

Effectiveness of a Discussion-based Course for Future Faculty

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Content/Objectives

1. UW-Madison Delta and CIRTL
2. Effective Teaching in Internationally Diverse Classroom
3. Course Evaluation Data Collection and Analysis
4. Results
5. Implications
6. Questions



UW-Madison Delta Program and CIRTL

Mission of the UW-Madison Delta Program:

To promote the development of a future faculty in the sciences, technology, engineering, and mathematics (STEM) that is committed to implementing and advancing effective teaching practices for diverse student audiences as part of their professional careers. See more at <https://delta.wisc.edu/>.

Pillars of the Program:

The program is founded on three interrelated core ideas:

- Teaching-as-Research (SOTL)
- Learning Community
- Learning-through-Diversity

CIRTL:

The program has expanded nationwide as the **C**enter for the **I**ntegration of **R**esearch, **T**eaching and **L**earning, which is a network of 45+ research universities. The network is NSF-funded. See more at <https://www.cirtl.net>.

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Course Description (1 of 6)

<https://kb.wisc.edu/dairynutrient/875CCISIF/>



**Course
Guide**

Background

Expected
Learning
Outcomes

Course
Design

Expectations
Grades

Working Title:

Effective Teaching in Internationally Diverse College Classroom.

Date / Time:

Fridays 10:00 am – 12:00 pm.

Prerequisite:

Open to UW-Madison PhD candidates with an interest teaching.

Course Description (2 of 6)

<https://kb.wisc.edu/dairynutrient/875CCISIF/>



Expected

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... Your future students and colleagues will come from countries (cultural, socio-economic, racial background) other than your own,

... This diversity is a challenge but also an opportunity...

... As an effective and savvy instructor, how should you use global perspectives, varied modes of instruction, and students' diversity as tools to increase the learning of every student in your classes?

Course Description (3 of 6)

<https://kb.wisc.edu/dairynutrient/875CCISIF/>



Expected Learning Outcomes

Course Design

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Course Guide

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Course participants will become more experienced in:

1. Exploring roles of instructor and students, and establishing realistic objectives for different types of college classrooms;
2. Moving toward learning-centered class environment;
3. Practicing classroom assessment techniques;
4. Searching the education literature;
5. Facilitating discussion as a legitimate teaching-and-learning tool.

Course Description (4 of 6)

<https://kb.wisc.edu/dairynutrient/875CCISIF/>



**Course
Design**

Expectations Grades

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This is a discussion-based course focused on:

1. Teaching for learning in the 21st century: developing your professional identity (peer-reviewed literature);
2. Learning through diversity (peer-reviewed literature);
3. Scholarship of teaching and learning (peer-reviewed literature);
4. Learning communities (guest panels to share experiences);
5. Micro-teaching (topics chosen by teams of students).

Course Description (5 of 6)

<https://kb.wisc.edu/dairynutrient/875CCISIF/>



Expectations

Grades

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Students are expected to contribute to the class in the following ways:

1. Before class: Read or viewed pre-assigned materials.
2. Before class: Post a pre-class blog entry on course website.
3. During class: Be actively engaged at two levels: a) the class topic and b) the modeling of discussion as a mode of teaching.
4. After class: Post a post-class blog entry on course website.
5. Plan and implement a team-based micro-teaching project.

Course Description (6 of 6)

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Grades

Course
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Graded Item

Deadline

Points

1. Attendance (-5 pts per absence)

Weekly

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2. Pre-Class Blogs (3 pts/wk x 10 wks)

Weekly

30

3. Post-class blogs (4 pts/wk x 10 wks)

Weekly

40

4. Micro-teaching

Tba

30

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End of Semester Course Survey

LOOKING AT YOUR LEARNING IN COLLEGE CLASSROOM: INTERNATIONAL STUDENTS INTERNATIONAL FACULTY; EPD 690 & DY SCI 875

Due Date: December 9, 2016

Objective: To give your instructors an opportunity for meaningful feedback on the learning environment of this class. Results of this evaluation might be shared with other faculty and might contribute to departmental and campus-wide evaluation projects.

Instructions: In addition to select a number that represents your opinion, please include written comments to clarify your ratings as needed. Read the questions carefully before answering, and please try to be fair and impartial in your responses. **Your inputs are important.** In an effort to guarantee that your comments are fair, feel free not to identify yourself at all

Section 1: The topic of this Course – What's in it for me?

Q1a. Course syllabus and topics. Please circle the number that reflects your opinion on a scale of 1 (“not at all”) to 10 (“a great deal”) for the following statements.

