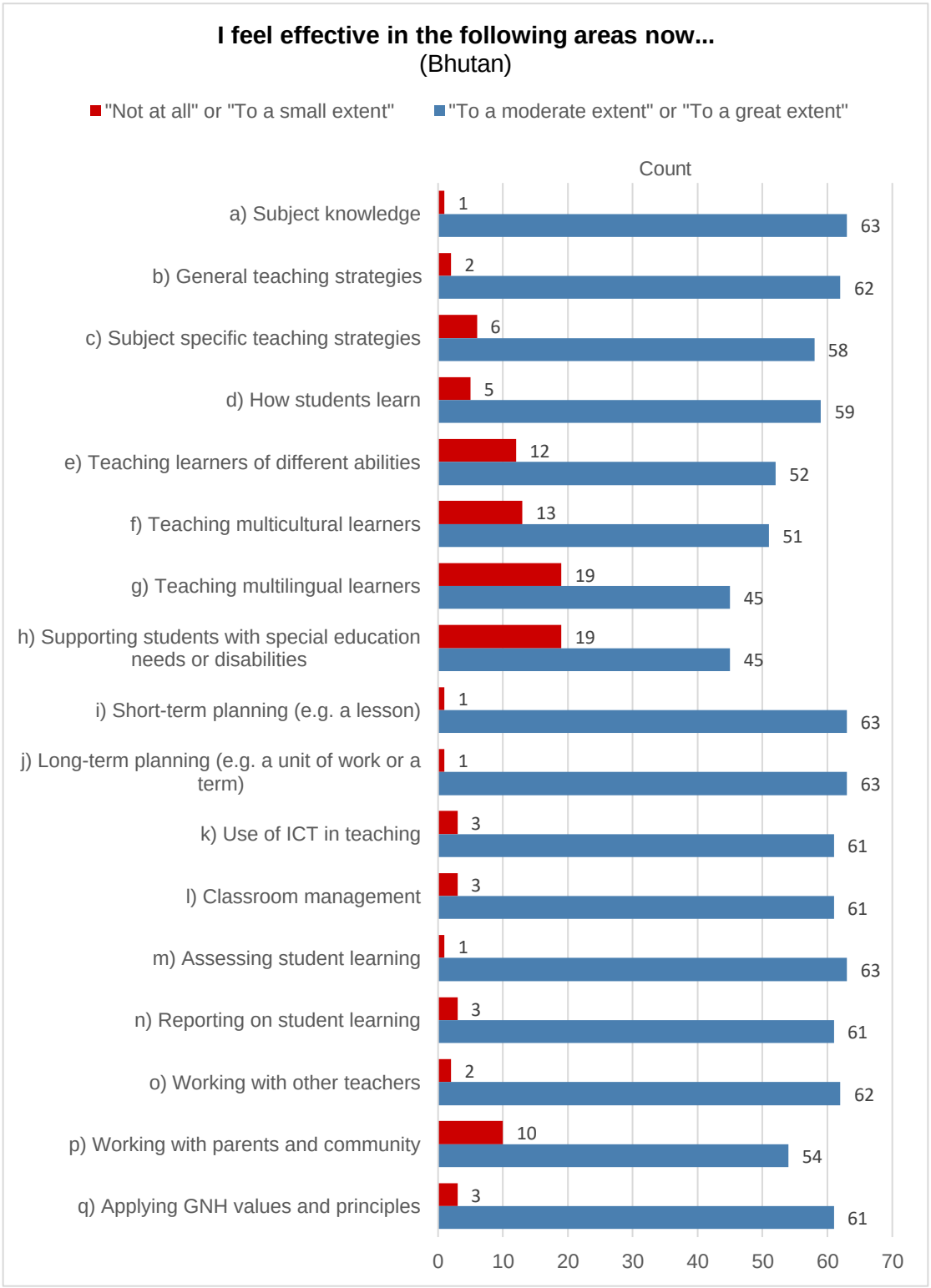


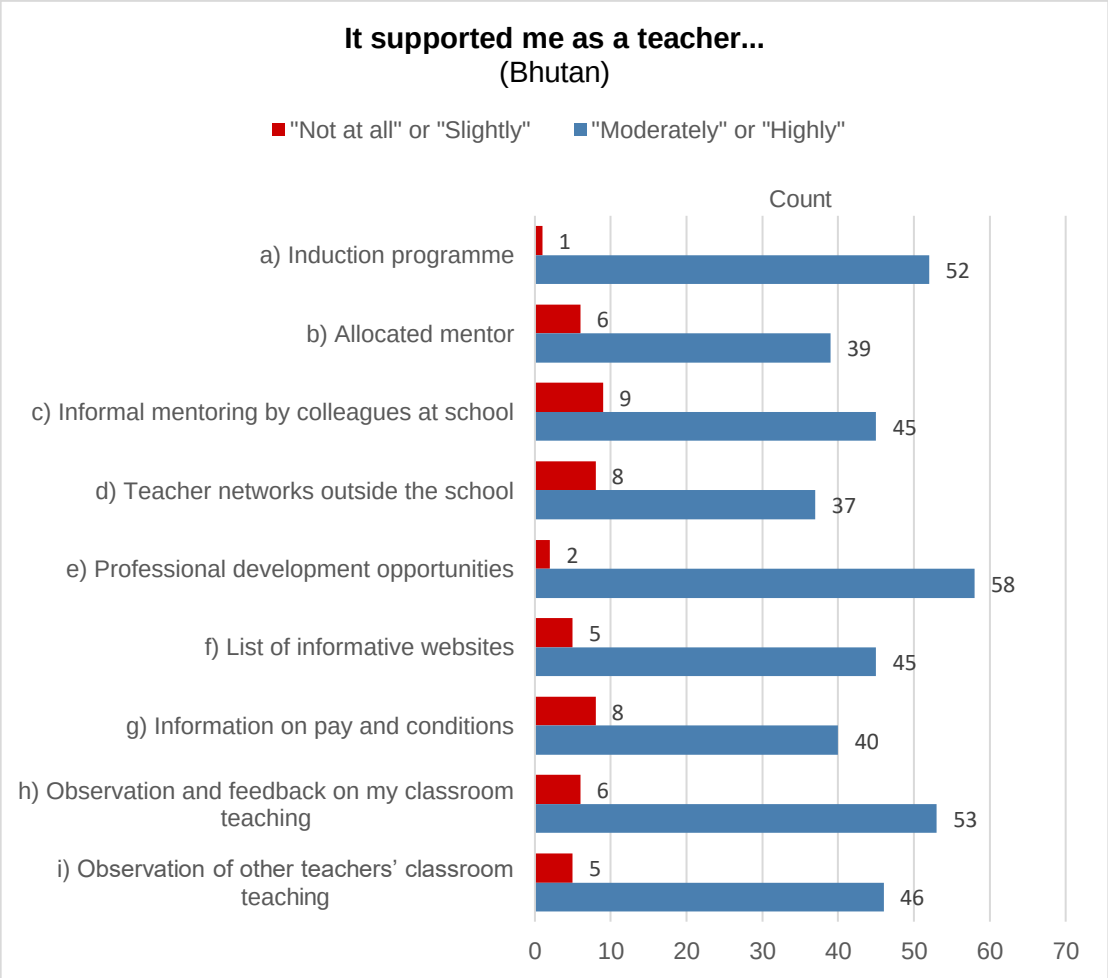
Figure 8.4: Perceptions of effectiveness as teachers (Bhutan)



8.2.5 School support

Nearly all respondents found school induction programmes and professional development opportunities 'moderately' or 'highly' effective in supporting them as teachers[6] (see Figure 8.5). The types of school support they found least useful were: informal mentoring by colleagues, teacher networks outside the school, and information on pay and conditions.

Figure 8.5: Perceived effectiveness of provided school support (Bhutan)

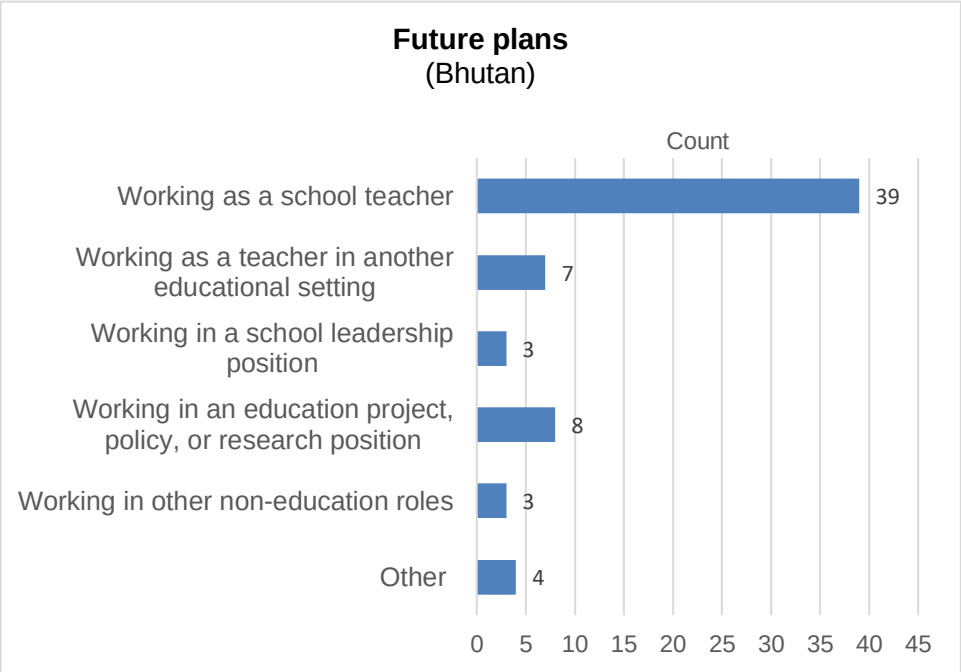


6 If respondents were not provided with a certain type of school support, their responses assessing the effectiveness of those aspects were excluded from the analysis.

8.2.6 Future plans

When asked about their plans for their career in three years' time, about two-thirds of the respondents saw themselves working as schoolteachers and around a quarter – in other education positions (see Figure 8.6). Only a few indicated that they planned to move into non-education roles.

Figure 8.6: Future plans (Bhutan)



8.2.7 Open-ended responses

While the respondents mostly appreciated the knowledge acquired from their training programmes, some noted a disconnect between theory and practice. They commented that time spent in school during training was not enough to prepare them for the realities of the classroom and it would be beneficial to extend the duration of the PGDE course as the quotes below illustrate.

> *'What we learn in the training institute is rarely practiced in schools.'*
>
> *'The training time programme for Post Graduate Diploma in Education is not enough to learn proper strategies/concepts/methods to teach.'*

Some wished the training had given them a better understanding of working with students of diverse languages, cultures and abilities. It was suggested that training

courses should reflect current strategies of teaching and learning, be more suitable for digital natives and include guidance on applying the GNH principles in teaching. The need for providing equal opportunities to private and public school teachers for continuous professional development was also highlighted.

8.3 India

8.3.1 Sample characteristics

The STQ survey was administered online in India in October 2020. In total, 50 teachers completed the questionnaire in Hindi. All respondents were primary school teachers with a higher academic degree and were employed in full-time, permanent/ongoing positions. Their teaching experiences varied with over a third having taught from six to 10 years and about two-thirds for more than 10 years. Most were currently teaching in at least one of their specialist areas. Just over a third of the respondents identified as female which was a slightly lower percentage than the relatively balanced gender ratio in the Indian teaching workforce as reported by the UNESCO Institute for Statistics (UIS, 2019). A detailed profile of the survey sample is provided in Appendix C (p. 81).

8.3.2 Teacher training programme

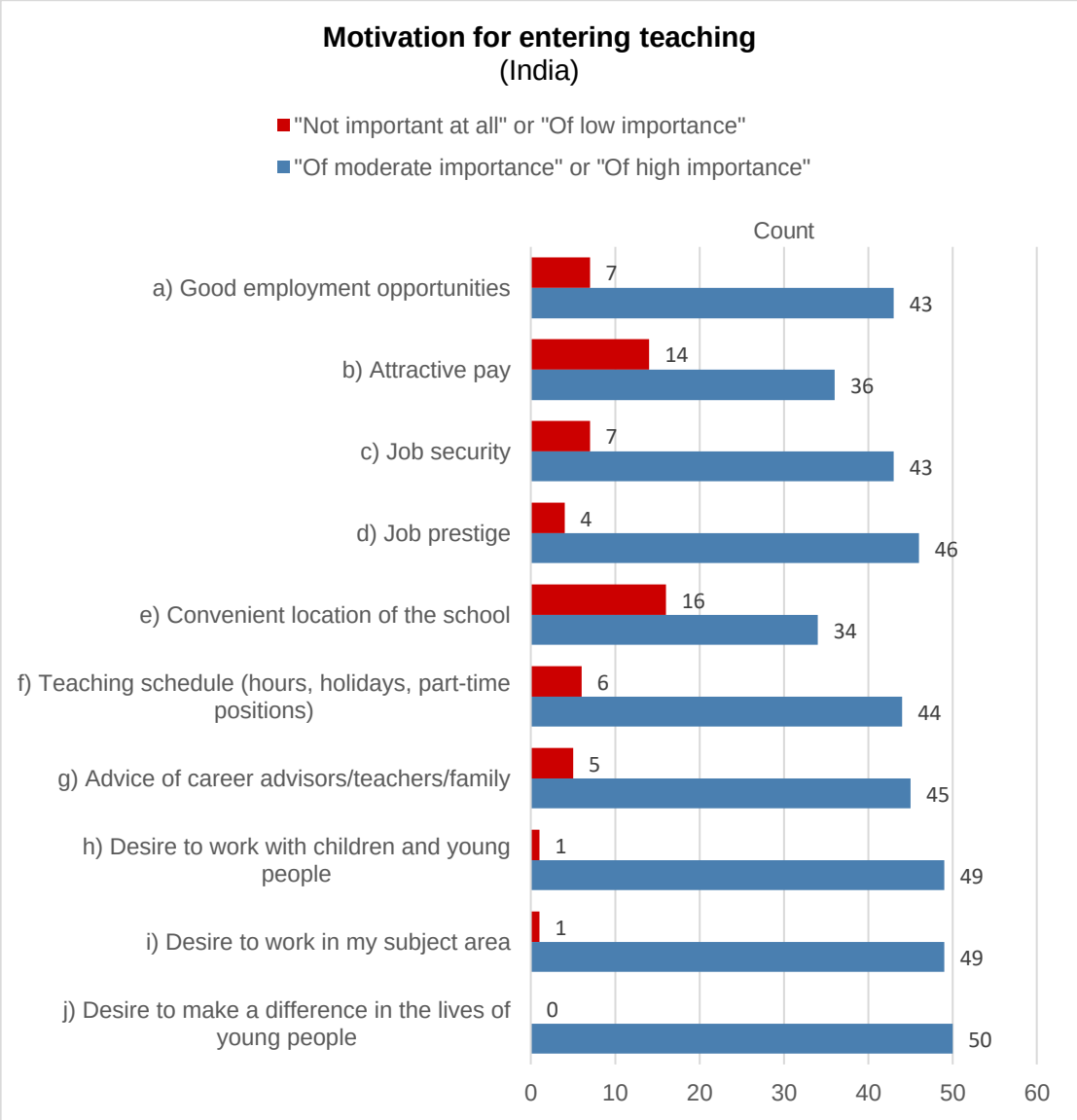
All the respondents had taken their teacher training programmes in India. A higher proportion had completed it 6-10 years ago (47%), followed by 10+ years (31%) and 0-5 years (21%). Most had trained in primary school education with about three-

quarters having undertaken a concurrent teacher training programme and less than a quarter - subject-specific training. Around half were qualified to teach the subjects of language and literature and had spent 20-60 days in schools as part of their training. The programme characteristics are summarised in Appendix D (p. 84).

8.3.3 Motivation for entering teaching

The respondents' main reasons given for choosing a teaching career were the desire to work in a given subject area, work with children/youth and make a difference in their lives. The least important aspects were convenient location of the school and attractive pay (see Figure 8.7).

Figure 8.7: Motivation for entering teaching (India)



8.3.4 Perceptions of preparedness and effectiveness

The extent to which the respondents felt prepared and effective as teachers in different aspects of their role was linked to whether their training programmes included those areas (see Figure 8.8 - Figure 8.10). About two-thirds reported that their training programmes did not incorporate teaching multilingual learners and use of ICT – the areas where the teachers found themselves least prepared and least effective. Most believed their training programmes prepared them for classroom management and felt effective in this area.

Figure 8.8: Aspects included in the teacher training programme (India)

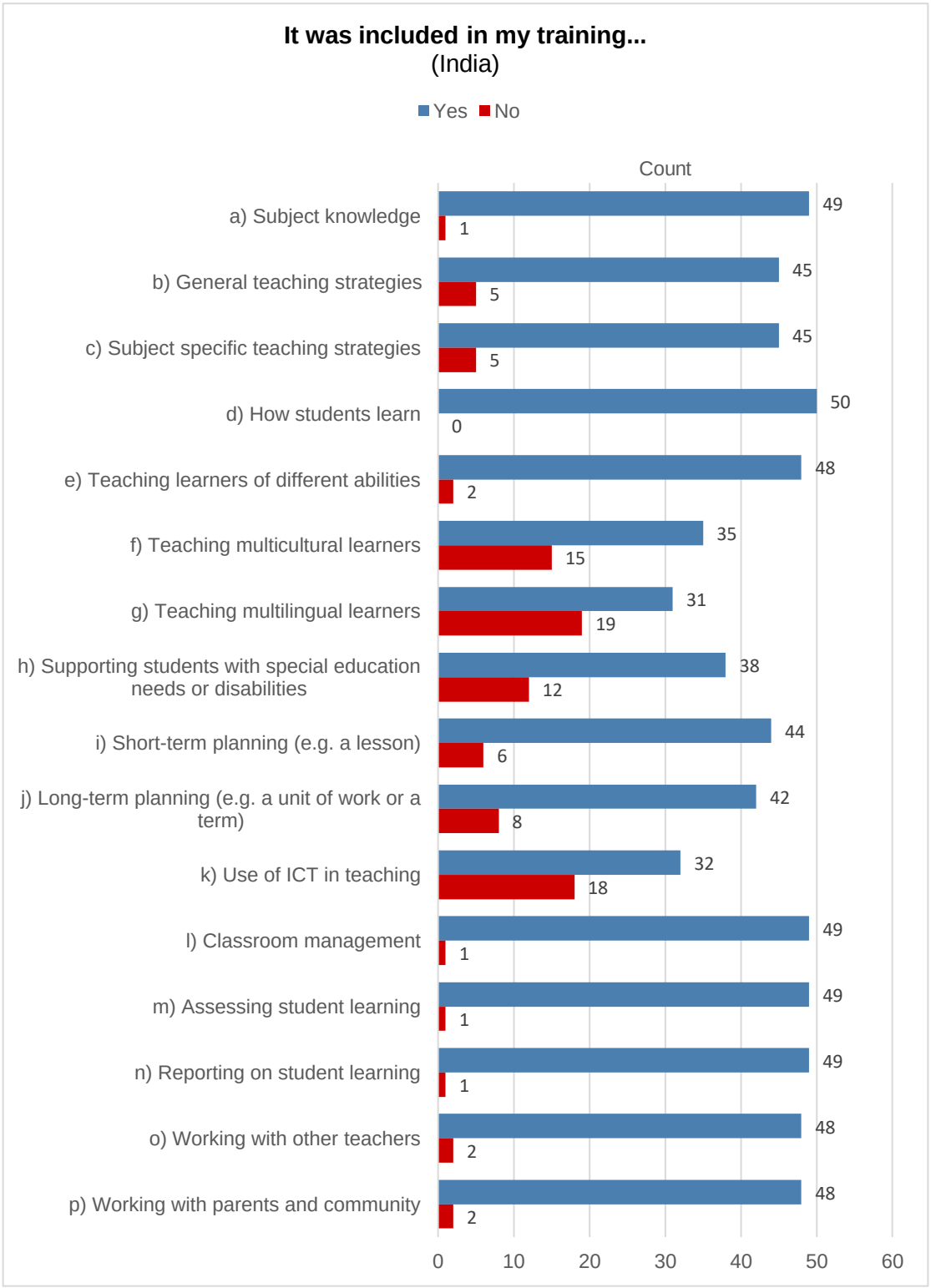


Figure 8.9: Perceptions of preparedness for teaching (India)

