



A Puzzle to Solve: How Successful Is Teaching Information Literacy Instruction in Distance Learning?

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A Pilot Study

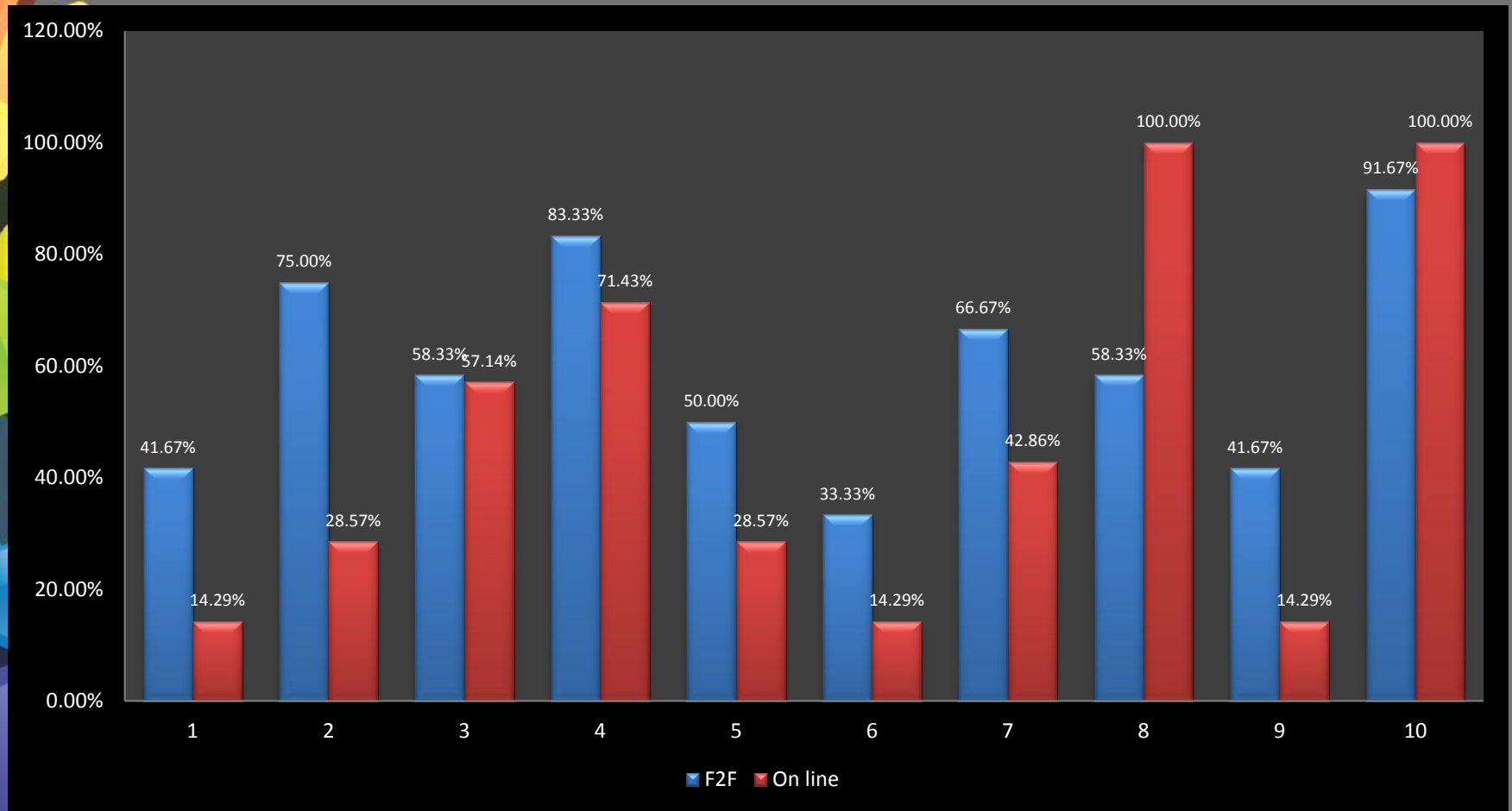
- Two identical courses, Spring, 2013 (Feb-May)
 - CIS-340 Online: Ecommerce, 12 students
 - CIS-340 F2F: Ecommerce, 26 students
- Worked with Faculty/professor of the two courses
- [Pre-test](#)
- F2F research instruction for CIS-340 F2F
- [Captured lecture](#) for online course
- [Post test](#)