	Not at all	A little	Some what	A lot	A great deal
1.01 This class is timely and its topics is important to me	<u>1</u> 2	3 4	5 6	7 8	9 10
1.02 I am enthusiastic about this class	<u>1</u> 2	3 4	5 6	7 8	9 10
1.03 I feel comfortable asking questions in class	<u>1</u> 2	3 4	5 6	7 8	9 10

(Optional) Feel free to explain your rating(s). If you do so, please indicate the question # in front of your explanation

Section 2: Your Learning Goals

Section 3: The Learning Environment, Assignments and Grades

Section 4: Overall Evaluation of the Instructor and the Class

Section 5: About you...

End of Semester Course Survey

Items Analyzed

Section 2: Your Learning Goals

Question 2d: After deciding how much you have learned in this class, decide to what extent each of the following aspect of the class helped your learning?

Item	Not at all		A Little		Some what		A lot		A great deal	
2.10 I learned a lot in this course:	1	2	3	4	5	6	7	8	9	10
I learned a lot in this course because (of):										
2.11 the reading I did before class:	1	2	3	4	5	6	7	8	9	10
2.12 the in-class discussion:	1	2	3	4	5	6	7	8	9	10
2.13 the panels of guests:	1	2	3	4	5	6	7	8	9	10
2.14 the micro-teaching project	1	2	3	4	5	6	7	8	9	10
2.15 the website accessibility and use	1	2	3	4	5	6	7	8	9	10

Statistical Analysis

Data Analysis: Average score, std dev. and correlations for surveys (n=51) from year 2013, 2014, 2015, 2016.

Dependent (response) variables (Y_{ij}):

- D1: “Reading before class” = item 2.11 score – item 2.10 score
- D2: “In-class discussion” = item 2.12 score – item 2.10 score
- D3: “Panels of guests” = item 2.13 score – item 2.10 score
- D4: “Microteaching project” = item 2.14 score – item 2.10 score
- D5: “Web accessibility and use” = item 2.15 score – item 2.10 score

Independent (explanatory) variables:

Gender (G): Man vs. Woman

Nationality (N): US-born vs. Foreign-born

Proc. Mixed (SAS) Model:

$$Y_{ij} = G_i + N_j + G_i \times N_j + E_{ij}$$

Lsmeans G, N, GxN / Diff

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Results: Average Scores

Item	Average ¹	Standard Deviation ²	Spearman Cor. ³
2.10 I learned a lot in this course:	8.6	1.4	
I learned a lot in this course because (of):			
2.11 the reading I did before class:	7.5	1.8	0.49
2.12 the in-class discussion:	8.9	1.3	0.67
2.13 the panels of guests:	8.5	1.7	0.45
2.14 the micro-teaching project	8.4	1.5	0.50
2.15 the website accessibility and use	7.6	1.8	0.50

¹: MEASURE OF AGREEMENT: On a scale of 1 (not at all) to 10 (a great deal).

²: MEASURE OF CONSENSUS: Lower value = higher consensus; higher value = lower consensus.

³: All P value < 0.001.

Results: Deviation from “I learned a lot in this course”

Item	LSM ¹	P value ²
2.10 I learned a lot in this course	---	---
I learned a lot in this course because (of):		
D 1 the reading I did before class:	-0.97	0.0003
D 2 the in-class discussion:	+0.40	0.0134
D 3 the panels of guests:	0.00	1.0000
D 4 the micro-teaching project	-0.09	0.7074
D 5 the website accessibility and use	-0.92	0.0009

¹: LS Mean of the deviation from the average score of the “I learned a lot in this course” item: 8.6.

²: P value for a difference (D) significantly different than zero.

Results: Nationality by Gender Interactions

Item ¹	Women		Difference in LSM	P value	
	Foreign -born	US -born			
D 3	the panels of guests:	0.80	-0.57	+1.37	0.05
D 5	the website accessibility and use	0.10	-1.50	+1.60	0.05

¹: LS Mean of the deviation from the average score of the “I learned a lot in this course” item: 8.6.

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Implications

- Overall, in-class discussion of pre-assigned materials, guest panels and end-of-semester micro-teaching projects were highly effective in modeling discussion as a legitimate mode of teaching and learning (for self-selected and highly motivated PhD candidates!).
- In-class activities (discussion of pre-assigned material and panel of guests) contributed the most to the perception of learning among course participants.
- Out-of-class activities (reading and use of website) contributed the least to the perception of learning among course participants.
- Although the dataset was limited, the nationality of women (Foreign-born vs. US-born) may have influenced the perception of the effectiveness of various course components.

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