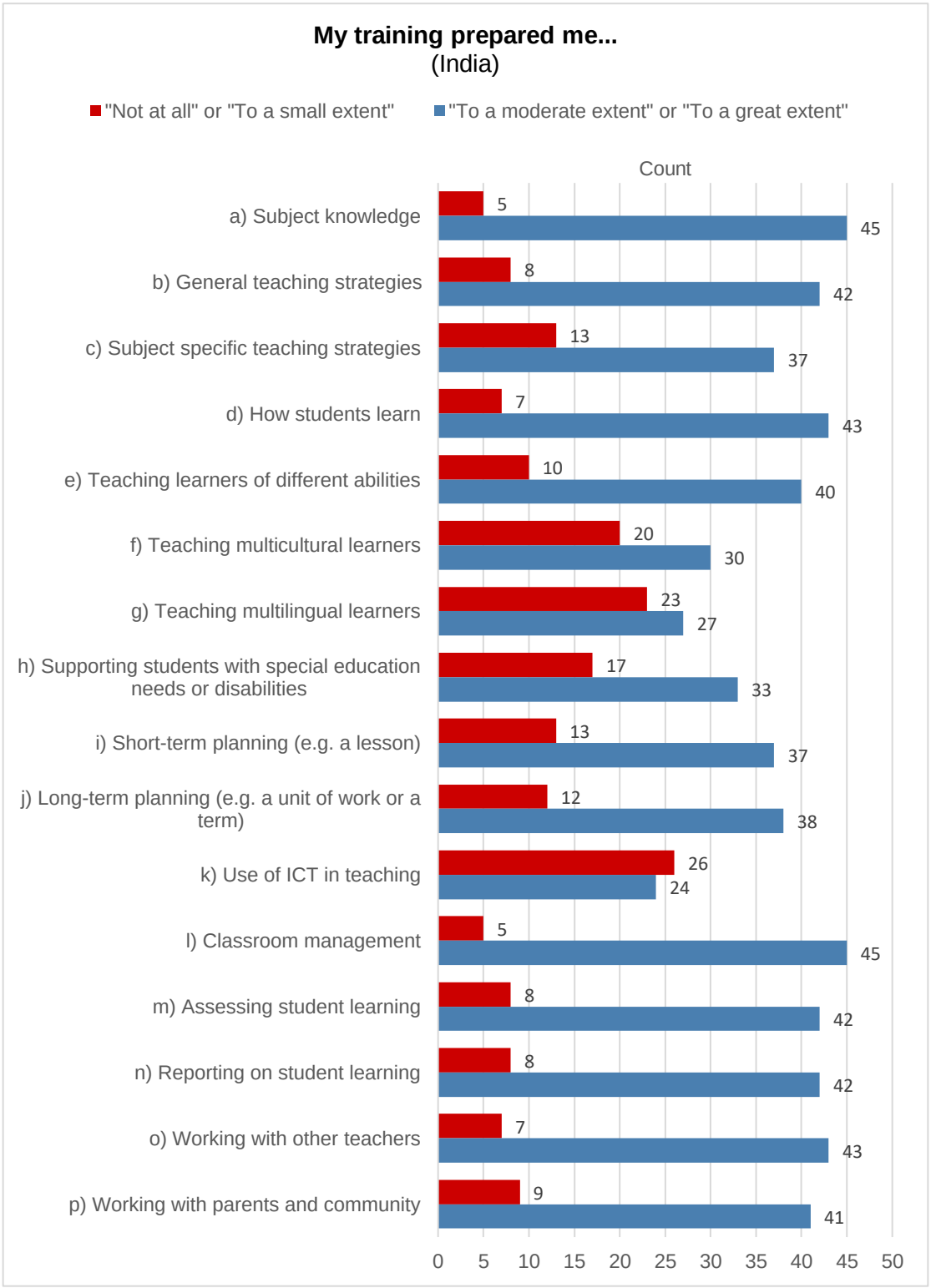
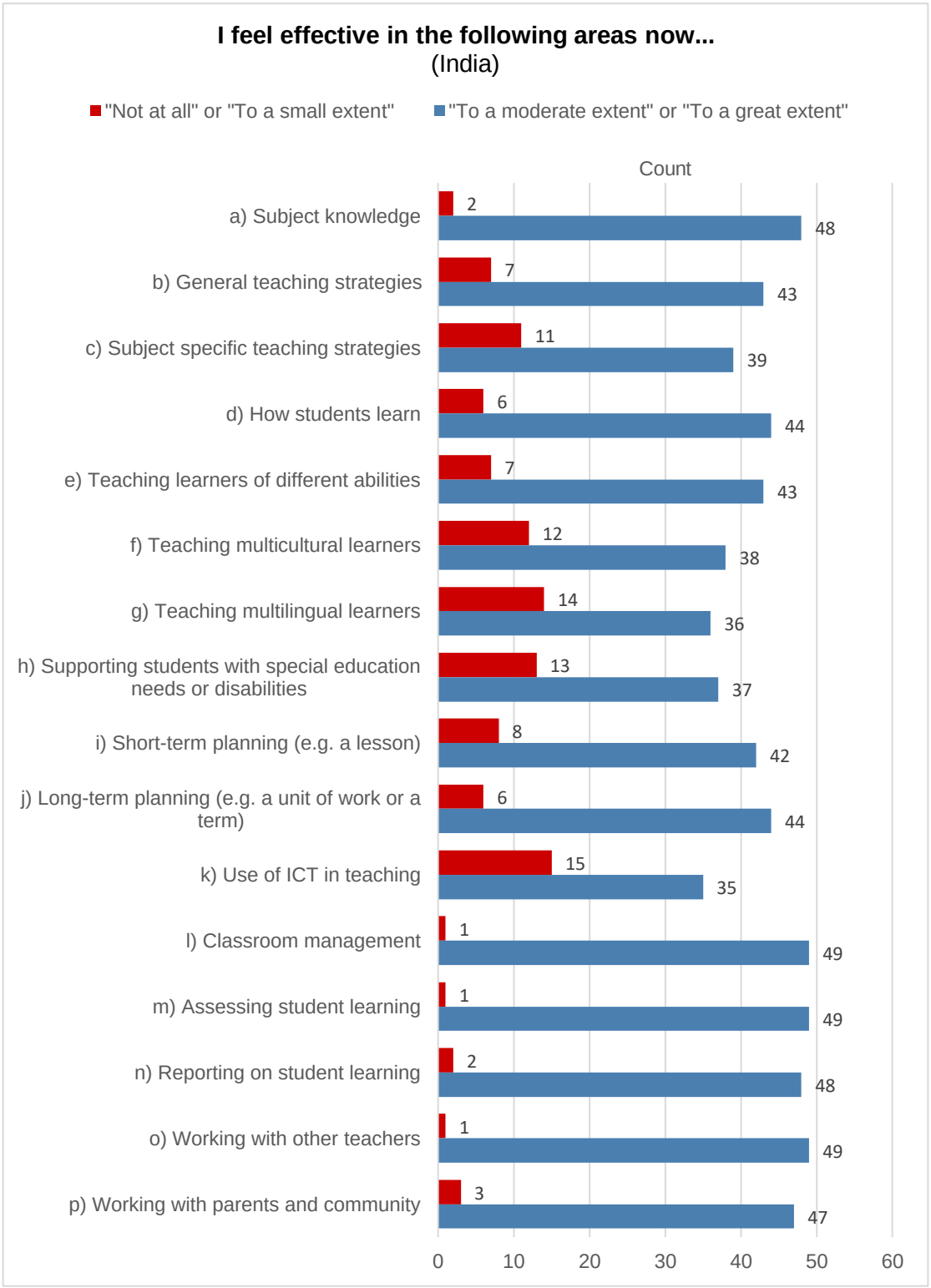


Figure 8.10: Perceptions of effectiveness as teachers (India)

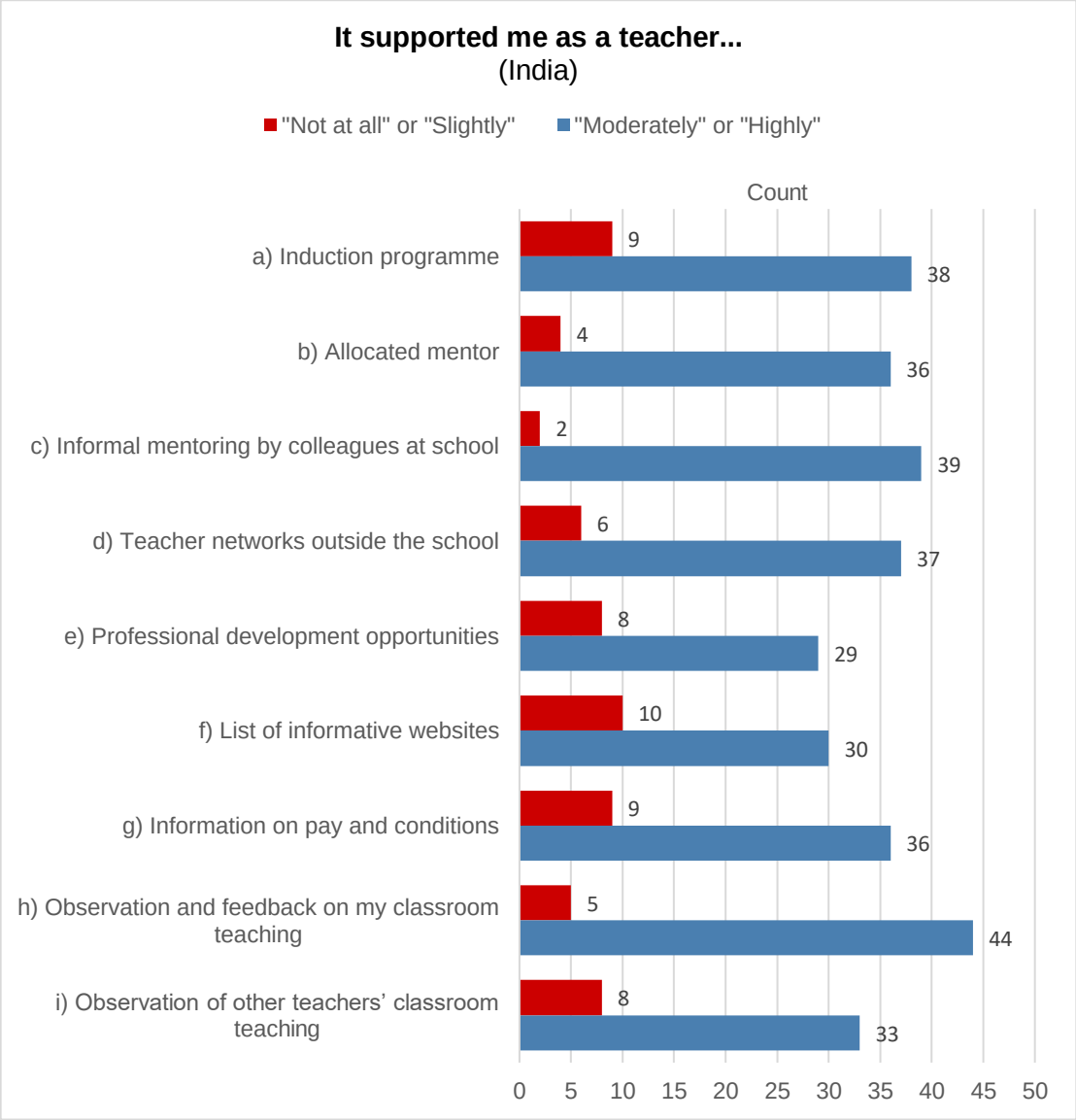


8.3.5 School support

Nearly all respondents found informal mentoring by colleagues at school 'moderately' or 'highly' effective in supporting them as teachers[7] (see Figure 8.11). The majority also valued an allocated mentor and observation and feedback on their classroom teaching. The types of school support that were nominated as least useful were: induction programme, list of informative websites and information on pay and conditions.

7 If respondents were not provided with a certain type of school support, their responses assessing the effectiveness of those aspects were excluded from the analysis.

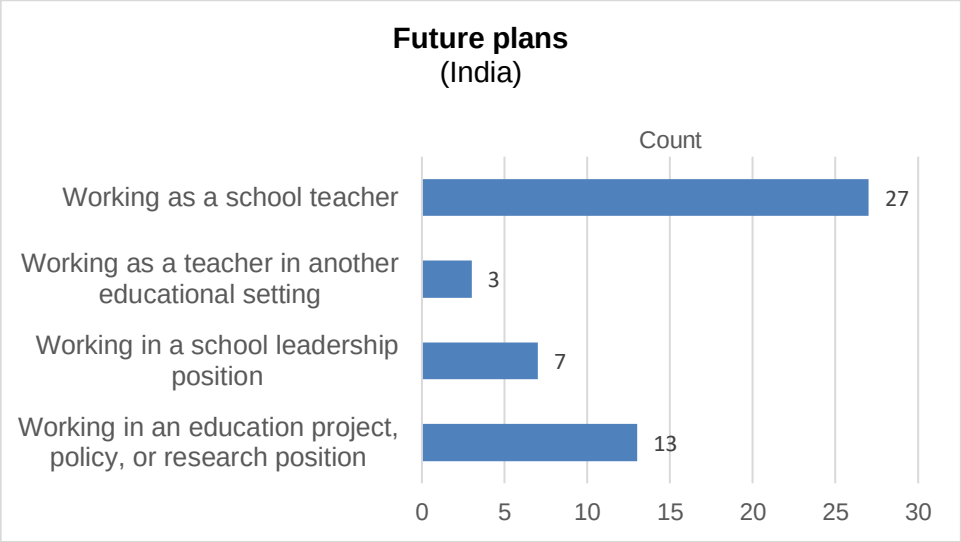
Figure 8.11: Perceived effectiveness of provided school support (India)



8.3.6 Future plans

When asked about their plans for their career in three years' time, about half of the respondents saw themselves working as schoolteachers and around a quarter – in education projects, policy or research positions (see Figure 8.12). None indicated that they planned to move into non-education roles.

Figure 8.12: Future plans (India)



8.3.7 Open-ended responses

The respondents commended the quality of training they had received and believed it had helped them become better teachers as the quotes below highlight.

> *'In the teacher training programme we were guided very well and developed the teacher's mindset.'*
>
> *'The training has helped me grow in confidence.'*

They also appreciated continuous professional development opportunities for learning current and innovative teaching methods. Some explicitly referred to the Room to Read programme and its role in helping children read better.

8.4 Mexico

8.4.1 Sample characteristics

The STQ survey was administered online in Mexico between March and July 2020. In total, 38 teachers completed the questionnaire in Spanish. The proportion of primary and secondary school teachers was balanced in the sample. Nearly all were in permanent/ongoing employment with over a third being employed part-time. About three-quarters had a master's degree and a quarter had a certificate or a diploma. Nearly all were teaching in at least one of their specialist areas at the time of the survey. Their teaching experience ranged from less than a year to 30+ years, with over a third being in their first five years of teaching. About two-thirds of the respondents identified as female which was similar to the gender ratio in the Mexican teaching workforce as reported by the UNESCO Institute for Statistics (UIS, 2018). A detailed profile of the survey sample is provided in Appendix C (p. 81).

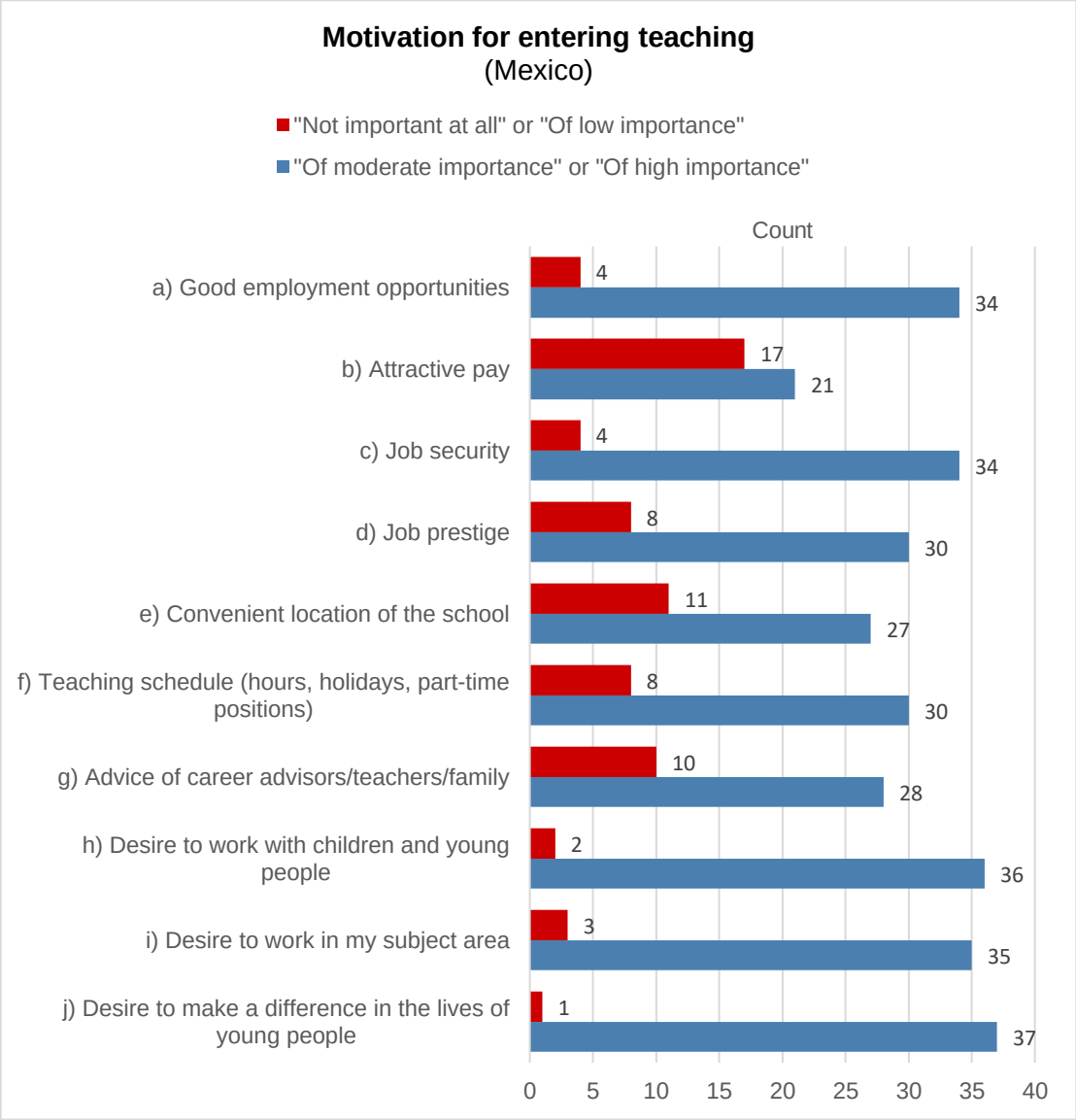
8.4.2 Teacher training programme

All the respondents had taken their teacher training programmes in Mexico. The higher proportion had completed it 6-10 years ago (43%) followed by 10+ years (32%) and 0-5 years (24%). Around half had received their first teaching qualification through a concurrent teacher training programme and about a quarter – through a consecutive one. The proportion of the respondents who trained in primary and secondary school education was balanced. About two-thirds had studied full-time and were qualified to teach specialist subjects of language and literature, mathematics, science and social studies. About three-quarters had spent more than 60 days in schools as part of their training. The programme characteristics are summarised in Appendix D (p. 84).

8.4.3 Motivation for entering teaching

The respondents' main reasons for choosing a teaching career were the desire to work in a given subject area, work with children/youth and make a difference in their lives. The least important aspects were attractive pay, convenient location of the school and advice of career advisors/teachers/family (see Figure 8.13).

Figure 8.13: Motivation for entering teaching (Mexico)



8.4.4 Perceptions of preparedness and effectiveness

The extent to which the respondents felt prepared and effective as teachers in different aspects of their role was linked to whether their training programmes incorporated those areas (see Figure 8.14 - Figure 8.16). The least included aspects in the programmes were: teaching multilingual learners and teaching multicultural learners. Accordingly, these were the very areas where the teachers found themselves least prepared and least effective.

Figure 8.14: Aspects included in the teacher training programme (Mexico)

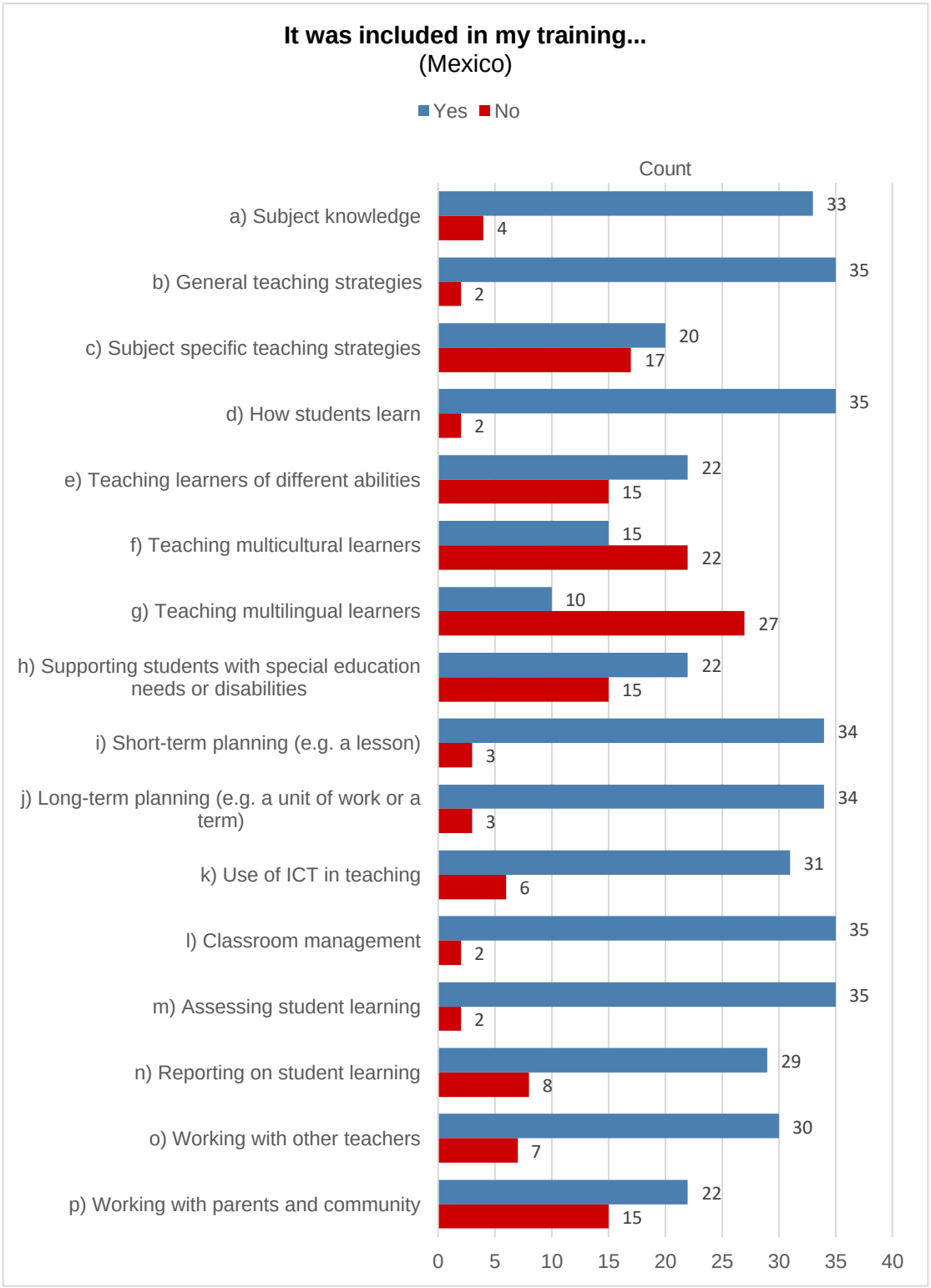


Figure 8.15: Perceptions of preparedness for teaching (Mexico)

