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Organisation for Economic Co-operation and Development (OECD)

Teaching and Learning International Survey (TALIS) 2013

Mathematics Teacher Module

PISA Schools

Main Study Version

[International English, UK Spelling]

[National Project Information]

International Project Consortium:

International Association for the Evaluation of Educational Achievement (IEA), The Netherlands

IEA Data Processing and Research Center (IEA DPC), Germany

Statistics Canada, Canada

About the TALIS 2013 Mathematics Teacher Module

The primary subject area for PISA 2012 (OECD Programme for International Student Assessment) is mathematics and it would be helpful to have background information on mathematics teaching and learning for countries that participated in PISA 2012. You were asked to complete the TALIS survey and, as a mathematics teacher, we are asking you for additional information about your mathematics <classes> and the general focus of mathematics instruction in your school. PISA was administered to 15-year-old students and thus, for the purposes of this survey, we ask you to think about teaching students of this age.

As was the case with the main TALIS questionnaire, these questions were designed to be used in countries with differing mathematics curricula and educational systems. In cases where you are not sure how to answer, we ask you to take your best guess about what is true for you and the <classes> you teach. Note that the confidentiality promised with the main TALIS questionnaire also applies to this module.

About the Questionnaire

- You should complete this questionnaire module AFTER you have completed the main TALIS Teacher Questionnaire.
- This questionnaire module should take approximately 15-20 minutes to complete.
- Guidelines for answering the questions are typed in italics. Most questions can be answered by marking the one most appropriate answer.
- When you have completed this questionnaire, please [National Return Procedures and Date].

Thank you very much for your participation!

Selecting a <Target Class>

Like the teaching practices section of the TALIS Teacher Questionnaire, most of the questions in this survey focus on one <class> that you teach. The next three questions are designed to select one of your mathematics <classes> so that you can answer the rest of the questions with regard to that <class>.

We are aware that the <class> that is selected here may not represent the breadth of your teaching practices. However, this process allows us to get a picture of the full range of classes that are taught in each country that participates in this survey.

1. Please list all mathematics <classes> you teach where some of the students are 15 years old.

Please list below.

TT2M01T

_____

_____

2. Which of the <classes> listed in Question [1] has the most 15-year-olds? If you have several classes with almost the same number of 15-year-olds and one of those classes was the one that you identified for Questions [35 to 43] in the main TALIS Teacher Questionnaire, please use that <class> here.

Please give the name of the <class> that will be referred to as the <target class>.

TT2M02T

_____

3. Is the <class> you just identified in the previous question the same one that you identified for Questions [35 to 43] in the TALIS Teacher Questionnaire?

Please mark one choice.

TT2M03

☐ 1 Yes

☐ 2 No

About the <Target Class>

For the questions below, please respond with respect to the <target class> you specified in Question [2].

4. Which of the following best describes the achievement level of students in the <target class>?

Please mark one choice.

TT2M04

- ☐ 1 Mostly high achieving students in mathematics.
- ☐ 2 Mostly average students in mathematics.
- ☐ 3 Mostly low achieving students in mathematics.
- ☐ 4 Approximately equal numbers of high, average, and low achievement students in mathematics.

5. How many times per school week on average does the <target class> meet for a mathematics lesson?

Please write down a whole number. If the number of times changes each week, write the average.

TT2M05 ⌊_⌋ Time(s) per week

6. When you meet with the <target class>, what is the average length of a mathematics lesson?

Please specify the scheduled number of minutes.

TT2M06 ⌊_|_|_⌋ Minutes

7. During a typical mathematics lesson, how likely are you to use each of the following strategies in the <target class>?

Please mark one choice in each row.

			Very unlikely	Somewhat unlikely	Somewhat likely	Very likely
TT2M07A	a)	I lecture or explain a mathematics concept or procedure to the whole class.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M07B	b)	I go over homework or problem sets with the whole class.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M07C	c)	I review a previous lesson or lessons with the whole class.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M07D	d)	I have students work individually.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M07E	e)	I have students work in groups.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M07F	f)	I have students complete a test or quiz.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M07G	g)	I complete classroom administrative tasks (e.g. recording attendance, handing out school information/forms).	☐ 1	☐ 2	☐ 3	☐ 4

8. How often do you assign homework for completion outside of the classroom to the students in the <target class>?

Please mark one choice.

TT2M08

- ☐ 1 Never or almost never → **Please go to Question [10]**
- ☐ 2 Occasionally
- ☐ 3 Frequently
- ☐ 4 In all or nearly all lessons

9. About how much time do you expect an average student in the <target class> to work on each homework assignment?

Please mark one choice.

TT2M09

- ☐ 1 15 minutes or less
- ☐ 2 16 to 30 minutes
- ☐ 3 31 to 60 minutes
- ☐ 4 More than 60 minutes
- ☐ 5 Length of time to complete homework assignments varies a great deal.

10. How often do students in the <target class> have calculators available for use in their mathematics assignments?

Please mark one choice.

TT2M10

- ☐ 1 Never or almost never
- ☐ 2 Occasionally
- ☐ 3 Frequently
- ☐ 4 In all or nearly all assignments

11. How often are students in the <target class> allowed to use calculators in tests or quizzes?

Please mark one choice.

TT2M11

- ☐ 1 Never or almost never
- ☐ 2 Occasionally
- ☐ 3 Frequently
- ☐ 4 In all or nearly all tests or quizzes

12. Over the course of the school year, how frequently are the following types of ICT (information and communication technology) resources used when teaching the <target class>?

