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**DIRECTORATE FOR EDUCATION
EDUCATION POLICY COMMITTEE**

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Board of Participating Countries of the Teaching and Learning International Survey

The 8th Meeting of the Board of Participating Countries (BPC) of TALIS

ANALYTICAL DIRECTIONS OF THE NEXT SURVEY ROUND OF TALIS

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Mr Michael Davidson: + 33 1 45 24 92 25 ; michael.davidson@oecd.org
Secretariat: + 33 1 45 24 18 72 ; isabelle.moulherat@oecd.org

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ANALYTICAL DIRECTIONS OF THE NEXT SURVEY ROUND OF TALIS

Introduction

1. This paper presents the proposed analytical framework that will shape the second round of TALIS. It updates TALIS' first round framework with the outcomes from the first round and suggests themes that the second round survey could address. The paper also offers some suggestions of how the dimensions of the framework and the indicators within them could be viewed in terms of teacher well-being, teachers' education, and teaching and learning. This can serve as a guide for countries in deciding on the priorities for the next round of TALIS.

2. The TALIS BPC is asked to:

- **REVIEW AND COMMENT** on the updated framework to ensure that all policy-relevant themes are covered in preparation for a priority-rating exercise that will determine the focus of the next round of TALIS.
- **REVIEW AND COMMENT** on the proposal to survey teachers at ISCED Level 1 through to ISCED Level 3 in the next round of TALIS.

Project aim

3. The OECD's Teaching and Learning International Survey (TALIS) is designed to provide a comprehensive assessment of how teachers and teaching and learning environments shape learning outcomes. It seeks to fill gaps in the international (and national) evidence base on effective teaching and learning practices and the policy levers that can create the pre-requisites for this.

4. In doing so, TALIS provides insights into some of the factors that lie at the heart of differences in learning outcomes that the OECD's Programme for International Student Assessment (PISA) has revealed. Indeed, the ultimate objective is for PISA and TALIS to become increasingly integrated.

The first round of TALIS

5. The first round of TALIS was carried out in 24 countries in the 2007/08 school year. Through a questionnaire-based sample survey of teachers and school principals, TALIS investigated the learning environment and working conditions of schools. In each country, around 200 schools and 20 teachers within each school were randomly selected. Of those selected, the target response rates of both the schools and teachers were 75%. All but one country reached these standards.

6. The chosen target population of the first round of TALIS was teachers of lower-secondary education and the school principals of their schools. The chosen policy themes were:

- the role and functioning of school leadership;
- how the work of teachers is evaluated and how teachers receive feedback;

- teachers' continuous professional development; and
- teachers' beliefs and attitudes about teaching and their pedagogical practices.

7. The main policy findings from the first round of TALIS can be found in Annex B and the Executive Summary and full Initial Report can be downloaded from the following website: www.oecd.org/edu/talis.

Strategic plans for a second round of TALIS

8. In its next round, TALIS could aspire to gain a clearer picture of teacher and teaching quality and provide governments with some tools to support a teaching profession with an identity and a community of continuously-improving professionals. In addition to a survey component, the new approach could also include a collaborative platform with searchable video-studies that would link the work of policymakers, influencers and leaders with the 'front line' of teaching and learning. The work would be international in nature and comparative in approach, building on the best examples from around the world and grounded in leading research on the effectiveness of teaching. This is discussed in more detail in the paper EDU/INES/TALIS(2010)1.

9. For the survey component, the policy themes to be focused on will be determined by participating countries. With that said, it is clear that for TALIS to have a genuine impact on policies and improve the quality of teachers and teaching, its focus will need to be on providing sharper internationally comparative data on teaching practices and teacher and teaching quality.

10. It would be possible, for instance, from research literature and national/international policy documents (e.g. the European Commission "Improving the quality of teacher education") to establish some common attributes of what makes a good teacher and to examine through TALIS the extent to which teachers in different countries have these. System level information as well as teacher and school level information collected through TALIS on initial teacher training, induction, mentoring and in-service training could examine the effectiveness of teacher training systems in providing these skills to teachers.

11. In terms of actual teaching practices, there could be an added value in focusing on practices in mathematics teaching (perhaps by over-sampling mathematics teachers), as this would correspond to the major domain in PISA 2012. This approach would allow TALIS to examine more specific comparative practices, in contrast to the subject-general practices that the first round of TALIS investigated. Given the limitations of examining teaching practices through a questionnaire approach, the next round of TALIS may consider alternative options for identifying and observing good teaching practices, perhaps through the use of video. This could be offered as an optional component in TALIS.

Linking TALIS to PISA 2012

12. Linking the next round of TALIS to PISA 2012 would strengthen the analysis of links between practices and student outcomes. At least at the school level; this may be an option for countries to choose in the next round of TALIS. This possible linkage and its benefits are discussed in document EDU/INES/TALIS/ (2010)3.

Possible themes for a second round of TALIS to focus on

13. A priority-rating exercise will help guide the policy focus of the next round of TALIS (see doc. Ref. EDU/INES/TALIS(2010)4). The framework in Annex A will form the basis of that rating exercise, so it is important that the TALIS BPC reviews it for completeness and relevance.

The framework

14. The framework is organised around the following five policy themes:

- Attracting teachers to the profession;
- Developing teachers within the profession;
- Retaining teachers in the profession;
- School policies supporting effectiveness
- Effective teachers and teaching.

15. Under each policy issue, there are several themes which could then be studied, and within these themes, several indicators that a TALIS survey could generate. Each theme is detailed with a brief description, a list of the indicators that comprise each theme, the sample of respondents for relevant questions in the survey, a brief discussion of the potential analysis, and the policy and research questions that could be addressed by the theme. This illustrates aspects of both the survey design and the deliverables to be obtained from the survey

16. The framework has been revised and amended in light of the results from the first round of TALIS, with some new themes and indicators added, as well as some refocusing and reorganising of other themes. Key changes to the framework include the introduction of a separate theme on initial teacher education (Theme 1.2) and refocusing Theme 2.1 onto in-service professional development), new themes on teachers' professional practices (Theme 5.3), 21st Century skills: ICT in teaching (Theme 5.4) and the expansion of Theme 4.2 to consider the school ethos and school climate.

Providing a coherent story of teaching

17. In establishing the priorities for the focus of the second round of TALIS, it will be important that the chosen themes make a coherent whole. To assist in the discussion of this, it is possible to regard the themes and indicators in the framework into dimensions of: *Teacher well-being*, *Teacher education*, and *Teaching practices*. With each one of these dimensions, related information about the national policies, practices and data could be collected and presented to strengthen the policy relevance of the study. Use of these dimensions could also help not only to explain similarities and differences between countries, but also to understand teachers and teaching and learning in broader cultural contexts.

18. Such an approach recognises that policy issues and indicators dealing with attracting, developing and retaining teachers are very strongly connected to each other and that teacher well-being could be a common denominator of these. Separate studies of these issues would give a fragmented picture of the whole.

19. Furthermore, the different phases of teacher education are strongly interlinked. One could argue that the study of in-service teacher education alone, without complementary information on initial teacher education in countries, would provide a very weak base for policy recommendations on the knowledge, skills and competences of teachers.

Teacher well-being dimension

20. The 'teacher well-being' dimension would be constructed from indicators that assess motivations to become a teacher, general job satisfaction with career choice, teaching and school climate, general career experiences, and career development. The well-being of teachers can be considered to be an essential issue when attracting, motivating and retaining teachers, it deals with questions such as the following:

- What factors motivated them to become teachers?
- Are these factors relevant in teacher's practicing careers?
- What are the aspects that teachers would like to change in their work?
- Where do they find their motivation?
- How much influence do teachers have on educational issues of different levels?

21. Some system level background information could be highlighted to better understand the teacher well-being in a national context (for example, with indicators such as: appreciation of teachers' work by students, parents, principals and society; the proportion of applicants to teacher education (TE) programmes versus graduates from TE; length of teacher education; teachers' salaries; holidays, retirement age, workload and class sizes; school climate; teacher supply and demand; working status; gender distribution of teachers; etc). Most of these system level indicators already exist, but they should be checked and possibly updated. TALIS questionnaires could also be used for this purpose, but could only do so with a limited length and number of questions.

22. Another important element would involve a collection of national ministry level official policies (information from written documents) which aim at making teachers jobs more attractive, improving teachers' working status, and promoting for example more males into teaching.