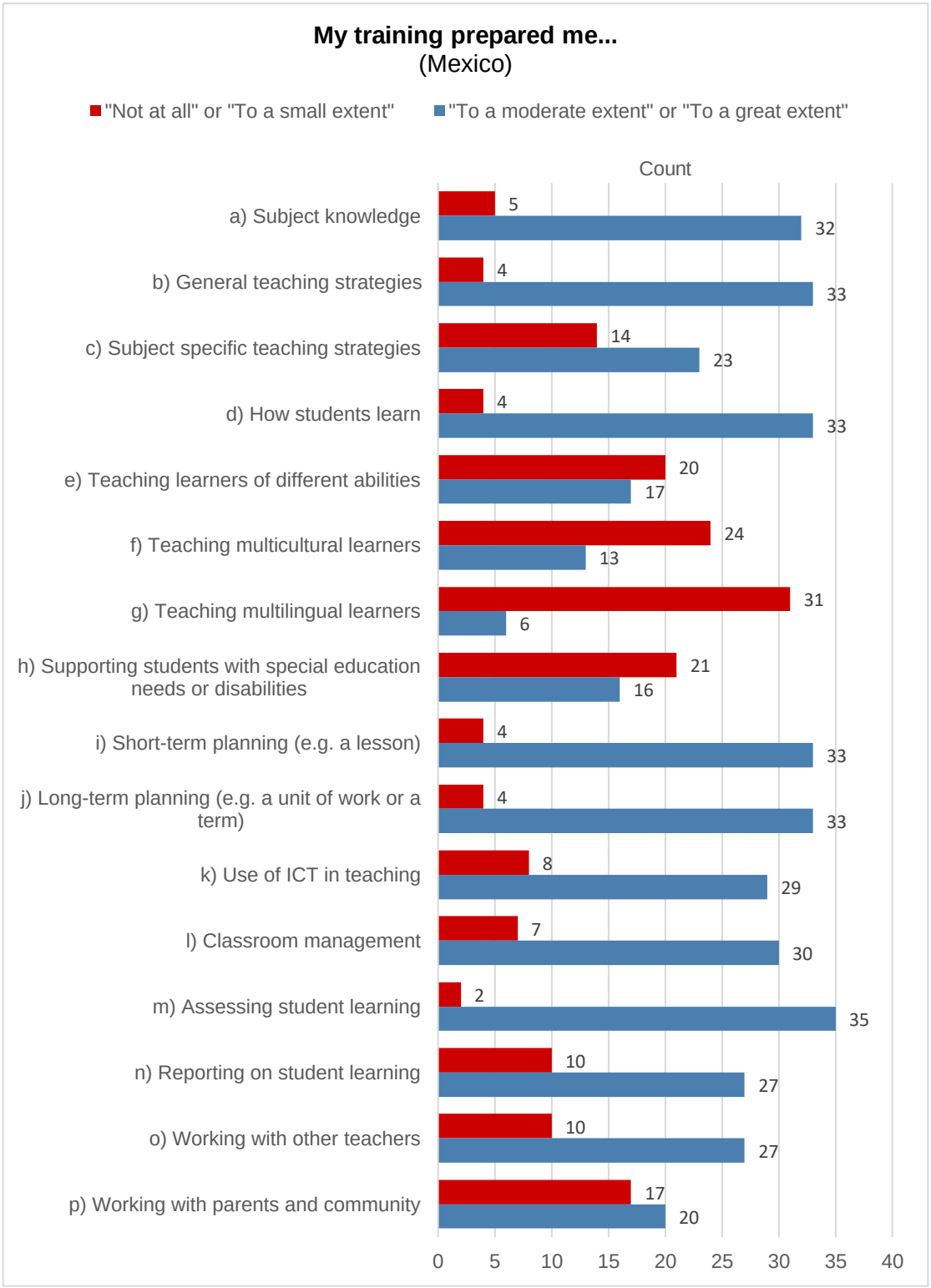
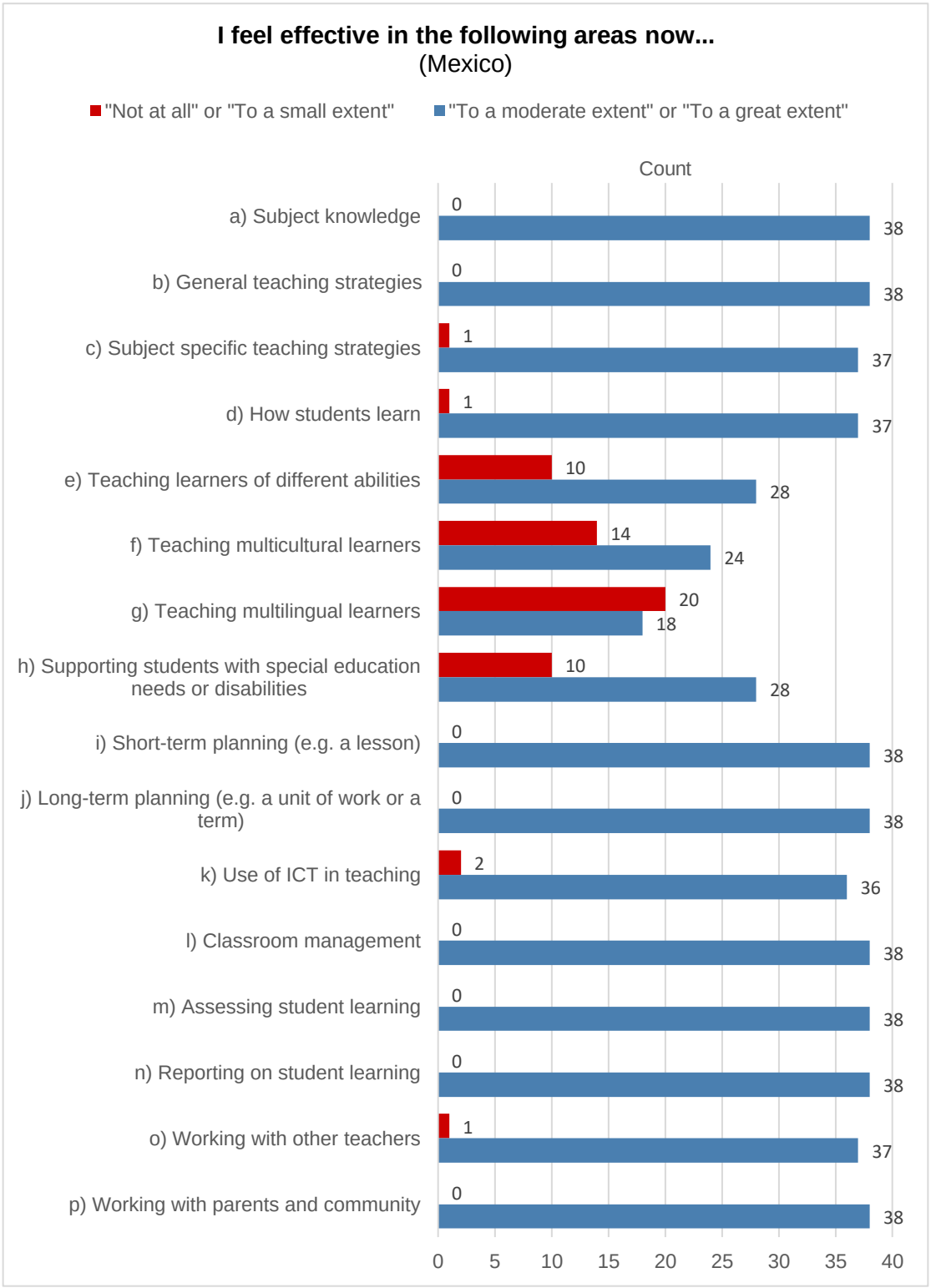


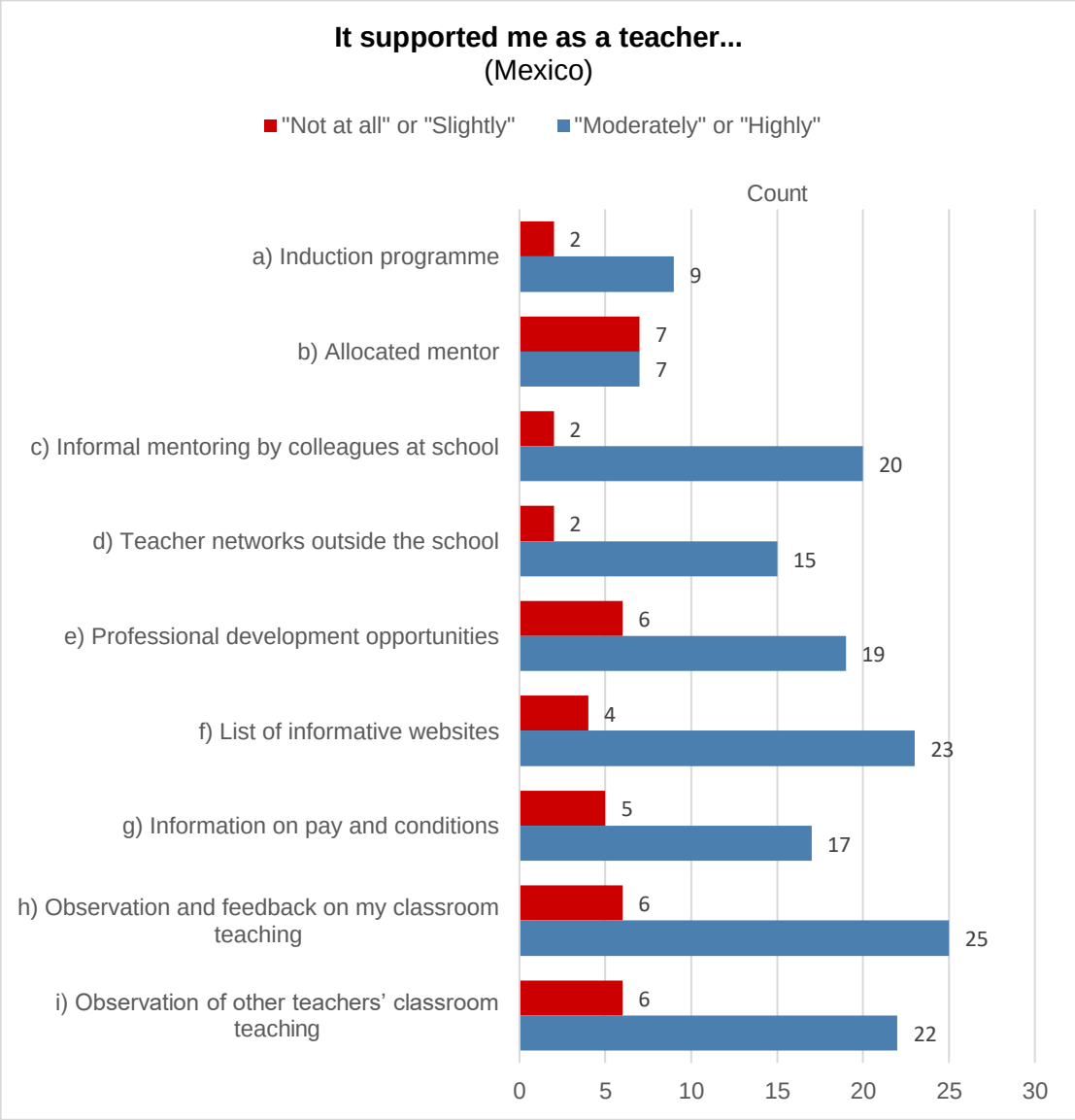
Figure 8.16: Perceptions of effectiveness as teachers (Mexico)



8.4.5 School support

Most respondents found observation and feedback on their classroom teaching 'moderately' or 'highly' effective in supporting them as teachers[8] (see Figure 8.17). The type of school support that was found least useful was a formally allocated mentor.

Figure 8.17: Perceived effectiveness of provided school support (Mexico)

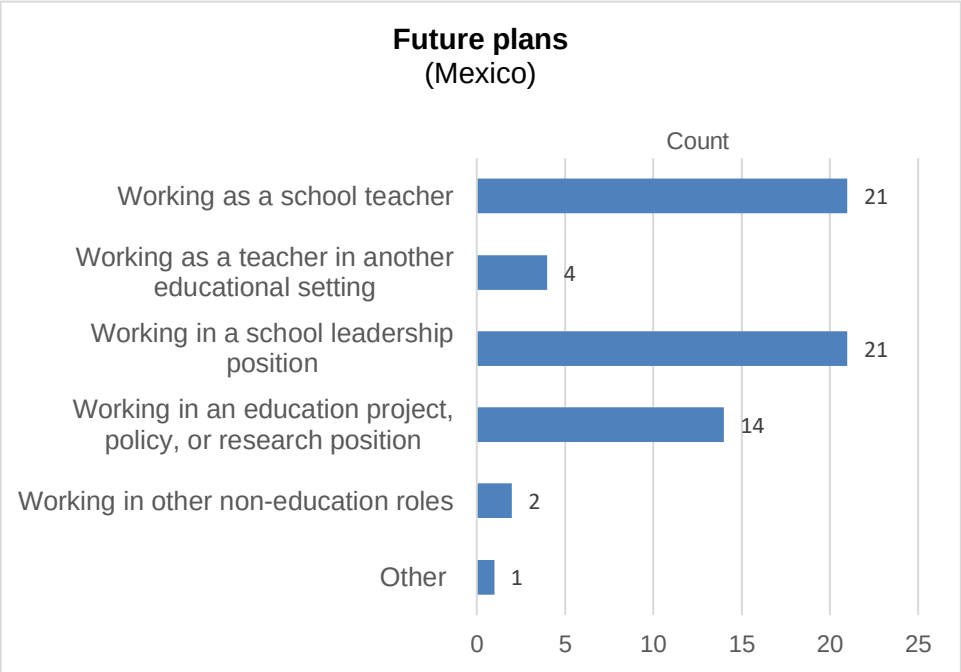


8 If respondents were not provided with a certain type of school support, their responses assessing the effectiveness of those aspects were excluded from the analysis.

8.4.6 Future plans

When asked about their plans for their career in three years' time, about a third of the respondents saw themselves working as schoolteachers and another third – in a school leadership position (see Figure 8.18). Only a few indicated that they planned to move into non-education roles.

Figure 8.18: Future plans (Mexico)



8.4.7 Open-ended responses

While the respondents mostly valued their training programmes, some noted that the acquired theoretical knowledge was not enough to prepare them for the realities of the classroom. The quote below captures this sentiment.

> *'The theory is very beautiful, but the reality is totally different. I wish the studies were carried out in schools in real time so that we can really observe what are the challenges that teachers face after graduating from Normal School or university.'*

They highlighted the importance of a wide range of professional development opportunities, mentoring by colleagues and feedback on their teaching practice. The teachers pointed to the need to diversify the training courses keeping them relevant and

up-to-date. For example, they wished to learn more about supporting students with special needs and using ICT in teaching. It was also suggested that young teachers should be given a chance to progress to leadership roles as they would bring fresh ideas and positive change - the opportunity currently afforded to those with over 20 years of teaching experience.

8.5 Moldova

8.5.1 Sample characteristics

The STQ survey was administered online in Moldova in May 2020. In total, 57 teachers completed the bilingual English/Romanian questionnaire. About a quarter of the respondents were primary school teachers and two-thirds taught at a secondary level. Most were in full-time, permanent/ongoing employment. Nearly all had a higher academic degree and were currently teaching in at least one of their specialist areas. Their teaching experience varied with less than a quarter having taught for 0-5 years and about two-thirds for over 10 years. The majority of the respondents identified as female which was in line with the gender ratio in the Moldovan teaching workforce reported by the UNESCO Institute for Statistics (UIS, 2018). A detailed profile of the survey sample is provided in Appendix C.

8.5.2 Teacher training programme

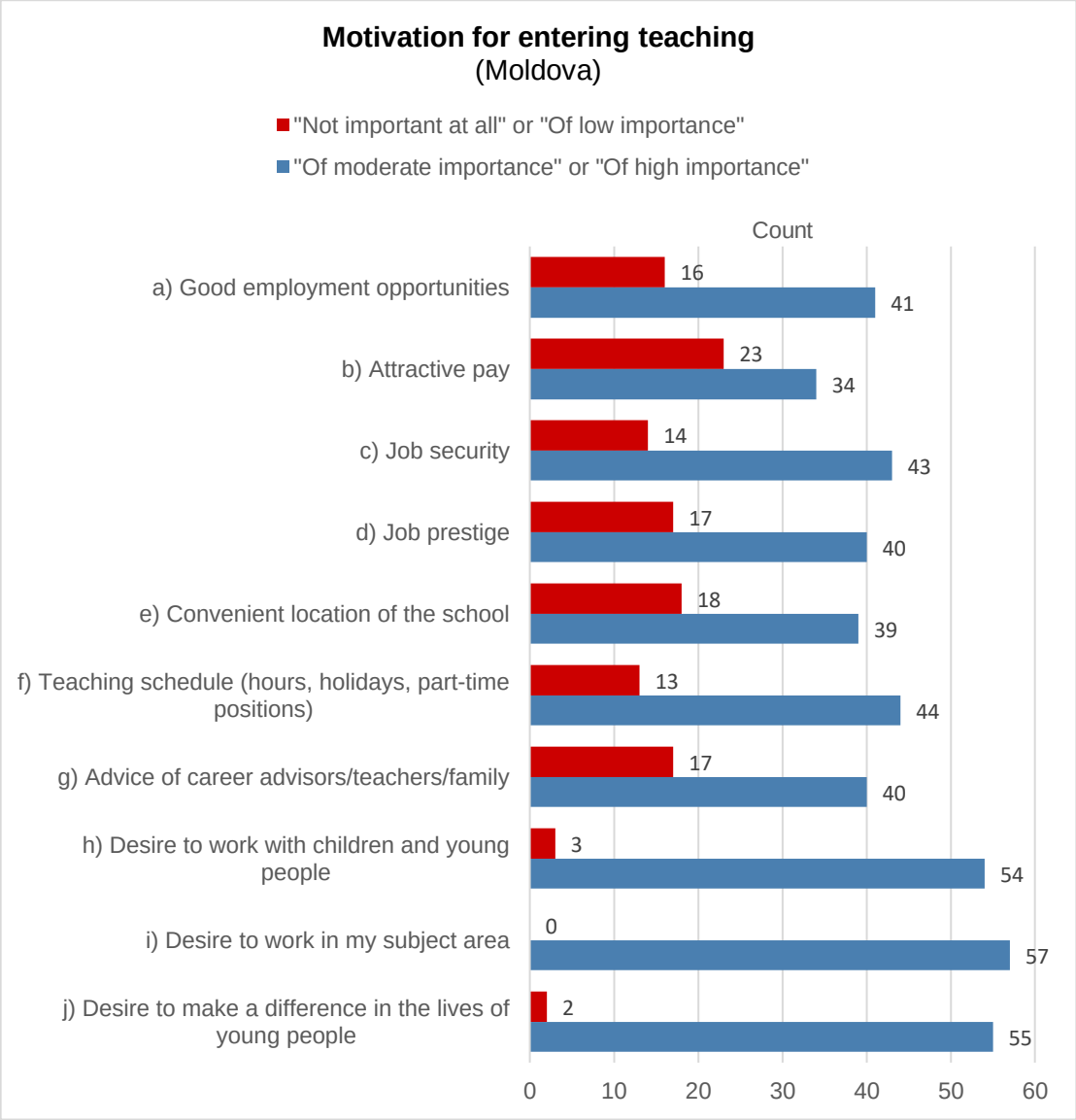
Nearly all the respondents had taken their teacher training programmes in Moldova. The higher proportion had completed it over 10 years ago (74%) followed by 0-5 years

(19%) and 6-10 years (19%). Around two-thirds had received their first teaching qualification through a concurrent teacher training programme. About a three-quarters had trained in secondary school education and around a quarter in primary school education. Nearly all were qualified to teach specialist subjects with a particular focus on social studies (40%). Over a third had spent 40-60 days and about a third – more than 60 days in schools as part of their training. The programme characteristics are summarised in Appendix D (p. 84).

8.5.3 Motivation for entering teaching

The respondents' main reasons for choosing a teaching career were the desire to work in a given subject area, work with children/youth and make a difference in their lives. The least important aspects were attractive pay and convenient location of the school (see Figure 8.19).

Figure 8.19: Motivation for entering teaching (Moldova)



8.5.4 Perceptions of preparedness and effectiveness

The extent to which the respondents felt prepared and effective as teachers in different aspects of their role was linked to whether their training programmes included those areas (see Figure 8.20 - Figure 8.22). Nearly all respondents' training programmes incorporated subject knowledge, subject-specific teaching strategies and short-term planning, the areas in which they felt most prepared and highly effective. The least included aspects in the programmes were: teaching multicultural learners, teaching multilingual learners and supporting students with special education needs or

disabilities. Accordingly, these were the very areas where the teachers found themselves least prepared and least effective.

Figure 8.20: Aspects included in the teacher training programme (Moldova)

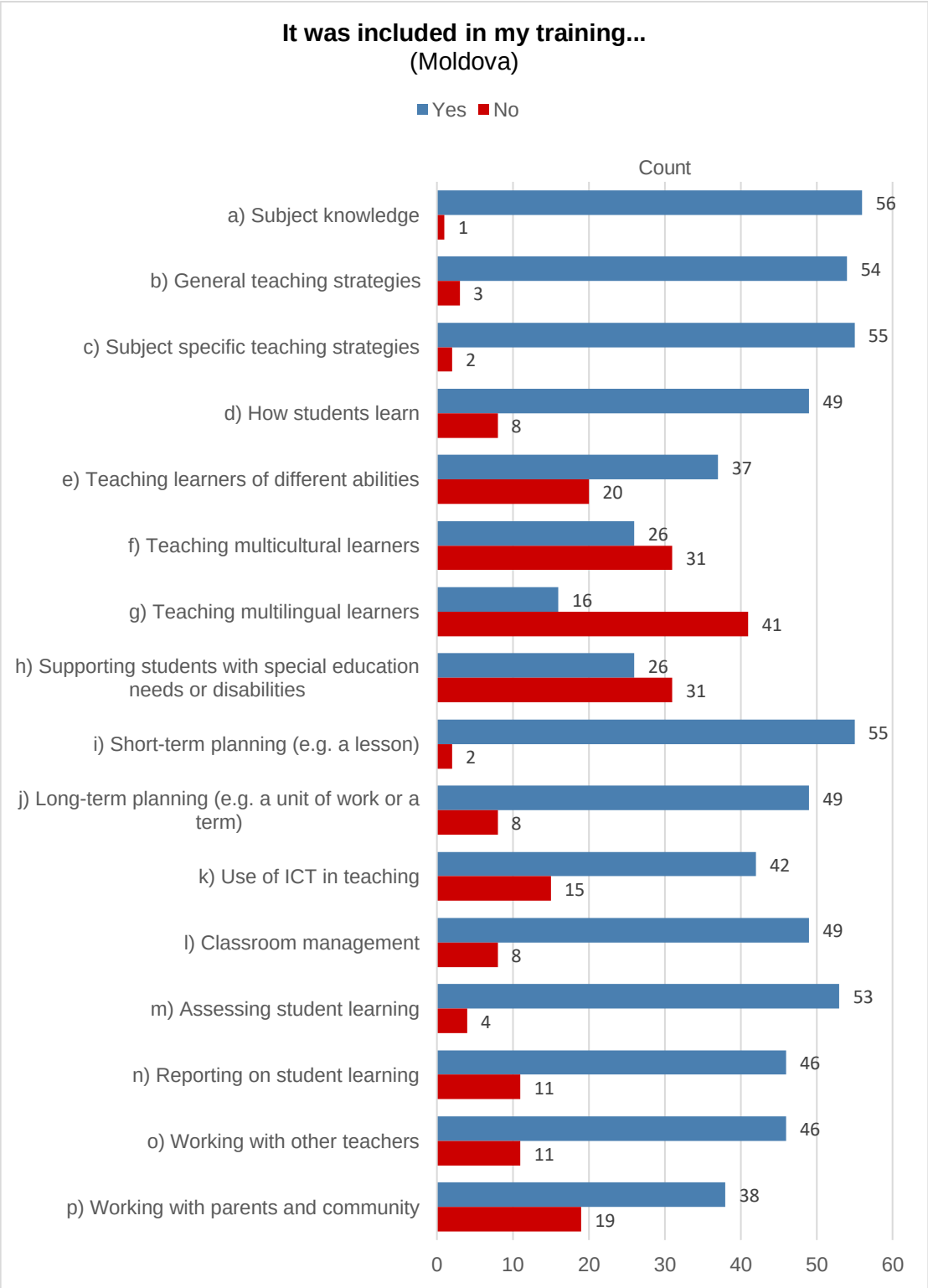


Figure 8.21: Perceptions of preparedness for teaching (Moldova)

