

## Supplementary Data Files for “Exploring scientific inquiry and curiosity with online question ranking tools”

### **supplementarydata\_questions.txt** **supplementarydata\_questions\_Codebook.pdf**

This data file, in tab-delimited text, includes every question submitted. Questions are identified by the session in which they were asked and the author of the question. Also included is a summary of the total number of votes this question received. We show the classification of the question based on the thematic categories in Table 2 of the manuscript (done by blind coding the questions in random order).

### **supplementarydata\_sessions.txt** **supplementarydata\_sessions\_Codebook.pdf**

This data file, in tab-delimited text, includes data about the sessions. Each session is an individual meeting of the course (a ‘day’ during the semester). We identify the dominant modality of the session according to the classifications in Table 3 of the manuscript.

### **supplementarydata\_students.txt** **supplementarydata\_students\_Codebook.pdf**

This data file, in tab-delimited text, includes ancillary data about students (including student performance on summative assessments) and changes in attitude as measured using the STEBI-B instrument for measuring science teaching self efficacy beliefs.

### **supplementarydata\_votes.txt** **supplementarydata\_votes\_Codebook.pdf**

This data file, in tab-delimited text, includes every vote cast and identified by student. Note that this tracking data only spans a portion of one semester rather than all course sections. We had not implemented vote tracking until late in the research study.

**supplementarydata\_students.txt**

This data file, in tab-delimited text, includes ancillary data about students (including student performance on summative assessments) and changes in attitude as measured using the STEBI-B instrument for measuring science teaching self efficacy beliefs.

Columns (listed in sequential order)

PersonID	Randomly assigned code that uniquely identifies a student
Team	Students are grouped into teams. This is the student's team assignment.
NumQuestionsSubmitted	The approximate number of questions the student submitted. For some semesters, this number was estimated inaccurately in this column. A better measure is to actually sum up their questions from the question table. It is included here for legacy purposes.
NumTimesVoted	Since voting was not tracked in most class sessions, we estimated the relative number of times a student voted based on how many times they clicked the voting link in Moodle. - 999 means that we did not perform the analysis.
ScoreOverall	Students's overall percentage score for the entire course (includes homework, projects, peer assessments, quizzes, exam, etc...)
ScoreQuiz	Students average percentage score on quizzes during the course.
ScoreFinal	Student's percentage score on the final exam.
PSTE_Pre	Student's PSTE score from the STEBI-B, Pre-test at beginning of semester.
STOE_Pre	Student's STOE score from the STEBI-B, Pre-test at beginning of semester.
PSTE_Post	Student's PSTE score from the STEBI-B, Post-test at end of semester.
STOE_Post	Student's STOE score from the STEBI-B, Post-test at end of semester.
AverageVotesForPerson	Average number of votes that questions written by this student received. -999 indicates we did not do the analysis.

**supplementarydata\_votes.txt**

This data file, in tab-delimited text, includes every vote cast and identified by student. Note that this tracking data only spans a portion of one semester rather than all course sections. We had not implemented vote tracking until late in the research study.

## Columns (listed in sequential order)

supplementarydata_votes.txt	
QuestionID	Unique ID of the question. Corresponds to the ID's in the questions table.
PersonID	Unique ID of the author (corresponds to the ID's in the student table).
Yes	Students can either vote in favor of a question, against a question, or leave a question unvoted. If they leave the question unvoted, no information gets tracked. If they vote for the question, Yes is set to 1 and No is set to 0.
No	If the student voted against this question, No is set to 1 and Yes is set to 0.

**supplementarydata\_questions.txt**

This data file, in tab-delimited text, includes every question submitted. Questions are identified by the session in which they were asked and the author of the question. Also included is a summary of the total number of votes this question received. We show the classification of the question based on the thematic categories in Table 2 of the manuscript (done by blind coding the questions in random order).

## Columns (listed in sequential order)

supplementarydata_questions.txt	
	Unique ID of the question. Questions are numbered sequentially, with each semester starting at 1, 1000, or 3000. There were two sections during the semester with index starting in 1000 that were
QuestionID	intermixed.
PersonID	Unique ID of the author. Corresponds to the ID's in the student table.
SessionID	Unique ID of the session. Corresponds to the ID's in the session table.
Plus Votes	Total number of votes for this question.
Minus Votes	Total number of votes against this question
BLINDCODE	The coding of the questions as defined in Table 2 of the manuscript text.
Text	The actual question text.

**supplementarydata\_sessions.txt**

This data file, in tab-delimited text, includes data about the sessions. Each session is an individual meeting of the course (a 'day' during the semester). We identify the dominant modality of the session according to the classifications in Table 3 of the manuscript.

**Columns (listed in sequential order)**

supplementarydata\_sessions.txt

	The lesson sequence varied slightly over each semester. In order to analyze temporal patterns, we mapped all courses onto the sequence used in Fall 2013 (sessionID's 1-30)
SessionNum_AlignedTo2013	2013 (sessionID's 1-30)
SessionID	Unique ID of the session.
PedagogicalApproach	Codes are defined in Table 3 of the manuscript text.
TimeOnTopic	Number of sessions spent on this topic thus far.
Topic	A brief description of the lesson that day.