November 13, 2016

Dear Professor Doe,

Thank you for participating in the study of teaching and learning practices at the University of Kansas (i.e., TRESTLE). KU is collaborating with six other research institutions to investigate ways to support instruction in higher education. This study is funded by the National Science Foundation and provides multiple sources of data over a five-year period to look at changes in attitudes and practices. One source of information is direct observation of classroom instruction. Trained observers attend three class periods per course and record events using the COPUS protocol.[[1]](#footnote-1)

The COPUS protocol is a widely used tool that enables an observer to record the types of student and instructor activities that occur within a class period. Each class period is divided into two-minute intervals, for which the observer records both the activities of students and instructors.

**Course Observed: ABCD 103 Introduction to Biology**

**Instructor: John Doe**

**Dates of Observations: 10/1/16, 10/3/16, 10/5/16**

**Occurrence of Activity by Time (Collapsed Codes)**

The following figures show the activities that occurred in each 2-minute time interval across the class period. The activities are grouped into eight categories. Rows show the time periods in which a given activity occurred. Columns show which activities were marked in each time interval. This visualization can give insights into the overall flow of the class. The dark shaded squares indicate that the activity occurred at some point during the 2-minutes interval. It does not indicate that the activity occurred for the entire 2-minute interval. See the description below the figures that explains how the categories were combined. A detailed description of all the observation categories is provided at the end of this observation summary.

**Date: 10/1/16**



**Date: 10/3/16**



**Date: 10/5/16**



**Collapsed Codes\***

|  |  |
| --- | --- |
| **Student Activities** | **Categories included** |
| Receiving | Listening to instructor (L) |
| Talking to Class | Student answering question (AnQ), Student asking question (SQ), Whole-class discussion (WC), Students presenting to entire class (SP) |
| Working | Individual thinking (Ind), Discussing clicker question (CG), Working in groups on worksheet (WG), Other group activity (OG), Making prediction (Prd), Test/Quiz (TQ) |
| Other | Waiting (W), Other (O) |

|  |  |
| --- | --- |
| **Instructor Activities** | **Categories included** |
| Presenting | Lecturing or presenting information (Lec), Real-time writing (RtW), Demonstration/Video (D/V) |
| Guiding | Follow-up/feedback on activity (FUp), Pose question (PQ), Pose clicker question (CQ), Listening to and answering student questions (AnQ), Moving and Guiding (MG), One on one discussion (1o1) |
| Administration | Administration (Adm) |
| Other | Waiting (W) or Other (O) |

\*As defined in M. K. Smith, E. L. Vinson, J. A. Smith, J. D. Lewin, & M. R. Stetzer (2014). *A Campus-Wide Study of STEM Courses: New Perspectives on Teaching Practices and Perceptions,* CBE-Life Sciences Education 13(4), pp. 624–635.

**Occurrence of Activity by Time**

The figures below also show which activities occurred in each 2-minute time interval. In this case, the general categories are separated into 25 categories to capture which specific activities occurred at some point during that 2-minute interval.

**Date: 10/1/16**



**Date: 10/3/16**



**Date: 10/5/16**



**Activity as Percentage of Time Intervals (Collapsed Codes)**

The next figures show the percentage of 2-minute time intervals in which each activity occurred during the class. Again, it only indicates that the activity occurred for at least a portion of that interval. The activities are grouped into 8 categories, as they were in the figures shown earlier.

**Date: 10/1/16**

**Date: 10/3/16**

**Date: 10/5/16**

**Activity as Percentage of Time Intervals**

The next figures show the percentage of 2-minute time intervals in which each activity occurred. In this case, all 25 categories are represented.

**Date: 10/1/16**

**Date: 10/3/16**

**Date: 10/5/16**

**Student Time-On-Task Ratings**

We can also generate rough approximations of student time-on-task. If you would like to more information about these ratings, please let me know.

**Summary**

Hopefully the COPUS results above provide an objective way to consider the instruction that occurred on these observation dates. Again, these observations are confidential and will only be used for research purposes. However, if you would like to discuss these results further, we are happy to meet with you and/or provide any resources that might be helpful. You can contact me at janedoe@trestle.com with any questions.

Sincerely,

Jane Doe, Ph.D.

Course Transformation Program Director

TRESTLE

**Codes Descriptions**

|  |  |
| --- | --- |
| **Code** | **Students are Doing** |
| Listening | Listening to instructor/taking notes, etc. |
| Individual Thinking | Individual thinking/problem solving. Only mark when an instructor explicitly asks students to think about a clicker question or another question/problem on their own. |
| Clicker Group | Discuss clicker question in groups of 2 or more students |
| Working Group | Working in groups on worksheet activity |
| Other Group | Other assigned group activity, such as responding to instructor question |
| Answer Question | Student answering a question posed by the instructor with rest of class listening |
| Student Question | Student asks question |
| Whole class discussion | Engaged in whole class discussion by offering explanations, opinion, judgment, etc. to whole class, often facilitated by instructor |
| Prediction | Making a prediction about the outcome of demo or experiment |
| Student Presentation | Presentation by student(s) |
| Test or Quiz | Test or quiz |
| Waiting | Waiting (instructor late, working on fixing AV problems, instructor otherwise occupied, etc.) |
| Other | Other – explain in comments |

|  |  |
| --- | --- |
| **Code** | **Instructor is Doing** |
| Lecture | Lecturing (presenting content, deriving mathematical results, presenting a problem solution, etc.) |
| Real-Time Writing | Real-time writing on board, doc. projector, etc. (often checked off along with Lec) |
| Follow Up | Follow-up/feedback on clicker question or activity to entire class |
| Posing Question | Posing non-clicker question to students (non-rhetorical) |
| Clicker Question | Asking a clicker question (mark the entire time the instructor is using a clicker question, not just when first asked) |
| Answer Question | Listening to and answering student questions with entire class listening |
| Moving/Guiding | Moving through class guiding ongoing student work during active learning task |
| 1-on-1 | One-on-one extended discussion with one or a few individuals, not paying attention to the rest of the class (can be along with MG or AnQ) |
| Demo/Video | Showing or conducting a demo, experiment, simulation, video, or animation |
| Administration | Administration (assign homework, return tests, etc.) |
| Waiting | Waiting when there is an opportunity for an instructor to be interacting with or observing/listening to student or group activities and the instructor is not doing so |
| Other | Other – explain in comments |

1. Smith, MK, FH Jones, SL Gilbert, and CE Wieman. “The Classroom Observation Protocol for Undergraduate STEM (COPUS): A New Instrument to Characterize University STEM Classroom Practices.” *CBE-Life Sciences Education* 12, no. 4 (2013): 618-27. [↑](#footnote-ref-1)