



Student and Faculty Views of Learning with Technology: Implications for Teaching

Linda J. Carpenter, Ph.D

Jenna Komarek

Network for Excellence in Teaching



Introduction

Research Question

To what extent do students and faculty differ in preferences and beliefs about teaching and learning with technology?

Rationale

- Interest in enhancing student learning with technology
- Interest in how students and faculty prefer to learn a new technology
- Interest in beliefs about learning
- Intent to use results in professional development

Method

Materials

- EDUCAUSE-developed survey
 - 5 preference questions
 - 13 belief questions
 - 11 student demographic items
 - 5 faculty demographic items

Procedures

- Electronic format
- Email distribution of survey link
- All students, faculty, staff – Fall 07
- 3 week availability
- 3 reminder messages

Respondents

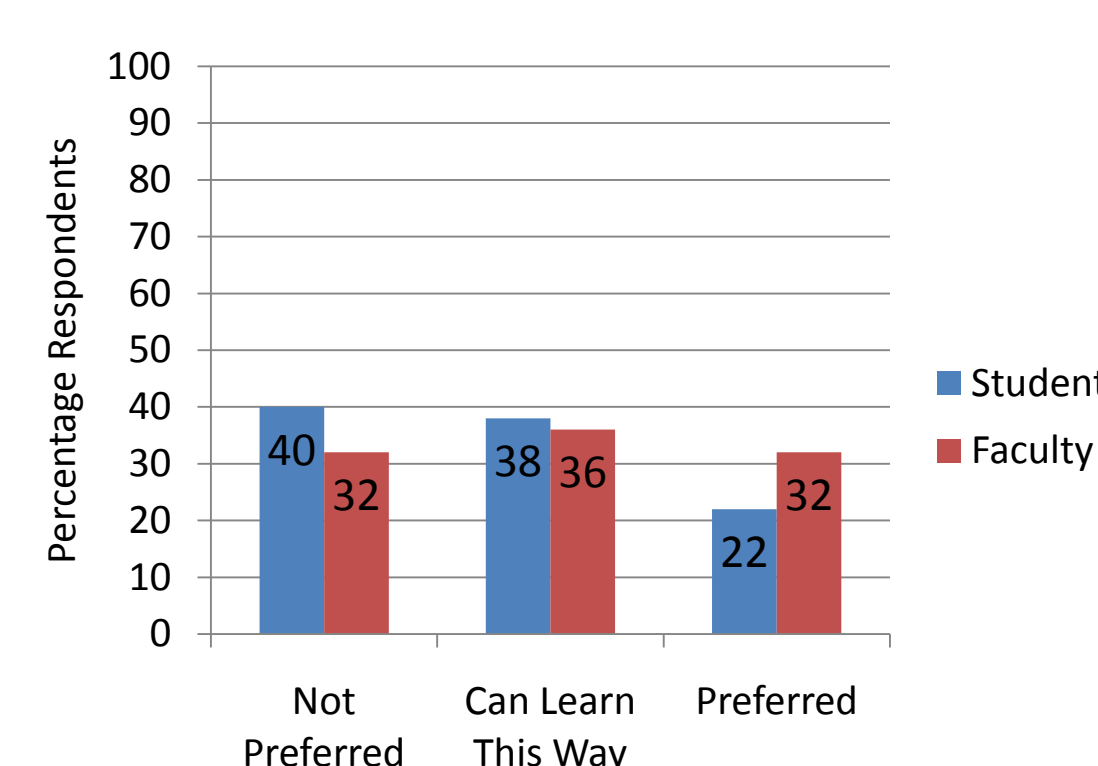
	%		%
College			
• A&S	54	• Full-time	91
• CoB	21	• Part-time	9
• CoEHS	20	Age in years	
• CoNHS	5	• 17-22	80
• Undeclared	1	• 23-35	15
Gender			
• Female	71	• 36-50+	6
Class			
• Freshmen	20	• White	94
• Sophomores	18	• Asian-Pac Islander	3
• Juniors	22	• Hispanic/Latino	1
• Seniors	33	• American Indian	1
• Grads	7	• African-American	.23
		• Multi-racial	.23
		• Other	1

	%		%
College			
• A&S	65	• 1-2	28
• CoB	8	• 3-4	67
• CoEHS	18	• 5-6	5
• CoNHS	6	Years Teaching	
• Other	3	• 1-3	12
Rank			
• Professor	24	• 4-6	16
• Associate	25	• 7-12	27
• Assistant	22	• 13-20	22
• IAS	16	• 21+	22
• Adjunct	13		

