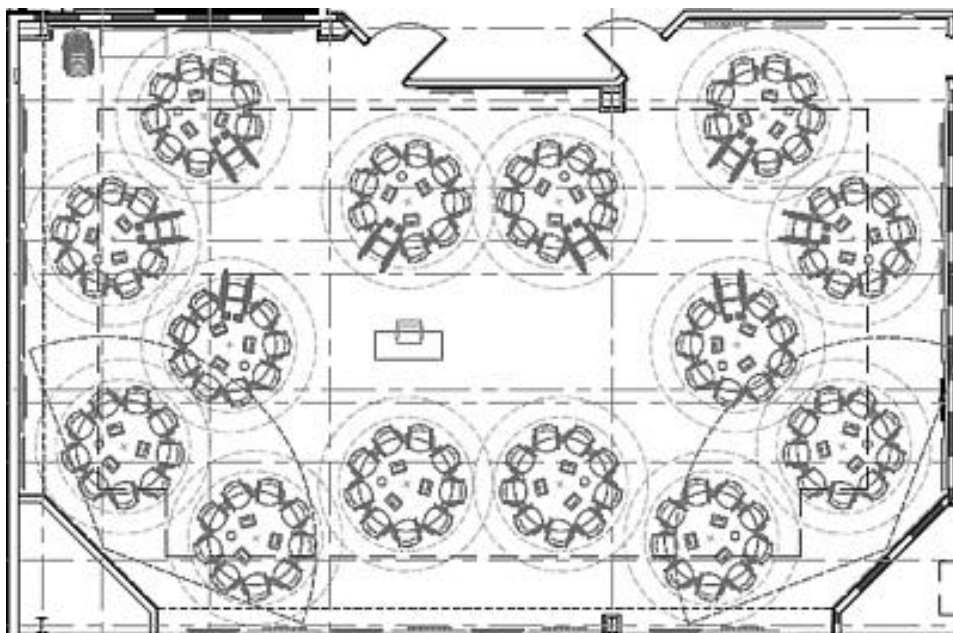


Assessing Teaching and Learning Practices in Classrooms that Foster Active, Collaborative Learning

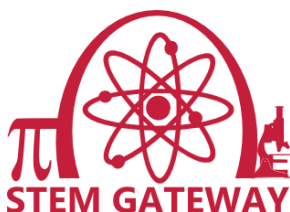


Audriana Stark

*STEM Gateway, Graduate Assistant
Organization, Information, & Learning Sciences*

Gary Smith

*STEM Gateway, PI
Director, Office of Medical Educator Development*



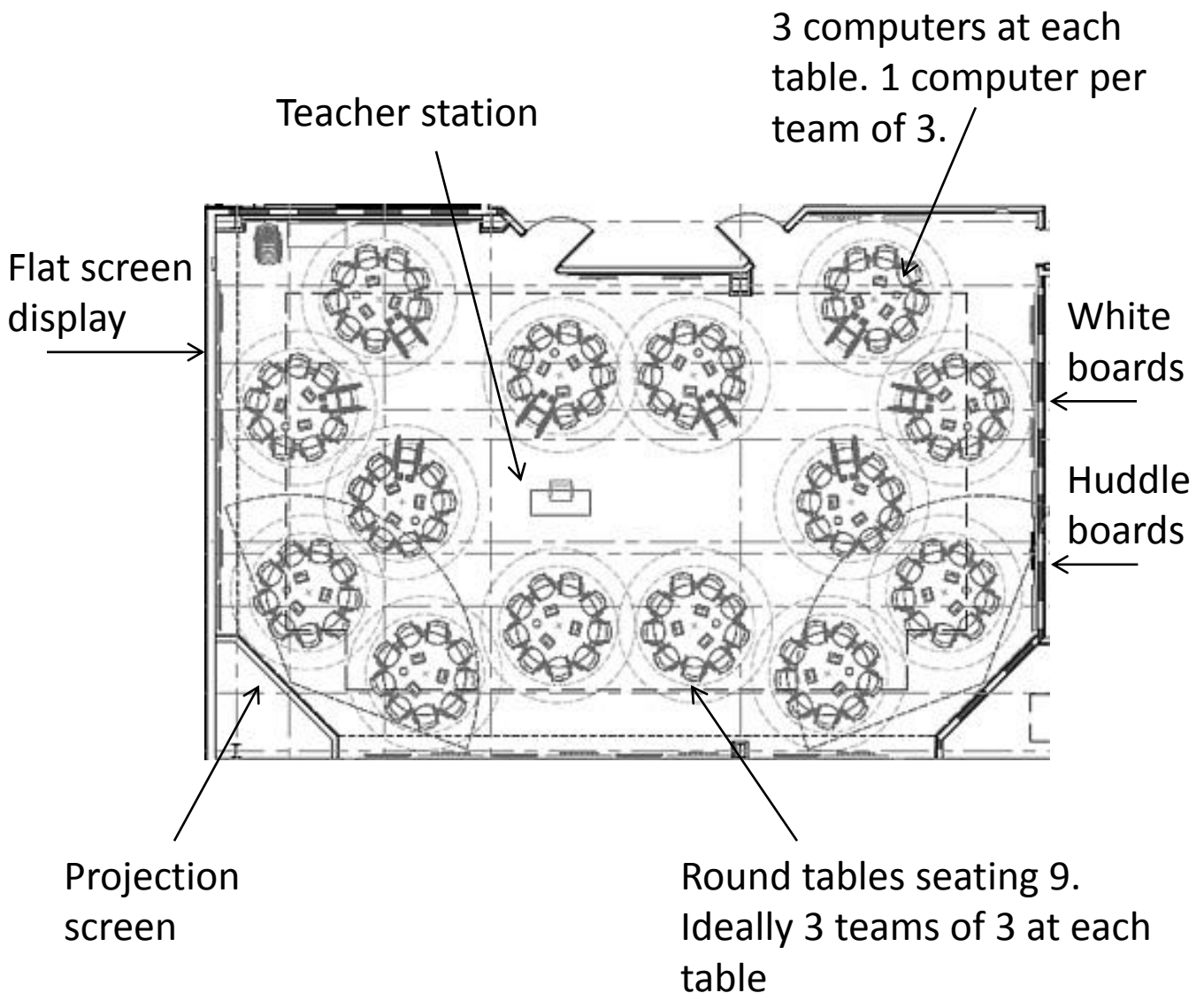
Project for Inclusive Undergraduate STEM Success