Teacher education dimension

23. The teacher education dimension could describe the competences required by teachers to adequately impart knowledge and skills to students and encourage lifelong learning. Traditionally teachers are considered to gain those necessary competences through their initial teacher education, induction phase and in-service training. The first round of TALIS focused on in-service training and took a glimpse at the induction phase, but left initial teacher education untouched. However, in order to understand the role and the need for in-service training in different countries, the contents of preceding trainings such as initial teacher education and a teacher's active role in that practice, need to be known.

24. The next round of TALIS could identify teachers as central mediators in the practical application of educational policy issues. This is why it would be important to know what kind of tools (knowledge, skills and competencies) teachers have and have not received in their training. TALIS could also place more emphasis on identifying which tools teachers find to be applicable in their work and which ones are not so necessary.

25. Research on teacher education could ask the following questions:

- What are the goals of policy makers with regards to teachers' key competencies, and how well do teacher education programmes actually support these competencies? Do teachers' own educational and career goals differ from those of policy makers?
- What types of training and professional development occur inside and outside of school and what is the role of learning in practice?
- What is the role of innovation in school and what kind of support exists for this?

26. To understand teachers' education in a national context, some system level indicators could be collected (for example, pre-service teacher training requirements in education, cumulative years of education required for entry into the training programme, duration of training programme; mandatory amount of work experience and time required for certification and/or licensing; existence of competitive examination to enter public education system; final qualification required for various ISCED levels; amount participation in professional development; etc).

27. Policy issues collected from participating countries could highlight official policies at the national ministry level (written documents, if they exist), where general goals are set for the key competencies and requirements of teachers at various levels. If those do not exist at national or state levels, there could be a collection of policies on the general school curricula at certain levels of education in order to find out what teaching approaches and skills are recommended at the national level.

Teaching practices dimension

28. In terms of actual teaching practices, there could be an added value in focusing on practices in mathematics teaching (perhaps by over-sampling mathematics teachers), as this would correspond to the major domain in PISA 2012. This approach would allow TALIS to examine more specific comparative practices, in contrast to the subject-general practices that the first round of TALIS investigated. Given the limitations of examining teaching practices through a questionnaire approach, the next round of TALIS may consider alternative options for identifying and observing good teaching practices, perhaps through the use of video. This could be offered as an optional component in TALIS.

29. Thus, the teaching and learning dimension could rely on mixed method approach, because it would enable more details and nuances of the diversity of teaching and learning approaches to be captured, than the collection of questionnaire and system level data (for mixed method research, see e.g., *Designing and Conducting Mixed Methods Research*, John W. Creswell – Vicki L. Plano Clark, University of Nebraska-Lincoln, Sage Publications). In that sense, the use of video in TALIS would be complementing the findings of questionnaire study and vice versa. The idea of an on-line collaborative platform for teachers mentioned earlier, could provide a very modern platform for dissemination of integrated results of both of these study approaches. That would enable us also to show how good pedagogical teaching and learning orientations work in practice.

30. Compared to the first round of TALIS, the next cycle could focus more the use of ICT in teaching, support for innovation in school, multi-professional co-operation (between teachers and social workers), and networking within society. The teaching practices dimension could also include a question on school climate and recognize teachers' central and collaborative roles in establishing it. Teachers could provide individual-level responses about their teaching approaches and roles, and this could include information about student assessment practices and preferred teaching methods and classroom strategies. With this kind of approach, the following questions could be answered:

- What impact, if any, does integration of ICT in the teaching and learning process have on the pedagogical orientation and other aspects of teachers' practice?
- How do teachers perceive the term "quality in teaching"? What are their pedagogical beliefs and preferred teaching strategies? How does this relate to the structure of decision-making, policies and objectives established in schools? Do these issues and beliefs differ between teachers of different ISCED levels?
- How do the qualifications and years of experience of teachers affect their perception of their most effective teaching strategies? How does this relate to the training they received and the way they are evaluated and rewarded?
- How do teachers in different countries view their teaching goals and the approaches they should take to achieve them? What factors do teachers regard as promoters and obstacles for them in achieving a high quality of teaching?
- What are the preferred teaching and classroom strategies?

A modular approach

31. As discussed and supported at the October 2009 meeting of the BPC, one possible development to the next round of TALIS could be to have a core set of indicators addressing commonly agreed key policy areas but to also introduce different dimensions/modules for thematic areas that groups of countries could choose to investigate in more detail. These modules could be offered as national options or if there were sufficient countries, international options. This approach would have the advantage of broadening the international appeal of TALIS, though care would need to be taken to ensure the international core of TALIS is not undermined by lengthening of the questionnaires (EDU/INES/TALIS (2009)4). The proposal of topic for modules could be produced in assessing the results of the priority-rating exercise.

Choosing the target population for a second round

32. TALIS was conceived as a sequence of surveys which, over time, will survey teachers from all phases of schooling. Having focussed on teachers of lower secondary education (ISCED level 2) in the first round of TALIS, the proposed focus of the second round needs to be considered now.

33. Advantages and disadvantages of different target populations for the second round have been discussed widely in TALIS BPC meetings. When this was discussed at the BPC meeting in October 2009, there were mixed views about the ISCED level focus of the second round but the BPC noted that a representative sample of school teachers across a number of ISCED levels could be an option.

34. Recognising the varied preferences of countries, the Secretariat proposes that the next round of TALIS would cover both primary and secondary levels of teachers. This will have the advantage of increasing the relevance of TALIS to a broader range of countries.

35. A further advantage of adopting a broader target population such as this would be that it would enable the study of some cross-phase issues that are shared between teachers throughout schooling. By this design we could study similarities and differences between ISCED levels for example in:

- teacher well-being
- teachers' education (initial training, induction and in-service)

- teachers' qualifications
- teachers' beliefs in teaching
- subject specific components
- teacher competences (for example pedagogical skills to integrate the usage of ICT in teaching)

36. The inclusion of primary level teachers would also increase the understanding of long-lasting and cumulative impact of the earlier education on student achievement at the end of compulsory schooling. Thus, it would help us to understand for example the outcome measures of PISA and national achievement tests.

37. With this test design we could also study the collaboration between the teachers of different ISCED levels and seek answers to the following questions:

- What kind of information flows between the levels?
- What kind of supportive actions exists for students in the transition phase between the different levels (e.g. counseling)?
- Is there teacher collaboration between different levels, for example in curricula development?
- Is the mobility of teachers or principals possible between different levels?

38. Other advantages of a broader target population are that it would allow the responses of teachers in lower secondary education to be compared between the first and second round of TALIS. It would also facilitate a link between TALIS and PISA for those countries who wished to do that, since the schools attended by 15-year-old students in the PISA study are either at ISCED level 2 or ISCED level 3, thus falling within the TALIS target population of schools.

39. One issue which could arise from having a cross-phase target population is the extent to which one single teacher questionnaire could be equally applicable for teachers at different ISCED levels. The evidence from the first round of TALIS suggests that a single questionnaire could in fact be achievable. The Secretariat's assessment is that with only minor changes in 2 out of total of 43 Teacher Questionnaire items used in first TALIS, the questionnaire could have been valid for use in primary as well as secondary education.

40. But some variation might be necessary. For instance, if it is decided to oversample mathematics teachers to examine teaching practices in mathematics in the next TALIS round, then there could be a need to have different questions on mathematics teaching for teachers in primary and secondary levels.

41. These issues would of course be fully considered in the development of the questionnaires for the second round of TALIS.

42. Clearly cost is an important consideration in reaching a recommendation for target populations. As noted in an earlier BPC papers (Doc. Ref. EDU/INES/TALIS(2008)6 and EDU/INES/TALIS (2009)4) a rough indication of the increased international costs of surveying two ISCED levels rather than one would be around EUR 20,000 per country and the cost of surveying three ISCED levels instead of one would increase the international costs by around EUR 30,000 per country. These cost estimates are highly tentative and of course exclude the national costs associated with expanding the target population.

ANNEX A: TALIS POLICY FRAMEWORK

The TALIS BPC is asked to **REVIEW AND COMMENT** on the updated framework to ensure that all policy relevant issues are covered in preparation for a priority-rating exercise to determine the focus of a second round. More specifically, direction is sought regarding the following 5 policy issues are:

1. Attracting teachers to the profession
2. Developing teachers within the profession
3. Retaining teachers in the profession
4. School policies supporting effectiveness
5. Effective teachers and teaching

Under each policy issue there will be short description about lessons learned from the first TALIS together with information about what else could be learned from second round of TALIS. Under that there are several themes which could be then studied with indicators. This paper describes and illustrates the nature of indicators that could be obtained through the next round of TALIS. Each theme is detailed with a brief description, a list of the indicators that comprise each theme, the sample and respondents to pertinent questions in the survey, a brief discussion of the resulting analysis, and the policy and research questions that could be addressed with the theme. This illustrates aspects of both the survey design and the deliverables to be obtained from the survey.