Results

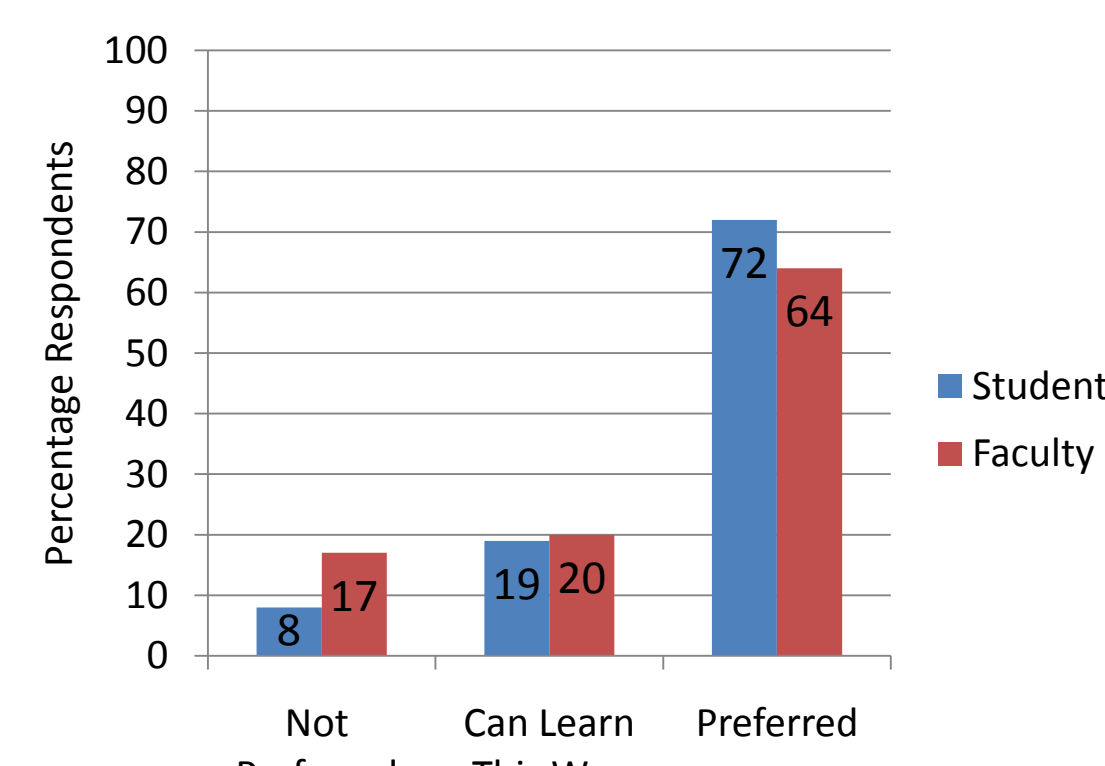
Significant Preferences for Learning a New Technology

Figure 1
Read a paper instruction manual



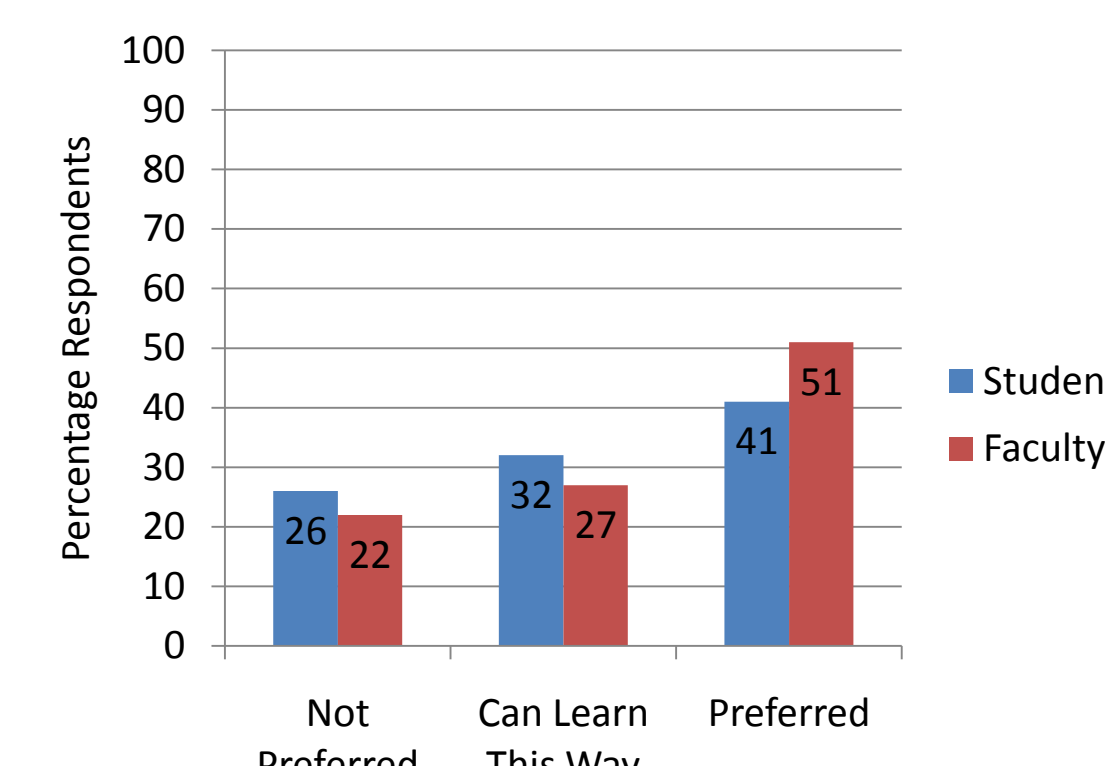
Pearson Chi-Square =11.83, df = 2, Cramer's V = .08, p < .01