The University of New Mexico STEM Gateway program is funded through a U.S. Department of Education TITLE V grant, 2011-2016 (total anticipated funding \$3.82 million).

Outline-

- Description of the Learning Studios
- Rationale for assessing activity in the Learning Studios
- Explanation of the survey instrument
- Breakout session to review some of the collected data and evaluate the survey
- Debrief

UNM Learning Studios



Purpose for Administering Survey

To determine the extent that the STEM Gateway supported courses taught in the Learning Studio achieve goals set by the Learning Environments Committee.

4 out of 5 goals set by Learning Environments Committee are measured:

- ✓ Maximize learner time-on-task
- ✓ Provide immediate learning-progress feedback
- ✓ Supporting peer collaborative learning
- ✓ Increase instructor access for students
- Improving the pass rate and grade achievement in courses

What the survey directly measures:



Class Time Utilization

FEEDBACK



Modes of Immediate Feedback



Collaborative Teaching Techniques



Use of Technology



Student Engagement in the Learning Process

Survey Construction

1. Developed by graduate students Larissa Thill and Elmer Gonzalez in Educational Psychology 572 in consultation with Dr. Julie Sanchez and Dr. Gary Smith.
2. Selected questions from the Office of Information Technology, University of Minnesota Active Learning Classroom survey.
3. Revised with UNM learning studio instructor input.

Survey Implementation

	Total # Courses Survey was Administered in	Total n	Response Rate
Mid-Semester	8	434	61%
End-of-Semester	6	464	62%

All Data Collected

	Total # Courses Data Pulled from	Total n	Response Rate
End-of-Semester	2	235	52%

Data Displayed Today



Class Time Utilization

1. How often was each of the following teaching and learning activities experienced in class?

		Never	About once per month	Two or three times per month	About once per week	In every class
Q1.1	Assignment completion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1.2	Discussion with others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1.3	Lectured more than one third of class time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1.4	Lectured no more than one third of class time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1.5	Time for professor accessible (questions/answers)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q1.6	Utilizing technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

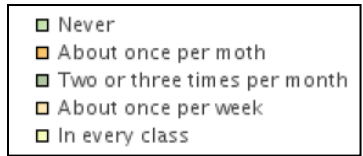
Survey Questions

Answer the following questions with reference to the survey items above and the response data provided on the next page.

1. What is the key take-away point from the data regarding class time utilization?
2. Are there any problematic survey items? If so, list the item numbers and briefly state why they are problematic.
3. List suggestions for improving the survey items.

