PhysPort Implementation Guide:
Classroom Observation Protocol for Undergraduate STEM (COPUS)
Version 1

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Purpose of the COPUS
To allow observers with little observation protocol training and experience to reliably characterize what both faculty and students are doing in a classroom.

Course Level: What kinds of courses is it appropriate for?
Upper-level, Intermediate, and Intro college

Content: What does it assess?
Teaching (What are the students doing?, What is the instructor doing?)

Timing: How long should I give students to take it?
N/A minutes

Example Questions
Descriptions of the COPUS student and instructor codes:

Access: Where do I get the assessment?
Download the assessment from phsysport at www.physport.org/assessments/COPUS.

Versions and Variations: Which version of the assessment should I use?
The latest version of the COPUS, v1, was released in 2013.

Administering: How do I give the assessment?
- Complete the COPUS training according to the COPUS Training Guide (http://www.cwsei.ubc.ca/resources/files/COPUS_Training_Protocol.pdf)
- Print out the COPUS codes and observation matrix.
Put a check under all codes that happen anytime in each 2 minute time period (check multiple codes where appropriate). If no codes fit, choose “O” (other) and explain in comments. Put in comments when you feel something extra should be noted or explained.

If you have two observers in a classroom and would like to calculate inter-rater reliability (IRR), for all 25 codes add up all the total number of times: 1) both observers put a check in the same box, 2) neither observer put a check in the same box, 3) observer 1 put a check in a box when observer 2 did not, and 4) observer 2 put a check in a box when observer 1 did not. With this information, you can use a statistical package such as SPSS (IBM Inc.) to calculate the Kappa values.

Scoring: How do I calculate my students’ scores?

Create a pie chart of the code frequency for "Students are doing" and a separate pie chart with the code frequency for "Instructor is doing" for the whole class period. These pie charts give faculty a good sense of how much time they spent on different activities during class.

Clusters: Does this assessment include clusters of questions by topic?

COPUS data can be used in several ways.

- It can provide a non-threatening way to help faculty members evaluate how they are spending their time in class.
- Be used in tenure and promotion documentation to supplement their normal documentation to give substantially more information to report about their use of active-learning strategies than is usually the case.
- Be used to develop targeted professional development.
- Carry out systematic observations of all instructors in a department in order to characterize teaching practices.

Resources

Where can I learn more about this assessment?


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Translations: Where can I find translations of this assessment 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

Similar Assessments
TDOP, RIOT, RTOP

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

Research Validation: Gold Star ★
This is the highest level of research validation, corresponding to all seven of the validation categories below.

- Based on research into classroom behavior
- Studied using iterative observations
- Studied using inter-rater reliability
- Studied using training materials
- Research conducted at multiple institutions
- Research conducted by multiple research groups
- Peer-reviewed publication

Research Overview
The codes on the observational protocol were developed based on iterative modifications of the TDOP observation protocol. Sixteen science education specialists used the preliminary protocol in pairs or trios across most departments at one university. The science education specialists met to discuss coding difficulties, and the COPUS was refined through five versions. The COPUS was then tested with 16 K–12 teachers participating in a teacher professional development program, and the COPUS was revised. The final version was tested by having the same 16 K–12 teachers use it to observe 23 STEM classes, and by having seven STEM faculty observers use it to observe eight classrooms at another university in pairs after 1.5 hours of training. The inter-rater reliability of the observations was to be good. COPUS results are published in one peer-reviewed publication.

Developer: Who developed this assessment?
Michelle K. Smith, Francis H. M. Jones, Sarah L. Gilbert, and Carl E. Wieman

References