Figure 2
Take a class/attend a demonstration



Pearson Chi-Square =16.36, df = 2, Cramer's V = .09, p < .01

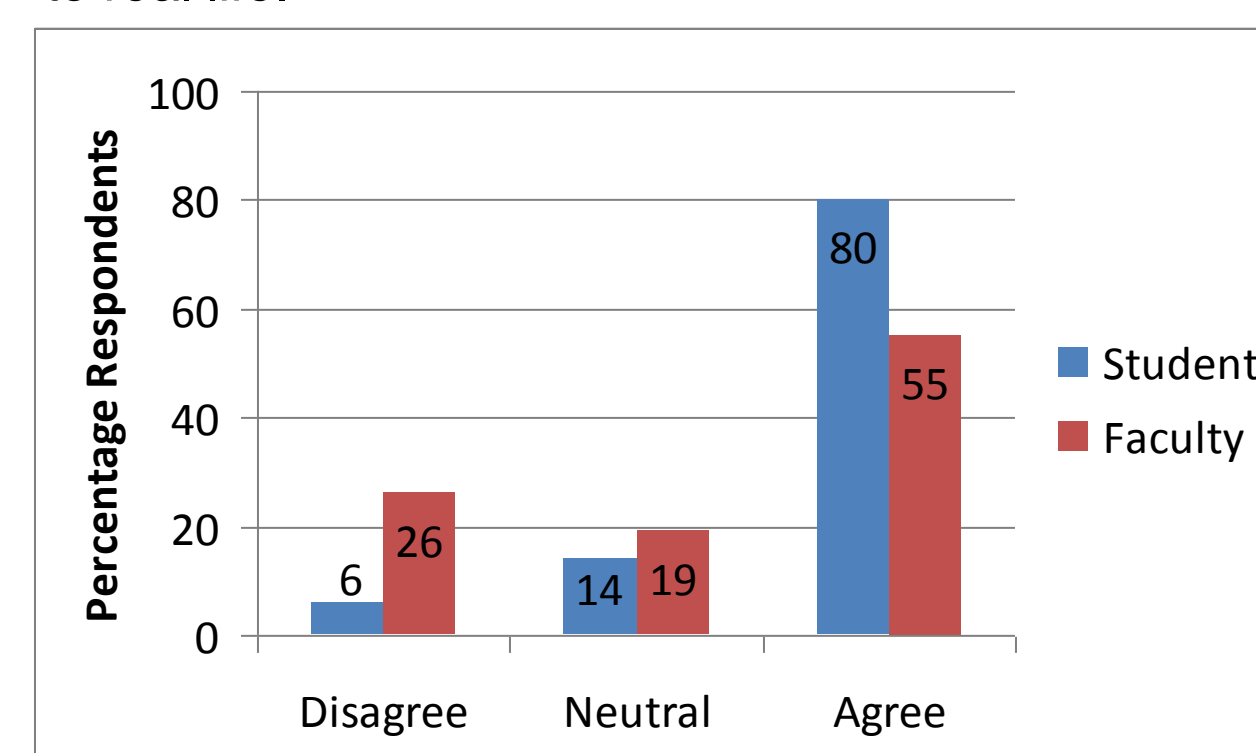
Figure 3
Just do it and see what works



Pearson Chi-Square =6.82, df = 2, Cramer's V = .06, p < .05