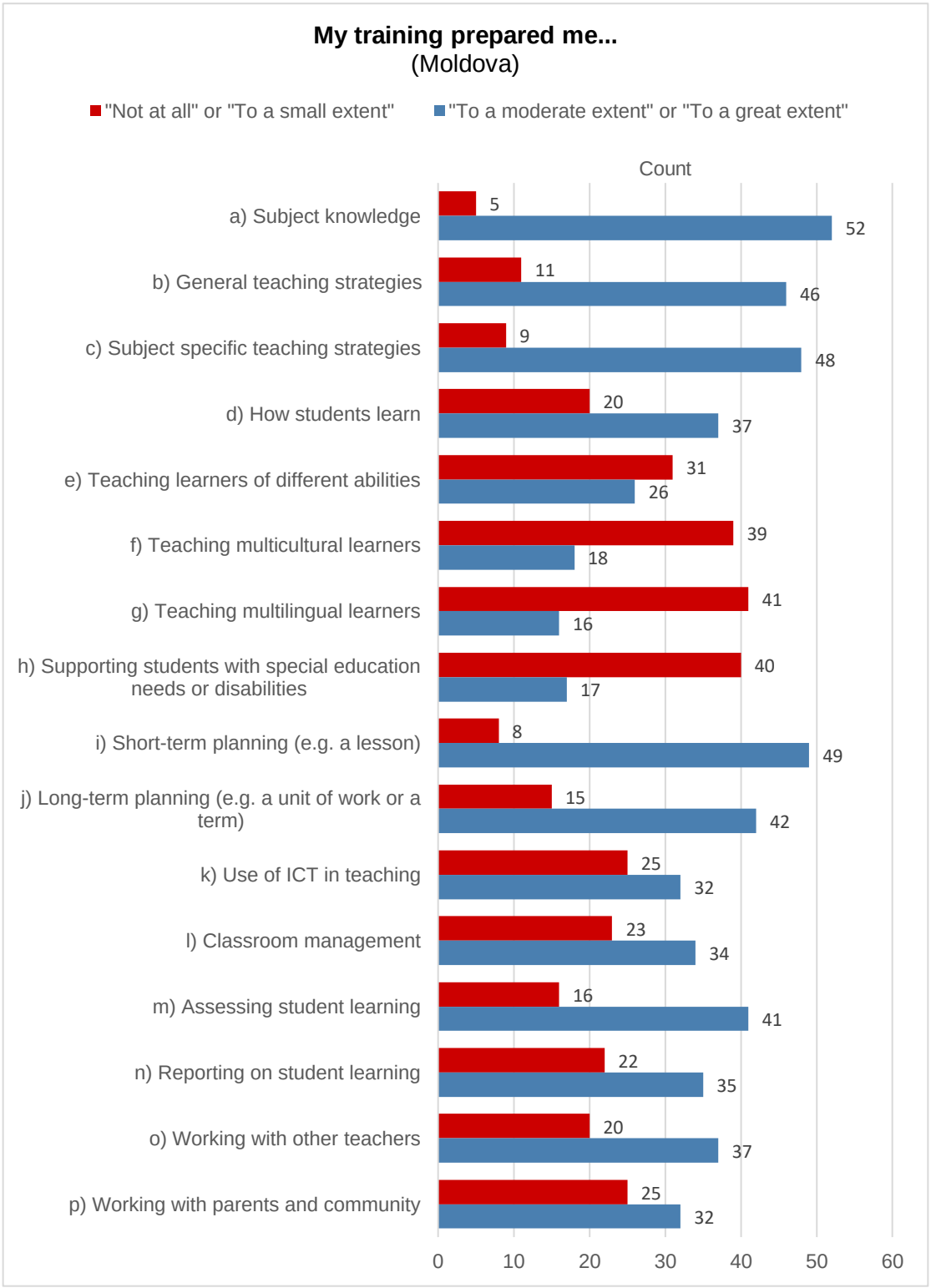
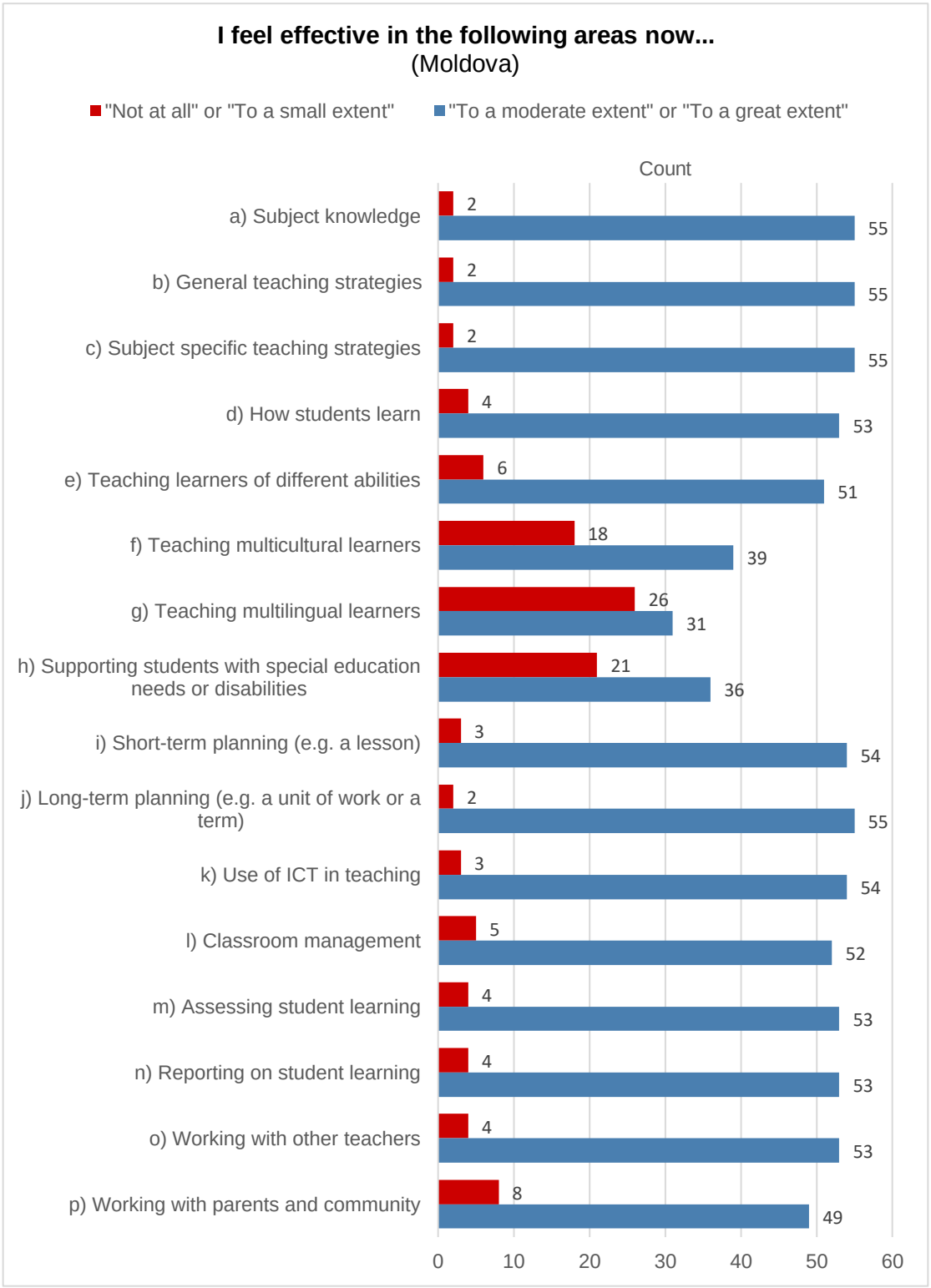


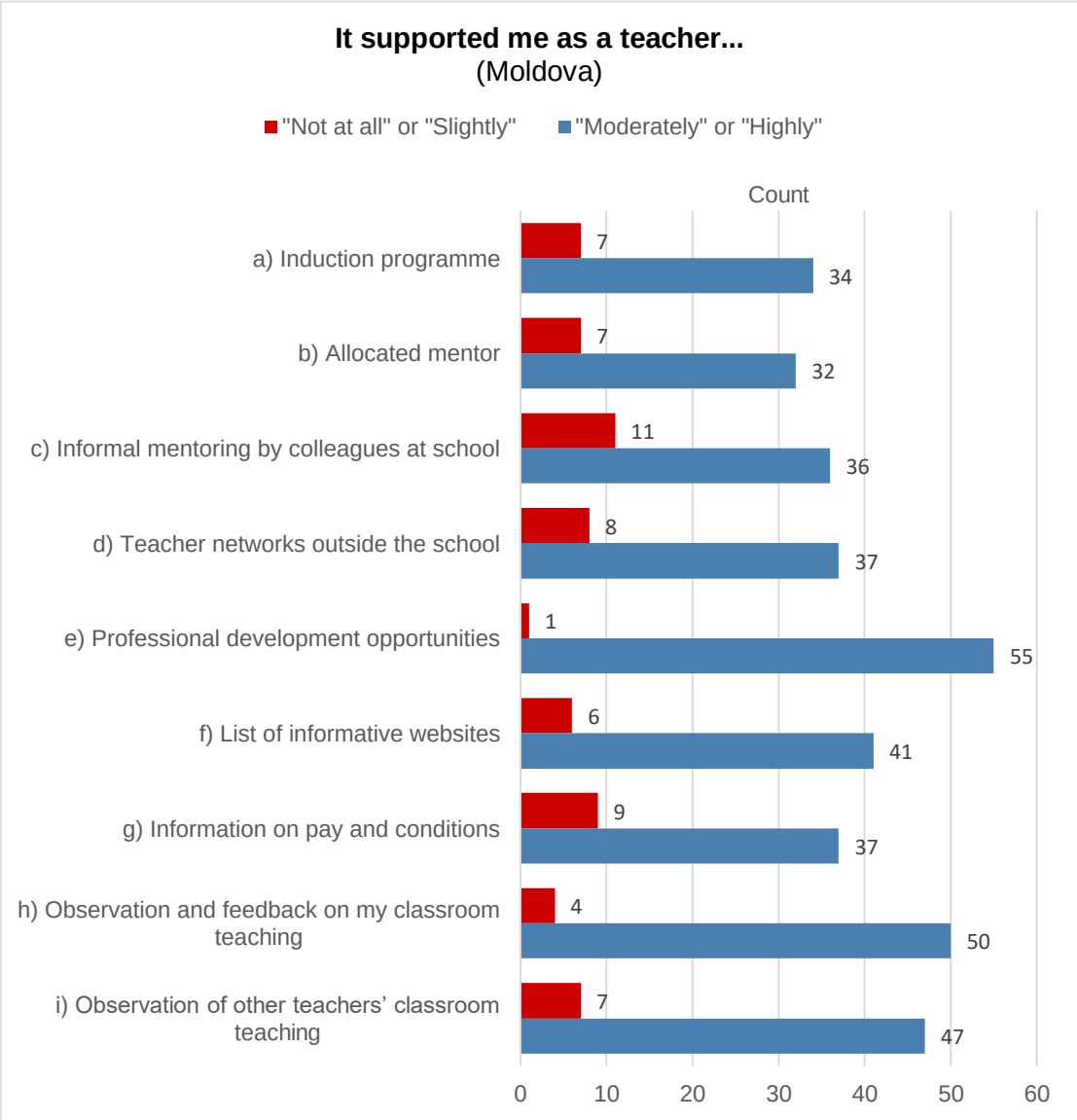
Figure 8.22: Perceptions of effectiveness as teachers (Moldova)



8.5.5 School support

Nearly all respondents found professional development opportunities 'moderately' or 'highly' effective in supporting them as teachers[9] (see Figure 8.23). The types of school support that were found least useful were: informal mentoring by colleagues and information on pay and conditions.

Figure 8.23: Perceived effectiveness of provided school support (Moldova)

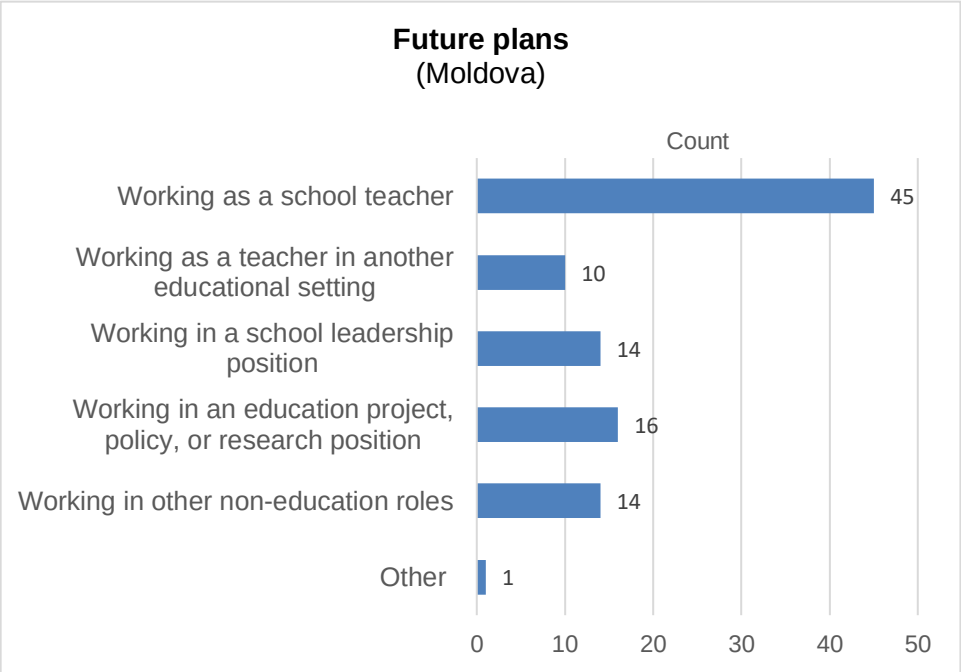


9 If respondents were not provided with a certain type of school support, their responses assessing the effectiveness of those aspects were excluded from the analysis.

8.5.6 Future plans

When asked about their plans for their career in three years' time, about half of the respondents saw themselves working as schoolteachers and around a quarter – in other education positions (see Figure 8.24). Less than a quarter indicated that they planned to move into non-education roles.

Figure 8.24: Future plans (Moldova)



8.5.7 Open-ended responses

The respondents expressed gratitude for the knowledge and skills they had acquired through their teacher training programmes as the quotes below demonstrate.

> *'The specialised knowledge received helped me to train and educate many generations of students.'*
>
> *'Many thanks to the pedagogical college teachers who laid the foundation for my training as a teacher.'*

The value of continuous professional development was highlighted to keep up with modern teaching methods, particularly when using ICT. However, it was noted that training courses were heavy on theory and would benefit from placing more emphasis on practical aspects of teaching.

8.6 Papua New Guinea

8.6.1 Sample characteristics

The STQ survey was administered on paper in Papua New Guinea between September and December 2020. In total, 28 teachers completed the questionnaire in English. Nearly all were secondary school teachers with a majority having a higher academic degree and permanent/ongoing employment. Most respondents were in their first five years of teaching (86%) and were currently teaching in at least one of their specialist areas. A detailed profile of the survey sample is provided in Appendix C (p. 81).

8.6.2 Teacher training programme

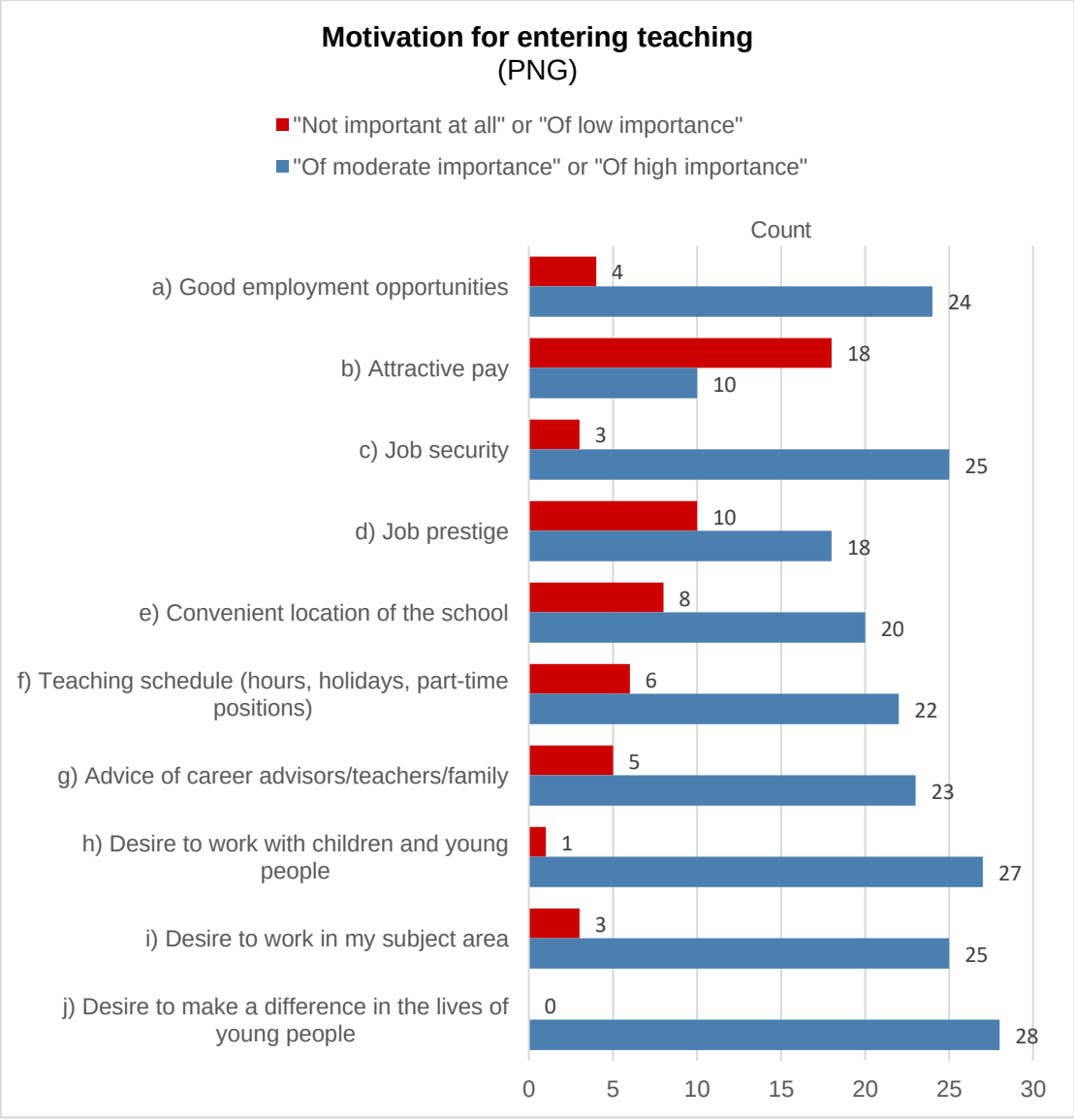
All the respondents had taken their teacher training programmes in PNG. The higher proportion had completed it 0-5 years ago (68%) followed by 6-10 years (25%) and 10+ years (7%). About three-quarters had received their first teaching qualification through a concurrent teacher training programme and less than a quarter – through a consecutive one. Most were qualified to teach specialist subjects of language and literature, mathematics, science and social studies. Around two-thirds had spent 20-60

days and about a third – more than 60 days in schools as part of their training. The programme characteristics are summarised in Appendix D (p. 84).

8.6.3 Motivation for entering teaching

The respondents' main reasons for choosing a teaching career were job security, the desire to work in a given subject area, work with children/youth and make a difference in their lives. The least important aspects were attractive pay, job prestige and convenient location of the school (see Figure 8.25).

Figure 8.25: Motivation for entering teaching (PNG)



8.6.4 Perceptions of preparedness and effectiveness

The extent to which the respondents felt prepared and effective as teachers in different aspects of their role was linked to whether their training programmes included those areas (see Figure 8.26 - Figure 8.28). The least included aspects in the programmes were: teaching multilingual learners and supporting students with special education needs or disabilities. Accordingly, these were the very areas where the teachers found themselves least prepared and least effective.

