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## Implementation

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### Purpose of the PTaP

To assess student perceptions about grade 7-12 math and science teaching as a profession.

### Course Level: What kinds of courses is it appropriate for?

Upper-level, Intermediate, Intro college, and High school

### Content: What does it test?

Beliefs / Attitudes (Personal Enjoyment, As a Career Choice, Others Support Me Teaching, My Department Values and Encourages, My Department Supports Me Teaching, Employee benefits and Stability, Teaching is Scientific, Nurturer, Back Up Plan, All Students Can Learn, I would if ...)

### Timing: How long should I give students to take it?

10 minutes

### Example Questions

My department would be proud if I became a Grade 7-12 teacher.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

I would become a Grade 7-12 teacher if the pay were equal to my other career options.

1. Strongly Disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly Agree

### Access: Where do I get the test?

Download the test from physport at [www.physport.org/assessments/PTaP](http://www.physport.org/assessments/PTaP).

### Versions and Variations: Which version of the test should I use?

The most recent version of the PTaP, version 2, was released in 2017.

### Administering: How do I give the test?

- The PTAP can be given as a paper/pencil survey or online using SurveyMonkey ([PTaP](#)). If you would like to give the PTAP using SurveyMonkey, please [contact](#) the developers first.
- Give it as both a pre- and post-test. This measures how students' perceptions of teaching change.
  - Give the pre-test at the beginning of the term.
  - Give the post-test at the end of the term.
- Use the whole survey, with the original wording and question order. This makes comparisons with other classes meaningful.
- Make the survey required, and give credit for completing the survey. This ensures maximum participation from your students.
- For more details, read the **PhysPort Guides** on implementation:
  - **PhysPort PTAP implementation guide** ([www.physport.org/implementation/PTAP](http://www.physport.org/implementation/PTAP))

## Scoring: How do I calculate my students' scores?

- Download the scoring rubric from PhysPort ([www.physport.org/key/PTaP](http://www.physport.org/key/PTaP))
- There are several different question types on the PTaP that are scored differently. For most questions, percent favorable is calculated based on the percent of the responses where the respondent agrees with the expert (and percent unfavorable where respondent disagrees with expert).
- Some questions are simple tallies of answering in the affirmative.
- Statement 47: To be included in analysis must choose option 4 (agree). If not, delete the entire respondent.
- For more scoring details see below.
- For instructions on scoring the PTaP, see the **PhysPort PTaP Implementation Guide** ([www.physport.org/implementation/PTaP](http://www.physport.org/implementation/PTaP))
- See the **PhysPort Expert Recommendation on Best Practices for Administering Belief Surveys** for instructions on calculating shift and effect size ([www.physport.org/expert/AdministeringBeliefSurveys/](http://www.physport.org/expert/AdministeringBeliefSurveys/))
- Use the **PhysPort Assessment Data Explorer** for analysis and visualization of your students' responses ([www.physport.org/explore/CLASS](http://www.physport.org/explore/CLASS))

## Scoring Rules

**Categories I – IX, Overall and All Categories scoring:** Comparison to the expert (same technique as the CLASS).

- When scoring these categories each answer for each respondent is compared to the expert.
- Percent favorable is calculated based on the percent of the responses where the respondent agrees with the expert.
- Percent unfavorable is calculated based on the percent of the statements where the respondent disagrees with the expert.
- Note, the sum of favorable and unfavorable do not need to equal 100% since a neutral response neither is an agreement nor a disagreement with the expert.
- Once category favorable and unfavorable scores have been calculated for each respondent, the favorable for all are averaged and the unfavorable for all are averaged.

**Category X scoring:** Considered favorable only if the respondent shows a consistent growth mindset.

- Favorable and unfavorable scores for each respondent calculated the same as for categories I – IX.
- Once favorable and unfavorable scores have been calculated for each respondent, the overall favorable score for the sample is the fraction of respondents who have 100% favorable. No unfavorable score is reported.

**Category XI scoring:** Tally of the number of students who would if any of the statements are answered in the affirmative (agree or strongly agree).

- Favorable and unfavorable scores for each respondent calculated the same as for categories I – IX.
- Once favorable and unfavorable scores have been calculated for each respondent, the overall favorable score for the sample is the tally (number) of respondents who have greater than 0% favorable. No unfavorable score is reported.

**Reported Statements:** Tallies (number answering in the affirmative – agree or strongly agree) reported for each of these three statements

33. I want to become a grade 7-12 teacher

36. I plan to pursue teacher certification at my institution.

37. I plan to pursue teacher certification through another route.

**Binning the above scores:** It's valuable for a department to be able to parse the students who want to become a teacher from those who do not.

- Report above scores for those who answer #33 in the affirmative separately from those who answer it in the negative (ignore the neutrals).

## Exclusion Criteria:

- Statement 47: To be included in analysis must choose option 4 (agree). If not, delete the entire respondent.
- Minimum number of statements answered to be included in the score for each category

- Overall 45
- All categories 36
- I. Personal Enjoyment 5
- II. As a Career Choice 7
- III. Support by Others 4
- IV. Department Support 3
- V. My Department... 3
- VI. Employee Benefits 3
- VII. Teaching is Scientific 4
- VIII. Nurturer 4
- IX. Back up Plan 3
- X. All Students can Learn 3
- XI. I would if... 1

**Skip Logic:**

- If 36. Or 37. are answered in the affirmative (agree or strongly agree), skip to 43.