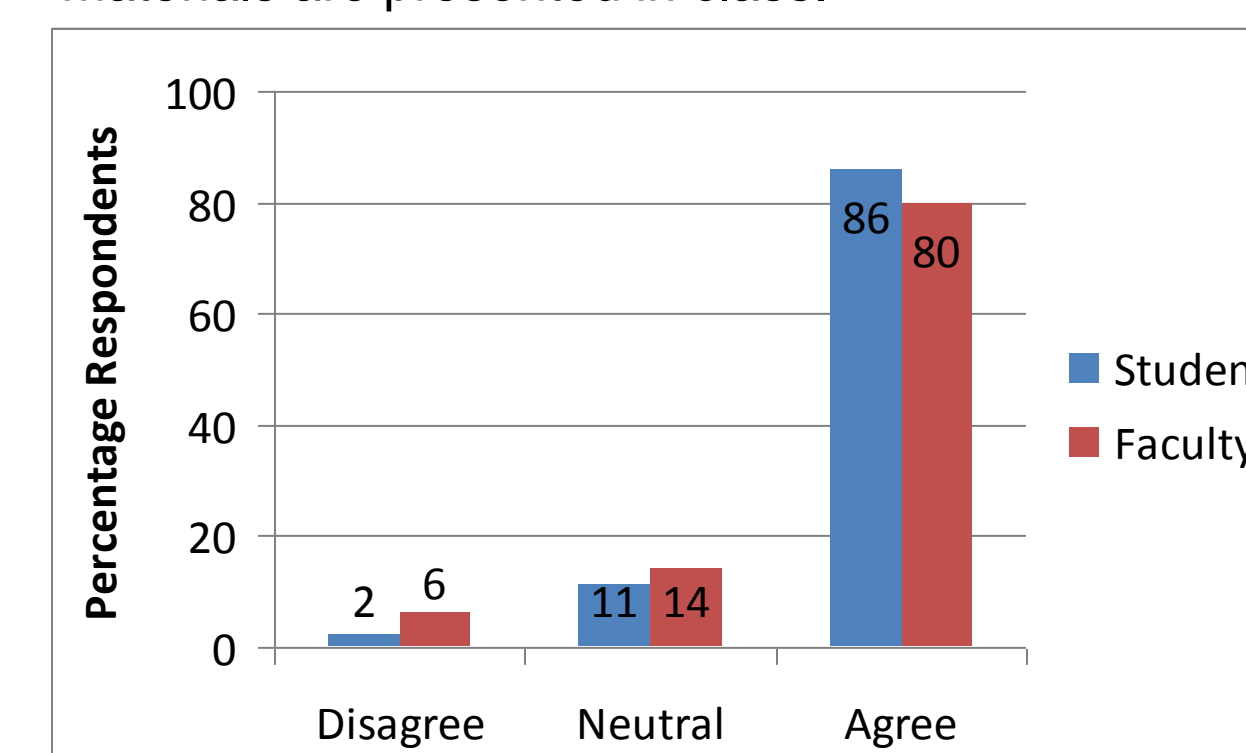
Significant Beliefs About Learning

Figure 4
To be of interest, course material must be relevant to real life.



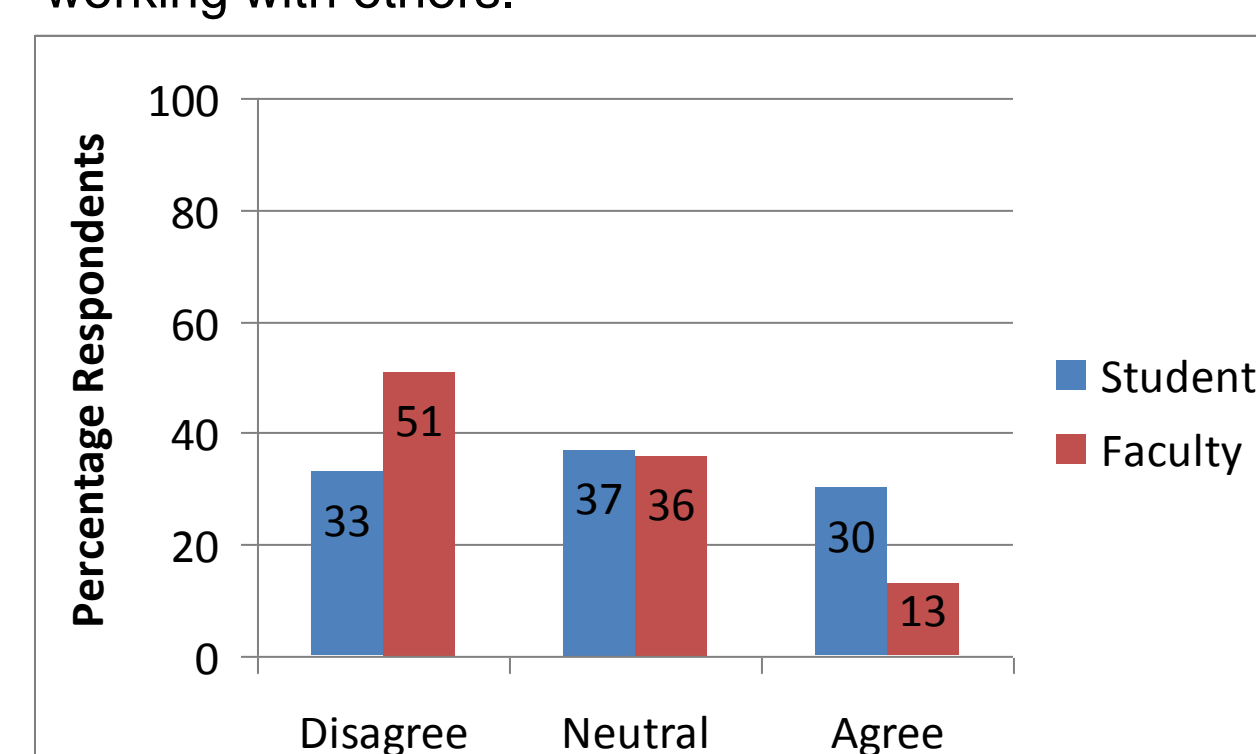
Pearson Chi-Square = 115.86, df = 2, Cramer's V = .24, p < .01