The Same 10 Questions for Pre- & Post Tests

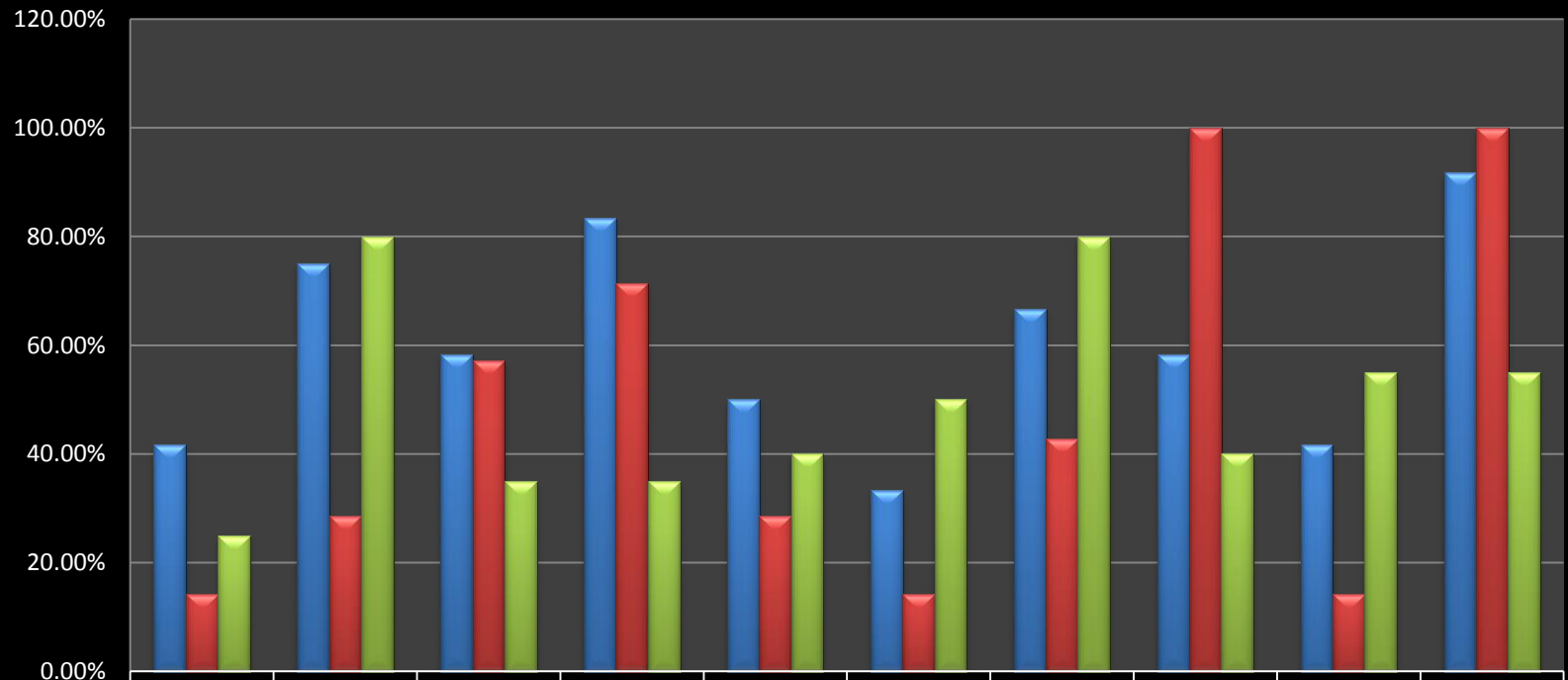
- 1 Why do you use truncation symbols in your search?
- 2 How do you do a phrase search?
- 3 You use Boolean operator "and" to...
- 4 You use Boolean operator "or" to
Which of the following is the best search statement for information on security issues regarding electronic fund transfer in setting up e-commerce?
- 5
- 6 If you are looking for information on the latest development of a technology, what is the best choice for searching?
If you want all the articles on business use of wiki from Wall Street Journal since 1970 to present, how do you do it?
- 7
- 8 What is a scholarly journal?
- 9 If you are looking for journal articles, where do you look?
What are the factors you should consider when evaluating Internet resources?
- 10