Figure 8.26: Aspects included in the teacher training programme (PNG)

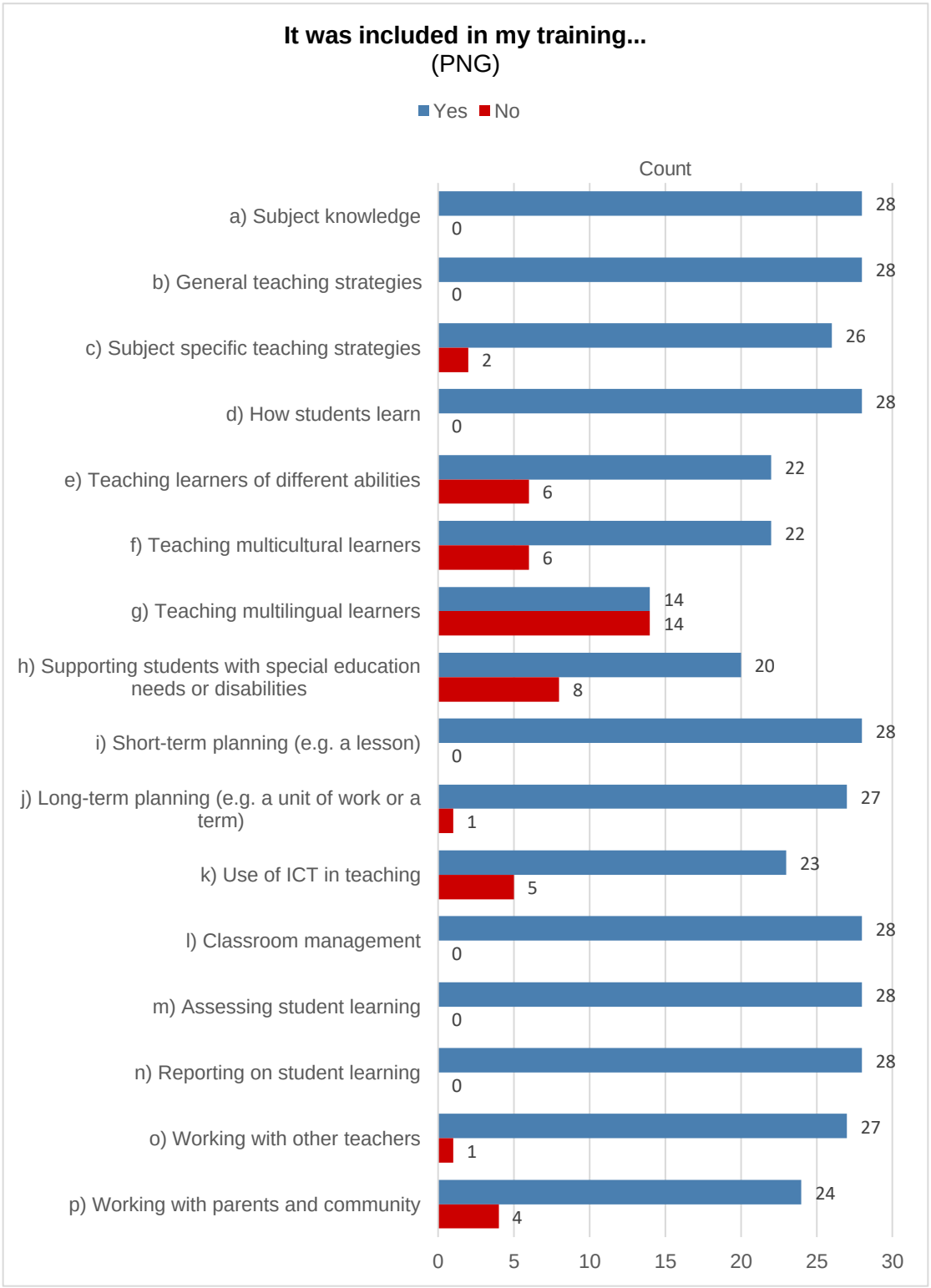


Figure 8.27: Perceptions of preparedness for teaching (PNG)

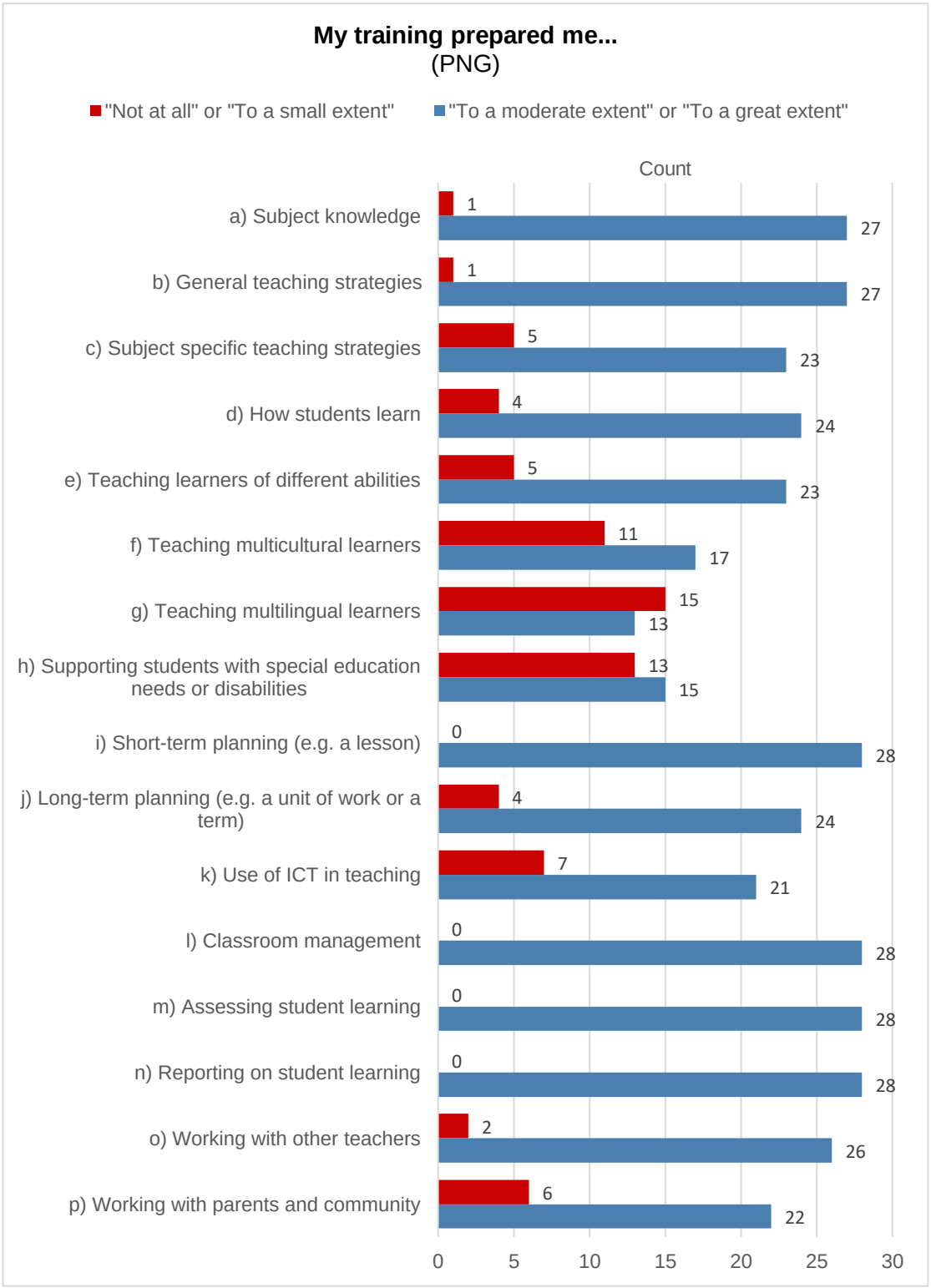
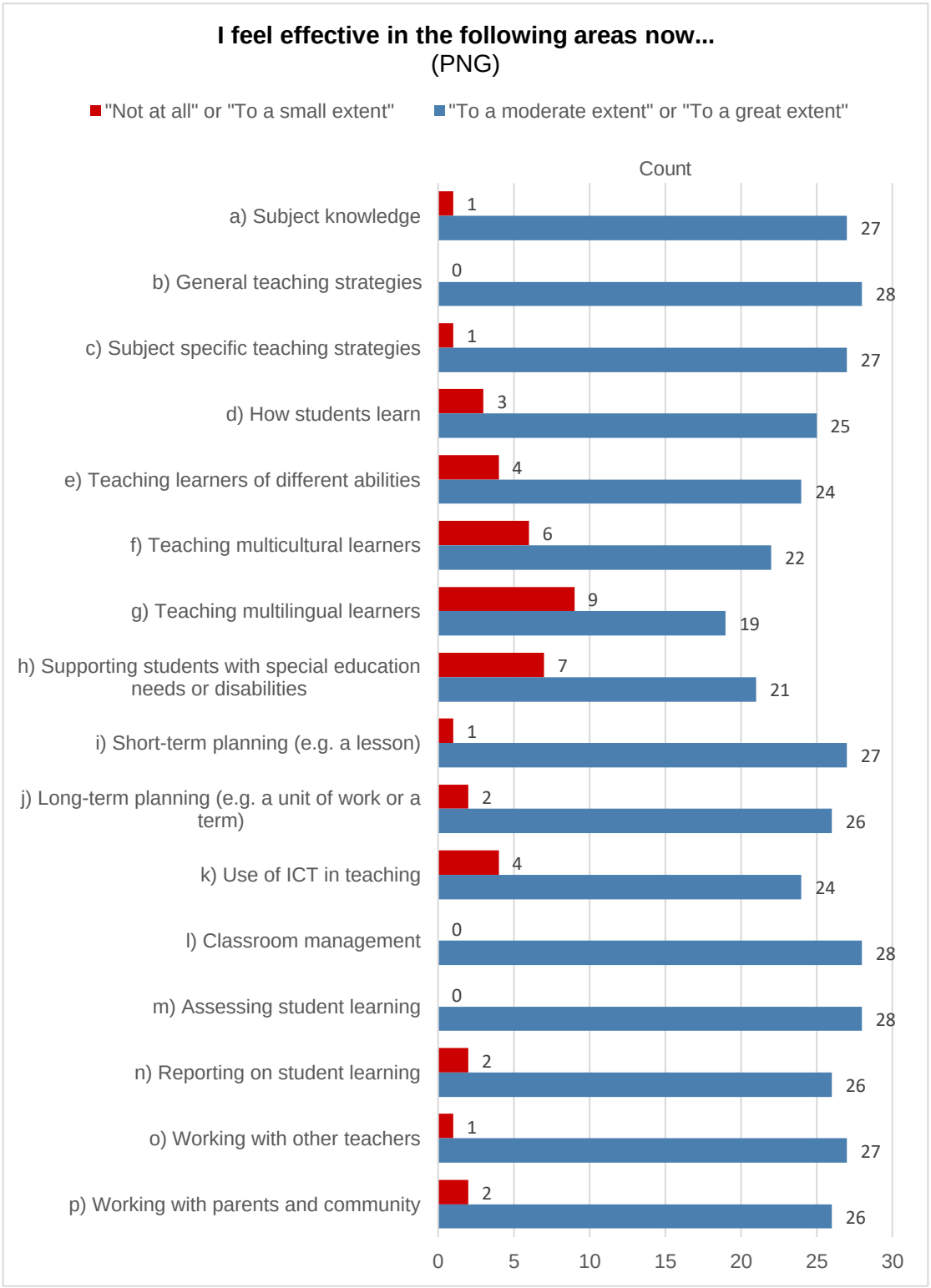


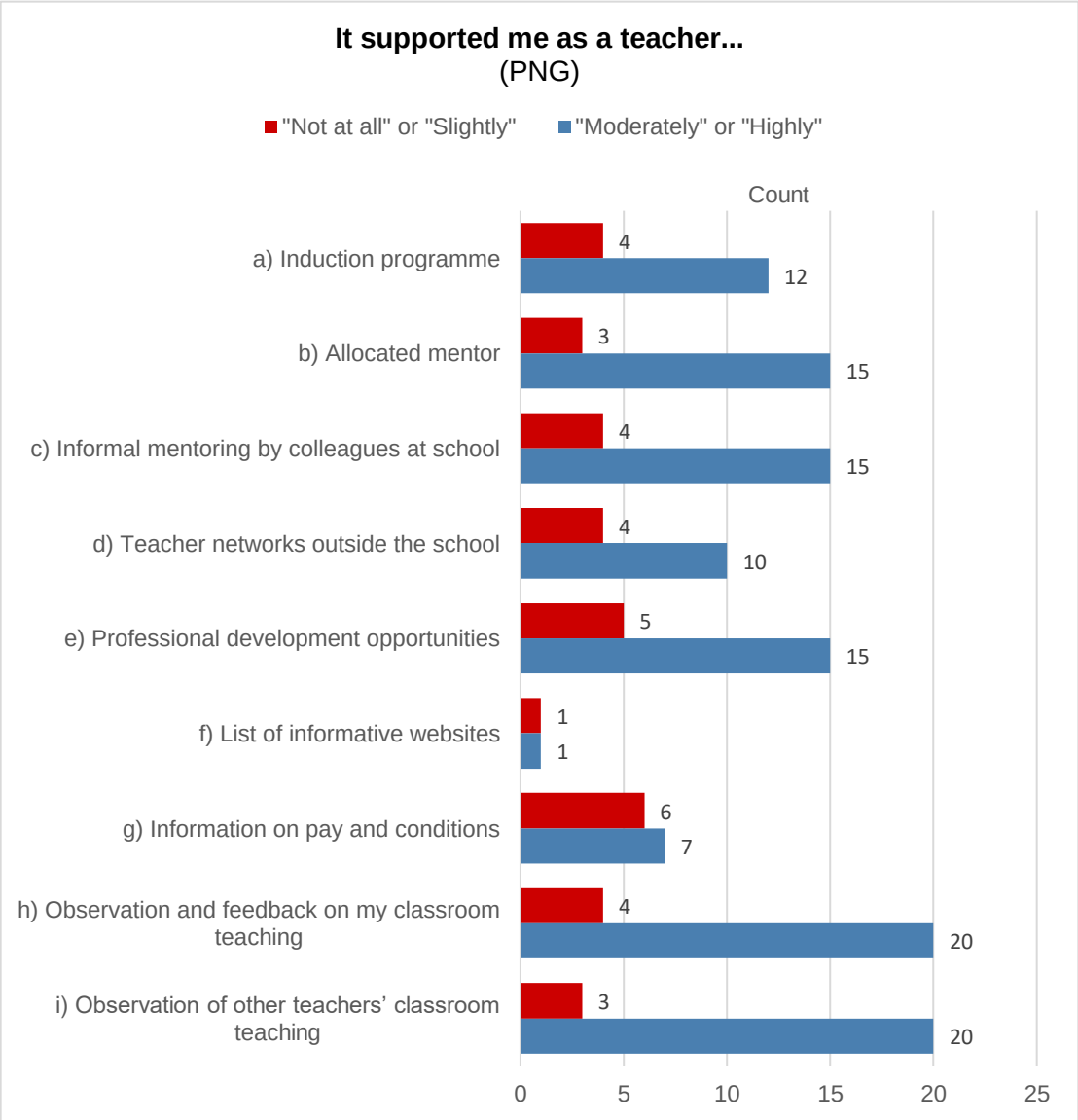
Figure 8.28: Perceptions of effectiveness as teachers (PNG)



8.6.5 School support

About three-quarters of the respondents found observation of their own and others' teaching 'moderately' or 'highly' effective in supporting them as teachers[10] (see Figure 8.29). The type of school support that was found least useful was information on pay and conditions.

Figure 8.29: Perceived effectiveness of provided school support (PNG)

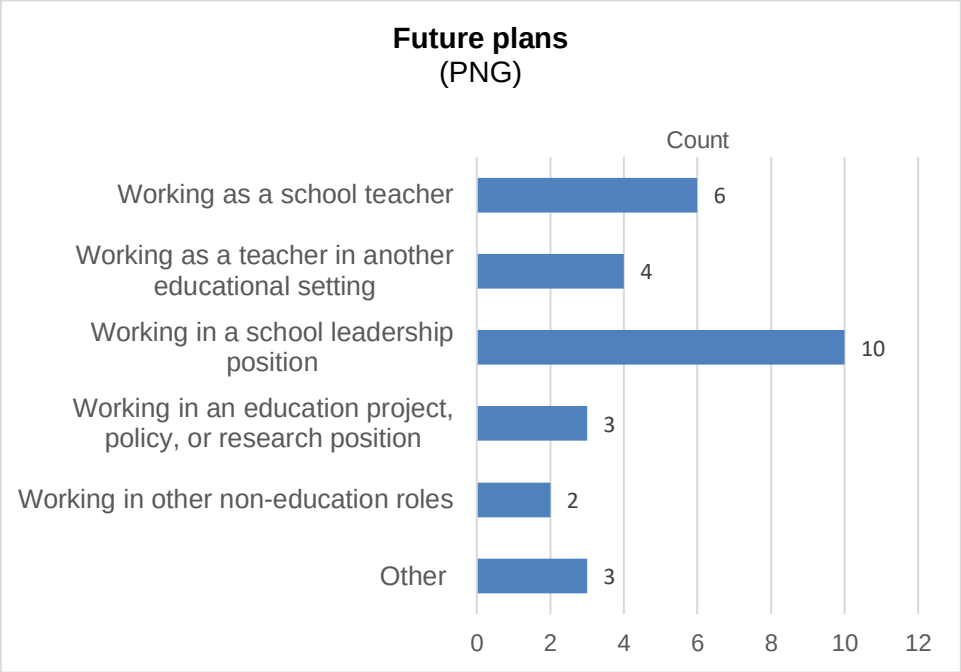


10 If respondents were not provided with a certain type of school support, their responses assessing the effectiveness of those aspects were excluded from the analysis.

8.6.6 Future plans

When asked about their plans for their career in three years' time, about a quarter of the respondents saw themselves working as schoolteachers and over a third – in school leadership positions (see Figure 8.30).

Figure 8.30: Future plans (PNG)



8.6.7 Open-ended responses

Most respondents expressed appreciation for their teacher training programmes in preparing them for teaching and helping them bridge theory with classroom practice as the quotes below illustrate.

> *'Teaching training program helped me … give my best to the students.'*
>
> *'It helped me to be the kind of teacher I am today.'*

Some pointed to the need for more mentoring and professional development opportunities including courses on leadership and management. There was a specific suggestion about improving subject-specific teaching strategies and increasing the duration of the curriculum instruction course from one to two years. It was also noted that stricter criteria should be in place for granting a teaching qualification to prospective teachers.

9. CONCLUDING COMMENT

The report provides a summary of the data produced by the STQ pilot survey in Bhutan, India, Mexico, Moldova and PNG. Although the findings are limited by the small sample size, the results from each country offer important insights into a) teachers' perceptions of their preparedness for teaching, b) perceived effectiveness of teacher training programmes, c) teachers' sense of effectiveness as teachers, and d) perceived value of provided school support.

While there were contextual differences in the surveyed teachers' overall perceptions and experiences, commonly identified weaknesses in teacher training showed a consistent trend across the five study countries. The findings suggested the need to better prepare teachers' for working in multicultural and multilingual classrooms as well as equip them with the skills to support learners with special education needs.

The presented results should be considered as provisional due to the small scale of the pilot survey and the timing of research. As data was primarily collected online amid the Covid-19 pandemic and resulting school closures, this may have excluded certain groups of teachers from taking part in the survey. Future research would utilise the modified survey with a representative sample and add another phase of investigation comprising in-depth case studies. This would involve classroom observations to investigate teachers' experiences and practices in schools and impact on student learning.

An evaluation was conducted with partner investigators to assess the suitability of the survey for future cross-country research in low- and middle-income countries and to determine the usefulness of the findings for in-country stakeholders. The partner investigators were invited to submit their feedback via an online form. Three responses were received.

Recruitment of teachers for the pilot survey was key to the success of the project. In one country, this was helped by contacting graduates from one university programme and then using a snowball method. In another, personal contact was made with school leaders and teachers known to the partner investigator and these contacts helped recruit

more participants. While the online mode of survey administration was beneficial, administering the survey in the middle of the COVID-19 pandemic was challenging given the difficult personal and professional circumstances within which the teachers were working. Also, it was reported that some teachers were unfamiliar with online surveys and some experienced weak internet connectivity issues which hampered their ability to complete the survey. The length of the questionnaire, its clarity, the structure and flow of the questions, the visual layout, the relevance to the country context, and the translation, were all rated as good or excellent. Different countries have diverse challenges that impact effective teaching so a suggestion was made to include a section on "Challenges in Teaching" in future surveys. Two respondents said the data analysis techniques were appropriate, while the other suggested some improvements in the reporting and these were taken on board in this final version of the report. Two respondents said the findings were highly useful for informing teacher education in their countries, while the other said they were slightly helpful. It was suggested that further investigations could include more open-ended responses in order to gain a more nuanced view of what is happening at the local level.

All these helpful suggestions from the evaluation will be incorporated as further investigations are planned to build on this pilot study.

10. REFERENCES

Braun, V., & Clarke, V. (2012). Thematic analysis. In H. Cooper, P. M. Camic, D. Long, A. Panter, D. Rindskof, & K. Sher (Eds.), *The APA handbook of research methods in psychology* (Vol. 2, pp. 57-71). American Psychological Association.

Cochran-Smith, M., & Power, C. (2010). New Directions for Teacher Preparation. *Educational Leadership*, *67*(8), 6-13.

Cohen, L., Manion, L., & Morrison, K. (2017). *Research methods in education*. routledge.

Flick, U., Von Kardorff, E., & Steinke, I. (2004). What is qualitative research? An introduction to the field. *A companion to qualitative research*, 3-11.

Goetz, J. P. & LeCompte, M. D. (1988). *Ethnography and qualitative design in educational research*. Madrid: Morata.

GPE. (2019). *Boosting education standards together in PNG (BEST PNG) program*. [Online] Available at: https://www.globalpartnership.org/sites/default/files/2019-04-gpe-png-program-document.pdf

INEE (2015). *Los docentes en México. Informe 2015*. México: INEE.

Lefebvre, H. (1991). *The production of space (D. Nicholson-Smith, Trans.)*. Blackwell Publishers.

Mayer, D., Allard, A., Bates, R., Doecke, B., Dixon, M., Kline, J., Kostogriz, A., Moss, J., Rowan, L., Walker-Gibbs, B., & White, S. (2015). *Studying the Effectiveness of Teacher Education, Final Report. (Australian Research Council Linkage project LP110100003).* Deakin University.

Mayer, D., Dixon, M., Kline, J., Kostogriz, A., Rowan, L., Walker-Gibbs, B., & White, S. (2017). *Studying the Effectiveness of Teacher Education: Early Career Teachers in Diverse Settings*. Springer.

McKenzie, P., Kos, J., Walker, M., Hong, J., & Owen, S. (2008). *Staff in Australia's Schools 2007*. Melbourne: Australian Council for Educational Research.

McKenzie, P., Rowley, G., Weldon, P. R., & Murphy, M. (2011). *Staff in Australia's Schools 2010*. Melbourne: Australian Council for Educational Research.

Nilsen, T., & Gustafsson, J.-E. (Eds.). (2016). *Teacher Quality, Instructional Quality and Student Outcomes: Relationships across countries, cohorst and time*. International Association for the Evaluation of Educational Achievement (IEA) and Springer.

OECD (2005). *Attracting, developing and retaining effective teachers. Final report—Teachers matter.* Paris: OECD Publishing.

Rowan, L., Mayer, D., Kline, J., Kostogriz, A., & Walker-Gibbs, B. (2015). Investigating the effectiveness of teacher education for early career teachers in diverse settings: The longitudinal research we have to have. *The Australian Educational Researcher*, *42*(3), 273-298.

SEP (2019). *Principales cifras del sistema educativo nacional*. México: SEP.

Tymms, P., Merrell, C., & Wildy, H. (2015). The progress of pupils in their first school year across classes and educational systems. *British Educational Research Journal*, *41*(3), 365-380.

Westbrook, J., Durrani, N., Brown, R., Orr, D., Pryor, J., Boddy, J., & Salvi, F. (2013). *Pedagogy, curriculum, teaching practices and teacher education in developing countries: Final Report. Education Rigorous Literature Review*. EPPI-Centre, Social Science Research Unit, Institute of Education, University of London.