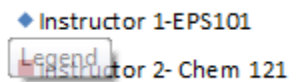
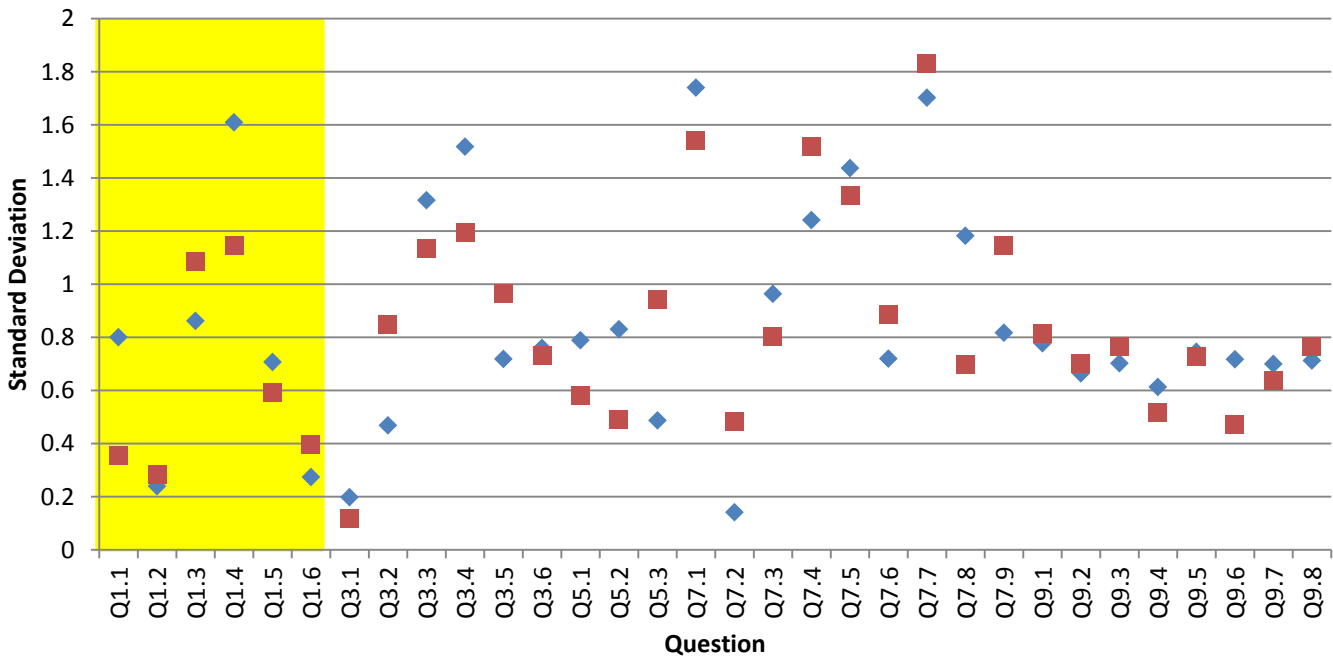
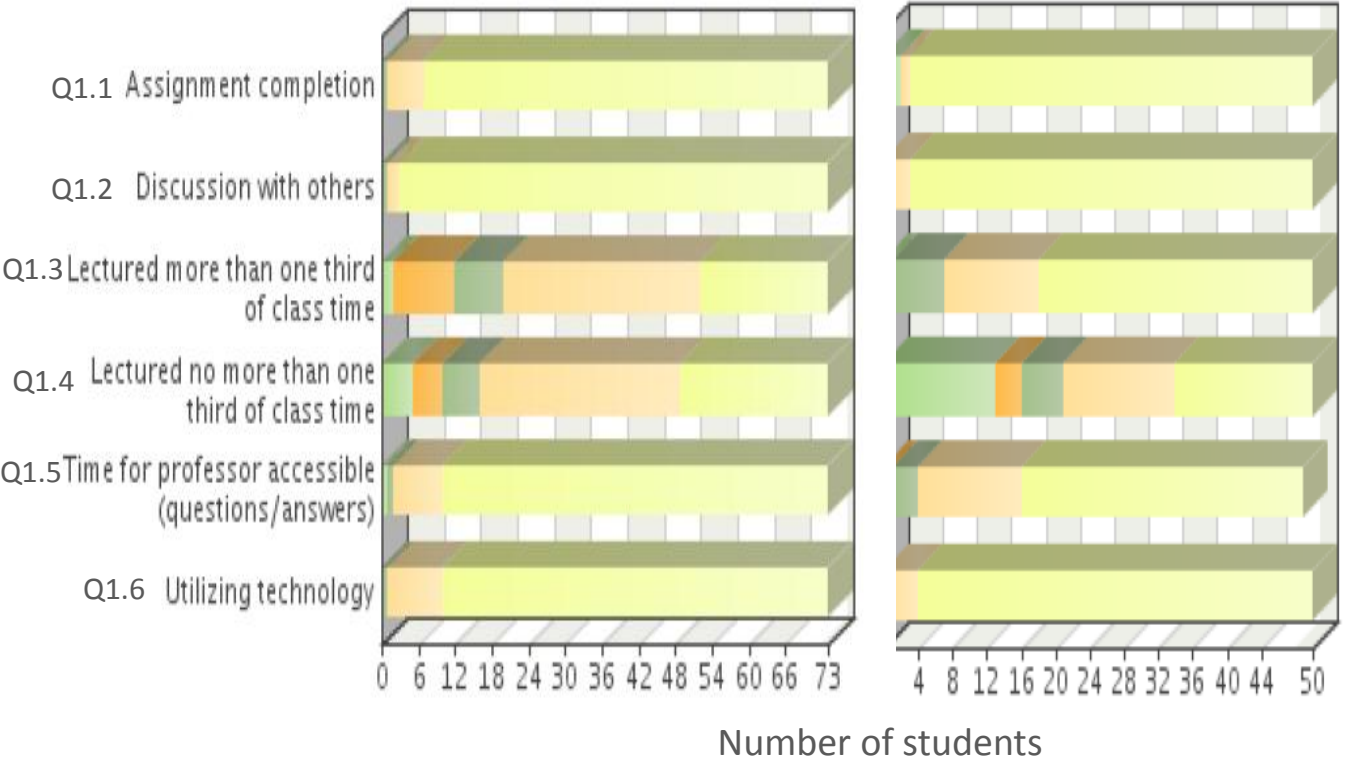


Class Time Utilization



CHEM 121

EPS 101





Modes of Immediate Feedback

5. How often was feedback experienced in class?

Q5.1		Never	About once per month	Two or three times a month	Once per week	In every class
Q5.2	Electronic feedback (iClicker use)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q5.3	Verbal feedback from instructor/TA/PLF	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Verbal feedback from peers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

