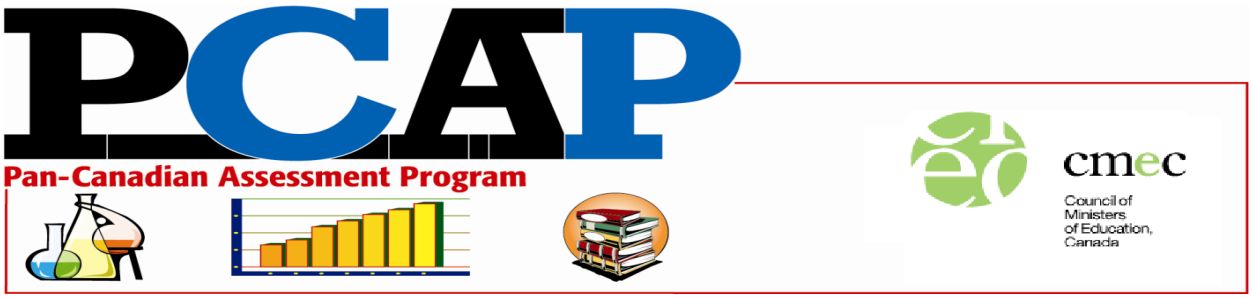
PCAP Main Administration (2010)

Teacher Questionnaire



Council of Ministers of Education, Canada

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Pan-Canadian Assessment Program (PCAP)

Main Administration (2010)

Teacher Questionnaire

Your school has been selected as one of approximately 1,200 schools in Canada to participate in the Pan-Canadian Assessment Program (PCAP) main administration. PCAP is an assessment of academic achievement in Canada, and its results are important for charting the progress of students in participating provinces and territories and for shaping curricula and teaching practices.

This questionnaire is addressed to the mathematics teachers of students who have been selected to participate in this assessment. **Please keep those students in mind when answering the questions.** The questionnaire asks about your professional background, instructional practices, the kinds of students you teach, and your attitudes toward the teaching of mathematics. Since your school is part of a pan-Canadian sample, your responses are very important in helping to describe how mathematics is taught in Canada. It is, therefore, important that all questions be answered as carefully and accurately as possible. Please answer the questions as they pertain to the 2009-10 school year.

This questionnaire is confidential. The Council of Ministers of Education, Canada, will not report any result that would allow you, your students, or your school to be identified.

Once you have completed the questionnaire, please return it to your PCAP school coordinator.

Thank you for your time, effort, and thought in completing this questionnaire.

Section 1: Background Questions

1. Are you male or female?

Male ..... ☐1
Female ..... ☐2

2. Including this year, how many years of teaching experience do you have?

Less than 5 years ..... ☐1
5 to 10 years ..... ☐2
11 to 15 years ..... ☐3
16 to 20 years ..... ☐4
More than 20 years ..... ☐5

3. Which of the following degrees or diplomas do you hold? *(Check all that apply.)*

B.A. or equivalent ..... ☐1
B.Sc. or equivalent ..... ☐2
B.Ed. or equivalent (e.g., at least one year of teacher training) ..... ☐3
Other bachelor's degree ..... ☐4
M.Ed ..... ☐5
Other master's degree ..... ☐6
Ph.D. or equivalent ..... ☐7
Other degree or diploma ..... ☐8
No degree or diploma ..... ☐9

4. During your postsecondary studies, how many semester courses did you take in mathematics or mathematics-related subjects? *(Do not include mathematics teaching-methodology courses. Count a full-year course, at the usual three class hours per week, as two semester courses.)*

1–2 courses ..... ☐1
3–5 courses ..... ☐2
6–9 courses ..... ☐3
10 or more courses ..... ☐4

5. Would you consider yourself a specialist in the teaching of mathematics, either by …

	Yes	**No**
Education	☐1	☐2
Experience	☐1	☐2

6. Approximately what percentage of your total teaching assignment is in mathematics for this school year?

Less than 20% ..... ☐1
20% to 39% ..... ☐2
40% to 69% ..... ☐3
70% or more ..... ☐4

7. What is the AVERAGE number of students in the Grade 8/Year 2 of Secondary Cycle 1 mathematics classes you teach this year (total class size, even if multi-grade)?