Figure 5
Students learn best when a variety of visual materials are presented in class.



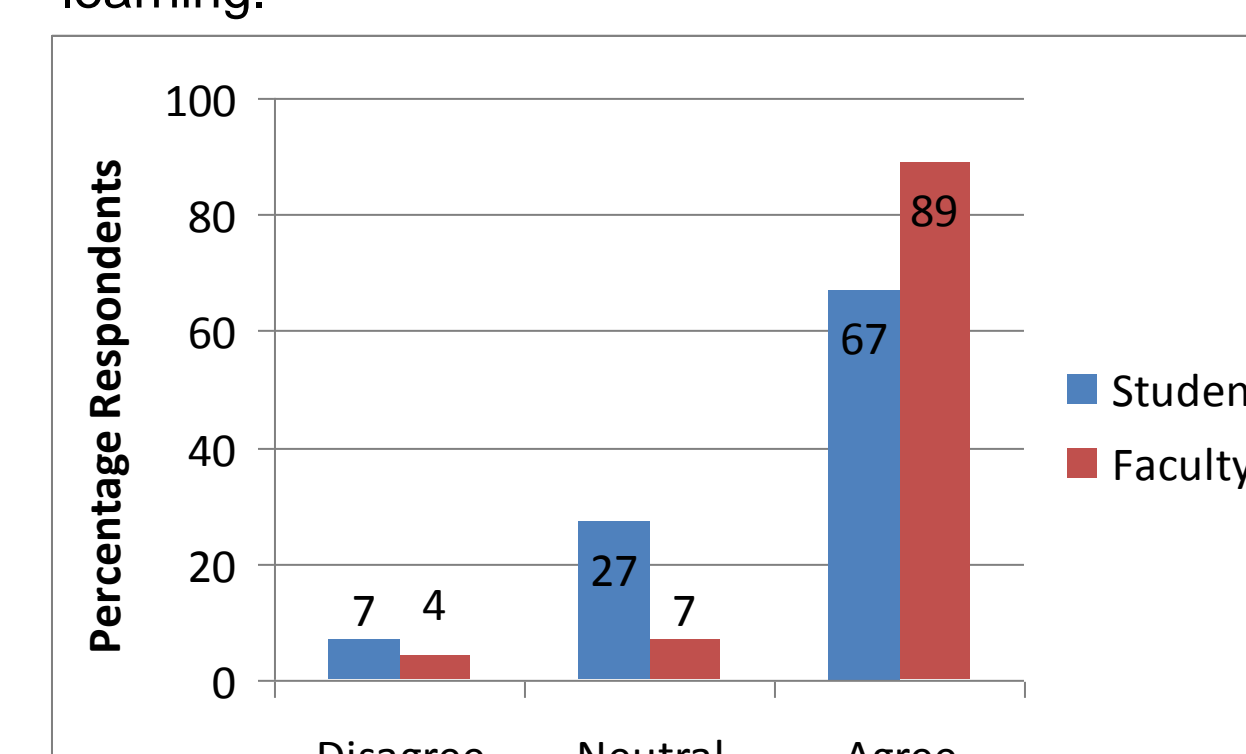
Pearson Chi-Square = 11.41, df = 2, Cramer's V = .08, p < .01

Figure 6
Students prefer to learn independently, not by working with others.