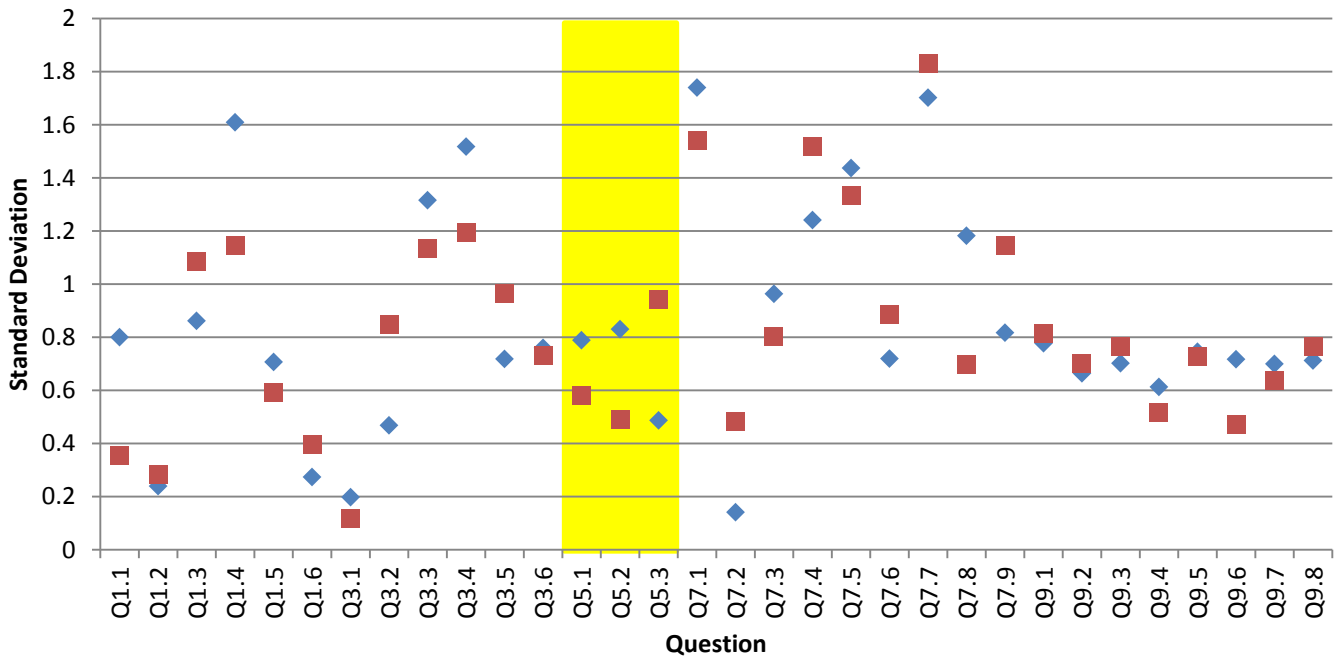
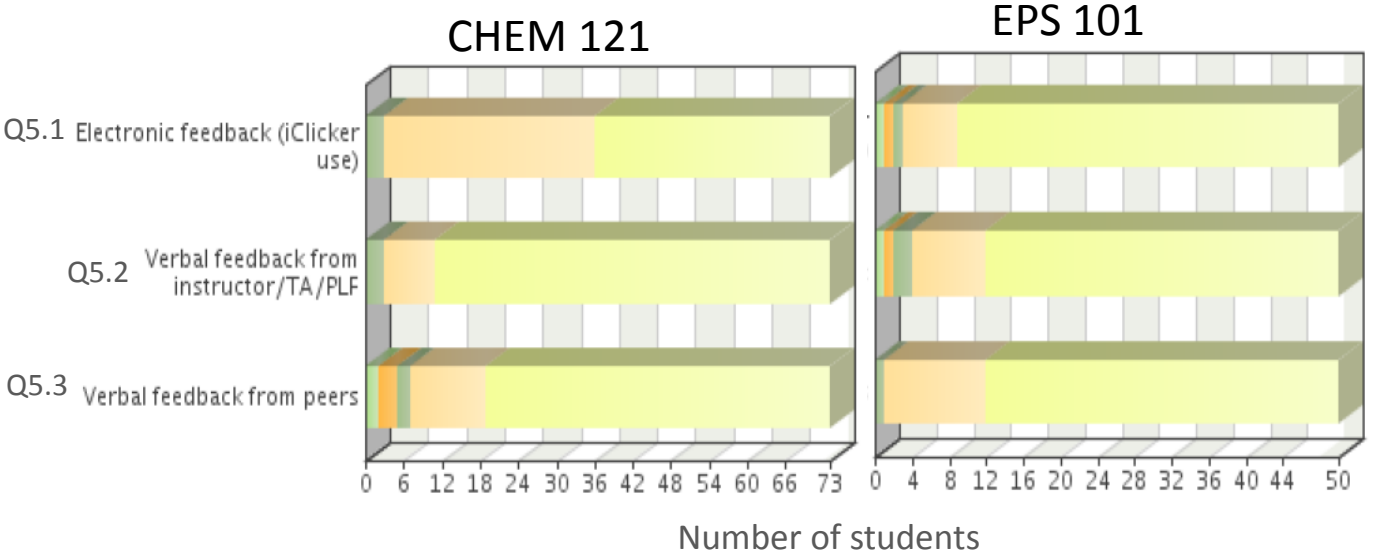
Answer the following questions using the questions above and the data provided on the next page:

1. What is the key take away point from the data regarding modes of immediate feedback?
2. Are there any problematic survey items? If so list them and a brief sentence about why they are problematic.
3. List suggestions for improving the survey items.



Modes of Immediate Feedback

- Never
- About once per month
- Two or three times per month
- About once per week
- In every class





Collaborative Teaching Techniques

3. How often was each of the following partner/group collaboration experienced in class?

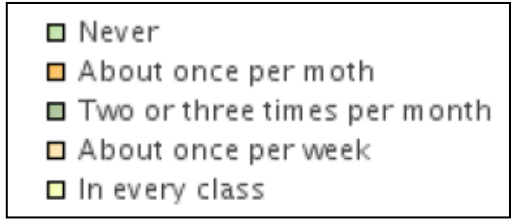
	Never	About once per moth	Two or three times per month	About once per week	In every class
Q3.1 In teams of 2-4 students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3.2 Table discussion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3.3 In-class interaction via software	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3.4 Class discussion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3.5 White board activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q3.6 Student/teacher interaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Answer the following questions using the questions above and the data provided on the next page:

1. What is the key take away point from the data regarding collaborative teaching techniques?
2. Are there any problematic survey items? If so list them and a brief sentence about why they are problematic.
3. List suggestions for improving the survey items.