**Clusters: Does this test include clusters of questions by topic?**

The PTaP contains Eleven empirical categories (contain 42 of 56 statements)

**I. Personal Enjoyment:** Items 15, 17, 28, 29, 33, 36, 45

**II. As a Career Choice:** Items 7, 8, 10, 13, 14, 16, 18, 27, 29

**III. Others Support Me Teaching:** Items 3, 6, 18, 30, 31, 32

**IV. My Department Values and Encourages:** Items 1, 2, 3, 4, 5

**V. My Department Supports Me Teaching:** Items 3, 6, 30, 32

**VI. Employee benefits and Stability:** Items 24, 25, 26, 50

**VII. Teaching is Scientific:** Items 8, 9, 13, 14, 27

**VIII. Nurturer:** Items 17, 36, 44, 45, 48

**IX. Back Up Plan:** Items 12, 34, 37, 49

**X. All Students Can Learn:** Items 53, 54, 55

**XI. I would if ...:** Items 38, 39, 40, 41

**Overall:** Includes 55 statements 1-42, 44-46, 48-57

**All categories:** Includes 41 statements: 1-8, 10, 12-18, 24-34, 36-41, 44-45, 48-50, 53-55

**Typical Results: What scores are usually achieved?**

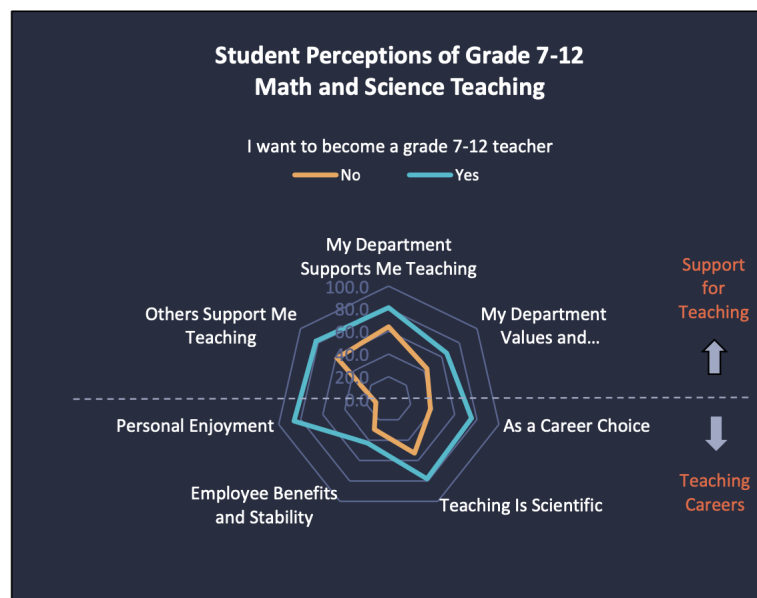
To identify those who want to teach, those who chose either agree or strongly agree on the statement "I want to become a grade 7–12 teacher" were combined. For those who do not want to teach, students who chose disagree or strongly disagree with this statement were combined. If a student chose neutral, they were not included in this analysis.

All scores are % agreement with what the experts identified as positive and accurate perceptions of the profession.

I want to become a grade 7-12 teacher	Neutral	No	Yes
N=777	156	481	140
Overall (53)		39.4	66.8
Personal enjoyment		12.2	87
As a career choice		37.1	75.8
Support by others		48.1	69
Department values and encourages teaching		35.5	59.7
Department supports me teaching		47.2	64.1
Employee benefits and security		29.4	48.4
Teaching is scientific		50.1	80.7
Nurturer		33	86.9
Back up plan		42.1	49.2
All students can learn		59.3	80

### Interpretation: How do I interpret my students' score in light of typical results?

The Get the Facts Out project plots seven of the eleven empirical categories of the PTaP on a radar plot to help departments see how their students perceive support for teaching in their department compared to how students perceive teaching careers. For a list of questions included in each of these categories, see the "Clusters" section below.



## Resources

### Where can I learn more about this test?

S. Logan, J. Breakall, R. Pearson III, and W. Adams, [College faculty support for grade 7-12 teaching careers: survey results and comparisons to student perceptions](#), presented at the Physics Education Research Conference 2020, Virtual Conference, 2020.

## Translations: Where can I find translations of this test in other languages?

We don't have any translations of this assessment yet.

If you know of a translation that we don't have yet, or if you would like to translate this assessment, please [contact us!](#)

## Background

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### Similar Tests

The PTaP.HE is a sister assessment to the PTaP. Give the PTaP to assess student perceptions about grade 7-12 math and science teaching as a profession. Give the PTaP.HE to assess college/university faculty, staff and advisors' perceptions of grade 7-12 math and science teaching as a profession.

### Research: What research has been done to create and validate the test?

**Research Validation:** Silver ●

This is the second highest level of research validation, corresponding to at least 5 of the validation categories below.

- Based on research into **student thinking**
- Studied using **student interviews**
- Studied using **expert review**
- Studied using **appropriate statistical analysis**
- Research conducted **at multiple institutions**
- Research conducted **by multiple research groups**
- Peer-reviewed publication**

### Research Overview

The statements on the PTaP were developed based on expert feedback on topics the developers found valuable. Students were interviewed about the statements, experts gave feedback on the statements, and they were revised. Additional students were interviewed about the revised statements. The PTaP was given to large numbers of students, and an item analysis and factor analysis were completed. Expert responses to the questions were collected, and experts gave feedback on the data and factor naming. The PTaP has been given to over 2000 students at over 40 institutions. The results have been published in one peer-reviewed publication.

### Developer: Who developed this test?

Wendy K. Adams, Taylor Plantt, Heather Taffe, Monica Plisch

## References

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- S. Logan, J. Breakall, R. Pearson III, and W. Adams, [College faculty support for grade 7-12 teaching careers: survey results and comparisons to student perceptions](#), presented at the Physics Education Research Conference 2020, Virtual Conference, 2020.