Policy Issue 1: Attracting teachers to the profession

The first TALIS gave us insights of:

- Broad qualification level of teachers
- Factors associated with job satisfaction
- Incentives and rewards (partial)
- Professional autonomy

But we still have more to learn about:

- Career structure
 - Teacher selection
 - Pathways into teaching
 - Quality of entrants
 - Salary competitiveness
 - Additional benefits (vacations, permanent career)
-

Themes

1. Attracting good students into teaching
2. Initial teacher education
3. Adequacy of teacher supply and teacher shortages
4. Effectiveness of recruitment and selection procedures and incentives
5. Motivations and early career experience of new teachers

Policy and research questions

- Which factors are perceived by teachers to be the most effective for attracting good students into teacher education and teaching, and what are the greatest detractors?
- How does the education and training of teachers vary between and within countries? Is it equitably distributed throughout schools and geographic locations and are there differences between teaching subjects?
- What are the levels of teacher shortages across countries? What are the distributions of teacher shortages across schools and subject areas? What approaches are used to cope with these shortages?
- What is the profile of the teacher job and workforce?
- What are the recruitment and selection procedures that are used within schools and how do they differ within and between countries? Are some recruitment procedures associated with increased or decreased teacher shortages and surpluses? How effective are these procedures perceived to be by teachers and principals?
- What kind of national policies have been introduced to raise the status and quality of teaching as a profession and which are aimed to attract teachers to the profession?

Theme 1.1 Attracting good students into teaching

General description

- This indicator describes the motivational reasons of why to become a teacher. It assess motivations to become a teacher, general job satisfactions with career choice, teaching, school climate, career experiences, and career development from teachers point of view. Contextually it could be linked to a larger group of indicators dealing with teacher well-being, where attracting, developing, motivating and retaining teachers form a lifelong continuum.

Indicators

- Appreciation of teachers profession by students, parents, principals and by society (teachers point of view)
- Expectations of the teachers' job at the beginning of teacher education and fulfilment of those expectations (teacher responses).
- Factors motivating teacher recruitment
- Terms and conditions of teacher contracts (salary, vacation, workload etc) (System level data)

Sample and respondents

- Responses would be obtained from teachers. There would be an advantage to oversample new teachers. Teachers' answers could be aggregated to school level and country level.

Discussion

- Discussion of attracting students into teaching would be both illustrative and analytical. It would illustrate the teachers' status across subject areas and how this differs between schools and countries. Expanding TALIS to cover both primary and secondary could give information about the differences between class-teachers and subject teachers.
- It is the duty of national or regional education authorities to implement such kind of policies that both assure the quality and quantity of TE. Attractiveness of the teacher's profession is highly depending on the status and job satisfaction of the teachers and teaching job. Introducing some system level indicators with teachers' responses would deepen our understanding about the appreciation of teacher's profession. Ideally that data would consists pre-service TE requirements; cumulative years of education required for entry into TE; duration of TE; model of TE; teacher salary; workload; vacation; career structure: retirement age and school climate. Also some new system level indicators could be collected in relation with TALIS, such as: the number of applicants to TE per graduates from TE; teachers' career structure; existence of different pathways into teaching; the national average of TE expenses per one graduate; and the number of teacher educators per student teachers.

Policy and research questions

- Is teachers work regarded as a profession across the countries? Which characters make teachers job more attractive in some countries than in others? How do the quality and attractiveness vary across schools, subject areas and different levels of teachers? How successful have national policies been in attracting students into teacher education?
- How do young teachers' (at the beginning of their career) and experienced teachers' perceptions about the issues which attracted them into a teaching differ? Have there been any policy changes which could explain these differences?

Theme 1.2 Initial teacher education*General description*

Provides a general profile of initial teacher education (TE) and training undertaken by school principals and teachers. This includes also education taken prior TE in descriptives of initial TE. Satisfaction and effectiveness would be measured with attitudinal responses. This includes both the perceptions of teachers that completed the teacher education and training and comparisons with the objectives of the education and training. Objectives of the education and training would be collected from research literature and national/international policy documents (e.g. the European Commission "Improving the quality of teacher education") to establish some common attributes of what makes a good teacher and to examine through TALIS the extent to which teachers in different countries have these.

Indicators

- Characteristics of initial teacher education (System level description)
- Initial teacher training route followed
- Teacher perceptions of the training
- Perceived effectiveness

Sample and respondents

- Individual-level responses will be obtained from teachers and principals regarding their initial education prior to joining the teaching profession and their subsequent education and training. Responses will then be aggregated to the school and country-level. However, the largest work would be the updating of the Education at a Glance 2003 system level data. The data would be updated by OECD or NPM).

Discussion

- The data will provide policy makers with an TE and training profile of teachers and school principals and enable comparisons of their workforce at the school and country level. System level data would help us to understand better the national TE system of and its' goals. Data collected from teachers and principals would help us to understand how these goals have been achieved. School-level data would also facilitate analysis of the relationship between the education and training of teachers and principals within schools and other school characteristics. This would focus upon the question of whether particular types of schools are more likely to both attract and then develop teachers with greater levels of initial TE. Position-level data would permit analysis of the distribution of in-service education and training across positions within schools. This would focus on the relationship between education and training and career advancement in the teaching profession.

Policy and research questions

- What is the education and training profile of teachers, head teachers, and principals at different levels in schools' hierarchy? What is the relationship between education and training and position/promotion?
- To what extent do teachers perceive that initial education:
 - prepared them for effective classroom teaching;
 - provided them with sufficient pedagogical knowledge;
 - gave them the knowledge and skills to identify and teach children with special learning needs;
 - helped them to conduct summative and formative assessment;
 - provided them knowledge and skills of being innovative and developing their own expertise in research based teaching.

- How do these perceptions differ between various teacher school and demographic characteristics such as subject area, experience and position in hierarchy, gender, and age, low or high-SES? What are the differences across countries that have different policy settings?
- How does the education and training of teachers vary between and within countries? Is it equitably distributed throughout schools and geographic locations and are there differences between teaching subjects?
- How well the nationally set and described teacher education system and goals set up to this system match up with teachers' and principals' educational background and their views of skills and competences they should have mastered in?

Theme 1.3 Adequacy of teacher supply and teacher shortages

General description

- This indicator would detail the levels of teacher shortages and surpluses in schools as considered by school principals and teachers. It would also illustrate recruitment issues in the teacher labour market. It would address much of the paucity of information concerning the distribution of teacher shortages across schools and between subject areas. It would identify differences across schools, community types, areas and countries. It would also identify teachers which are teaching subjects outside their field of expertise.

Indicators

- Levels and distribution of teacher shortages (as considered by principals)
- Difficulties in replacing qualified teachers (as considered by principals)
- Effectiveness and satisfaction with recruitment procedures (principal and teacher responses)
- Decision-making responsibilities in recruitment (principal and teacher responses)
- Teachers doing out-of-field teaching (teacher responses)

Sample and respondents

- Responses would be obtained from school principals that reflect school-level information of experience with teacher shortages and teacher supply. Teacher responses would indicate personal experience with recruitment and general impressions of job matching and the teacher labour market.

Discussion

- Discussion of recruitment and teacher shortages would be both illustrative and analytical. It would illustrate the extent of teacher shortages as considered by school principals and difficulties in hiring qualified teachers across subject areas and how this differs between schools and countries. Discussion of the prevalence of these issues and their impact upon teachers would also be provided. Analysis of attitudinal responses will add to this information, particularly in

comparisons between recruitment procedures, teacher shortages, and attitudes concerning the effectiveness of recruitment procedures.

- The main reasons behind the prevalence of out-of-field teaching are organizational characters of schools and school systems as a whole. It is important to find out how out-of-field teaching varies across schools, systems, areas and countries. This variation could be based on the rigidity of the teaching labour market as it facilitates or hampers school officials' ability to hire new or temporary personnel and the leadership characteristics of principals' inasmuch they are more or less arbitrary in allocation teachers to subjects, among others. Out-of-field teaching tells also about appreciation of teaching as a profession. Teachers can be considered as a semi-professionals inasmuch they can teach without full certification and outside of their field of expertise.
- Out-of-field teaching would be asked from teachers. It would be question dealing with their qualifications, including their university major or concentration and subject matter for which they are certified to teach or query teachers on the qualifications they have for the target class.