Pre-test. F2F vs. Online



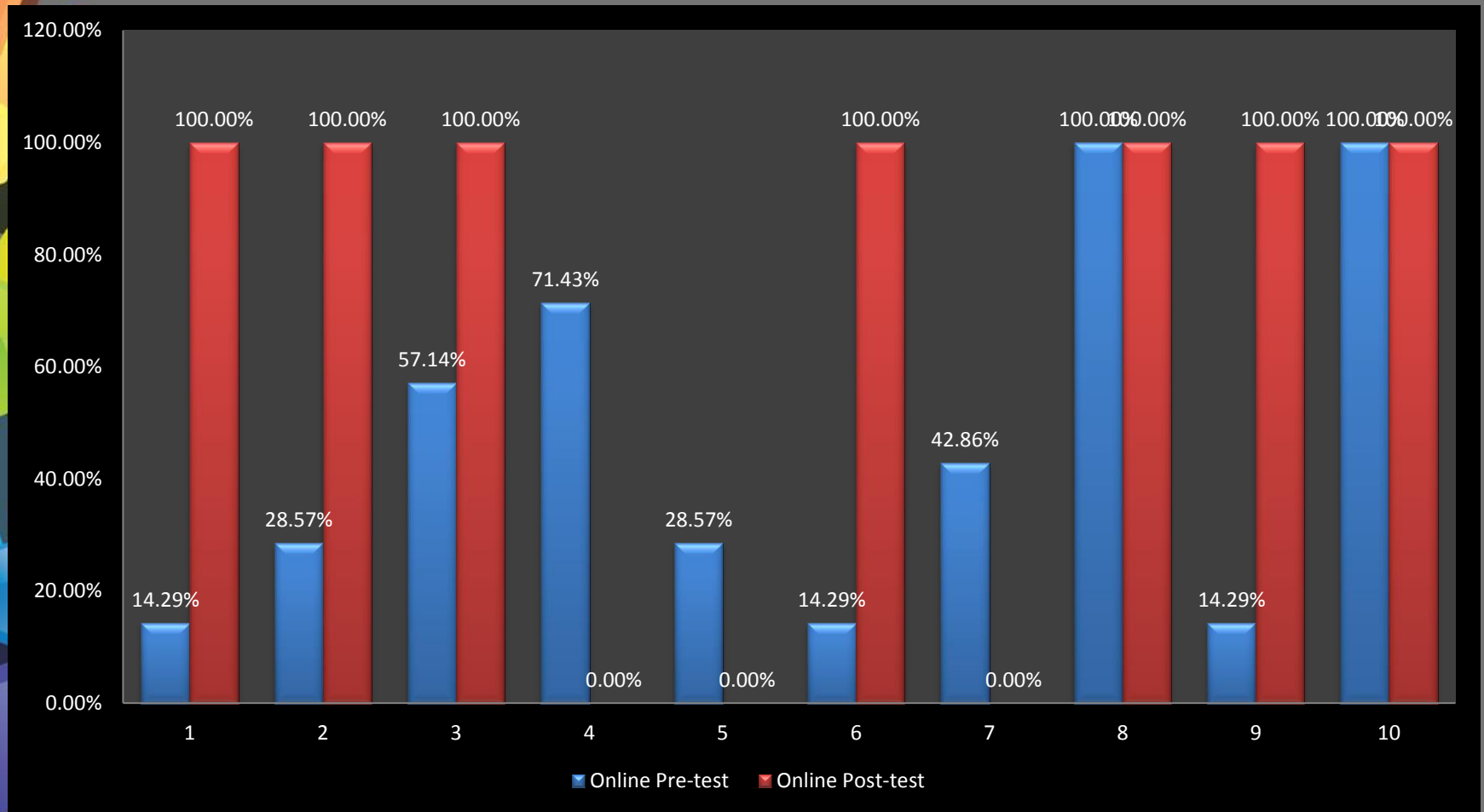
Baseline Knowledge of Students in the Online Course Is Not Less Than Others