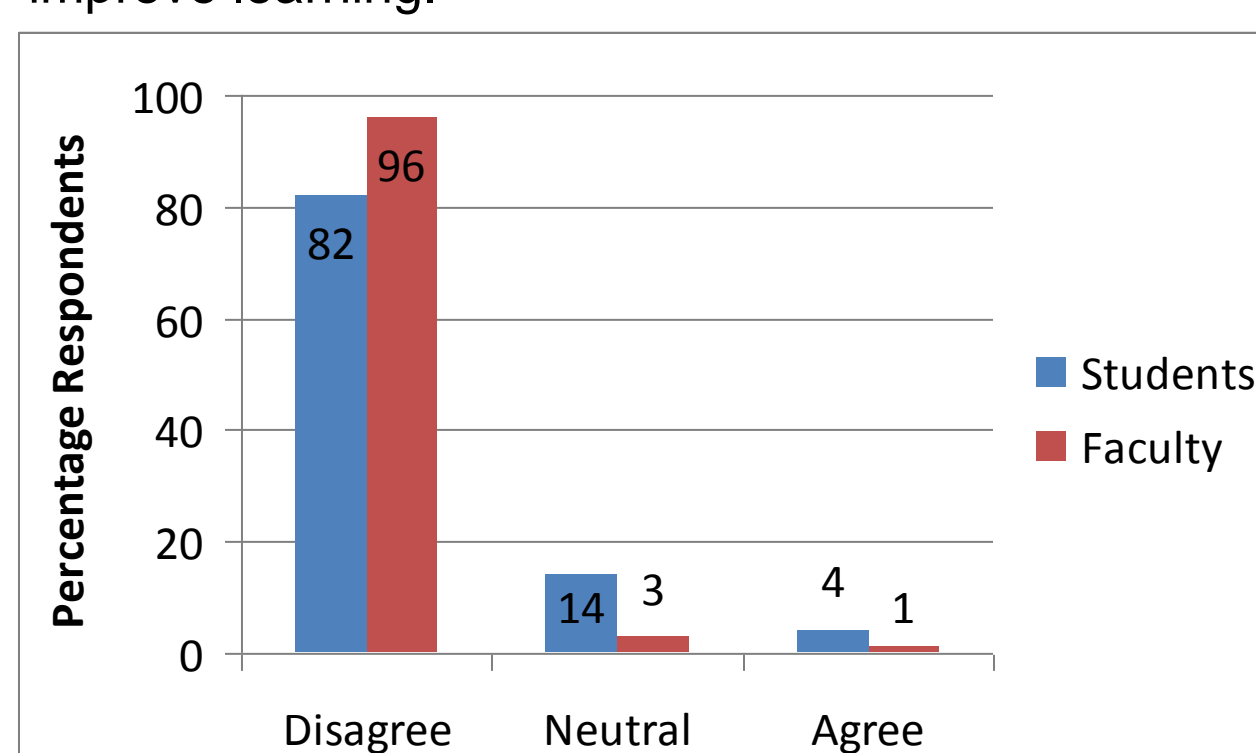
Pearson Chi-Square = 39.98, df = 2, Cramer's V = .14, p < .01

Figure 7
Interacting with fellow students in class improves learning.



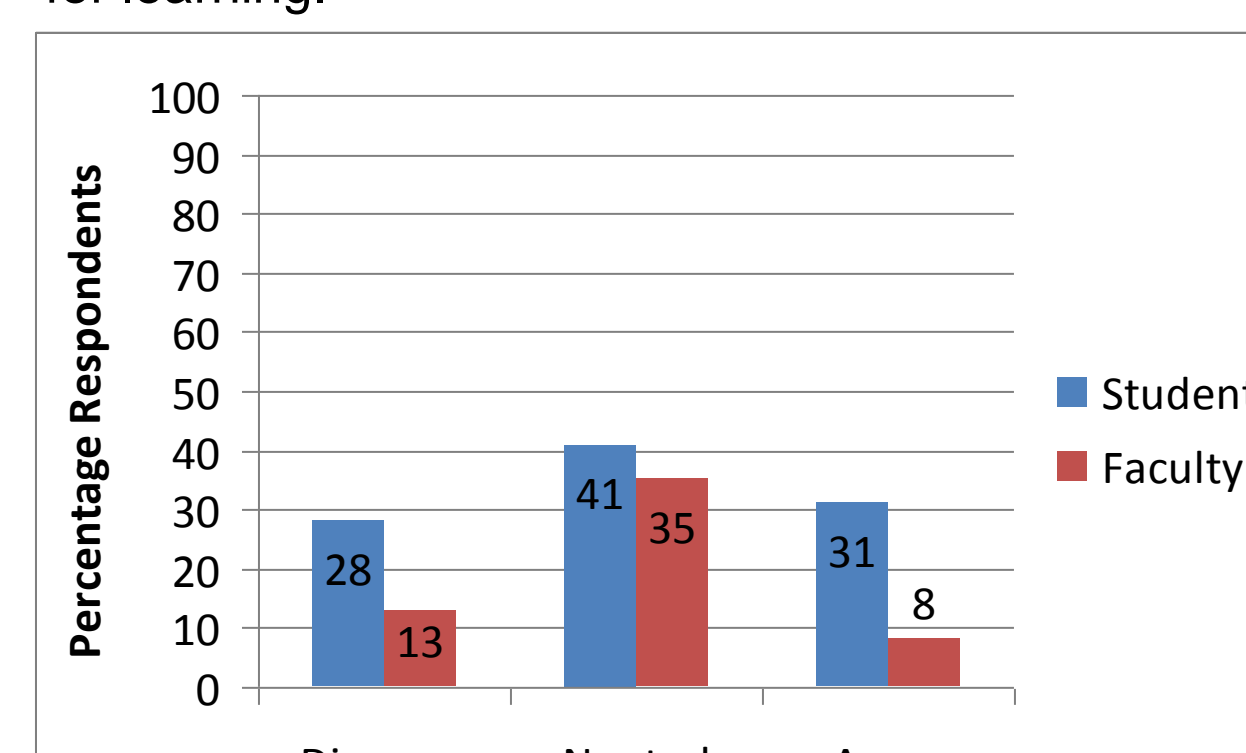
Pearson Chi-Square = 47.68, df = 2, Cramer's V = .16, p < .01