Please mark one choice in each row.

		Never or almost never	Occasionally	Frequently	Always or almost always
TT2M12A	a) Drill and practice software	☐ 1	☐ 2	☐ 3	☐ 4
TT2M12B	b) Topic-specific software (e.g. geometry software) ...	☐ 1	☐ 2	☐ 3	☐ 4
TT2M12C	c) Spreadsheets or other data analysis software	☐ 1	☐ 2	☐ 3	☐ 4
TT2M12D	d) Software for assessing student learning	☐ 1	☐ 2	☐ 3	☐ 4
TT2M12E	e) Internet resources	☐ 1	☐ 2	☐ 3	☐ 4

Your Educational Approaches in the <Target Class>

Countries and individuals differ in their educational approaches and a major goal of TALIS is to draw a picture of teachers' opinions and practices in participating countries. We rely on your expertise to describe your opinions and how you teach as accurately as possible.

Your response to most questions is likely to be the same regardless of which of your <classes> you think about, but if the response varies depending on the <class> you teach, please focus on the <target class>.

13. How often do you employ the following teaching practices in the <target class>?

Please mark one choice in each row.

			Never or almost never	Occasionally	Frequently	In all or nearly all lessons
TT2M13A	a)	I explicitly state learning goals.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M13B	b)	I ask short, fact-based questions.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M13C	c)	I expect students to explain their thinking on complex problems.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M13D	d)	I give students a choice of problems to solve.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M13E	e)	I connect mathematics concepts I teach to uses of those concepts outside of school.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M13F	f)	I encourage students to solve problems in more than one way.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M13G	g)	I require students to provide written explanations of how they solve problems.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M13H	h)	I require students to work on mathematics projects that take more than a single class period to complete.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M13I	i)	I go over homework problems that students were not able to solve.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M13J	j)	I encourage students to work together to solve problems.	☐ 1	☐ 2	☐ 3	☐ 4

14. How much do you agree or disagree with the following goals for and views about teaching mathematics?

Please mark one choice in each row.

			Strongly disagree	Disagree	Agree	Strongly agree
TT2M14A	a)	The goal of teaching mathematics is to help students use mathematics to solve real-world problems.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M14B	b)	I want my students to see the structure of the number system and the logic of mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M14C	c)	Explaining why an answer is correct is just as important as getting a correct answer.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M14D	d)	Even with the availability of calculators and computers, students need to learn traditional methods for doing mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M14E	e)	Students should be able to figure out for themselves whether they have solved a mathematics problem correctly.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M14F	f)	Students should learn basic skills before being asked to solve complex mathematics problems.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M14G	g)	Asking students to solve difficult problems in class helps them become good problem solvers.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M14H	h)	I'd rather have my students solve a few complex problems than a lot of relatively easy ones.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M14I	i)	An important reason for teaching mathematics is to help students become more logical.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M14J	j)	Graphics calculators and computers can be used to help students see mathematics concepts in new and different ways.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M14K	k)	Doing mathematics requires hypothesising, estimating, and creative thinking.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M14L	l)	Most things a student needs to know in mathematics can be learned through memorisation.	☐ 1	☐ 2	☐ 3	☐ 4

15. How much do you agree or disagree with the following statements concerning your ability to teach mathematics?

Please mark one choice in each row.

			Strongly disagree	Disagree	Agree	Strongly agree
TT2M15A	a)	I am able to ask questions that get students to think deeply about mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M15B	b)	I have a hard time getting students interested in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M15C	c)	I always know which of my students understand and which do not.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M15D	d)	I find it hard to meet the needs of the individual students in my mathematics class.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M15E	e)	I am able to get my students to feel confident in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M15F	f)	I have a hard time getting my students to understand underlying concepts in mathematics.	☐ 1	☐ 2	☐ 3	☐ 4

16. How much do you agree or disagree with each of the following statements about teaching mathematics?

Please mark one choice in each row.

			Strongly disagree	Disagree	Agree	Strongly agree
TT2M16A	a)	There is usually a best method for solving a mathematics problem and my job is to make sure students learn that method.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M16B	b)	I feel that I can do a better job when I have students with similar ability levels in my class.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M16C	c)	Grades are a primary motivator for getting students to learn mathematics.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M16D	d)	I would like my students to study mathematics because it is an interesting and worthwhile subject rather than only because they want good marks.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M16E	e)	A good mathematics teacher tells students exactly how to do every problem that is presented.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M16F	f)	Having students like mathematics is more important than having them learn to solve problems.	☐ 1	☐ 2	☐ 3	☐ 4
TT2M16G	g)	Mathematics teachers in my school have the support of the school administration.	☐ 1	☐ 2	☐ 3	☐ 4

Your Education for Teaching Mathematics

17. Were the following elements included in your mathematics education or training? If yes, was this before or after you took up a position as teacher?

Please mark one choice in each row.

			Before	After	Before and after	Never
TT2M17A	a)	Mathematics courses equivalent to those needed for a degree in mathematics	☐ 1	☐ 2	☐ 3	☐ 4
TT2M17B	b)	Courses on how to teach mathematics	☐ 1	☐ 2	☐ 3	☐ 4
TT2M17C	c)	Practice teaching in mathematics	☐ 1	☐ 2	☐ 3	☐ 4

This is the end of the questionnaire.

Thank you very much for your participation!

Please [National Return Procedures and Date]