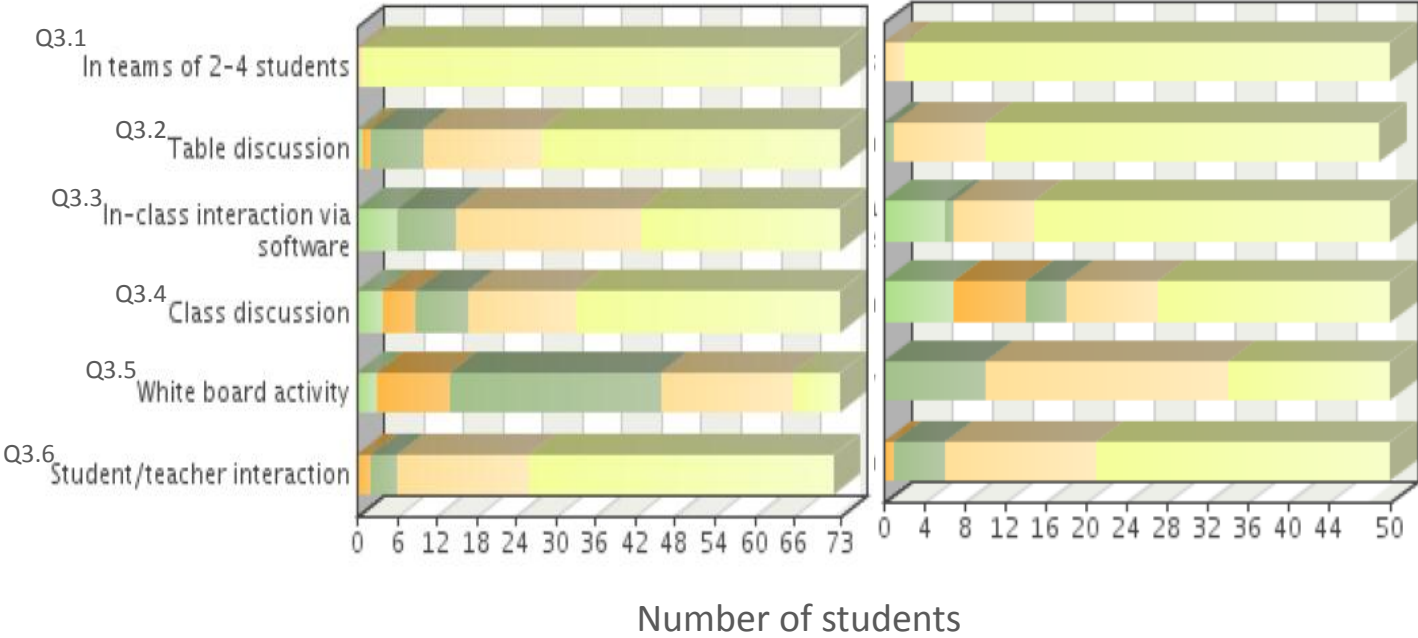


Collaborative Teaching Techniques

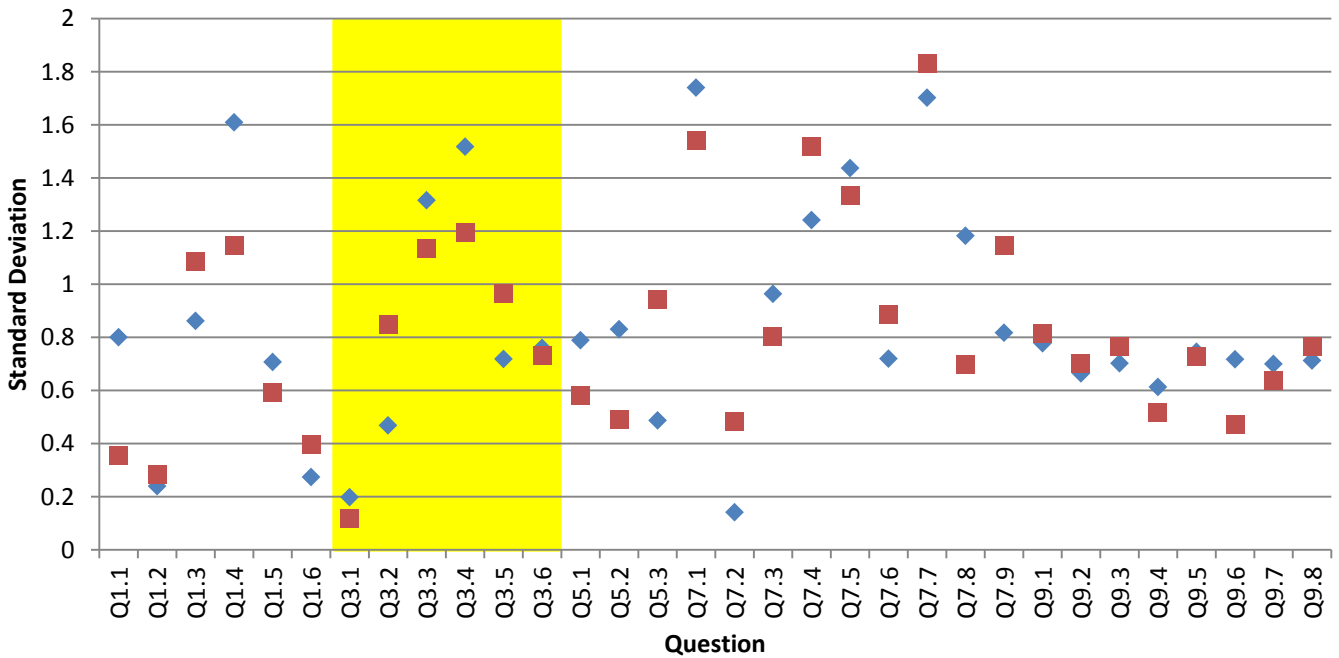


CHEM 121

EPS 101

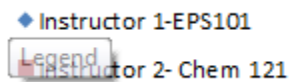


Number of students



Standard Deviation

Question





Use of Technology

7. How often was technology experienced in class?

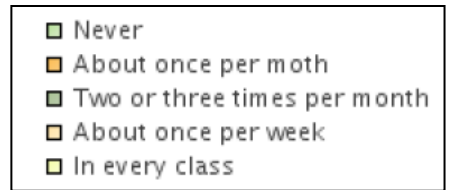
	Never	About once per month	Two or three times per month	About once per week	In every class
Q7.1 Personal laptops/pads	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q7.2 Classroom laptops	