Figure 8
Interacting with an instructor in class does not improve learning.



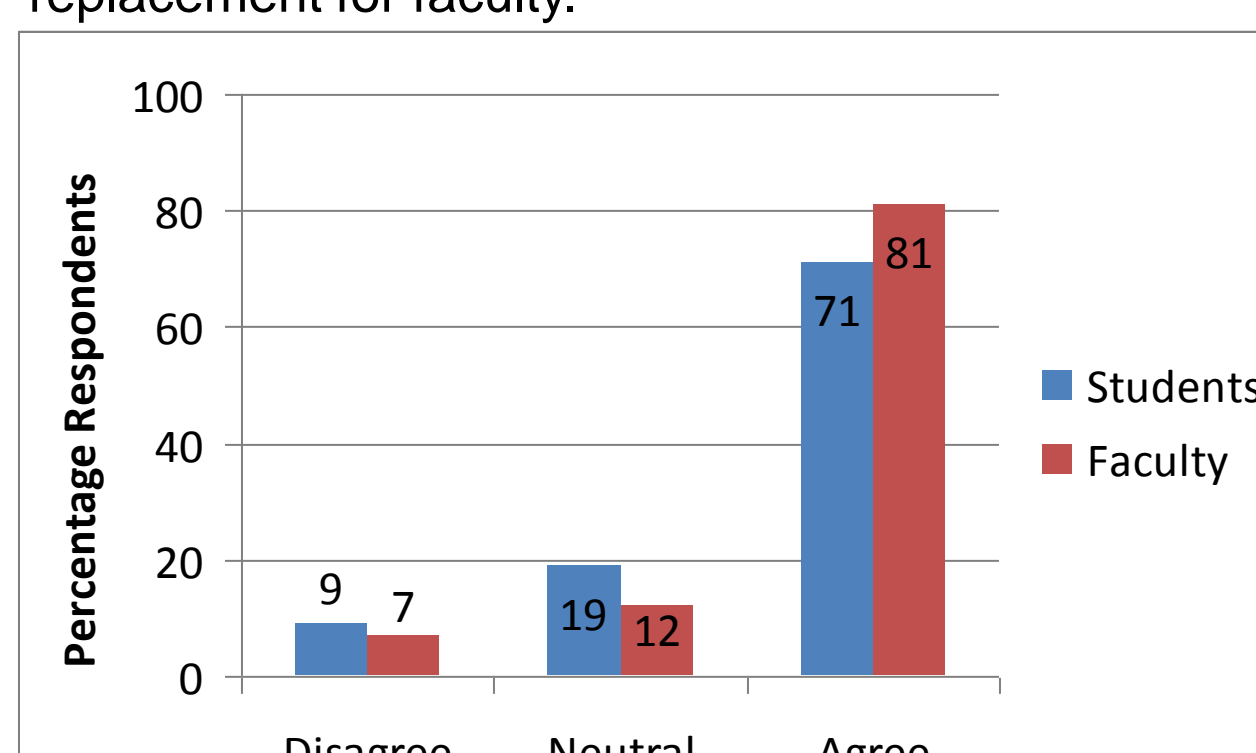
Pearson Chi-Square = 28.61, df = 2, Cramer's V = .12, p < .01

Figure 9
Online discussion boards and forums are not useful for learning.