Policy and research questions

- What are the differences in teacher shortages/surpluses (as considered by school principals) across countries? What are the distributions of these shortages/surpluses across schools and subject areas?
- What are the differences in teachers' experiences of out-of-field teaching? How do these differ between the schools, areas, and countries?
- What is the recruitment procedures used within schools and how do they differ within and between countries? Are some recruitment procedures associated with increased or decreased teacher shortages and surpluses?
- What are the perceptions of both school principals (employers) and school teachers (employees) of the recruitment procedures?

Theme 1.4 Effectiveness of recruitment and selection procedures and incentives

General description

- The indicator would identify the type of recruitment and selection procedures undertaken by schools and teachers. Differences at the school-level would be identified. The effectiveness of such procedures would be measured through both principal and teacher perceptions.

Indicators

- Objectives of recruitment procedures (teacher and/or principal responses)
- Perceptions of recruitment procedures (teacher and/or principal responses)
- Effectiveness and satisfaction with recruitment procedures (principal and teacher responses)
- Description of recruitment process and decision-making responsibilities (principal responses)

Discussion

- The indicator examines recruitment procedures and their effectiveness at the school-level. It would complement indicators analysing teacher shortages and new teachers. In particular, analysis of the effectiveness of recruitment procedures would be within the context of other school-level indicators such as school culture and developing and retaining teachers.

Policy and research questions

- What are the differences in recruitment and selection procedures across countries? Do these differences impact upon perceived effectiveness?
- How are differences in recruitment and selection procedures (and their effectiveness) correlated with other school-level indicators such as school culture and the development of teachers?

Theme 1.5 Motivations and early career experience of teachers*General description*

- The indicator provides attitudinal information of the early career experience and motivations of teachers. It will also describe the supportive actions and counselling what teachers have received in early phases of their teaching career. It will also give information of organizational challenges that new teachers might be facing in their career.

Indicators

- Career and teaching motivations of new teachers
- General satisfaction of new teachers with teacher education, teaching, school climate, and career choice
- Preparedness of new teachers for classroom teaching
- Support and counselling needs of new teachers
- Teacher sorting and tracking

Sample and respondents

- Questions concerning teachers' personal experience of their early careers are individual-level responses. New teachers can be sub-sampled. Agreement on which teachers are considered early career teachers would have to be reached during the questionnaire development.

Discussion

- Analysis would be presented of the early career experience and motivations of teachers. These will focus on the expectations and reasons of becoming a teacher and the impressions and issues how these expectations were satisfied in the beginning of the career. Thus there could be strong linkage with theme 1.1 which is about attraction of teacher's career.

- Importantly, comparisons will be drawn between motivations and expectations and in early career experience to identify if teachers with particular backgrounds and motivations are more likely to encounter specific issues or difficulties in their early career. The level and distribution of induction and mentoring programmes (detailed under policy issue number two) would also be analysed in the context of the attitudinal responses of early career teachers.
- Teacher sorting and tracking are issues where more qualified teachers are teaching in the schools with higher socioeconomic background and classes with more advanced students where as the less qualified teachers teach in lower level schools and classes. Often these lower qualified teachers are the ones with least experience.

Policy and research questions

- What are the motivations for teachers entering the profession? How does this differ by subject area? What does this imply for attracting more teachers to the profession? How satisfied new teachers are in TE. What's the relationship between career expectations, early career experiences and job satisfaction?
- What are the early career experiences of teachers and to what extent do they perceive they are prepared for classroom teaching? How does this differ between teacher characteristics, subject areas and use of induction and mentoring programmes?
- What kind of evidence there is of teacher sorting and teacher tracking in within schools and between schools across the countries?

Policy Issue 2: Developing teachers within the profession

The first TALIS gave us insights of:

- Amount and profile of CPD
- Priorities for CPD
- Effectiveness of CPD
- Costs versus benefits
- Prevalence of induction and mentoring
- Appraisal and feedback links
- Factors associated with self-efficacy
- Role of school leadership
- But we still have more to learn about:

But we still have more to learn about:

- Quality of CPD
- Initial teacher education
- Accreditation and certification
- Teacher competence profiles
- Attributes of effective teachers

Themes

1. Profile of teachers' in-service education and training
2. Frequency of in-service education and training
3. Satisfaction and effectiveness of in-service education and training

Policy and research questions

- What is the frequency of training and professional development across schools and countries? How does this differ between different types of schools and different types of teachers?
- What types of training and professional development occur within schools? What is the most favoured form of training and professional development?
- To what extent are induction and mentoring programmes prevalent across schools and countries?
- How are the initial teacher education, induction phase and in-service training connected with each other in countries? Who provides mentoring and in-service training of teachers? What kind of qualification system exists for CPD?
- What is the education and training profile of teachers, head teachers, and principals at different levels in schools' hierarchy? What is the relationship between education and training and position/promotion?
- Do teachers believe the education and training they have undertaken has equipped them with the necessary skills to gain promotion? Do they perceive it to expand their career in other occupations/industries?
- How is education, training and professional development assessed within schools? To what extent do teachers and principals consider it increases teacher effectiveness and improves student outcomes?

Theme 2.1 Profile of teachers' in-service education and training***General description***

- Provides a general profile of in-service education and training undertaken by school principals and teachers. This will provide a profile of the education history of respondents and include both training in and outside of schools.

Indicators

- Types of in-service education and training
- Support and barriers for in-service education and training
- Effectiveness of in-service education and training
- Profile of mentoring and induction programmes

Sample and respondents

- Both teachers and principals will be asked for these questions.

Discussion

- The data will provide policy makers with an in-service education and training profile of teachers and school principals and enable comparisons of their workforce at the school and country level. System level data would help us to understand better the national system of and its' goals. Data collected from teachers and principals would help us to understand how these goals have been achieved. School-level data would also facilitate analysis of the relationship between the education and training of teachers and principals within schools and other school characteristics. This would focus upon the question of whether particular types of schools are more likely to both attract and then develop teachers with greater levels of in-service education and training. Position-level data would permit analysis of the distribution of in-service education and training across positions within schools. This would focus on the relationship between education and training and career advancement in the teaching profession.

Policy and research questions

- How does the in-service training of teachers vary between and within countries? Is it equitably distributed throughout schools and geographic locations and are there differences between teaching subjects?
- What is the in-service training profile of school principals and teachers at different levels in schools' hierarchy? What is the relationship between in-service education and training and position/promotion?
- What is the relationship between teachers and principals' in-service education and training and other school characteristics? Do particular schools attract and then develop better educated teachers and principals?
- Are there any nationally set goals for teacher in-service training and professional development?
- How teachers' and principals' view skills and competences they should have mastered in?

Theme 2.2 Frequency of in-service education and training

General description

- The indicator would identify the frequency of education and training within and outside schools in different countries. It would also illustrate differences between and within schools in different countries.

Indicators

- Level and intensity of participation
- Frequency and distribution of induction and mentoring programs

Sample and respondents

- Principals would provide school-level data of the type and frequency of education and training in their schools. This could be complemented with information of the education and training undertaken by the principals themselves.
- Teachers would be asked to provide information of the education and training they have recently received (e.g. in the past 12-24 months). This would support information obtained from principals and allow for temporal and attitudinal indices to be created.

Discussion

- The information about the types of support available to new entrants to the teaching would be very important to have in order to understand and develop induction/on-the-job qualifying phase for new teachers. A big important issue is level of collaboration between mentors and teacher education institution to develop effective teachers.
- As well as being illustrative of the frequency of education and training across countries, differences between schools would be discussed and the extent that particular types of training are favoured by particular schools or targeted within the education system. Position-level data would permit analysis of the distribution of education and training across teachers within schools and help identify which teachers in a school are more likely to undertake education and training. This would investigate the relationship between education and training and career advancement.

Policy and research questions

- What is the frequency of in-service training and professional development across schools, provinces and countries? How does this differ between different types of schools and different types of teachers?
- What types of training and professional development occur within schools? What is the most favoured form of training and professional development?
- To what extent are induction and mentoring programmes prevalent across schools, provinces and countries? What are the contents of these programmes? Who gives the mentoring? How are the mentors educated? Are these programs done in co-operation of teacher education institutions? How the quality of teaching is ensured during the induction / on-the job-qualifying phase?