Fewer than 15 students ..... ☐1
15 to 19 students ..... ☐2
20 to 24 students ..... ☐3
25 to 29 students ..... ☐4
30 or more students ..... ☐5

8. How many grade levels are in your Grade 8/Year 2 of Secondary Cycle 1 mathematics class or classes?

One grade only ..... ☐1
Two grade levels in some or all classes ..... ☐2
Three or more grade levels in some or all classes ..... ☐3

9. On average, how many days this year would you say your Grade 8/Year 2 of Secondary Cycle 1 mathematics class(es) have been taught by someone other than yourself (e.g., a substitute teacher)?

5 or fewer ..... ☐1
6 to 9 ..... ☐2
10 to 19 ..... ☐3
20 or more ..... ☐4

Section 2: Professional Development

1. In the past five years, how many days (or equivalent) of professional development related to the teaching of mathematics have you participated in?

None..... ☐1
1 to 2 days..... ☐2
3 to 4 days..... ☐3
5 to 8 days ..... ☐4
9 or more days..... ☐5

2. In which types of professional development in mathematics have you participated during the past five years? Indicate their effect on your mathematics teaching.

	Participated in		**Effect on mathematics teaching**		
			Little or none	**Some**	**A lot**
(a) University courses	☐1		☐1	☐2	☐3
(b) Conferences	☐1		☐1	☐2	☐3
(c) Professional mathematics reading material	☐1		☐1	☐2	☐3
(d) Collaboration with other mathematics teachers	☐1		☐1	☐2	☐3
(e) Board/district or department/ministry of education professional development	☐1		☐1	☐2	☐3

3. Have you have taken part in professional-development opportunities on the following topics in the past five years? Indicate their effect on your mathematics teaching.

	Participated in		Effect on mathematics teaching		
			Little or none	Some	A lot
(a) Implementation of new curriculum	☐1		☐1	☐2	☐3
(b) Implementation of new resources	☐1		☐1	☐2	☐3
(c) Teaching through problem solving	☐1		☐1	☐2	☐3
(d) Assessment and evaluation	☐1		☐1	☐2	☐3
(e) Teaching strategies	☐1		☐1	☐2	☐3
(f) Facilitating investigations	☐1		☐1	☐2	☐3
(g) Specific content knowledge	☐1		☐1	☐2	☐3
(h) Use of technology	☐1		☐1	☐2	☐3
(i) Use of manipulatives (e.g., base-ten blocks, colour tiles, geometric solids)	☐1		☐1	☐2	☐3
(j) Inquiry learning	☐1		☐1	☐2	☐3

Section 3: Time Management

1. On average, how many minutes PER WEEK do you expect your students to spend on mathematics homework?

I do not assign mathematics homework *(Go to question 4.)* ..... ☐1
Less than 30 minutes ..... ☐2
30 minutes to one hour ..... ☐3
One to two hours ..... ☐4
More than two hours ..... ☐5

2. How often do you assign the following types of homework?

	Rarely or never	**A few times a month**	**A few times a week**	**Every or almost every class**
(a) Drill	☐1	☐2	☐3	☐4
(b) Practice	☐1	☐2	☐3	☐4
(c) Problems to solve	☐1	☐2	☐3	☐4
(d) Projects	☐1	☐2	☐3	☐4
(e) Creating problems	☐1	☐2	☐3	☐4
(f) Studying for tests	☐1	☐2	☐3	☐4
(g) Practice tests or quizzes	☐1	☐2	☐3	☐4
(h) Activities using manipulatives (e.g., base-ten blocks, colour tiles, geometric solids)	☐1	☐2	☐3	☐4

3. If you assign homework, how often do you do the following?

	Rarely or never	A few times a month	A few times a week	Every or almost every class
(a) Monitor whether or not the homework has been completed	☐1	☐2	☐3	☐4
(b) Collect and correct homework	☐1	☐2	☐3	☐4
(c) Have a class discussion	☐1	☐2	☐3	☐4
(d) Provide feedback on homework	☐1	☐2	☐3	☐4
(e) Have students correct homework in class	☐1	☐2	☐3	☐4
(f) Use homework to contribute to students' marks or grades	☐1	☐2	☐3	☐4

4. On average, how many FULL instructional days in a <u>school year</u> are used for the following? *(Do not report part days here. Report those under question 5.)*

(a) Tests or exams taken outside of regular class sessions (*include marking days*) _____

(b) Field trips or excursions (music, cultural, etc.) _____

(c) Sports activities _____

(d) School-spirit days _____

(e) Closings due to weather _____

(f) Other non-instructional activities _____

5. Of the total number of instructional hours you have in a given school year, on average, what percentage is lost due to class cancellations or other losses of whole class periods (other than whole school days, which should be reported in question 4)? (e.g., assemblies, fundraising, etc.)

