Motivation Scale towards Physics Learning (MSPL)

Version 1

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Format: Agree/disagree
Duration: 30 minutes
Focus: Beliefs / Attitudes (self-efficacy, appreciation reward, value of learning physics)
Level: Intro college

How to give the test

- Give it as both a pre- and post-test. This measures how your class shifts motivation toward physics learning.
  - Give the pre-test at the beginning of the term.
  - Give the post-test at the end of the term.
- Use the whole test, with the original wording and question order. This makes comparisons with other classes meaningful.
- Make the test required, and give credit for completing the test. This ensures maximum participation from your students.
- Tell your students that the test is designed to evaluate the course (not them), and that knowing how they think will help you teach better. Tell them that correctness will not affect their grades (only participation). This helps alleviate student anxiety.
- For more details, read the **PhysPort Guides** on implementation:
  - **PhysPort MSPL implementation guide** (www.physport.org/implementation/MSPL)
  - **PhysPort Expert Recommendation on Best Practices for Administering Belief Surveys** (www.physport.org/expert/AdministeringBeliefSurveys/)

How to score the test

- Strongly disagree is scored as 1, disagree as 2, neutral as 3, agree as 4, and strongly agree as 5. Each student's response is summed over all 22 items. Scores range between 22 (lowest) and 110 (highest).
- 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/)
- Use the **PhysPort Assessment Data Explorer** for analysis and visualization of your students' responses (www.physport.org/explore/MSPL)

Motivation Scale towards Physics Learning

Name:

Dear Pre-service Science Teachers,
This scale was prepared within the framework of a scientific study and the information collected will be used for a scientific study and kept confidential. Please think about how much the following statements define you and state your answers as "absolutely disagree, disagree, un-decided, agree, strongly agree" by putting an "X" in the box in the answer section. Please make sure your evaluations exactly reflect your thoughts. Thank you for your collaboration.

	Absolutely Disagree	Disagree	Undecided	Agree	Strongly Agree
1. If there is a success ranking in physics class, I like to see my name at the top in this ranking.					
2. In discussions about physics, my friends usually support my ideas.					
3. Learning physics changes our perspective on life and increases our attention.					
4. I like to hear appreciative words from the teacher because of my achievements in physics class.					
5. I know how to get the right resources to solve a question in physics.					
6. I definitely try different ways of solving a physics problem and compare the results I have achieved.					
7. I think that what I learned in physics has an important place in my life.					
8. Even if I encounter a question about physics that I have never seen before, I think I can solve that question.					
9. I would like to get high marks in physics class.					
10. Learning physics helps us to produce the creative ideas about the world.					
11. I can produce creative and effective solutions while solving physics questions.					
12. The fact that the teacher verbally thanks me in the physics class makes me proud.					
13. Even if it is a difficult physics problem, I believe that I will finally find a solution.					
14. My ideas about physics are often listened to with interest.					
15. I develop new research ideas in physics.					
16. Before coming to the physics class, I do research on the subject from different sources.					
17. I think about physics in everyday life.					
18. I like being in a race with my friends in physics classes.					
19. I find the results of all variables that can be found even if they are not asked in a physics problem.					
20. I feel smart when talking about my ideas that most people don't know about physics.					
21. After solving a physics problem, I explain the result I have reached with examples.					
22. I continue to do research until I find answers to my questions about physics.					