11. APPENDICES

11.1 Appendix A: School system in each country

Table 11.1: School system

<table>
<tr><th rowspan="2">Grade</th><td colspan="5">Country</td></tr>
<tr><th>Bhutan</th><th>India</th><th>Mexico</th><th>Moldova</th><th>PNG</th></tr>
<tr><td>Preparatory</td><td></td><td></td><td>Preschool</td><td></td><td>Elementary</td></tr>
<tr><td>G1</td><td rowspan="6">Primary
(6 years)</td><td rowspan="4">Lower Primary
(5 years)</td><td rowspan="5">Primary
(7 years)</td><td rowspan="3">Primary
(4 years)</td><td rowspan="5">Primary
(6 years)</td></tr>
<tr><td>G2</td></tr>
<tr><td>G3</td></tr>
<tr><td>G4</td></tr>
<tr><td>G5</td><td rowspan="4">Lower Secondary/ Gymnasium
(5 years)</td></tr>
<tr><td>G6</td><td rowspan="3">Upper Primary
(3 years)</td></tr>
<tr><td>G7</td><td rowspan="2">Lower Secondary
(2 years)</td><td rowspan="4">Secondary
(4 years)</td><td rowspan="4">Junior High School
(4 years)</td></tr>
<tr><td>G8</td></tr>
<tr><td>G9</td><td rowspan="2">High Secondary
(2 years)</td><td rowspan="2">High Secondary
(2 years)</td><td rowspan="3">Upper Secondary/ Lyceum
(3 years)</td></tr>
<tr><td>G10</td></tr>
<tr><td>G11</td><td rowspan="2">Higher Secondary
(2 years)</td><td rowspan="2">Higher Secondary
(2 years)</td><td rowspan="2">Senior High School
(2 years)</td></tr>
<tr><td>G12</td><td></td></tr>
</table>

11.2 Appendix B: Teaching workforce profile in each country

Table 11.2: Teaching workforce profile

	Country11				
	Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
Total number of teachers (Primary)	2.6K (2018)	4.3M (2019)	534.1K (2017)	7.8K (2018)	35.9K (2016)
Total number of teachers (Secondary)	7.0K (2018, UIS estimation)	6.1M (2019)	832.5K (2017)	22.9K (2018)	14.8K (2016)
Percentage of female teachers (Primary)	41 (2020)	54 (2019)	67 (2018)	98 (2018)	49 (2016)
Percentage of female teachers (Secondary)	42 (2018, UIS estimation)	46 (2019)	51 (2018)	78 (2018)	38 (2016)
Pupil-teacher ratio (Primary)	35 (2018)	33 (2017)	27 (2017)	18 (2018)	36 (2016)
Pupil-teacher ratio (Secondary)	11 (2018, UIS estimation)	29 (2018)	17 (2017)	10 (2018)	34 (2016)
Proportion of teachers with the minimum required qualifications in a given country (Primary)	100 (2018)	73 (2019)	97 (2016)	99 (2018)	n/a
Proportion of teachers with the minimum required qualifications in a given country (Secondary)	100 (2018, UIS estimation)	76 (2019)	92 (2016)	98 (2018)	100 (2012)
Pupil-trained teacher ratio (Primary)	35 (2018)	38 (2019)	28 (2016)	18 (2018)	n/a
Pupil-trained teacher ratio (Secondary)	11 (2018)	28 (2019)	18 (2016)	10 (2018)	27 (2012)
Percentage of teachers qualified according to national standards (Primary)	100 (2018)	92 (2019)	n/a	n/a	78.1% (2016)
Percentage of teachers qualified according to national standards (Secondary)	100 (2018)	87 (2019)	n/a	n/a	61.1% (2016)
Pupil-qualified teacher ratio (Primary)	35 (2018)	30 (2019)	n/a	n/a	n/a
Pupil-qualified teacher ratio (Secondary)	11 (2018)	25 (2019)	n/a	n/a	n/a

11 Source: UNESCO Institute for Statistics (UIS) database, http://data.uis.unesco.org/ [19-Dec-20]

Figure 11.1: Proportion of trained teachers

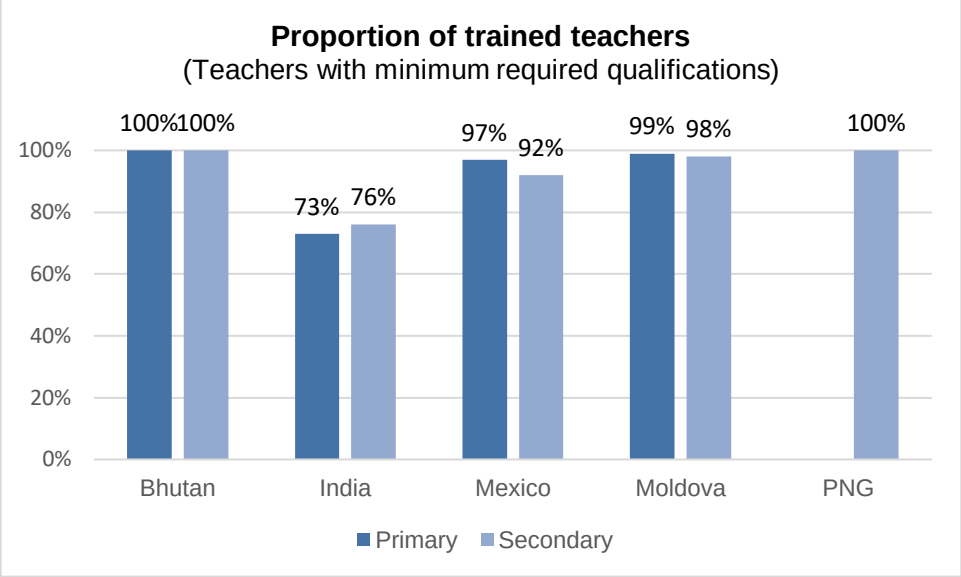


Figure 11.2: Proportion of female teachers

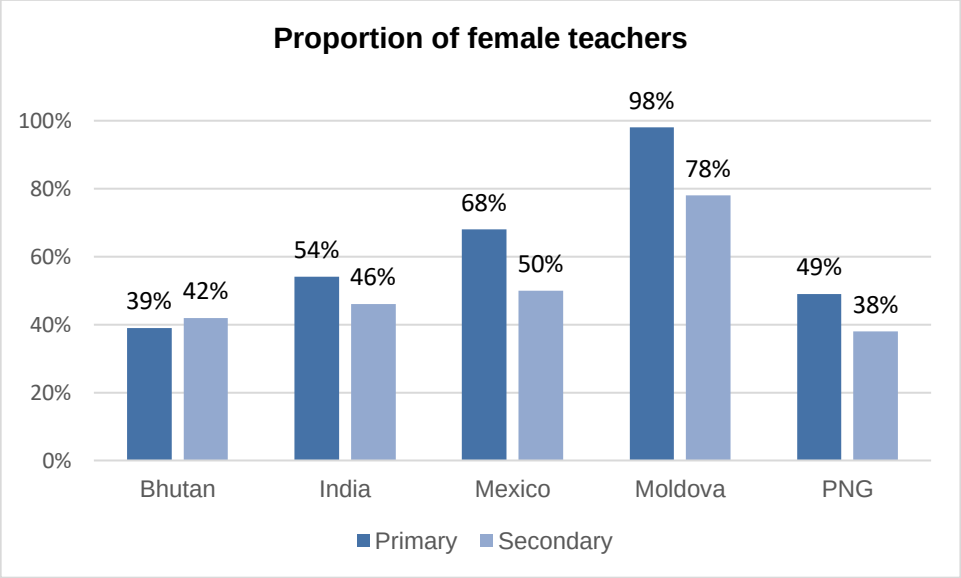


Figure 11.3: Pupil-teacher ratio

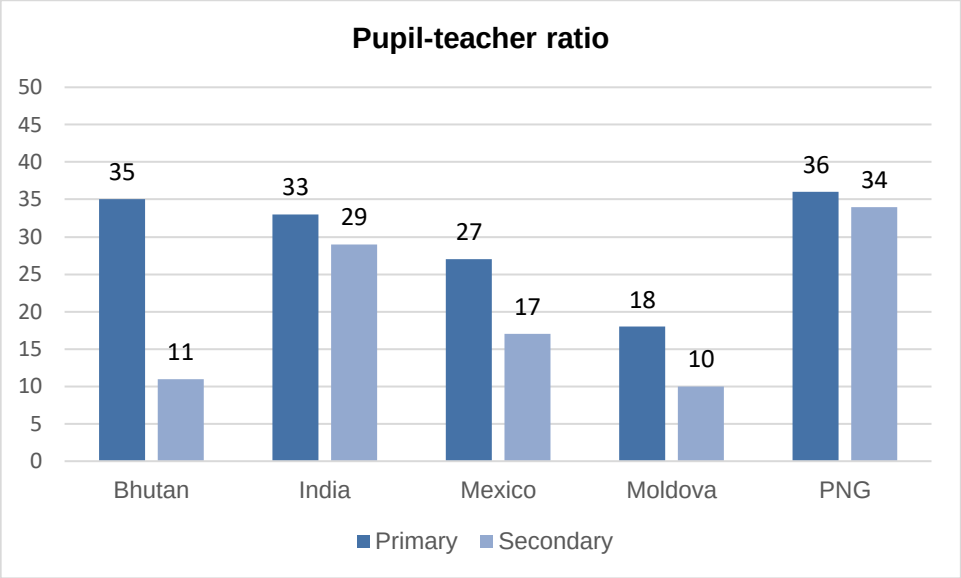
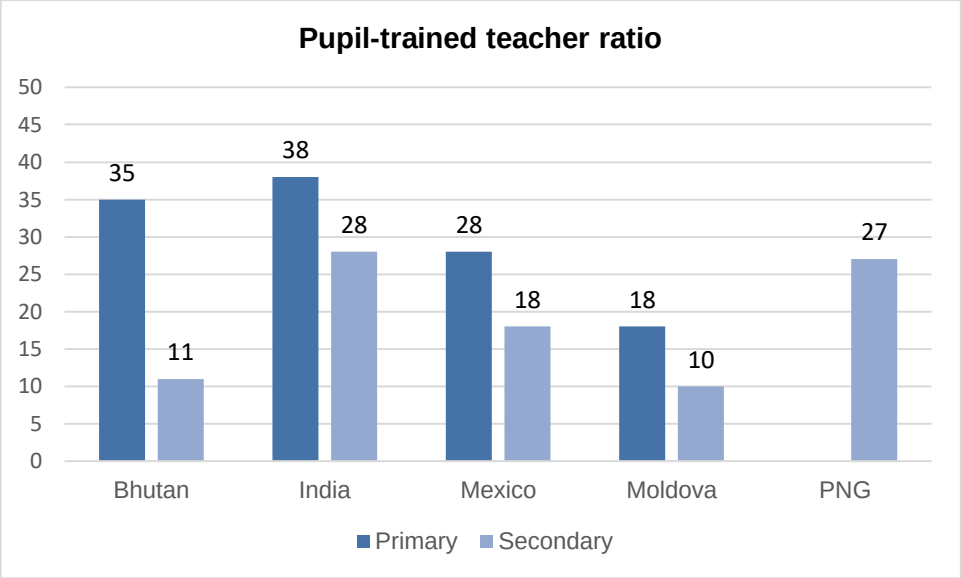


Figure 11.4: Pupil-trained teacher ratio



11.3 Appendix C: Sample characteristics in each country

Table 11.3: Highest level of formal education

What is the highest level of formal education you have completed?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
Below secondary education	Count	1	0	0	0	0
	% within Country	1.6%	0.0%	0.0%	0.0%	0.0%
Secondary education	Count	1	0	0	1	0
	% within Country	1.6%	0.0%	0.0%	1.8%	0.0%
Certificate or Diploma	Count	2	2	10	1	2
	% within Country	3.1%	4.0%	26.3%	1.8%	7.1%
Bachelor	Count	48	23	2	26	25
	% within Country	75.0%	46.0%	5.3%	45.6%	89.3%
Master	Count	12	25	26	27	1
	% within Country	18.8%	50.0%	68.4%	47.4%	3.6%
Doctoral	Count	0	0	0	2	0
	% within Country	0.0%	0.0%	0.0%	3.5%	0.0%
Total	Count	64	50	38	57	28
	% within Country	100.0%	100.0%	100.0%	100.0%	100.0%

Table 11.4: Current employment status

What is your current employment status as a schoolteacher?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
Permanent/ongoing employment	Count	56	46	37	52	26
	% within Country	94.9%	95.8%	97.4%	92.9%	92.9%
Fixed-term contract for longer than 1 school year	Count	3	2	0	1	1
	% within Country	5.1%	4.2%	0.0%	1.8%	3.6%
Fixed-term contract for 1 school year or less	Count	0	0	0	2	1
	% within Country	0.0%	0.0%	0.0%	3.6%	3.6%
Casual/supply/relief teacher	Count	0	0	1	1	0
	% within Country	0.0%	0.0%	2.6%	1.8%	0.0%
Total	Count	59	48	38	56	28
	% within Country	100.0%	100.0%	100.0%	100.0%	100.0%

Table 11.5: Working hours

What is your current employment status as a schoolteacher, in terms of working hours?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
Full-time	Count	63	48	22	49	28
	% within Country	98.4%	96.0%	57.9%	86.0%	100.0%
Part-time	Count	1	2	16	8	0
	% within Country	1.6%	4.0%	42.1%	14.0%	0.0%
Total	Count	64	50	38	57	28
	% within Country	100.0%	100.0%	100.0%	100.0%	100.0%

Table 11.6: Teaching experience

Year(s) working as a schoolteacher in total		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
0-5 years	Count	28	1	14	10	24
	% within Country	43.8%	2.0%	36.8%	17.5%	85.7%
6-10 years	Count	19	19	13	4	3
	% within Country	29.7%	38.0%	34.2%	7.0%	10.7%
10+ years	Count	17	30	11	43	1
	% within Country	26.6%	60.0%	28.9%	75.4%	3.6%
Total	Count	64	50	38	57	28
	% within Country	100.0%	100.0%	100.0%	100.0%	100.0%

Table 11.7: Level currently teaching

What level of schooling do you teach?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
Primary/Elementary	Count	25	50	19	18	1
	% within Country	33.8%	96.2%	48.7%	26.5%	3.6%
Secondary	Count	47	2	18	47	27
	% within Country	63.5%	3.8%	46.2%	69.1%	96.4%
Other	Count	2	0	2	3	0
	% within Country	2.7%	0.0%	5.1%	4.4%	0.0%
Total	Count	74	52	39	68	28
	% within Country	100.0%	100.0%	100.0%	100.0%	100.0%

Table 11.8: Teaching specialist areas

Are you currently teaching in at least one of your specialist areas?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
Yes	Count	50	28	22	55	22
	% within Country	94.3%	82.4%	95.7%	96.5%	84.6%
No	Count	3	6	1	2	4
	% within Country	5.7%	17.6%	4.3%	3.5%	15.4%
Total	Count	53	34	23	57	26
	% within Country	100.0%	100.0%	100.0%	100.0%	100.0%

Table 11.9: Respondents' gender

How do you describe your gender?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
Female	Count	27	18	25	49	9
	% within Country	48.2%	36.0%	65.8%	92.5%	32.1%
Male	Count	29	32	13	4	19
	% within Country	51.8%	64.0%	34.2%	7.5%	67.9%
Total	Count	56	50	38	53	28
	% within Country	100.0%	100.0%	100.0%	100.0%	100.0%

Table 11.10: Respondents' age

What is your age group?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
21 - 35 years of age	Count	43	17	23	15	26
	% within Country	67.2%	34.0%	60.5%	26.3%	92.9%
36 - 50 years of age	Count	20	32	13	30	2
	% within Country	31.3%	64.0%	34.2%	52.6%	7.1%
51 years of age and over	Count	1	1	2	12	0
	% within Country	1.6%	2.0%	5.3%	21.1%	0.0%
Total	Count	64	50	38	57	28
	% within Country	100.0%	100.0%	100.0%	100.0%	100.0%

11.4 Appendix D: Training characteristics in each country

Table 11.11: Year of training completion

When did you complete your teacher training programme?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
0-5 years	Count	20	10	9	11	19
	% within Country	31.7%	20.8%	24.3%	19.3%	67.9%
6-10 years	Count	28	23	16	4	7
	% within Country	44.4%	47.9%	43.2%	7.0%	25.0%
10+ years	Count	15	15	12	42	2
	% within Country	23.8%	31.3%	32.4%	73.7%	7.1%
Total	Count	63	48	37	57	28
	% within Country	100.0%	100.0%	100.0%	100.0%	100.0%

Table 11.12: Teaching qualification route

How did you receive your first teaching qualification?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
A concurrent teacher training programme, e.g., B.Ed.	Count	41	37	21	32	22
	% within Country	64.1%	74.0%	55.3%	56.1%	78.6%
A consecutive teacher training programme, e.g., BSc followed by Grad Dip of Teaching	Count	16	4	9	17	5
	% within Country	25.0%	8.0%	23.7%	29.8%	17.9%
A fast-track or specialised teacher training programme	Count	1	2	2	3	0
	% within Country	1.6%	4.0%	5.3%	5.3%	0.0%
Subject-specific training only	Count	5	7	5	5	1
	% within Country	7.8%	14.0%	13.2%	8.8%	3.6%
I have no formal teaching qualification.	Count	1	0	1	0	0
	% within Country	1.6%	0.0%	2.6%	0.0%	0.0%
Total	Count	64	50	38	57	28
	% within Country	100.0%	100.0%	100.0%	100.0%	100.0%

Table 11.13: Mode of study

What was the mode of study of your teacher training programme?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
Full-time	Count	57	35	24	46	27
	% within Country	87.7%	62.5%	61.5%	76.7%	96.4%
Part-time	Count	5	13	12	11	1
	% within Country	7.7%	23.2%	30.8%	18.3%	3.6%
Online	Count	3	8	3	3	0
	% within Country	4.6%	14.3%	7.7%	5.0%	0.0%
Total	Count	65	56	39	60	28
	% within Country	100%	100%	100%	100%	100%

Table 11.14: Main area of training

What was the main area of your teacher training programme?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
Primary/Elementary	Count	23	47	17	14	1
	% within Country	34.3%	83.9%	41.5%	21.9%	3.4%
Secondary	Count	38	9	20	47	27
	% within Country	56.7%	16.1%	48.8%	73.4%	93.1%
Other	Count	6	0	4	3	1
	% within Country	9.0%	0.0%	9.8%	4.7%	3.4%
Total	Count	67	56	41	64	29
	% within Country	100%	100%	100%	100%	100%

Table 11.15: Qualified to teach specialist subjects

Are you qualified to teach any specialist area(s)/subject(s)?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
Yes	Count	53	34	23	55	26
	% within Country	82.8%	68.0%	60.5%	96.5%	92.9%
No	Count	11	16	15	2	2
	% within Country	17.2%	32.0%	39.5%	3.5%	7.1%
Total	Count	64	50	38	57	28
	% within Country	100.0%	100.0%	100.0%	100.0%	100.0%

Table 11.16: Specialist subjects

		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
Language and literature	Count	26	34	8	13	2
	% within Country	31.7%	53.1%	20.5%	14.9%	3.9%
Mathematics	Count	14	12	10	11	7
	% within Country	17.1%	18.8%	25.6%	12.6%	13.7%
Science	Count	21	4	4	6	17
	% within Country	25.6%	6.3%	10.3%	6.9%	33.3%
Social studies	Count	15	9	10	35	22
	% within Country	18.3%	14.1%	25.6%	40.2%	43.1%
Modern foreign languages	Count	0	1	2	11	0
	% within Country	0.0%	1.6%	5.1%	12.6%	0.0%
Technology	Count	1	2	2	7	0
	% within Country	1.2%	3.1%	5.1%	8.0%	0.0%
Arts	Count	1	2	2	3	0
	% within Country	1.2%	3.1%	5.1%	3.4%	0.0%
Physical education	Count	1	0	0	0	0
	% within Country	1.2%	0.0%	0.0%	0.0%	0.0%
Religion/ethics	Count	1	0	0	0	0
	% within Country	1.2%	0.0%	0.0%	0.0%	0.0%
Practical and vocational skills	Count	1	0	0	0	3
	% within Country	1.2%	0.0%	0.0%	0.0%	5.9%
Other	Count	1	0	1	1	0
	% within Country	1.2%	0.0%	2.6%	1.1%	0.0%
Total	Count	82	64	39	87	51
	% within Country	100%	100%	100%	100%	100%

Table 11.17: Time spent in schools during training

Did you spend time in schools as part of your teacher training programme?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
Yes	Count	61	46	32	54	27
	% within Country	96.8%	92.0%	86.5%	94.7%	96.4%
No	Count	2	4	5	3	1
	% within Country	3.2%	8.0%	13.5%	5.3%	3.6%
Total	Count	63	50	37	57	28
	% within Country	100.0%	100.0%	100.0%	100.0%	100.0%

Table 11.18: Days spent in schools during training

Approximately how many days did you spend in schools during your programme?		Country				
		Bhutan	**India**	**Mexico**	**Moldova**	**PNG**
Less than 20 days	Count	0	15	4	13	2
	% within Country	0.0%	32.6%	12.5%	24.1%	7.4%
20 - 60 days	Count	31	21	5	22	16
	% within Country	50.8%	45.7%	15.6%	40.7%	59.3%
More than 60 days	Count	30	10	23	19	9
	% within Country	49.2%	21.7%	71.9%	35.2%	33.3%
Total	Count	61	46	32	54	27
	% within Country	100.0%	100.0%	100.0%	100.0%	100.0%

11.5 Appendix E: Motivation for entering teaching in each country

Table 11.19: Motivation for entering teaching (Bhutan)

		Not important at all	Of low importance	Of moderate importance	Of high importance
a) Good employment opportunities	Count	2	4	22	36
	%	3.1%	6.3%	34.4%	56.3%
b) Attractive pay	Count	2	8	28	26
	%	3.1%	12.5%	43.8%	40.6%
c) Job security	Count	3	2	17	42
	%	4.7%	3.1%	26.6%	65.6%
d) Job prestige	Count	1	14	26	23
	%	1.6%	21.9%	40.6%	35.9%
e) Convenient location of the school	Count	12	6	21	25
	%	18.8%	9.4%	32.8%	39.1%
f) Teaching schedule (hours, holidays, part-time positions)	Count	7	12	25	20
	%	10.9%	18.8%	39.1%	31.3%
g) Advice of career advisors/teachers/family	Count	4	6	32	22
	%	6.3%	9.4%	50.0%	34.4%
h) Desire to work with children and young people	Count	2	1	19	42
	%	3.1%	1.6%	29.7%	65.6%
i) Desire to work in my subject area	Count	1	1	14	48
	%	1.6%	1.6%	21.9%	75.0%
j) Desire to make a difference in the lives of young people	Count	0	0	10	54
	%	0.0%	0.0%	15.6%	84.4%

Table 11.20: Motivation for entering teaching (India)

		Not important at all	Of low importance	Of moderate importance	Of high importance
a) Good employment opportunities	Count	2	5	10	33
	%	4.0%	10.0%	20.0%	66.0%
b) Attractive pay	Count	6	8	14	22
	%	12.0%	16.0%	28.0%	44.0%
c) Job security	Count	3	4	17	26
	%	6.0%	8.0%	34.0%	52.0%
d) Job prestige	Count	1	3	9	37
	%	2.0%	6.0%	18.0%	74.0%
e) Convenient location of the school	Count	8	8	15	19
	%	16.0%	16.0%	30.0%	38.0%
f) Teaching schedule (hours, holidays, part-time positions)	Count	3	3	22	22
	%	6.0%	6.0%	44.0%	44.0%
g) Advice of career advisors/teachers/family	Count	3	2	18	27
	%	6.0%	4.0%	36.0%	54.0%
h) Desire to work with children and young people	Count	0	1	8	41
	%	0.0%	2.0%	16.0%	82.0%
i) Desire to work in my subject area	Count	0	1	5	44
	%	0.0%	2.0%	10.0%	88.0%
j) Desire to make a difference in the lives of young people	Count	0	0	5	45
	%	0.0%	0.0%	10.0%	90.0%