Percentage of hours lost: _____

6. How often do the following occur in your mathematics classes?

	Rarely or never	Sometimes	Often
(a) We lose time because of student misbehaviour.	☐1	☐2	☐3
(b) We lose time because of other disruptions (e.g., announcements, visits, etc.).	☐1	☐2	☐3
(c) We lose time because of in-class discussions unrelated to the lesson.	☐1	☐2	☐3

7. Approximately what percentage of time during your mathematics classes do you spend on each of the following?

	0 to 19%	20 to 39%	40 to 59%	60% or more
(a) Numbers and operations	☐1	☐2	☐3	☐4
(b) Geometry and measurement	☐1	☐2	☐3	☐4
(c) Patterns and relationships (algebra)	☐1	☐2	☐3	☐4
(d) Data-management and probability (statistics)	☐1	☐2	☐3	☐4

Section 4: Assessment Practices

1. What types of final reporting do you use in your Grade 8/Year 2 of Secondary Cycle 1 mathematics classes? *(Think of what appears on report cards. Check all that apply.)*

Numeric grades (e.g., percentages) ☐1
Letter grades (e.g., A, B, C) ☐2
Checklists based on course outcomes ☐3
Descriptive levels (e.g., excellent, acceptable, not meeting standards) ☐4
Numerical levels (e.g., 1, 2, 3) ☐5
Comments or descriptions of what students have learned ☐6
Other ☐7

2. Are the results of provincial/territorial tests or assessments used as part of students' final grades or evaluations in your Grade 8/Year 2 of Secondary Cycle 1 mathematics classes?

Yes ☐1
No ☐2

3. Are the results of any other tests or assessments external to the school (e.g., district assessments or standardized tests) used as part of students' final grades or evaluations in your Grade 8/Year 2 of Secondary Cycle 1 mathematics classes?

Yes ☐1
No ☐2

4. In your Grade 8/Year 2 of Secondary Cycle 1 mathematics classes, how often are students assessed in the following ways, with the results counting toward their final evaluations?

	Rarely or never	Sometimes	Often
(a) Common school-wide tests or assessments	☐1	☐2	☐3
(b) Teacher-developed classroom tests	☐1	☐2	☐3
(c) Student portfolios and/or journals	☐1	☐2	☐3
(d) Student assignments/projects	☐1	☐2	☐3
(e) Homework	☐1	☐2	☐3
(f) Self-assessment	☐1	☐2	☐3
(g) Peer assessment	☐1	☐2	☐3
(h) Group work	☐1	☐2	☐3

5. In your Grade 8/Year 2 of Secondary Cycle 1 mathematics classes, do you assign marks or value to the following, which count toward students' final evaluations?

	Yes	No
(a) Attendance	☐1	☐2
(b) Participation	☐1	☐2
(c) Effort	☐1	☐2
(d) Improvement	☐1	☐2
(e) Behaviour	☐1	☐2

6. In your teacher-developed mathematics tests/examinations, how often do you use the following kinds of items or questions?

	Rarely or never	Sometimes	Often
(a) Selected-response items (e.g., true/false, multiple choice)	☐1	☐2	☐3
(b) Short-response items (e.g., one or two words, one-step problems, short sentences)	☐1	☐2	☐3
(c) Extended-response items requiring multi-step solutions	☐1	☐2	☐3
(d) Extended-response items requiring an explanation or justification	☐1	☐2	☐3

7. If multiple-choice items are used in any assessments in your Grade 8/Year 2 of Secondary Cycle 1 mathematics classes (including provincial/territorial or district assessments), how do you instruct your students to respond if they do not know the correct answer?

Guess one of the options ..... ☐1
Eliminate as many options as possible and then guess from the others ..... ☐2
Omit the question ..... ☐3
I do not give instructions on how to respond ..... ☐4

8. In your teacher-developed mathematics tests/examinations, how often do you include items to measure the following types of thinking?