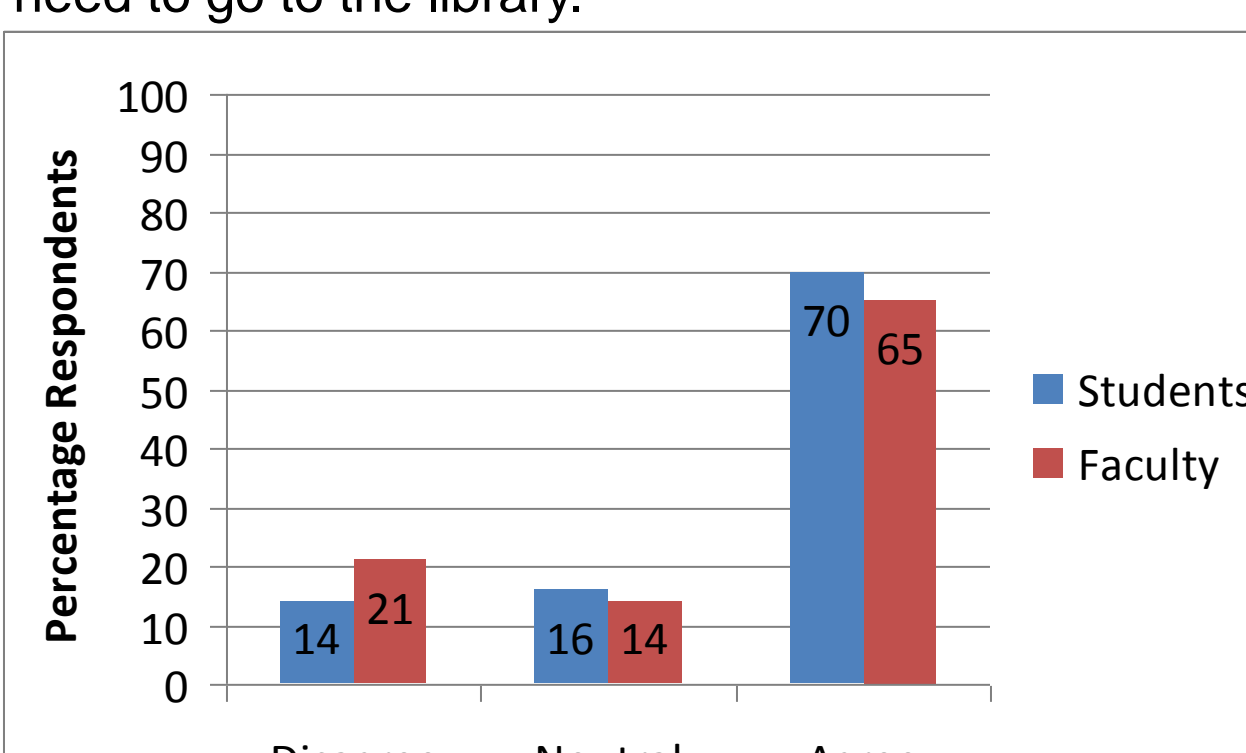
Pearson Chi-Square = 92.20, df = 2, Cramer's V = .22, p < .01

Figure 10
Resource on the Internet do not make a good replacement for faculty.



Pearson Chi-Square = 9.41, df = 2, Cramer's V = .07, p < .01

Figure 11
Resources on the Internet have greatly reduced the need to go to the library.



Pearson Chi-Square = 7.47, df = 2, Cramer's V = .06, p < .05

Interpretations

Preferences

3 of 5 items differ significantly

- Students prefer reading paper instructions less than faculty
- Both prefer taking a class/attending a demonstration; students more so than faculty
- Both prefer using a technology to see what works; faculty more so than students

Beliefs

8 of 13 items differ significantly

- Both believe content must be relevant; students more so than faculty
- Both believe variety of visual materials increases learning, students more so than faculty
- Faculty believe more strongly that students do not prefer to learn independently
- Faculty believe more strongly that interacting with fellow students in class improves learning
- Faculty believe more strongly that interacting with instructors in class improves learning
- Students believe more strongly that online discussion boards improve learning
- Faculty believe more strongly that resources on the Internet are not good replacements for instructors
- Students believe more strongly that resources on the Internet have reduced the need to go to the library

Implications

Professional development efforts need to help faculty:

- Account for learning preferences when designing learning activities with technology
- Use a variety of visual materials effectively
- Use group-/team-based learning effectively
- Examine effective use of online discussion boards/forum
- Explore how students use learning resources electronically versus going to the library

Limitations

- Survey not locally designed or piloted
- Relatively low percentage of student respondents

Acknowledgements

- Pat Karlen and Andy Nelson, Office of Institutional Research: assistance with demographic data
- Gene Leisz, Network for Excellence in Teaching: assistance with poster design
- UW – Eau Claire Office of Academic Affairs: assistance in survey deployment
- EDUCAUSE: survey instrument availability