Table 11.21: Motivation for entering teaching (Mexico)

		Not important at all	Of low importance	Of moderate importance	Of high importance
a) Good employment opportunities	Count	1	3	26	8
	%	2.6%	7.9%	68.4%	21.1%
b) Attractive pay	Count	4	13	18	3
	%	10.5%	34.2%	47.4%	7.9%
c) Job security	Count	1	3	14	20
	%	2.6%	7.9%	36.8%	52.6%
d) Job prestige	Count	3	5	16	14
	%	7.9%	13.2%	42.1%	36.8%
e) Convenient location of the school	Count	4	7	18	9
	%	10.5%	18.4%	47.4%	23.7%
f) Teaching schedule (hours, holidays, part-time positions)	Count	2	6	19	11
	%	5.3%	15.8%	50.0%	28.9%
g) Advice of career advisors/teachers/family	Count	7	3	13	15
	%	18.4%	7.9%	34.2%	39.5%
h) Desire to work with children and young people	Count	0	2	8	28
	%	0.0%	5.3%	21.1%	73.7%
i) Desire to work in my subject area	Count	0	3	8	27
	%	0.0%	7.9%	21.1%	71.1%
j) Desire to make a difference in the lives of young people	Count	0	1	4	33
	%	0.0%	2.6%	10.5%	86.8%

Table 11.22: Motivation for entering teaching (Moldova)

		Not important at all	Of low importance	Of moderate importance	Of high importance
a) Good employment opportunities	Count	7	9	20	21
	%	12.3%	15.8%	35.1%	36.8%
b) Attractive pay	Count	8	15	20	14
	%	14.0%	26.3%	35.1%	24.6%
c) Job security	Count	7	7	19	24
	%	12.3%	12.3%	33.3%	42.1%
d) Job prestige	Count	6	11	18	22
	%	10.5%	19.3%	31.6%	38.6%
e) Convenient location of the school	Count	13	5	17	22
	%	22.8%	8.8%	29.8%	38.6%
f) Teaching schedule (hours, holidays, part-time positions)	Count	7	6	22	22
	%	12.3%	10.5%	38.6%	38.6%
g) Advice of career advisors/teachers/family	Count	7	10	22	18
	%	12.3%	17.5%	38.6%	31.6%
h) Desire to work with children and young people	Count	1	2	12	42
	%	1.8%	3.5%	21.1%	73.7%
i) Desire to work in my subject area	Count	0	0	13	44
	%	0.0%	0.0%	22.8%	77.2%
j) Desire to make a difference in the lives of young people	Count	0	2	11	44
	%	0.0%	3.5%	19.3%	77.2%

Table 11.23: Motivation for entering teaching (PNG)

		Not important at all	Of low importance	Of moderate importance	Of high importance
a) Good employment opportunities	Count	2	2	10	14
	%	7.1%	7.1%	35.7%	50.0%
b) Attractive pay	Count	7	11	7	3
	%	25.0%	39.3%	25.0%	10.7%
c) Job security	Count	1	2	11	14
	%	3.6%	7.1%	39.3%	50.0%
d) Job prestige	Count	6	4	10	8
	%	21.4%	14.3%	35.7%	28.6%
e) Convenient location of the school	Count	7	1	12	8
	%	25.0%	3.6%	42.9%	28.6%
f) Teaching schedule (hours, holidays, part-time positions)	Count	0	6	12	10
	%	0.0%	21.4%	42.9%	35.7%
g) Advice of career advisors/teachers/family	Count	1	4	6	17
	%	3.6%	14.3%	21.4%	60.7%
h) Desire to work with children and young people	Count	0	1	2	25
	%	0.0%	3.6%	7.1%	89.3%
i) Desire to work in my subject area	Count	0	3	6	19
	%	0.0%	10.7%	21.4%	67.9%
j) Desire to make a difference in the lives of young people	Count	0	0	2	26
	%	0.0%	0.0%	7.1%	92.9%

11.6 Appendix F: Perceptions of preparedness and effectiveness in each country

Table 11.24: Perceptions of preparedness for teaching (Bhutan)

Felt prepared for…		Not at all	To a small extent	To a moderate extent	To a great extent
a) Subject knowledge	Count	0	9	27	27
	%	0.0%	14.3%	42.9%	42.9%
b) General teaching	Count	1	7	25	30
strategies	%	1.6%	11.1%	39.7%	47.6%
c) Subject specific teaching	Count	1	11	30	21
strategies	%	1.6%	17.5%	47.6%	33.3%
d) How students learn	Count	0	7	34	22
	%	0.0%	11.1%	54.0%	34.9%
e) Teaching learners of	Count	3	15	27	18
different abilities	%	4.8%	23.8%	42.9%	28.6%
f) Teaching multicultural	Count	6	20	25	12
learners	%	9.5%	31.7%	39.7%	19.0%
g) Teaching multilingual	Count	15	22	15	11
learners	%	23.8%	34.9%	23.8%	17.5%
h) Supporting students with	Count	11	19	24	9
special education needs or	%	17.5%	30.2%	38.1%	14.3%
disabilities					
i) Short-term planning (e.g.,	Count	0	4	24	35
a lesson)	%	0.0%	6.3%	38.1%	55.6%
j) Long-term planning (e.g.,	Count	2	6	25	30
a unit of work or a term)	%	3.2%	9.5%	39.7%	47.6%
k) Use of ICT in teaching	Count	3	20	22	18
	%	4.8%	31.7%	34.9%	28.6%
l) Classroom management	Count	0	6	25	32
	%	0.0%	9.5%	39.7%	50.8%
m) Assessing student	Count	0	5	20	38
learning	%	0.0%	7.9%	31.7%	60.3%
n) Reporting on student	Count	2	3	30	28
learning	%	3.2%	4.8%	47.6%	44.4%
o) Working with other	Count	2	11	26	24
teachers	%	3.2%	17.5%	41.3%	38.1%
p) Working with parents and	Count	6	16	26	15
community	%	9.5%	25.4%	41.3%	23.8%
q) Applying GNH values and	Count	4	10	27	22
principles	%	6.3%	15.9%	42.9%	34.9%

Table 11.25: Perceptions of effectiveness as teachers (Bhutan)

Feel effective in…		Not at all	To a small extent	To a moderate extent	To a great extent
a) Subject knowledge	Count	0	1	27	36
	%	0.0%	1.6%	42.2%	56.3%
b) General teaching	Count	0	2	27	35
strategies	%	0.0%	3.1%	42.2%	54.7%
c) Subject specific teaching	Count	0	6	26	32
strategies	%	0.0%	9.4%	40.6%	50.0%
d) How students learn	Count	0	5	30	29
	%	0.0%	7.8%	46.9%	45.3%
e) Teaching learners of	Count	0	12	32	20
different abilities	%	0.0%	18.8%	50.0%	31.3%
f) Teaching multicultural	Count	1	12	33	18
learners	%	1.6%	18.8%	51.6%	28.1%
g) Teaching multilingual	Count	1	18	30	15
learners	%	1.6%	28.1%	46.9%	23.4%
h) Supporting students with	Count	4	15	27	18
special education needs or	%	6.3%	23.4%	42.2%	28.1%
disabilities					
i) Short-term planning (e.g.,	Count	0	1	26	37
a lesson)	%	0.0%	1.6%	40.6%	57.8%
j) Long-term planning (e.g.,	Count	0	1	26	37
a unit of work or a term)	%	0.0%	1.6%	40.6%	57.8%
k) Use of ICT in teaching	Count	0	3	25	36
	%	0.0%	4.7%	39.1%	56.3%
l) Classroom management	Count	0	3	18	43
	%	0.0%	4.7%	28.1%	67.2%
m) Assessing student	Count	0	1	19	44
learning	%	0.0%	1.6%	29.7%	68.8%
n) Reporting on student	Count	0	3	26	35
learning	%	0.0%	4.7%	40.6%	54.7%
o) Working with other	Count	1	1	24	38
teachers	%	1.6%	1.6%	37.5%	59.4%
p) Working with parents and	Count	2	8	27	27
community	%	3.1%	12.5%	42.2%	42.2%
q) Applying GNH values and	Count	0	3	31	30
principles	%	0.0%	4.7%	48.4%	46.9%

Table 11.26: Perceptions of preparedness for teaching (India)

Felt prepared for…		Not at all	To a small extent	To a moderate extent	To a great extent
a) Subject knowledge	Count	1	4	12	33
	%	2.0%	8.0%	24.0%	66.0%
b) General teaching strategies	Count	3	5	19	23
	%	6.0%	10.0%	38.0%	46.0%
c) Subject specific teaching strategies	Count	2	11	11	26
	%	4.0%	22.0%	22.0%	52.0%
d) How students learn	Count	0	7	9	34
	%	0.0%	14.0%	18.0%	68.0%
e) Teaching learners of different abilities	Count	2	8	14	26
	%	4.0%	16.0%	28.0%	52.0%
f) Teaching multicultural learners	Count	8	12	13	17
	%	16.0%	24.0%	26.0%	34.0%
g) Teaching multilingual learners	Count	14	9	15	12
	%	28.0%	18.0%	30.0%	24.0%
h) Supporting students with special education needs or disabilities	Count	6	11	15	18
	%	12.0%	22.0%	30.0%	36.0%
i) Short-term planning (e.g., a lesson)	Count	3	10	13	24
	%	6.0%	20.0%	26.0%	48.0%
j) Long-term planning (e.g., a unit of work or a term)	Count	3	9	15	23
	%	6.0%	18.0%	30.0%	46.0%
k) Use of ICT in teaching	Count	10	16	7	17
	%	20.0%	32.0%	14.0%	34.0%
l) Classroom management	Count	0	5	15	30
	%	0.0%	10.0%	30.0%	60.0%
m) Assessing student learning	Count	0	8	13	29
	%	0.0%	16.0%	26.0%	58.0%
n) Reporting on student learning	Count	0	8	12	30
	%	0.0%	16.0%	24.0%	60.0%
o) Working with other teachers	Count	1	6	13	30
	%	2.0%	12.0%	26.0%	60.0%
p) Working with parents and community	Count	1	8	9	32
	%	2.0%	16.0%	18.0%	64.0%

Table 11.27: Perceptions of effectiveness as teachers (India)

Feel effective in…		Not at all	To a small extent	To a moderate extent	To a great extent
a) Subject knowledge	Count	0	2	32	16
	%	0.0%	4.0%	64.0%	32.0%
b) General teaching strategies	Count	0	7	29	14
	%	0.0%	14.0%	58.0%	28.0%
c) Subject specific teaching strategies	Count	1	10	25	14
	%	2.0%	20.0%	50.0%	28.0%
d) How students learn	Count	0	6	17	27
	%	0.0%	12.0%	34.0%	54.0%
e) Teaching learners of different abilities	Count	0	7	28	15
	%	0.0%	14.0%	56.0%	30.0%
f) Teaching multicultural learners	Count	4	8	31	7
	%	8.0%	16.0%	62.0%	14.0%
g) Teaching multilingual learners	Count	8	6	30	6
	%	16.0%	12.0%	60.0%	12.0%
h) Supporting students with special education needs or disabilities	Count	4	9	25	12
	%	8.0%	18.0%	50.0%	24.0%
i) Short-term planning (e.g., a lesson)	Count	1	7	28	14
	%	2.0%	14.0%	56.0%	28.0%
j) Long-term planning (e.g., a unit of work or a term)	Count	1	5	30	14
	%	2.0%	10.0%	60.0%	28.0%
k) Use of ICT in teaching	Count	7	8	24	11
	%	14.0%	16.0%	48.0%	22.0%
l) Classroom management	Count	0	1	21	28
	%	0.0%	2.0%	42.0%	56.0%
m) Assessing student learning	Count	0	1	24	25
	%	0.0%	2.0%	48.0%	50.0%
n) Reporting on student learning	Count	0	2	24	24
	%	0.0%	4.0%	48.0%	48.0%
o) Working with other teachers	Count	0	1	18	31
	%	0.0%	2.0%	36.0%	62.0%
p) Working with parents and community	Count	1	2	19	28
	%	2.0%	4.0%	38.0%	56.0%

Table 11.28: Perceptions of preparedness for teaching (Mexico)

Felt prepared for…		Not at all	To a small extent	To a moderate extent	To a great extent
a) Subject knowledge	Count	3	2	15	17
	%	8.1%	5.4%	40.5%	45.9%
b) General teaching	Count	2	2	18	15
strategies	%	5.4%	5.4%	48.6%	40.5%
c) Subject specific teaching	Count	6	8	17	6
strategies	%	16.2%	21.6%	45.9%	16.2%
d) How students learn	Count	2	2	15	18
	%	5.4%	5.4%	40.5%	48.6%
e) Teaching learners of	Count	11	9	12	5
different abilities	%	29.7%	24.3%	32.4%	13.5%
f) Teaching multicultural	Count	16	8	9	4
learners	%	43.2%	21.6%	24.3%	10.8%
g) Teaching multilingual	Count	21	10	5	1
learners	%	56.8%	27.0%	13.5%	2.7%
h) Supporting students with	Count	11	10	13	3
special education needs or	%	29.7%	27.0%	35.1%	8.1%
disabilities					
i) Short-term planning (e.g.,	Count	2	2	12	21
a lesson)	%	5.4%	5.4%	32.4%	56.8%
j) Long-term planning (e.g.,	Count	1	3	15	18
a unit of work or a term)	%	2.7%	8.1%	40.5%	48.6%
k) Use of ICT in teaching	Count	3	5	22	7
	%	8.1%	13.5%	59.5%	18.9%
l) Classroom management	Count	3	4	18	12
	%	8.1%	10.8%	48.6%	32.4%
m) Assessing student	Count	1	1	20	15
learning	%	2.7%	2.7%	54.1%	40.5%
n) Reporting on student	Count	5	5	18	9
learning	%	13.5%	13.5%	48.6%	24.3%
o) Working with other	Count	5	5	20	7
teachers	%	13.5%	13.5%	54.1%	18.9%
p) Working with parents and	Count	9	8	10	10
community	%	24.3%	21.6%	27.0%	27.0%

Table 11.29: Perceptions of effectiveness as teachers (Mexico)

Feel effective in…		Not at all	To a small extent	To a moderate extent	To a great extent
a) Subject knowledge	Count	0	0	1	37
	%	0.0%	0.0%	2.6%	97.4%
b) General teaching	Count	0	0	3	35
strategies	%	0.0%	0.0%	7.9%	92.1%
c) Subject specific teaching	Count	0	1	14	23
strategies	%	0.0%	2.6%	36.8%	60.5%
d) How students learn	Count	0	1	6	31
	%	0.0%	2.6%	15.8%	81.6%
e) Teaching learners of	Count	1	9	21	7
different abilities	%	2.6%	23.7%	55.3%	18.4%
f) Teaching multicultural	Count	5	9	17	7
learners	%	13.2%	23.7%	44.7%	18.4%
g) Teaching multilingual	Count	10	10	15	3
learners	%	26.3%	26.3%	39.5%	7.9%
h) Supporting students with	Count	3	7	19	9
special education needs or	%	7.9%	18.4%	50.0%	23.7%
disabilities					
i) Short-term planning (e.g.,	Count	0	0	2	36
a lesson)	%	0.0%	0.0%	5.3%	94.7%
j) Long-term planning (e.g.,	Count	0	0	5	33
a unit of work or a term)	%	0.0%	0.0%	13.2%	86.8%
k) Use of ICT in teaching	Count	0	2	12	24
	%	0.0%	5.3%	31.6%	63.2%
l) Classroom management	Count	0	0	8	30
	%	0.0%	0.0%	21.1%	78.9%
m) Assessing student	Count	0	0	6	32
learning	%	0.0%	0.0%	15.8%	84.2%
n) Reporting on student	Count	0	0	7	31
learning	%	0.0%	0.0%	18.4%	81.6%
o) Working with other	Count	0	1	14	23
teachers	%	0.0%	2.6%	36.8%	60.5%
p) Working with parents and	Count	0	0	11	27
community	%	0.0%	0.0%	28.9%	71.1%

Table 11.30: Perceptions of preparedness for teaching (Moldova)

Felt prepared for…		Not at all	To a small extent	To a moderate extent	To a great extent
a) Subject knowledge	Count	0	5	24	28
	%	0.0%	8.8%	42.1%	49.1%
b) General teaching	Count	1	10	25	21
strategies	%	1.8%	17.5%	43.9%	36.8%
c) Subject specific teaching	Count	1	8	22	26
strategies	%	1.8%	14.0%	38.6%	45.6%
d) How students learn	Count	6	14	28	9
	%	10.5%	24.6%	49.1%	15.8%
e) Teaching learners of	Count	14	17	20	6
different abilities	%	24.6%	29.8%	35.1%	10.5%
f) Teaching multicultural	Count	19	20	13	5
learners	%	33.3%	35.1%	22.8%	8.8%
g) Teaching multilingual	Count	30	11	13	3
learners	%	52.6%	19.3%	22.8%	5.3%
h) Supporting students with	Count	24	16	13	4
special education needs or	%	42.1%	28.1%	22.8%	7.0%
disabilities					
i) Short-term planning (e.g.,	Count	3	5	21	28
a lesson)	%	5.3%	8.8%	36.8%	49.1%
j) Long-term planning (e.g.,	Count	5	10	17	25
a unit of work or a term)	%	8.8%	17.5%	29.8%	43.9%
k) Use of ICT in teaching	Count	14	11	17	15
	%	24.6%	19.3%	29.8%	26.3%
l) Classroom management	Count	7	16	16	18
	%	12.3%	28.1%	28.1%	31.6%
m) Assessing student	Count	2	14	22	19
learning	%	3.5%	24.6%	38.6%	33.3%
n) Reporting on student	Count	7	15	22	13
learning	%	12.3%	26.3%	38.6%	22.8%
o) Working with other	Count	9	11	22	15
teachers	%	15.8%	19.3%	38.6%	26.3%
p) Working with parents and	Count	14	11	19	13
community	%	24.6%	19.3%	33.3%	22.8%

Table 11.31: Perceptions of effectiveness as teachers (Moldova)

Feel effective in…		Not at all	To a small extent	To a moderate extent	To a great extent
a) Subject knowledge	Count	1	1	17	38
	%	1.8%	1.8%	29.8%	66.7%
b) General teaching	Count	1	1	29	26
strategies	%	1.8%	1.8%	50.9%	45.6%
c) Subject specific teaching	Count	1	1	23	32
strategies	%	1.8%	1.8%	40.4%	56.1%
d) How students learn	Count	1	3	23	30
	%	1.8%	5.3%	40.4%	52.6%
e) Teaching learners of	Count	1	5	32	19
different abilities	%	1.8%	8.8%	56.1%	33.3%
f) Teaching multicultural	Count	6	12	33	6
learners	%	10.5%	21.1%	57.9%	10.5%
g) Teaching multilingual	Count	10	16	26	5
learners	%	17.5%	28.1%	45.6%	8.8%
h) Supporting students with	Count	2	19	23	13
special education needs or	%	3.5%	33.3%	40.4%	22.8%
disabilities					
i) Short-term planning (e.g.,	Count	1	2	12	42
a lesson)	%	1.8%	3.5%	21.1%	73.7%
j) Long-term planning (e.g.,	Count	1	1	15	40
a unit of work or a term)	%	1.8%	1.8%	26.3%	70.2%
k) Use of ICT in teaching	Count	1	2	24	30
	%	1.8%	3.5%	42.1%	52.6%
l) Classroom management	Count	2	3	22	30
	%	3.5%	5.3%	38.6%	52.6%
m) Assessing student	Count	1	3	22	31
learning	%	1.8%	5.3%	38.6%	54.4%
n) Reporting on student	Count	1	3	26	27
learning	%	1.8%	5.3%	45.6%	47.4%
o) Working with other	Count	1	3	22	31
teachers	%	1.8%	5.3%	38.6%	54.4%
p) Working with parents and	Count	1	7	23	26
community	%	1.8%	12.3%	40.4%	45.6%

Table 11.32: Perceptions of preparedness for teaching (PNG)

Felt prepared for…		Not at all	To a small extent	To a moderate extent	To a great extent
a) Subject knowledge	Count	1	0	9	18
	%	3.6%	0.0%	32.1%	64.3%
b) General teaching	Count	0	1	12	15
strategies	%	0.0%	3.6%	42.9%	53.6%
c) Subject specific teaching	Count	1	4	11	12
strategies	%	3.6%	14.3%	39.3%	42.9%
d) How students learn	Count	0	4	10	14
	%	0.0%	14.3%	35.7%	50.0%
e) Teaching learners of	Count	1	4	13	10
different abilities	%	3.6%	14.3%	46.4%	35.7%
f) Teaching multicultural	Count	5	6	11	6
learners	%	17.9%	21.4%	39.3%	21.4%
g) Teaching multilingual	Count	13	2	8	5
learners	%	46.4%	7.1%	28.6%	17.9%
h) Supporting students with	Count	5	8	9	6
special education needs or	%	17.9%	28.6%	32.1%	21.4%
disabilities					
i) Short-term planning (e.g.,	Count	0	0	7	21
a lesson)	%	0.0%	0.0%	25.0%	75.0%
j) Long-term planning (e.g.,	Count	0	4	4	20
a unit of work or a term)	%	0.0%	14.3%	14.3%	71.4%
k) Use of ICT in teaching	Count	3	4	11	10
	%	10.7%	14.3%	39.3%	35.7%
l) Classroom management	Count	0	0	10	18
	%	0.0%	0.0%	35.7%	64.3%
m) Assessing student	Count	0	0	4	24
learning	%	0.0%	0.0%	14.3%	85.7%
n) Reporting on student	Count	0	0	8	20
learning	%	0.0%	0.0%	28.6%	71.4%
o) Working with other	Count	0	2	10	16
teachers	%	0.0%	7.1%	35.7%	57.1%
p) Working with parents and	Count	2	4	11	11
community	%	7.1%	14.3%	39.3%	39.3%

Table 11.33: Perceptions of effectiveness as teachers (PNG)