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q7.3 Blu-ray/DVD player	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q7.4 Drawing on instructor's monitor (Smart Podium)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q7.5 Sharing views of students' work from classroom laptops (SmartSync)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q7.6 WI-FI access	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q7.7 Document camera	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q7.8 Projection screens/projector	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q7.9 White board	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Answer the following questions using the questions above and the data provided on the next page:

1. What is the key take away point from the data regarding the use of technology?
2. Are there any problematic survey items? If so list them and a brief sentence about why they are problematic.
3. List suggestions for improving the survey items.

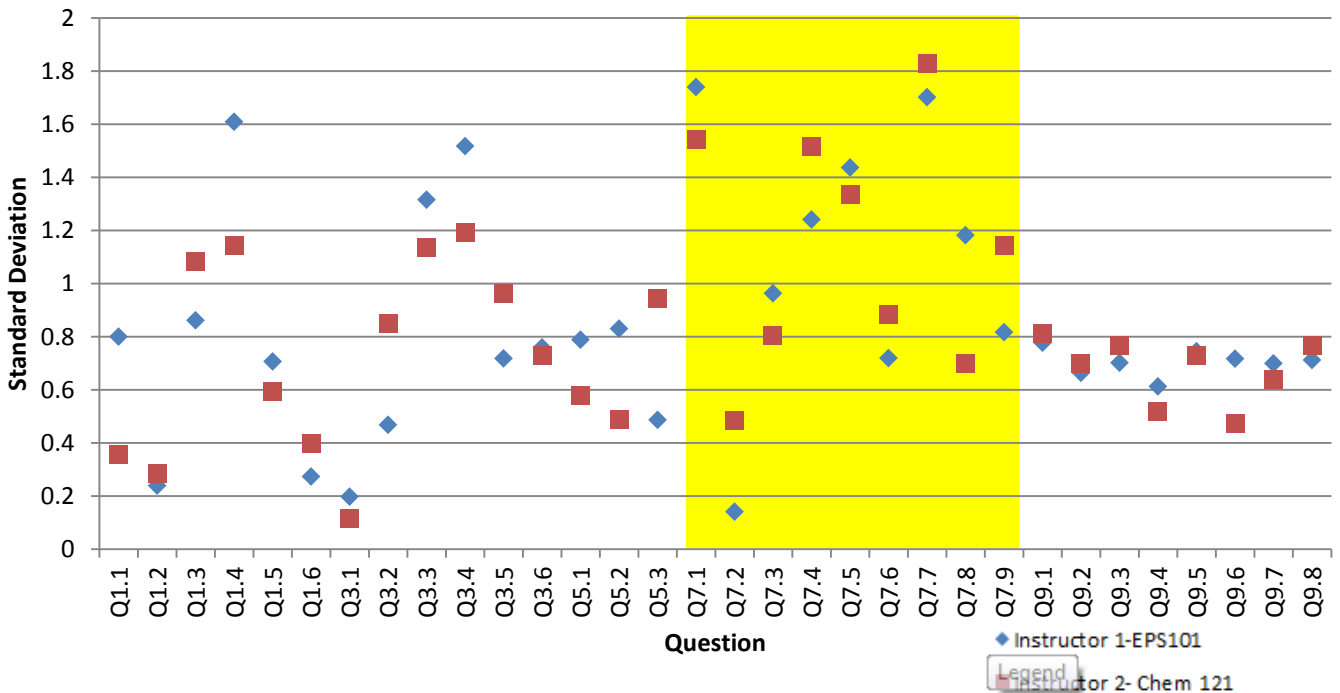
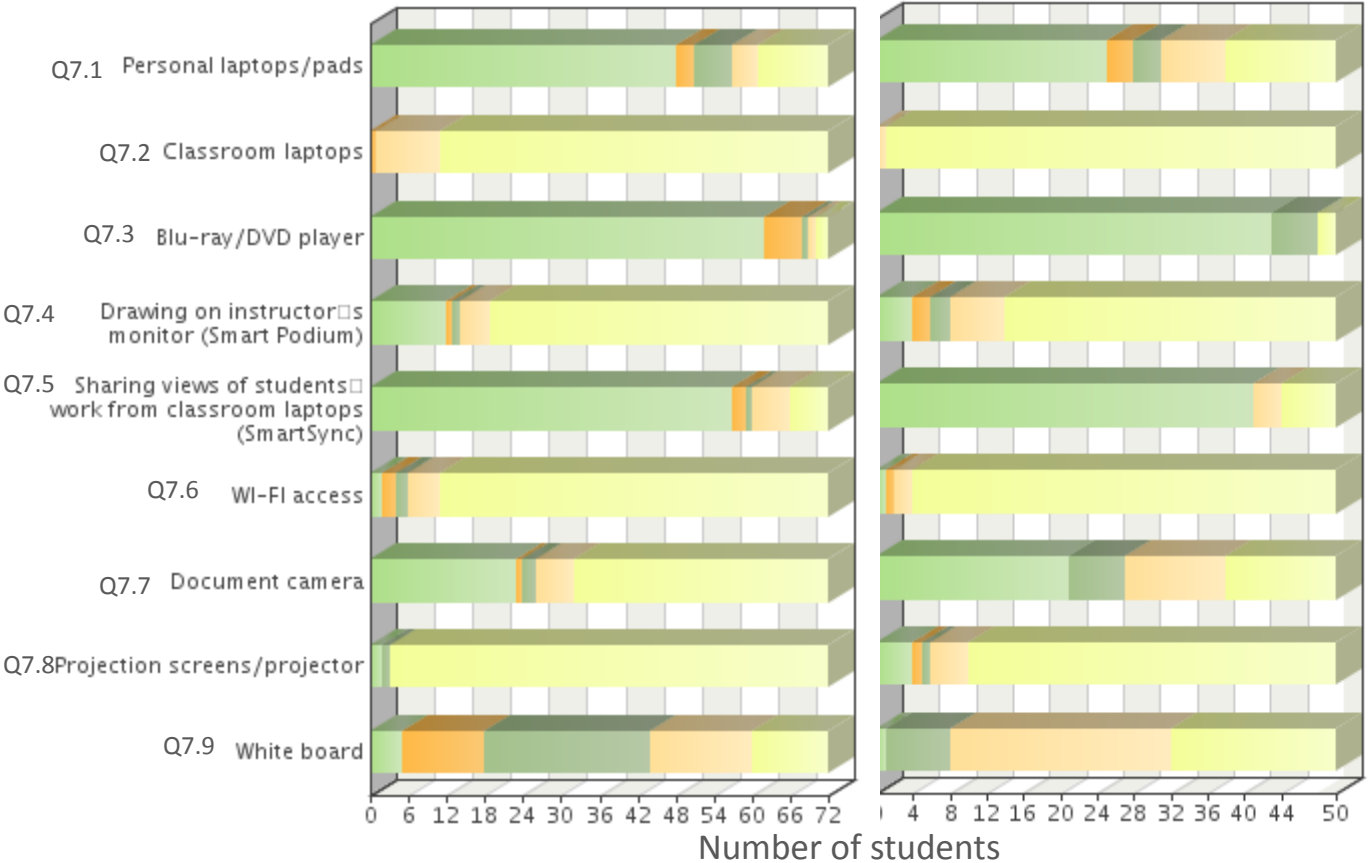