Theme 2.3 Satisfaction and effectiveness of in-service education and training*General description*

Satisfaction and effectiveness of in-service training would be measured with attitudinal responses. Data would be obtained on the perceived effectiveness and satisfaction of education and training; perceptions of value to the education offered to students; objectives and incentives for schools and individual teachers to undertake education and training; and perceptions and procedures of assessment of education and training within schools. System level information as well as teacher and school level information collected through TALIS on in-service training could examine the effectiveness of systems providing these skills to teachers.

Indicators

- Personal and school objectives of in-service education and training
 - Decision-making structure (who in schools decides the type of education and training received and for which teachers)
 - Personal needs and requirements education and training
 - Incentives and plans for future education and training and perceived relationship with career structure and promotion opportunities
- Assessment mechanisms for in-service education and training (including opinion on value of such assessment) (principal and teacher responses)
- Development needs and un-satisfied demand
- Government priorities for teachers' professional development (System level data)
- Impact of in-service education and training

Sample and respondents

- Respondents will include both school principals and teachers and analysed accordingly. Principals will provide attitudinal information regarding education and training at their school that could be complemented with information of their personal education and training. Teacher responses would be individual-level responses that reflect the education and training they have personally undertaken. System level educational goals for teacher education and key skills will be studied from official documents.

Discussion

- Attitudinal data would complement self-reports of the education and training profile of school principals and teachers and the frequency with which it is undertaken. It would provide evidence of the perceived value of such education training, how its value is assessed within schools and incorporated into teaching, and the role of education and training in teachers' careers. Differences between countries would be illustrated to provide context and policy information. At the school level, differences would be analysed between types of schools, their education and training needs, and the perceived effectiveness of such training. These analyses would complement education and training profiles (indicator 2.1).
- The skills and competences set nationally for teachers are important in studying the possible mismatch of skills set for teachers and skills they have received from different phases of teacher education or from practice. Another issue is also to study teachers' consideration of the importance of those skills. The knowledge of nationally set skills is also very important when defining international skills and competences, so that better instruments to monitor the demand and supply of those could be created.

Policy and research questions

- To what extent do teachers perceive that their in-service training:

- Improves their effectiveness in classroom teaching
 - provided them more pedagogical knowledge;
 - improved their ability to identify and teach children with special learning needs;
 - improved their ability to conduct summative and formative assessment;
 - improved their knowledge and skills of being innovative and developing own expertise in research based teaching:
- How do these perceptions of in-service training differ between various teacher school and demographic characteristics such as subject area, experience and position in hierarchy, gender, and age, low or high-SES? What are the differences across countries that have different policy settings?
 - How is education, training and professional development assessed within schools? To what extent do teachers and principals consider it increases teacher effectiveness and improves student outcomes?
 - What types of education and training do teachers consider would be most valuable to improve teacher/school effectiveness and student outcomes? Do teachers believe they are receiving this from the education and training they have undertaken?

Policy issue 3: Retaining teachers in the profession

The first TALIS gave us insights of:

- Factors associated with job satisfaction
- Factors associated with self-efficacy
- Recognition and rewards
- Teacher evaluation
- Support mechanisms in schools
- Role of school leadership

But we still have more to learn about:

- Career prospects
- Teacher attrition
- Interventions to address underperformance
- Dismissal procedures

Themes

1. Teacher attrition and turnover rates
2. Job satisfaction and teacher human resource measures
3. Recognition, reward and evaluation of teachers
4. Support and guidance for the most experienced teachers
5. Division of teachers' working time

Policy and research questions

- How does teacher attrition compare between and within countries? Are they higher in some subjects, types of teachers, types of schools, geographic locations than others and what does this mean for targeting policies for retaining teachers?
- What are the sources of teacher satisfaction/dissatisfaction? How does teacher job satisfaction vary between different types of teachers (age, gender, subject specialty etc)? What are the implications of this for incentive policies?
- What are the policies for recognising, rewarding and evaluating teachers and how do these differ between countries? How effective are these policies perceived to be by teachers and principals; are there types of reward mechanisms or models of evaluation that seem to work better than others?
- How well does the career structure of teachers encourage or hinder teacher motivation and teacher retention? Are models that allow greater career variety and diversification associated with greater job satisfaction?
- Are there national policies which help to maintain the work ability and motivation of the oldest teachers? How these oldest and most experienced teachers adapt to changes? What are teaching practices, beliefs and attitudes of these teachers compared to teachers from other age groups teachers? How the tacit knowledge is transferred to younger teacher generation?

Theme 3.1 Teacher attrition and turnover rates

General description

- The indicator provides a profile of teacher supply and demand issues from the school perspective (through school principal and teacher responses). Data would illustrate the extent of teacher shortages and surpluses across subject areas and in what types of schools they are likely to occur. This would also include data on the movement of teachers within the profession and the extent mismatches in supply and demand have caused unqualified teachers to fill vacancies in particular schools or subject areas. In national level, information about the control mechanisms of the teacher production are also collected

Indicators

- Teacher turnover and attrition (principal responses)
- Qualified candidates and qualified teachers (principal responses)
- National policies of controlling the number of teachers (system/national level data)

Sample and respondents

- Principals would provide information of their experiences in recruiting and retaining teachers to their schools. This would be school-level information of shortages, surpluses and number and quality of qualified candidates. Teachers would provide individual-level responses of their

personal experience with recruitment and retention and their experience in teaching classes for which they may not have been fully qualified. Ministries would provide short descriptions how the teacher labour force is being regulated.

Discussion

- Discussion would focus upon the level and distribution of teacher shortages across countries. School-level differences would illustrate if particular schools are more or less likely to incur shortages and/or surpluses and in which subject areas. Analysis of the extent of use of unqualified teachers would complement this discussion and highlight one of the consequences of the mismatch between the supply and demand for teachers. National level analysis would highlight the variations of policies for controlling the teacher labour force. Insights into the relationships between teacher shortages and surpluses and school climate and school leadership could also prove valuable for policy analysis and development.

Policy and research questions

- How do issues of teacher attrition compare between and within countries? Are they higher in some subjects, for different types of teachers and schools, geographic locations than others and what does this mean for policies targeting the retentions of teachers?
- To what extent are mismatches in supply and demand causing teachers to teach subjects and/or classes for which they are not fully qualified? Is this occurring more often in particular subject areas and particular schools?
- What are the national labour force policies and how successful they seem to be in the light of the teachers' and principals' responses?

Theme 3.2 Job satisfaction and teacher human resource measures

General description

- The indicator would provide attitudinal responses of various human resource issues for teachers and principals such as measures of job satisfaction, job security. A measure of the likelihood of teachers leaving the profession could also be obtained.

Indicators

- Job satisfaction, security and morale
- Self-efficacy
- Perceived status of the profession
- Likelihood of leaving the profession
 - Per cent chance that teachers would leave their job voluntarily in the next 12 or 24 months.
 - Perceptions of gaining employment outside the profession (if they were to consider leaving).

Sample and respondents

- Both teachers and principals would provide individual-level information of their attitudes and beliefs concerning their own employment and career. Principals could also be asked for their impressions of the human resource issues for teachers in their schools.

Discussion

- Discussion would centre on key human resource measures such as job satisfaction and job security. Differences between countries, schools, and different teacher positions and subject areas would be analysed. Analysis would also be conducted of the interaction of various attitudinal responses to provide insights into the drivers of various human resource issues.

Policy and research questions

- How does teacher job satisfaction/dissatisfaction vary between and within countries and how does this correspond with differences in school and teacher characteristics?
- How does teacher job satisfaction vary between teachers of different types (age, gender, subject area)? What are the implications of this for incentive policies?
- What school-level policies and programmes are associated with increased or decreased job satisfaction?

Theme 3.3 Recognition, reward and evaluation of teachers

General description

- An indicator that details the career structure of school principals and teachers. It provides details of the school-level policies and procedures that evaluate and reward principals and teachers. This is complemented by attitudinal data of the impact and effectiveness of these policies and procedures.