Feel effective in…		Not at all	To a small extent	To a moderate extent	To a great extent
a) Subject knowledge	Count	0	1	6	21
	%	0.0%	3.6%	21.4%	75.0%
b) General teaching	Count	0	0	14	14
strategies	%	0.0%	0.0%	50.0%	50.0%
c) Subject specific teaching	Count	0	1	11	16
strategies	%	0.0%	3.6%	39.3%	57.1%
d) How students learn	Count	0	3	11	14
	%	0.0%	10.7%	39.3%	50.0%
e) Teaching learners of	Count	1	3	14	10
different abilities	%	3.6%	10.7%	50.0%	35.7%
f) Teaching multicultural	Count	2	4	12	10
learners	%	7.1%	14.3%	42.9%	35.7%
g) Teaching multilingual	Count	3	6	11	8
learners	%	10.7%	21.4%	39.3%	28.6%
h) Supporting students with	Count	2	5	5	16
special education needs or	%	7.1%	17.9%	17.9%	57.1%
disabilities					
i) Short-term planning (e.g.,	Count	0	1	2	25
a lesson)	%	0.0%	3.6%	7.1%	89.3%
j) Long-term planning (e.g.,	Count	1	1	6	20
a unit of work or a term)	%	3.6%	3.6%	21.4%	71.4%
k) Use of ICT in teaching	Count	1	3	7	17
	%	3.6%	10.7%	25.0%	60.7%
l) Classroom management	Count	0	0	5	23
	%	0.0%	0.0%	17.9%	82.1%
m) Assessing student	Count	0	0	4	24
learning	%	0.0%	0.0%	14.3%	85.7%
n) Reporting on student	Count	0	2	4	22
learning	%	0.0%	7.1%	14.3%	78.6%
o) Working with other	Count	0	1	7	20
teachers	%	0.0%	3.6%	25.0%	71.4%
p) Working with parents and	Count	0	2	13	13
community	%	0.0%	7.1%	46.4%	46.4%

11.7 Appendix G: School support in each country

Table 11.34: School support (Bhutan)

		Not at all	Slightly	Moderately	Highly
a) Induction programme	Count	0	1	30	22
	%	0.0%	1.9%	56.6%	41.5%
b) Allocated mentor	Count	0	6	17	22
	%	0.0%	13.3%	37.8%	48.9%
c) Informal mentoring by colleagues at school	Count	0	9	22	23
	%	0.0%	16.7%	40.7%	42.6%
d) Teacher networks outside the school	Count	1	7	26	11
	%	2.2%	15.6%	57.8%	24.4%
e) Professional development opportunities	Count	0	2	22	36
	%	0.0%	3.3%	36.7%	60.0%
f) List of informative websites	Count	1	4	32	13
	%	2.0%	8.0%	64.0%	26.0%
g) Information on pay and conditions	Count	1	7	26	14
	%	2.1%	14.6%	54.2%	29.2%
h) Observation and feedback on my classroom teaching	Count	0	6	18	35
	%	0.0%	10.2%	30.5%	59.3%
i) Observation of other teachers' classroom teaching	Count	0	5	21	25
	%	0.0%	9.8%	41.2%	49.0%

Table 11.35: School support (India)

		Not at all	Slightly	Moderately	Highly
a) Induction programme	Count	0	9	0	38
	%	0.0%	19.1%	0.0%	80.9%
b) Allocated mentor	Count	0	4	0	36
	%	0.0%	10.0%	0.0%	90.0%
c) Informal mentoring by colleagues at school	Count	0	2	0	39
	%	0.0%	4.9%	0.0%	95.1%
d) Teacher networks outside the school	Count	1	5	0	37
	%	2.3%	11.6%	0.0%	86.0%
e) Professional development opportunities	Count	0	8	0	29
	%	0.0%	21.6%	0.0%	78.4%
f) List of informative websites	Count	1	9	0	30
	%	2.5%	22.5%	0.0%	75.0%
g) Information on pay and conditions	Count	2	7	0	36
	%	4.4%	15.6%	0.0%	80.0%
h) Observation and feedback on my classroom teaching	Count	1	4	0	44
	%	2.0%	8.2%	0.0%	89.8%
i) Observation of other teachers' classroom teaching	Count	3	5	0	33
	%	7.3%	12.2%	0.0%	80.5%

Table 11.36: School support (Mexico)

		Not at all	Slightly	Moderately	Highly
a) Induction programme	Count	0	2	3	6
	%	0.0%	18.2%	27.3%	54.5%
b) Allocated mentor	Count	0	7	1	6
	%	0.0%	50.0%	7.1%	42.9%
c) Informal mentoring by colleagues at school	Count	0	2	4	16
	%	0.0%	9.1%	18.2%	72.7%
d) Teacher networks outside the school	Count	1	1	6	9
	%	5.9%	5.9%	35.3%	52.9%
e) Professional development opportunities	Count	1	5	8	11
	%	4.0%	20.0%	32.0%	44.0%
f) List of informative websites	Count	0	4	10	13
	%	0.0%	14.8%	37.0%	48.1%
g) Information on pay and conditions	Count	0	5	8	9
	%	0.0%	22.7%	36.4%	40.9%
h) Observation and feedback on my classroom teaching	Count	0	6	9	16
	%	0.0%	19.4%	29.0%	51.6%
i) Observation of other teachers' classroom teaching	Count	0	6	10	12
	%	0.0%	21.4%	35.7%	42.9%

Table 11.37: School support (Moldova)

		Not at all	Slightly	Moderately	Highly
a) Induction programme	Count	1	6	21	13
	%	2.4%	14.6%	51.2%	31.7%
b) Allocated mentor	Count	1	6	17	15
	%	2.6%	15.4%	43.6%	38.5%
c) Informal mentoring by colleagues at school	Count	0	11	18	18
	%	0.0%	23.4%	38.3%	38.3%
d) Teacher networks outside the school	Count	1	7	17	20
	%	2.2%	15.6%	37.8%	44.4%
e) Professional development opportunities	Count	1	0	19	36
	%	1.8%	0.0%	33.9%	64.3%
f) List of informative websites	Count	0	6	15	26
	%	0.0%	12.8%	31.9%	55.3%
g) Information on pay and conditions	Count	2	7	25	12
	%	4.3%	15.2%	54.3%	26.1%
h) Observation and feedback on my classroom teaching	Count	0	4	33	17
	%	0.0%	7.4%	61.1%	31.5%
i) Observation of other teachers' classroom teaching	Count	1	6	23	24
	%	1.9%	11.1%	42.6%	44.4%

Table 11.38: School support (PNG)

		Not at all	Slightly	Moderately	Highly
a) Induction programme	Count	0	4	8	4
	%	0.0%	25.0%	50.0%	25.0%
b) Allocated mentor	Count	0	3	12	3
	%	0.0%	16.7%	66.7%	16.7%
c) Informal mentoring by colleagues at school	Count	0	4	10	5
	%	0.0%	21.1%	52.6%	26.3%
d) Teacher networks outside the school	Count	0	4	7	3
	%	0.0%	28.6%	50.0%	21.4%
e) Professional development opportunities	Count	0	5	9	6
	%	0.0%	25.0%	45.0%	30.0%
f) List of informative websites	Count	0	1	0	1
	%	0.0%	50.0%	0.0%	50.0%
g) Information on pay and conditions	Count	0	6	6	1
	%	0.0%	46.2%	46.2%	7.7%
h) Observation and feedback on my classroom teaching	Count	0	4	9	11
	%	0.0%	16.7%	37.5%	45.8%
i) Observation of other teachers' classroom teaching	Count	0	3	14	6
	%	0.0%	13.0%	60.9%	26.1%

11.8 Appendix H: Letter of support template

Letterhead / University Logo

Date

Diane Mayer, PhD
Professor of Education (Teacher Education)
University of Oxford | Department of Education
15 Norham Gardens, Oxford. OX2 6PY
Tel: +44(0)1865274015
Email: diane.mayer@education.ox.ac.uk
Website: http://www.education.ox.ac.uk

Re: Letter of support to participate in a research project

Dear Professor Mayer,

We are pleased to support the research project entitled "Education partnerships for development: Sustaining teacher quality in context" that you are leading with a team of researchers in the Department of Education at the University of Oxford.

We at [Name of University/Organisation] always look for ways to improve our teacher quality and feel that rigorous research studies are an important part of our work. By this letter, we confirm our participation in this study.

We expect our role in the project will include

- providing feedback on the linguistic and cultural appropriateness of the questionnaire,
- recruiting schoolteachers for survey research and facilitating survey administration either online or on paper as deemed appropriate,
- discussing views about the feasibility of the questionnaire with the research team at the University of Oxford.

We understand that

- collected raw data and research findings will be shared with us and can be used for our purposes,
- data analysis and reporting will be done by the research team at the University of Oxford,
- our contribution as local partner investigators will be acknowledged in the resulting research outputs,

- this is a pilot study and further collaboration will involve close partner investigator planning for a larger research project.

We look forward to working with you on this project.

Kind regards,

[Name of partner investigator]

[Title of partner investigator]

[Name of University/Organisation]

[Address of University/Organisation if not in letterhead]

11.9 Appendix I: Participant information sheet

DEPARTMENT OF EDUCATION

Diane Mayer, PhD
Professor of Education (Teacher Education)
University of Oxford | Department of Education
15 Norham Gardens, Oxford. OX2 6PY
Tel: +44(0)1865274015
Email: diane.mayer@education.ox.ac.uk

Education partnerships for development: Sustaining teacher quality in context

PARTICIPANT INFORMATION SHEET

Central University Research Ethics Committee (CUREC) Approval Reference: ED-C1A-20-135

1. Why is this research being conducted?

This project is investigating effective teacher training in collaboration with researchers and policymakers in Bhutan, India, Malawi, Mexico, Moldova, Papua New Guinea and Timor-Leste. Teacher quality is important in all these countries as they make progress towards the United Nations Sustainable Development Goal (SDG) 4 ensuring inclusive, equitable and good-quality education and lifelong learning for all. The findings from this project will inform teacher training policies and practices in the participating countries.

The study is guided by the following questions:

1. How well-prepared are teachers for teaching?
2. What characteristics of teacher training are most effective?
3. What school support and induction is valued by teachers?

2. Why have I been invited to take part?

You have been invited because you are employed as a schoolteacher in [country]. We are interested in finding out how your teacher training has prepared you for teaching and impacted your career.

3. Do I have to take part?

No. You can ask questions about the research before deciding whether or not to participate. If you agree to take part, you may withdraw yourself from the study at any time, without giving a reason, by advising the researchers of this decision.

4. ***What will happen to me if I take part in the research?***

If you are happy to take part in the research, you will be asked to complete a survey questionnaire. This should take approximately 10-15 minutes to complete.

5. ***Are there any potential risks in taking part?***

There are no known risks to taking part in the study. All data will be kept confidential, and not disclosed to anyone besides the research team.

6. ***Are there any benefits in taking part?***

There will be no direct or personal benefit to you from taking part in this research. However, your contribution will help us understand the effectiveness of existing teacher training provision and inform relevant policies and practices in [country].

7. ***What happens to the data provided?***

All personal information that could identify you will be removed or changed before results are shared or made public. The research team including local partner investigators will have access to the collected data.

Any data transfer and storage will be done securely in accordance with the data management policy of the University of Oxford. All research data will be retained on encrypted electronic storage devices for at least three years after publication.

8. ***Will the research be published?***

The research findings may be published in academic journals and presented at conferences and other events.

9. ***Who is funding the research?***

The project is funded by the John Fell Fund at the University of Oxford.

10. ***Who has reviewed this study?***

This study has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee (Reference number: ED-C1A-20-135).

11. ***Who do I contact if I have a concern about the study or I wish to complain?***

If you have a concern about any aspect of this study, please contact the local partner investigator [name, email, tel.] or the principal investigator Professor Diane Mayer (diane.mayer@education.ox.ac.uk; +44(0)1865274015) and we will do our best to answer

your query. If you remain unhappy or wish to make a formal complaint, please contact the Chair of the Department of Education Research Ethics Committee at the University of Oxford (using the contact details below) who will seek to resolve the matter.

Dr Liam Gearon
University of Oxford | Department of Education
15 Norham Gardens, Oxford. OX2 6PY
Tel: +44(0) 1865 274036
Email: Liam.gearon@education.ox.ac.uk

12. Data Protection

The University of Oxford is the data controller with respect to your personal data, and as such will determine how your personal data is used in the study. The University will process your personal data for the purpose of the research outlined above. Research is a task that is performed in the public interest.
Further information about your rights with respect to your personal data is available from http://www.admin.ox.ac.uk/councilsec/compliance/gdpr/individualrights/.

Thank you for reading this information sheet and for considering taking part in this research. Please feel free to ask any questions if you would like further details of the study.

11.10 Appendix J: Questionnaire

Sustaining Teacher Quality Questionnaire

About the Study

You are invited to participate in a research study investigating effective teacher training in Bhutan, India, Malawi, Mexico, Moldova, Papua New Guinea and Timor-Leste. The study is being carried out by a research team in the Department of Education at the University of Oxford in collaboration with researchers and policymakers in your country.

We are interested in finding out how your teacher training has prepared you for teaching. Your responses will help inform teacher training policies and practices in [COUNTRY] to support work towards achieving the United Nations Sustainable Development Goal (SDG) 4.

All information collected from this survey will be kept confidential. Further details, including information about data protection, are available in the Participant Information Sheet.

The questionnaire should take about 10-15 minutes to complete. Your participation is entirely voluntary, and you can withdraw at any time without giving a reason.

Thank you very much for your participation!

Participant Consent Form

If you are happy to take this survey, please tick each of the boxes below.

1	I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.	☐
2	I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, and without any adverse consequences or penalty.	☐
3	I understand that this project has been reviewed by, and received ethics clearance through, the University of Oxford Central University Research Ethics Committee.	☐
4	I understand who will have access to personal data provided, how the data will be stored and what will happen to the data at the end of the project.	☐
5	I understand how this research will be written up and published.	☐
6	I understand how to raise a concern or make a complaint.	☐
7	I agree to the use of anonymised quotes in research outputs.	☐
8	I agree to take part in the study.	☐

Sustaining Teacher Quality Questionnaire

Qualifications

1. What is the highest level of formal education you have completed?

- ☐ Below secondary education
- ☐ Secondary education
- ☐ Certificate or Diploma
- ☐ Bachelor
- ☐ Master
- ☐ Doctoral

2. In which country did you complete your highest level of formal education?

_____

3. How did you receive your first teaching qualification?

Please mark one choice.

- ☐ A concurrent teacher training programme, e.g., B.Ed.
- ☐ A consecutive teacher training programme, e.g., BSc followed by Grad Dip of Teaching
- ☐ A fast-track or specialised teacher training programme
- ☐ Subject-specific training only
- ☐ I have no formal teaching qualification. → **Please go to Question 11.**
- ☐ Other (please specify)

_____

4. When did you complete your teacher training programme?

Please write an approximate year.

└┘└┘└┘└┘

5. In which country did you complete your teacher training programme?

_____

6. What was the mode of study of your teacher training programme?

Please mark all that apply.

☐ Full-time

☐ Part-time

☐ Online

7. What was the main area of your teacher training programme?

Please mark all that apply.

☐ Primary/Elementary

☐ Secondary

☐ Other (please specify)

_____

8. Did you spend time in schools as part of your teacher training programme?

☐ Yes

☐ No

9. If 'Yes', approximately how many days did you spend in schools during your programme?

☐ Less than 20 days

☐ 20 - 60 days

☐ More than 60 days

10. Were the following elements included in your teacher training programme? To what extent did you feel prepared for each element in your teaching?

Please mark one choice in both part (A) and part (B) in each row.

	(A) It was included in my training…		(B) I felt my training prepared me…			
	Yes	No	Not at all	Some-what	Well	Very well
a) Subject knowledge	☐	☐	☐	☐	☐	☐
b) General teaching strategies	☐	☐	☐	☐	☐	☐
c) Subject specific teaching strategies	☐	☐	☐	☐	☐	☐
d) How students learn	☐	☐	☐	☐	☐	☐
e) Teaching learners of different abilities	☐	☐	☐	☐	☐	☐
f) Teaching multicultural learners	☐	☐	☐	☐	☐	☐

g) Teaching multilingual learners	☐	☐	☐	☐	☐	☐
h) Supporting students with special education needs or disabilities	☐	☐	☐	☐	☐	☐
i) Short-term planning (e.g., a lesson)	☐	☐	☐	☐	☐	☐
j) Long-term planning (e.g., a unit of work or a term)	☐	☐	☐	☐	☐	☐
k) Use of ICT (information and communication technology) in teaching	☐	☐	☐	☐	☐	☐
l) Classroom management	☐	☐	☐	☐	☐	☐
m) Assessing student learning	☐	☐	☐	☐	☐	☐
n) Reporting on student learning	☐	☐	☐	☐	☐	☐
o) Working with other teachers	☐	☐	☐	☐	☐	☐
p) Working with parents and community	☐	☐	☐	☐	☐	☐

11. How effective do you feel as a teacher in the following areas <u>now</u>?

	I feel effective in the following areas now…			
	Not at all	Slightly	Moderately	Highly
a) Subject knowledge	☐	☐	☐	☐
b) General teaching strategies	☐	☐	☐	☐
c) Subject specific teaching strategies	☐	☐	☐	☐
d) How students learn	☐	☐	☐	☐
e) Teaching learners of different abilities	☐	☐	☐	☐
f) Teaching multicultural learners	☐	☐	☐	☐
g) Teaching multilingual learners	☐	☐	☐	☐
h) Supporting students with special education needs or disabilities	☐	☐	☐	☐
i) Short-term planning (e.g., a lesson)	☐	☐	☐	☐
j) Long-term planning (e.g., a unit of work or a term)	☐	☐	☐	☐
k) Use of ICT (information and communication technology) in teaching	☐	☐	☐	☐
l) Classroom management	☐	☐	☐	☐

m) Assessing student learning	☐	☐	☐	☐
n) Reporting on student learning	☐	☐	☐	☐
o) Working with other teachers	☐	☐	☐	☐
p) Working with parents and community	☐	☐	☐	☐

12. How important were the following for you in deciding to become a teacher?

	Not important at all	Of low importance	Of moderate importance	Of high importance
a) Good employment opportunities	☐	☐	☐	☐
b) Attractive pay	☐	☐	☐	☐
c) Job security	☐	☐	☐	☐
d) Job prestige	☐	☐	☐	☐
e) Convenient location of the school	☐	☐	☐	☐
f) Teaching schedule (hours, holidays, part-time positions)	☐	☐	☐	☐
g) Advice of career advisors/teachers/family	☐	☐	☐	☐
h) Desire to work with children and young people	☐	☐	☐	☐
i) Desire to work in my subject area	☐	☐	☐	☐
j) Desire to make a difference in the lives of young people	☐	☐	☐	☐

Current Work

13. What is your current employment status as a schoolteacher?

☐ Permanent/ongoing employment

☐ Fixed-term contract for longer than 1 school year

☐ Fixed-term contract for 1 school year or less

☐ Casual/supply/relief teacher

☐ Unpaid volunteer

☐ Other (please specify) _____

14. What is your current employment status as a schoolteacher, in terms of working hours?

☐ Full-time

☐ Part-time

15. What level of schooling do you teach?

Please mark all that apply.

☐ Primary/Elementary

☐ Secondary

☐ Other (please specify) _____

16. Are you qualified to teach any specialist area(s)/subject(s)?

☐ Yes

☐ No → **Please go to Question 19.**

17. What are your specialist teaching areas/subjects?

Please write up to two areas/subjects.

1. _____ 2. _____

18. Are you currently teaching in at least one of your specialist areas?

☐ Yes

☐ No

19. How many years of paid school teaching experience do you have?

Please write a number. Write 0 (zero) if none.

└┘└┘ Year(s) working as a schoolteacher in total

└┘└┘ Year(s) working in other education roles, not as a teacher

└┘└┘ Year(s) working in other non-education roles

20. Do you currently work as a teacher at more than one school?

☐ Yes

☐ No

21. If 'Yes', how many schools do you currently work at as a teacher?

Please write a number.

└┘└┘ School(s)

School Support

22. Have you been provided with the following types of school support? If yes, how effective were they in supporting you as a teacher?

Please mark one choice in both part (A) and part (B) in each row.

	(A) It was provided...		(B) It supported me as a teacher…			
	Yes	No	Not at all	Slightly	Moderately	Highly
a) Induction programme	☐	☐	☐	☐	☐	☐
b) Allocated mentor	☐	☐	☐	☐	☐	☐
c) Informal mentoring by colleagues at school	☐	☐	☐	☐	☐	☐
d) Teacher networks outside the school	☐	☐	☐	☐	☐	☐
e) Professional development opportunities	☐	☐	☐	☐	☐	☐
f) List of informative websites	☐	☐	☐	☐	☐	☐
g) Information on pay and conditions	☐	☐	☐	☐	☐	☐
h) Observation and feedback on my classroom teaching	☐	☐	☐	☐	☐	☐
i) Observation of other teachers' classroom teaching	☐	☐	☐	☐	☐	☐

Future Plans

23. Where do you see yourself in three years' time?

☐ Working as a schoolteacher

☐ Working as a teacher in another educational setting (e.g., adult education)

☐ Working in a school leadership position

☐ Working in an education project, policy, or research position

☐ Working in other non-education roles

☐ Other (please specify)

_____

About You

24. How do you describe your gender?

- ☐ Female
- ☐ Male
- ☐ Prefer to self-describe

_____

25. What is your age group?

- ☐ Under 20 years of age
- ☐ 21 - 35 years of age
- ☐ 36 - 50 years of age
- ☐ 51 years of age and over

26. What is your first language(s)?

_____

27. In what language do you teach?

_____

Final Thoughts

28. Please provide any additional comments you would like to make about your teacher training programme or professional development opportunities available to you:

_____

_____

_____

Thank you for your time! Your response has been recorded.

11.11 Appendix K: Pilot study feedback form

Dear partner investigators,

Thank you very much for supporting the Sustaining Teacher Quality (STQ) project.

To improve the STQ survey, we would appreciate your feedback regarding your experience of conducting the pilot study in your country. The form consists of three sections and should take about 5-10 minutes to complete. The questions are designed to gather your views on participant recruitment strategies, questionnaire design/implementation and findings/analysis.

Thank you for taking the time to share your thoughts with us.

Before we begin, please select which country's STQ research team you are part of.

- ☐ Bhutan
- ☐ India
- ☐ Mexico
- ☐ Moldova
- ☐ Papua New Guinea

I. Participant Recruitment Strategies

Q1. How easy or difficult was it to recruit teachers for the pilot survey?

	1	2	3	4	5	
Very difficult	○	○	○	○	○	Very easy

Q2. What worked well?

_____

_____

Q3. What were the challenges?

_____

_____

II. Questionnaire Design & Implementation

Q4. Please rate the following aspects of the questionnaire:

	Poor	Fair	Good	Excellent
Length	☐	☐	☐	☐
Clarity	☐	☐	☐	☐
Structure/Flow of questions	☐	☐	☐	☐
Visual layout	☐	☐	☐	☐
Relevance to country context	☐	☐	☐	☐
Translation (if applicable)	☐	☐	☐	☐

Q5. Did the participants report any difficulties completing the questionnaire?

☐ Yes (please explain) _____

☐ No

Q6. Is there any question we should add/revise/delete?

☐ Yes (please explain) _____

☐ No

III. Findings & Analysis

Q7. Did you find the data analysis techniques appropriate?

☐ Yes

☐ No (please explain) _____

Q8. How useful did you find the findings for informing the local teacher education policies and practices?

☐ Not at all ☐ Slightly ☐ Moderately ☐ Highly

Please explain why: _____

IV. Final Thoughts

Q9. Do you have any final comments or suggestions? _____