Use of Technology



CHEM 121

EPS 101





Student Engagement in the Learning Process

9. The classroom in which I am taking this course...

	Strongly disagree	Disagree	Agree	Strongly agree
Q9.1 Increases my excitement to learn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9.2 Helps develop professional skills that can be transferred to the real world	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9.3 Enriches my learning experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9.4 Encourages active participation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9.5 Makes me want to attend class regularly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9.6 Helps me develop connections with my classmates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9.7 Engages me in the learning process	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Q9.8 Nurtures a variety of learning styles	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

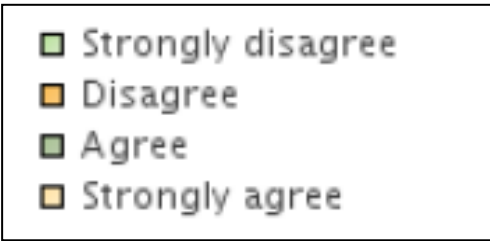
Questions selected from Office of Information Technology, University of Minnesota, Student Survey

Answer the following questions using the questions above and the data provided on the next page:

1. What is the key take away point from the data regarding students' engagement in the learning process?
2. Are there any problematic survey items? If so list them and a brief sentence about why they are problematic.
3. List suggestions for improving the survey items.

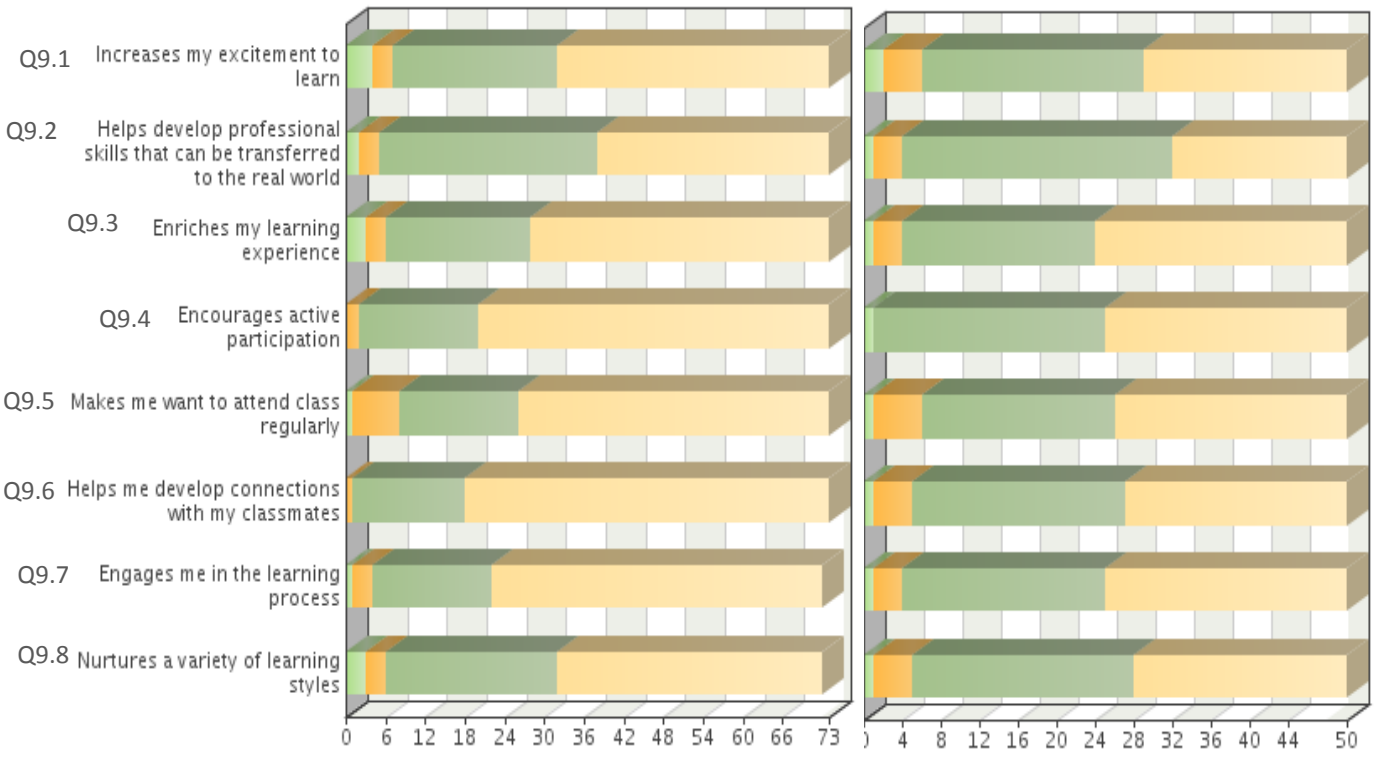


Student Engagement in the Learning Process

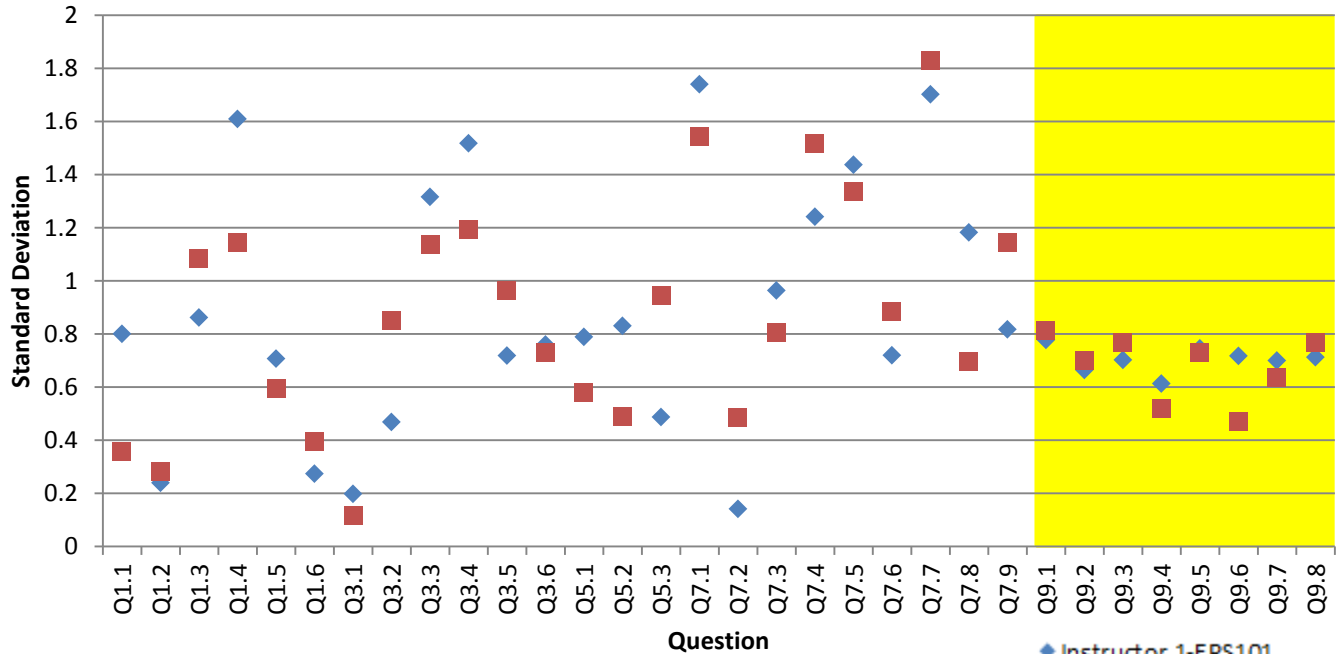


CHEM 121

EPS 101



Number of students



◆ Instructor 1-EPS101
 ■ Legend Instructor 2-Chem 121