Indicators

- School policies that recognise, reward and evaluate teachers – Frequency, criteria, outcomes (principals provide school-level data and teachers provide personal responses)
 - links to rewards and professional development, basis of evaluation, process for dealing with ineffective teachers, promotion and career diversification arrangements
- Perceptions of the effectiveness of policies that recognise, reward and evaluate teachers (principal and teacher perceptions)
 - To what extent does it reflect and reward: good teaching; innovation; tenure; student test scores; peer reviews; supervisor assessment; education and training
 - To what extent is it individual or team oriented and what is its perceived impact upon morale, school effectiveness

- What is the frequency and clarity of evaluation and reward procedures
- What are the teachers' considerations of evaluation policies (frequencies, time usage) in student, teacher, and school level?
- Interventions to address underperformance
- Career ladder and prospects of teachers (principal and teacher personal responses)
 - Career plans and perceptions of career possibilities: in school, in other positions, schools, sector, industry

Sample and respondents

- Individual-level data would be obtained from both school principals and teachers that reflect their experiences throughout their career and their perceptions regarding the career path and evaluation and recognition of principals and teachers. Principals would also provide school-level data that detail pertinent school policies and procedures to provide the framework to analyse responses. System level data about national policies of school, teacher and student evaluation would be collected from the official documents.

Discussion

- Discussion would be illustrative of the career path of principals and teachers. The school-level data would complement existing data of the career hierarchy and commensurate wages and conditions that exist in centralised agreements in countries to illustrate how these agreements operate at the school level. Analysis would focus on differences in school programs and policies and how these differences impact upon principals' and teachers' career path. This would also include analysis of attitudinal responses and perceptions of the impact upon teaching, school effectiveness and the factors that encourage and restrict career advancement.

Policy and research questions

- What are the policies for recognising, rewarding and evaluating teachers and how do these differ between countries? How effective are these policies perceived to be by teachers and principals; are there types of reward mechanisms or models of evaluation that seem to work better than others?
- What are teachers' considerations about the frequency and need of national/regional evaluations of the students, teachers and schools? Are evaluations taking time of teachers main job – teaching?
- How well does the career structure of teachers encourage or hinder teacher motivation and teacher retention? Are models that allow greater career variety and diversification associated with greater job satisfaction and teacher retention?
- What are the factors that encourage and restrict career advancement? To what extent are these factors perceived to impact upon teaching and school effectiveness? Are there strong differences between schools and between different types of schools in both these policies and their impact?

Theme 3.4 Support and guidance for the most experienced teachers

General description

- Provides basic information of the support, counselling and motivation methods for oldest and most experienced teachers.

Indicators

- Participation in professional development by 55+ teachers
- Adaptation to changes in working climate, for example collaboration between the teachers and use of ICT
- General job satisfaction for 55+ teachers
- Teaching practices, beliefs and attitudes of 55+ teachers
- Maintaining motivation and work ability (Collaboration with younger teachers)

Sample and respondents

- A common agreement should be made about the definition of 'oldest or more experienced teachers'. The proposal is for those aged 55+ years to be considered the oldest teachers. This would provide a large enough group which could be sub-sampled from TALIS. Data would be collected from all teachers and principals and analysed by subgroup of 55+ teachers.

Discussion

- Teaching is a profession placed within the context of lifelong learning. The first TALIS informed us that 27% of teachers and 60% of principals in TALIS countries were over 50 years of age. TALIS also reported that for these older teachers participation rates in professional development were lower. However, the changes in society such as increased immigration, developments in ICT, diversified work tasks, and changes in professional image from the individual job to cooperation of teachers and stakeholders are affecting all the teachers.
- In many countries together with an ageing population of teachers, there is a political tendency to increase the retirement age. Thus, it might be very challenging to keep the most experienced teachers motivated, their competences (for example ICT-skills) updated and keep them sufficiently effective in their work. There might be a need to access more accurately the oldest groups of teachers which would mean teachers of 55 + years or teachers 55-59 years and teachers 60+ years

Policy and research questions

- Are there any national policies which address maintaining the work ability and motivation of 55+ year old teachers?
- How do the oldest teachers adapt to changes in teachers work compared to younger teachers?
- What is the general job satisfaction among 55+ teachers?

- What are the teaching practices, beliefs and attitudes of 55+ teachers?
- How the tacit knowledge is transferred to younger teacher generation?

Theme 3.5 Division of teachers' working time

General description

- An indicator depicting how teachers working time between various tasks. It would distinguish between administrative duties, school duties, contact with individuals and institutions external to the school, and various teaching duties.

Indicators

- Classroom teaching time
- Teaching outside of the classroom (preparation, assessment, guidance of students)
- Administrative duties
- Extra-curricular activities

Sample and respondents

- Questions under this indicator would only be obtained from teachers. However, if it was considered desirable, principals could also be included and the questions altered accordingly. School principals could also be asked to supply information of school policies regarding working time and variation between different staff.

Discussion

- Discussion would be illustrative of the manner in which teachers working time is divided between various tasks. Particular attention would be given to the relationship between time spent in various duties by teachers in different positions and subject areas. This would permit analyses of differences in how schools allocate their teacher resources.
- The division of classroom instructional time to different kind of tasks would give us further evidence of teaching styles and instructional approaches. Linking those either with PISA or national standardized test would provide data regarding whether teachers in different types of schools vary their working time.
- Descriptions of teachers working time in different type of schools and countries gives interesting information about the workload. Comparison of official data about the teachers' workload and their own explanations about the usage of time on teaching and other work related tasks could explain students learning outcomes. Among pupils there is an important measure, Opportunity to Learn. In teachers point of view a similar measure would be Opportunity to Teach.

Policy and research questions

- How do teachers vary their working time between teaching and non-teaching activities? What is the proportion of time spent on various teaching activities? To what extent does this vary between teachers of different experience and subject areas?
- Does the manner in which teachers' divide their working time differ with school characteristics? Does this differ with differences in school leadership and school culture?
- What is the division of working time in classroom teaching? (OTT)

Policy Issue 4: School policies supporting effectiveness

The first TALIS gave us insights of:

- Profile of practices and beliefs
- Contrast of beliefs with practices
- Factors associated with different practices
- Extent of teacher collaboration

But we still have more to learn about:

- Are some practices more effective than others?
 - How do teachers adapt practices for different students?
 - How do different practices associate with student motivation and engagement?
 - Subject-specific practices
 - Evidence of innovation
-

Themes

1. School leadership
2. School climate and ethos

Policy and research questions

- What do school principals and teachers perceive as effective school leadership and what are the main factors associated with effective school leadership? What are the levels of school leadership across schools and countries? Is effective school leadership more likely to exist in particular types of schools or with particular groups of principals and students?
- What is the connection with school leadership, school climate and other school characteristics? To what extent are school programmes (such as common direction in learning) used in schools and what is their impact upon teachers and teaching (e.g. education and training and teaching practices)?

- What are the factors associated with a positive and or negative school climate? To what extent do particular issues impact upon particular teachers? Are there particular characteristics or issues that drive responses regarding school climate?

Theme 4.1 School leadership

General description

- This indicator would identify the factors that teachers and principals perceive to create effective school leadership. It would also detail the extent that these factors exist in schools (e.g. the extent that specific programmes and policies exist in schools). Attitudinal responses would detail their impact upon teachers and their perceived impact upon teaching and school effectiveness. This would complement data and analysis of other indicators such as school climate, teaching practices and various principal, teacher and school characteristics. In the first TALIS these issues were addressed.

Indicators

- Terms and conditions of employment of school leader
- Qualifications and experience
- Role and function of the school leader (administrative and pedagogical leadership)
- Distributed leadership (team leadership in the school)
- Training and development of school leaders
- Attracting effective school leaders
- School policies to support teaching and learning (e.g. ability-grouping, student assessment, target setting, discipline)
- Perception of school leadership (only asked of teachers)

Sample and respondents

- Principal and teacher responses would be divided with principals asked to provide school-level information of programmes and policies and the impact their perceived impact of programmes and policies upon teachers, teaching and the school.
- Teachers would provide attitudinal information of the impact upon them and their career, their teaching, and their perceptions of the impact upon the school. Teachers would also supply information of the extent of their involvement and interaction in each school policy and programme.

Discussion

- An indicator that details and compares the responses of school principals and teachers. School principal responses would provide information of school programmes, levels of school autonomy and the effect they perceive these have on teachers and students. Teacher responses would provide information concerning the impact of these programs upon both their teaching and their personal work situation. These two sets of information would be aggregated to the country level to illustrate the differences in the extent that school leadership factors operate within schools.
- At the school level, comparisons would be made between the types of school leadership factors employed by principals and their impact upon teachers. This would be analysed to identify those school leadership factors that have the most positive effect upon teachers.
- School principal and teacher perceptions of the impact upon students would also be analysed in this fashion with analysis controlling for any discrepancies between principal and teacher perceptions. Comparisons would be made between teacher and school characteristics to assist in identifying the impact upon the school and if positive responses are more connected to particular types of schools and/or teachers.