	Rarely or never	Sometimes	Often
(a) Recall of facts and procedures	☐1	☐2	☐3
(b) Application of mathematical procedures	☐1	☐2	☐3
(c) Explanations and/or justifications	☐1	☐2	☐3
(d) Generalizations	☐1	☐2	☐3

9. During your postsecondary studies, how many semester credit courses or equivalent did you take that were directly related to student assessment? *(Count a full-year course, at the usual three class hours per week, as two semester courses.)*

None ☐1
1 to 2 courses ☐2
3 to 4 courses ☐3
5 or more courses ☐4

10. In the past five years, how many days or equivalent of professional-development workshops have you completed that were related to student assessment?

None ☐1
1 to 2 days ☐2
3 to 4 days ☐3
5 or more days ☐4

11. Do you use the results of the following types of assessments for purposes other than student evaluation (e.g., to see how your school or class is doing relative to others or to check areas of strength or weakness)?

	Yes	No
(a) National or international assessments such as the Programme for International Student Assessment (PISA) or the Pan-Canadian Assessment Program (PCAP), which provide provincial/territorial results	☐1	☐2
(b) Provincial/territorial assessments	☐1	☐2

Section 5: Teaching Strategies

1. To what extent do you use the following instructional strategies in your Grade 8/Year 2 of Secondary Cycle 1 mathematics classes?

	Not at all	A little	More than a little	A lot
(a) Explain, demonstrate, and provide examples	☐1	☐2	☐3	☐4
(b) Teach through problem solving and investigations	☐1	☐2	☐3	☐4
(c) Have students share solutions to problems and investigations	☐1	☐2	☐3	☐4
(d) Provide time for practice	☐1	☐2	☐3	☐4
(e) Have students work with concrete materials or manipulatives (e.g., base-ten blocks, colour tiles, geometric solids)	☐1	☐2	☐3	☐4
(f) Have students work individually on problems	☐1	☐2	☐3	☐4
(g) Encourage students to persevere	☐1	☐2	☐3	☐4
(h) Have students summarize what was learned	☐1	☐2	☐3	☐4
(i) Have students work in collaborative groups	☐1	☐2	☐3	☐4
(j) Allow time for student reflection	☐1	☐2	☐3	☐4

2. To what extent do you use the following strategies during Grade 8/Year 2 of Secondary Cycle 1 mathematics instruction?

	Not at all	A little	More than a little	A lot
(a) Re-teach concepts and skills that should have been mastered earlier	☐1	☐2	☐3	☐4
(b) Adapt instructions and resources, including textbooks, to students' learning styles and interests	☐1	☐2	☐3	☐4
(c) Provide enrichment for advanced students	☐1	☐2	☐3	☐4

3. To what extent do you agree with the following statements about mathematics?

	Strongly disagree	Disagree	Agree	Strongly agree
(a) It is possible for most students to succeed in mathematics.	☐1	☐2	☐3	☐4
(b) Success in mathematics requires hard work.	☐1	☐2	☐3	☐4
(c) Success in mathematics requires natural ability.	☐1	☐2	☐3	☐4
(d) Practice is important for student learning in mathematics.	☐1	☐2	☐3	☐4
(e) Because calculators are easily available, there is less need to emphasize basic computational skills in teaching mathematics.	☐1	☐2	☐3	☐4
(f) There is not enough emphasis on basic mathematical skills in the early grades.	☐1	☐2	☐3	☐4
(g) Student success in mathematics requires good teaching.	☐1	☐2	☐3	☐4
(h) By the time students reach Grade 8, the emphasis in mathematics teaching should be more on problem solving than on basic skills.	☐1	☐2	☐3	☐4
(i) Students should not be allowed to use calculators until they have mastered basic computational skills.	☐1	☐2	☐3	☐4

4. In your view, how valuable are the following in helping students learn mathematics?

	Slightly valuable	Somewhat valuable	Very valuable
(a) calculators	☐1	☐2	☐3
(b) computer software	☐1	☐2	☐3
(c) problem solving	☐1	☐2	☐3
(d) class discussions	☐1	☐2	☐3
(e) manipulatives (e.g., base-ten blocks, colour tiles, geometric solids)	☐1	☐2	☐3

	Slightly valuable	Somewhat valuable	Very valuable
(f) working in groups	☐1	☐2	☐3
(g) presenting alternate methods of finding solutions	☐1	☐2	☐3
(h) presenting a concept in various ways	☐1	☐2	☐3
(i) practising	☐1	☐2	☐3

5. On average, over a school year, what percentage of the total class time would you say is spent on the following activities in your Grade 8/Year 2 of Secondary Cycle 1 mathematics classes?