Policy and research questions

- What do school principals and teachers perceive as effective school leadership and what are the main factors associated with effective school leadership? What are the levels of school leadership across schools and countries? Is effective school leadership more likely to exist in particular types of schools or with particular groups of principals and students?
- What is the connection with school leadership, school climate and other school characteristics? To what extent are school programmes (such as common direction in learning) used in schools and what is their impact upon teachers and teaching (e.g. education and training and teaching practices)?

Theme 4.2 School climate and ethos

General description

- The indicator consists of attitudinal data of principal and teacher perceptions of school climate issues. These include factors relating to students, teachers, principals and the school overall. These are complemented by principal responses regarding staffing issues.

Indicators

- Factors hindering instruction (student and teacher factors) (principal and teacher attitudinal responses)
- Parental and community relations/participation with the school
- Disciplinary climate
- Student-teacher relations

- School ethos (e.g. goal driven, high aspirations, community engagement)

Sample and respondents

- Responses would be obtained from both principals and teachers. For some indicators, principals would be asked about the school policy and their perceptions of teachers and students. Teachers would be asked for individual feedback.

Discussion

- Discussion of attitudinal responses would illustrate levels of school climate across schools and countries. Statistical analysis, such as factor analytic techniques, would be employed to analyse the variance in responses and identify the drivers of school climate issues. Comparative analysis of school climate would also facilitate analysis of a variety of other issues such as school leadership, and various teacher labour market and human resource issues. Parents are very important partners for teachers.
- Parents' appreciation of teachers work, trust and support reflect positively on teacher student relationship and schoolwork. However, sometimes parents' view about their child's wellbeing or achievement in school might be inconsistent with the teacher's view about the same issue. Teachers have to consider more than one child, since all the children are special. Sometimes the teachers may even experience the threats and bullying from parents. These questions might be linked to school's or parents' SES or teachers being inexperienced or school level.

Policy and research questions

- What are the factors associated with a positive and or negative school climate? To what extent do particular issues impact upon certain teachers? Are there characteristics or issues that drive responses regarding school climate? How safe is the school?
- To what extent do school climate issues vary between schools? To what extent does this variation correlate with other school and teaching issues?
- How parents are involved in school level activities (administration, development of curriculum and setting the schools targets? How parents are involvement in classroom level activities (teaching, collaboration, extra-curricular activities)? How teachers and parents co-operate in child well-being and achievement issues? What kind of experiences have teachers experienced from parent? And what kind of support is provided to teachers by principal?

Policy Issue 5: Effective teachers and teaching

The first TALIS gave us insights of:

- Factors associated with self-efficacy
- Engagement in professional activities
- Content knowledge
- Pedagogical knowledge
- Attributes of an effective teacher

But we still have more to learn about:

Themes

1. Teachers' instructional practices and beliefs
2. Education and qualifications of teachers
3. Teachers' professional practices
4. 21st Century skills: ICT in teaching

Policy and research questions

- How do teachers perceive quality in teaching? What are their pedagogical beliefs and preferred teaching strategies. How does this relate to course content, the structure of decision-making, and school policies and objectives?
- Do the teachers perceive the objectives in written curricula being the same as in real life practice? Is there a "hidden" curriculum (for example matriculation examination, entrance examination or national test) for students which guides and limits the use of more constructivist and social teaching approaches?
- How perceptions of effective teaching strategies differ between teachers (age, subject matter, ISCED level)? Are these perceptions connected with the training they have received and the way they are evaluated and rewarded?
- What is the distribution of teacher human capital across schools? How does it differ by job position and subject area? What is the distribution within and across countries?

Theme 5.1 Teachers' instructional practices and beliefs

General description

- An indicator that provides attitudinal data on a variety of teaching issues. Teachers and principals (when appropriate) would provide information concerning their teaching methods, beliefs and preferred teaching and classroom strategies, and as well ability to do career guidance.

Indicators

- General beliefs about teaching (e.g. constructivist versus direct transmission)
- Instructional practices (e.g. student oriented, structuring, enhanced activities)
- Classroom management
- Effective teaching time
- Attributes of a good teacher

- Student assessment methods (formative and summative)
- Teacher competence framework (System level data)
- Career guidance to students

Sample and respondents

- Teachers would provide individual-level responses of their teaching and guidance. This would include information regarding student assessment practices, and preferred teaching methods and classroom strategies. Principals could also be asked to provide information concerning school-wide policies, programmes and interventions on these areas and their perceptions of the methods and strategies teachers employ in their school.

Discussion

- Discussion would seek to illustrate aspects of the teaching employed across schools and countries such as students' assessment practices and teachers' preferred teaching and classroom strategies. This would complement analysis of other indicators, particularly teacher education and training profiles and school leadership programmes. This indicator also enables analysis of the extent that teachers differ in their preferred teaching methods and classroom strategies for students with different characteristics and needs. One of these students needs is increasing demand for career guidance, particularly because of the increasing number of career choices, the individualization of education and rapid changes in working life. There is a need to extend guidance in different stages of life, and thus change the concept of guidance.

Policy and research questions

- How do teachers perceive quality in teaching? What are their pedagogical beliefs and preferred teaching strategies. How does this relate to the structure of decision-making, and school policies and objectives?
- How differently qualified / experienced teachers perceive their most effective teaching strategies, and factors affecting quality teaching? Does this relate to the training they have received or to the way they are evaluated and rewarded?
- Have teachers adopted the national ministry level goals for knowledge and skills that they and their students should have? How do these goals and their adoption differ between the countries, areas, schools? What do teachers in different countries see as their teaching goals and how best these should be achieved? What do they regard as the promoters and obstacles towards achieving quality teaching?
- How do student assessment practices differ between and within countries? What is the balance between formative and summative assessment and how do teachers perceive their use in improving student learning?
- What types of career guidance interventions exist in school level and what is the intensity of these? How do these differ among the school levels, schools, and countries?

- What is the nature and extent of career guidance resources?
- Which ways teachers are personally involved in providing career guidance? Is it from their subject point of view whereto they develop students' labour market competences? Do the teachers differ in this by experience, subject matter, school background?

Theme 5.2 Education and qualifications of teachers

General description

- The indicator will illustrate the experience, skills and human capital of teachers within and across countries. It will also access the changes which have occurred in school during the last 9-10 years.

Indicators

- Teacher experience (tenure, responsibilities, subject areas, other teaching experience/positions, experience at the same school)
- Teacher qualifications, qualified status, certification
- Teacher and principal observation of changes taken place during the last 9-10 years (one PISA cycle)

Sample and respondents

- School principals and teachers would provide information of their career history. Both sets of respondents would only provide their own personal history and experience of changes. School principals could also provide information concerning the requirements and needs of the teachers employed in their school which could then be contrasted with the career histories provided by teachers.

Discussion

- Discussion would illustrate both the level and distribution of teacher and administrative resources within and across countries. This would focus on education and experience. Information concerning the career history and skills of teachers would be contrasted with indicators of developing and evaluating teachers, particular data concerning perceptions of training requirements for improved teaching.
- The link to PISA would considerably add to this discussion as it would allow analysis of the relationship of the SES Indicators collected in the PISA survey and of the experience and skills of teachers in these schools.

Policy and research questions

- What is the distribution of teacher and principal human capital across schools? How does it differ by job position and subject area? What is the distribution within and across countries?

- How do education qualifications of the teacher workforce vary between and within subject areas? What implications does this have for policies of teacher recruitment and deployment?
- To what extent does the education and experience of principals and teachers differ? Does this adequately reflect differences in job descriptions? Are similar differences evident in teachers of different levels in the hierarchy with differences in responsibilities and subject areas?
- Are there any observed changes in school-life which explain changes in PISA outcomes for example between 2003- 2012?

Theme 5.3 Teachers' professional practices

General description

- This indicator provides basic information of teachers' ability to express their views individually at the school, and their networking skills in teacher collaboration or collectively through unions or associations on issues that affect their daily lives on both a personal and professional bases in various levels of education policy making.