	Less than 10%	10% to 24%	25% to 39%	40% to 59%	60% to 79%	80% or more
(a) Teaching to the whole class (e.g., lecturing or demonstrating, giving instructions, going over assignments or homework)	☐1	☐2	☐3	☐4	☐5	☐6
(b) Teaching to small groups (while the rest of the class does other things)	☐1	☐2	☐3	☐4	☐5	☐6
(c) Individual seat-work (while teacher circulates to help individuals as needed)	☐1	☐2	☐3	☐4	☐5	☐6
(d) Group work (while teacher facilitates)	☐1	☐2	☐3	☐4	☐5	☐6
(e) Project work (e.g., student groups working on long-term projects)	☐1	☐2	☐3	☐4	☐5	☐6
(f) Labs or work stations (e.g., computer labs)	☐1	☐2	☐3	☐4	☐5	☐6
(g) Other activities	☐1	☐2	☐3	☐4	☐5	☐6

6. How often do students do the following in your Grade 8/Year 2 of Secondary Cycle 1 mathematics classes?

	Rarely or never	Sometimes	Often
(a) Explain their solutions orally	☐1	☐2	☐3
(b) Explain their solutions in writing	☐1	☐2	☐3
(c) Use correct mathematical language	☐1	☐2	☐3
(d) Justify their reasoning	☐1	☐2	☐3
(e) Make generalizations and conjectures	☐1	☐2	☐3
(f) Use multiple representations	☐1	☐2	☐3
(g) Make connections among multiple representations	☐1	☐2	☐3

7. How often are the following resources used in your Grade 8/Year 2 of Secondary Cycle 1 mathematics instruction?

	Rarely or never	Sometimes	Often
(a) manipulatives (e.g., base-ten blocks, colour tiles, geometric solids)	☐1	☐2	☐3
(b) mathematics curriculum documents	☐1	☐2	☐3
(c) textbooks	☐1	☐2	☐3
(d) teacher's guide	☐1	☐2	☐3
(e) worksheets	☐1	☐2	☐3
(f) other print resources	☐1	☐2	☐3
(g) calculators	☐1	☐2	☐3
(h) computer software	☐1	☐2	☐3
(i) spreadsheets	☐1	☐2	☐3
(j) Web-based resources (other than worksheets)	☐1	☐2	☐3
(k) measuring devices (e.g., protractors, balance)	☐1	☐2	☐3
(l) smart-boards	☐1	☐2	☐3

Section 6: Students with Special Needs

1. On average, how many students in each of your Grade 8/Year 2 of Secondary Cycle 1 mathematics classes have special needs and require one or more of the following accommodations or adaptations?

	None	1 or 2 students	3 to 5 students	More than 5 students
(a) program modifications to meet these needs (e.g., alter course expectations)	☐1	☐2	☐3	☐4
(b) given more time (no change in expectations)	☐1	☐2	☐3	☐4
(c) modified teaching methods (no change in expectations)	☐1	☐2	☐3	☐4
(d) the help of a teaching assistant	☐1	☐2	☐3	☐4
(e) withdrawal of student from mathematics class (assignment to a special class)	☐1	☐2	☐3	☐4
(f) special attention to reduce their disrupting the rest of the class	☐1	☐2	☐3	☐4
(g) medical attention	☐1	☐2	☐3	☐4
(h) special assistance with speaking, listening, reading, or writing	☐1	☐2	☐3	☐4
(i) enrichment	☐1	☐2	☐3	☐4

2. To what extent do you need to adjust your teaching strategies for the entire class to accommodate students with special needs?

Not at all ..... ☐1
A little ..... ☐2
More than a little ..... ☐3
A lot ..... ☐4

3. To what extent do you consider your mathematics classes to be enhanced by the presence of students with special needs?

Not at all ..... ☐1
A little ..... ☐2
More than a little ..... ☐3
A lot ..... ☐4

4. For about how much time in your mathematics classes is there an adult (other than yourself) present to assist with teaching or helping individual students?

None ..... ☐1
Up to one quarter of the time ..... ☐2
Up to one half of the time ..... ☐3
Most or all of the time ..... ☐4

Section 7: Attitudes

1. To what extent do you agree or disagree with each of the following statements?

	Strongly disagree	Disagree	Agree	Strongly agree
(a) I enjoy mathematics.	☐1	☐2	☐3	☐4
(b) I like teaching mathematics.	☐1	☐2	☐3	☐4
(c) I feel nervous when teaching mathematics.	☐1	☐2	☐3	☐4
(d) Mathematics is more important than most other subjects.	☐1	☐2	☐3	☐4
(e) Mathematics is easy to teach.	☐1	☐2	☐3	☐4
(f) I like solving mathematical problems.	☐1	☐2	☐3	☐4
(g) Mathematics is challenging to teach.	☐1	☐2	☐3	☐4

2. When students do well in my mathematics classes, it is because of …

	Strongly disagree	Disagree	Agree	Strongly agree
(a) natural ability.	☐1	☐2	☐3	☐4
(b) good work habits.	☐1	☐2	☐3	☐4
(c) good teaching.	☐1	☐2	☐3	☐4
(d) support from parents/guardians.	☐1	☐2	☐3	☐4
(e) positive peer influence.	☐1	☐2	☐3	☐4
(f) student effort/motivation.	☐1	☐2	☐3	☐4
(g) mathematics skills were well learned in earlier grades.	☐1	☐2	☐3	☐4

3. When students struggle with mathematics in my classes, it is because of…

	Strongly disagree	Disagree	Agree	Strongly agree
(a) not enough natural ability.	☐1	☐2	☐3	☐4
(b) poor work habits.	☐1	☐2	☐3	☐4
(c) poor teaching.	☐1	☐2	☐3	☐4
(d) lack of support from parents/ guardians.	☐1	☐2	☐3	☐4
(e) negative peer influence.	☐1	☐2	☐3	☐4
(f) lack of student effort/ motivation.	☐1	☐2	☐3	☐4
(g) mathematics skills were not well learned in earlier grades.	☐1	☐2	☐3	☐4

4. How confident are you in your ability to do the following?

	Not at all confident	Somewhat confident	Very confident
(a) Paper-pencil calculations	☐1	☐2	☐3
(b) Mental math	☐1	☐2	☐3
(c) Estimation	☐1	☐2	☐3
(d) Solving complex problems	☐1	☐2	☐3
(e) Use of technology	☐1	☐2	☐3

5. How confident are you in your ability to help students develop understanding in each of the following content areas?

	Not at all confident	Somewhat confident	Very confident
(a) Numbers and operations	☐1	☐2	☐3
(b) Geometry and measurement	☐1	☐2	☐3
(c) Patterns and relationships (algebra)	☐1	☐2	☐3
(d) Data-management and probability (statistics)	☐1	☐2	☐3

6. To what extent do the following present challenges to your ability to teach mathematics?

	Little or no challenge	Some challenge	A great challenge
(a) The range of student abilities in the class	☐1	☐2	☐3
(b) Students coming from a wide variety of backgrounds (e.g., socioeconomic, language, etc.)	☐1	☐2	☐3
(c) Students with special needs (cognitive, emotional, or physical)	☐1	☐2	☐3
(d) Uninterested students	☐1	☐2	☐3
(e) Disruptive students	☐1	☐2	☐3
(f) Pressure from parents/guardians	☐1	☐2	☐3
(g) Curriculum inappropriate for grade level	☐1	☐2	☐3
(h) Shortage of computer hardware or software	☐1	☐2	☐3
(i) Shortage of materials or equipment	☐1	☐2	☐3
(j) Inadequate physical facilities	☐1	☐2	☐3
(k) Too much content in curriculum	☐1	☐2	☐3
(l) Large class sizes	☐1	☐2	☐3
(m) Low morale in the school	☐1	☐2	☐3
(n) Concerns for personal safety or the safety of students	☐1	☐2	☐3
(o) Inadequate resource materials for lesson planning	☐1	☐2	☐3
(p) Lack of time for planning	☐1	☐2	☐3
(q) Limits in my own background in the subject	☐1	☐2	☐3
(r) Weak curriculum	☐1	☐2	☐3
(s) External assessments or standardized tests	☐1	☐2	☐3
(t) Lack of professional development	☐1	☐2	☐3

Thank you for taking the time to complete this questionnaire.