Indicators

- Collaboration among staff
- Participation in wider professional community
- Teachers participation in decision making at the school
- Teacher representative bodies – role, profile and participation rates
- Participation in educational policy making and improving quality of education at the various levels

Sample and respondents

- Data would be collected from teachers and principals.

Discussion

- Teachers and principals do not feel that they have a voice in education decision-making beyond their immediate teaching or school environment. There is a strong sense of distance from regional and national-level decisions that are eventually communicated to teachers as immutable decisions, often divorced from their daily situation. That is why it would be important that teachers' representatives are encouraged and assisted in developing comprehensive positions on educational policy with a proactive approach toward improving the quality of education as an integral part of education planning and policy formulation.

Policy and research questions

- What is the teachers' role in decision making within school?

- How empowered teachers and principals feel that they are through their representatives (unions) in educational policy making at the local and national level?
- How important is it for teachers in different countries that their opinion is asked in various levels of decision and policy making?

Theme 5.4 21st Century skills: ICT in teaching

General description

- This construct clarifies what kind of impact the integration of ICT in the teaching and learning process has on the pedagogical orientation and other aspects of teachers' practice (adopted from SITES 2006)

Indicators

- Policies and practices at the system-level relating to ICT use in schools
- Availability of ICT hardware and software in schools
- Teachers pedagogical content knowledge and skills of integrating the usage of ICT in teaching
- Frequency of pedagogical activities and use of ICT

Sample and respondents

- National policy goals of ICT use in schools would be collected from related documents. Principals would report school level resources and support of using ICT. Teachers would report on their ability of using ICT and how they actually use it. The use of ICT in classrooms could be a good option for Video study to promote effective teaching practices.

Discussion

- A common goal that has emerged in recent years in many educational policy documents is the use of ICT to support national education reform efforts aimed at preparing students for the challenges of the 21st century. Instead of focusing on learner's specific knowledge and skills, these reform goals focus their metacognitive and affective qualities. In addition of limitations of examining teaching practices through a questionnaire approach the next round of TALIS should consider alternative options for identifying and observing good practices of using ICT in teaching by Video study. That would enable us also to see in practice some good pedagogical teaching and learning orientations: traditionally important, lifelong learning, and connectedness. If the second round of TALIS would include Video study and a mixed method research approach, the integrated results of such a study would be very strong ones.

Policy and research questions

- What impact, if any, integration of ICT in the teaching and learning process has on the pedagogical orientation and other aspects of teachers' practice?

- What are the pedagogical practices adopted in schools and how is ICT used in them?
- What teacher, school, community, and system factors are associated with different pedagogical approaches and ICT use, and can an explanatory model be identified?
- What system factors are associated with different pedagogical approaches and ICT use?
- Which pedagogical practices can be considered as successful ones when the use of ICT has integrated in teaching and learning processes?

ANNEX B LESSONS LEARNED FROM THE FIRST ROUND OF TALIS

Teachers' continuous professional development

- In the participating countries, an average of 89% of teachers in lower secondary education engaged in professional development. The 11% who did not are a source of concern. Around one in four teachers did not participate in professional development in Denmark, the Slovak Republic and Turkey.
- On average in TALIS countries, teachers participated in professional development for just under one day per month.
- A significant proportion of teachers think that professional development does not meet their needs: over half reported wanting more than they received during the previous 18 months.
- The aspect of their work for which teachers most frequently say they require professional development is “Teaching special learning needs students”, followed by “ICT teaching skills” and “Student discipline and behaviour”.
- Teachers who paid the full cost of professional development took part in more than those who received it free or at partial cost. This is partly because the more time-intensive development activities were more likely to be paid for by teachers themselves.
- Even when development is paid for by teachers, their demand is not satisfied: those who paid towards the cost were more likely to say they wanted more.
- The main reason for unfulfilled demand (according to teachers) is the conflict with their work schedule, but lack of suitable development opportunities is also a significant factor.
- The types of development that teachers regard as the most effective have, on average, lower rates of participation. However, those who do participate in these activities also devote more time to them than those participating in other activities, even though they are more likely to have to pay for them.
- This suggests a need not just for better support for teachers to participate in professional development, but for policy makers and school leaders to ensure that the development opportunities available are effective and meet teachers' needs.

Teaching practices, attitudes, beliefs

- Teachers are more inclined to regard students as active participants in the process of acquiring knowledge than to see the teacher's main role as the transmission of information and demonstration of “correct solutions”. This is most true in northwest Europe, Scandinavia,

Australia and Korea and least true in southern Europe, Brazil and Malaysia where teachers fall between the two views.

- In the classroom, teachers in all countries put greater emphasis on ensuring that learning is well structured than on student-oriented activities which give them more autonomy. Both of these teaching practices are emphasised more than enhanced learning activities such as project work. This pattern is true in every country.
- Co-operation by teachers in all countries more commonly takes the form of exchanging and co-ordinating ideas and information than direct professional collaboration such as team teaching.
- At least half of teachers in most countries spend over 80% of their lesson time on teaching and learning. However, one in four teachers in most countries lose at least 30% of their lesson time, and some lose more than half, through disruptions and administrative tasks. This is closely associated with the classroom disciplinary climate.
- A better disciplinary climate is more often found in classrooms where teachers adopt more structuring in their teaching practices; class sizes are smaller; teachers are more experienced.
- The average levels of job satisfaction and of teachers' belief in their own effectiveness are fairly similar across countries, although Norwegian teachers again stand out as well above average in both respects. Most differences in these job-related attitudes entail differences among teachers within countries and within schools.
- Female teachers are less likely than male teachers to see teaching as the direct transmission of knowledge and are more likely to structuring and student oriented practices as well as to co-operate more with colleagues.
- Teachers who undertake professional development undertake a wider array of teaching practices and are more likely to co-operate with other teachers.

School evaluation, teacher appraisal and feedback

- Appraisal and feedback have a strong positive influence on teachers and their work. Teachers report that it increases their job satisfaction and, to some degree, their job security, and it significantly increases their development as teachers.
- The greater the emphasis on specific aspects of teacher appraisal and feedback, the greater the change in teachers' practices to improve their teaching. In some instances, more emphasis in school evaluations on certain aspects of teaching is linked to an emphasis on these aspects in teacher appraisal and feedback which, in turn, leads to further changes in teachers' reported teaching practices.
- A number of countries have a relatively weak evaluation structure and do not benefit from school evaluations and teacher appraisal and feedback. For example, one-third or more of teachers work in schools in Austria (35%), Ireland (39%) and Portugal (33%) that had no school evaluation in the previous five years. In addition, on average across TALIS countries, 13% of teachers did not receive any appraisal or feedback in their school. Large proportions of teachers are missing out on the benefits of appraisal and feedback in Italy (55%), Portugal (26%), and Spain (46%).

- Most teachers work in schools that offer no rewards or recognition for their efforts. Three-quarters reported that they would receive no recognition for improving the quality of their work. A similar proportion reported they would receive no recognition for being more innovative in their teaching. This says little for a number of countries' efforts to promote schools as centres of learning that foster continual improvements.
- Most teachers work in schools that do not reward effective teachers and do not dismiss teachers who perform poorly. Three-quarters of teachers reported that, in their schools, the most effective teachers do not receive the most recognition. A similar proportion reported that, in their schools, teachers would not be dismissed because of sustained poor performance.

School leadership

- Some principals in every country have adopted the “instructional leadership” styles which are central to today's paradigm of effective school leadership.
- However, the prevalence of such practices varies greatly by country and they are much more in evidence in some countries such as Brazil, Poland and Slovenia than they are in others, such as Estonia and Spain.
- Across TALIS countries, a significant number of principals employ both instructional and administrative leadership styles.
- Greater autonomy for the school principal in decision making about schools is not related to either management style.
- In more than half of the TALIS countries, schools with more pronounced instructional leadership tend to link teacher appraisals with teachers' participation in professional development. Also in many TALIS countries, schools whose principals are instructional leaders are more likely to take account of innovative teaching practices in the appraisal of teachers.
- In almost three-quarters of TALIS countries, principals who adopt an instructional leadership style tend to develop professional development programmes for instructionally weak teachers.
- In more than one quarter of TALIS countries, teachers whose school principal adopts a more pronounced instructional leadership style are more likely to engage in collaborative activities with their colleagues.
- In contrast, variations in principals' use of an administrative leadership style are unrelated to classroom practices, pedagogical beliefs and attitudes, or to the amount of professional development teachers receive.