Pre-test for Three Classes

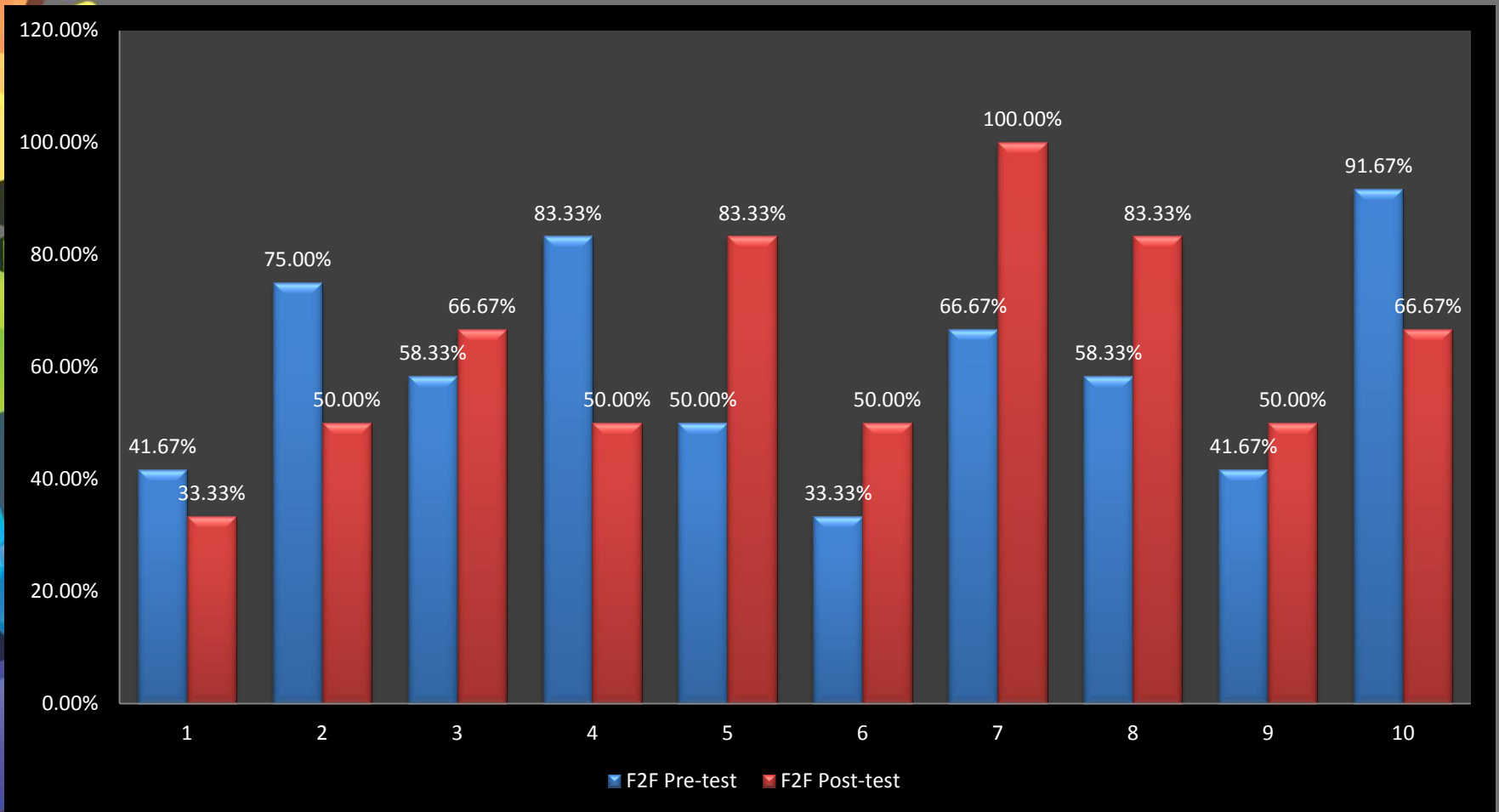


	1	2	3	4	5	6	7	8	9	10
■ CIS340(F2F)	41.67%	75.00%	58.33%	83.33%	50.00%	33.33%	66.67%	58.33%	41.67%	91.67%
■ CIS340(On line)	14.29%	28.57%	57.14%	71.43%	28.57%	14.29%	42.86%	100.00%	14.29%	100.00%
■ CIS385(F2F)	25%	80%	35%	35%	40%	50%	80%	40%	55%	55%

Post Test-One student from the Online Course (Google lost 18 responses)

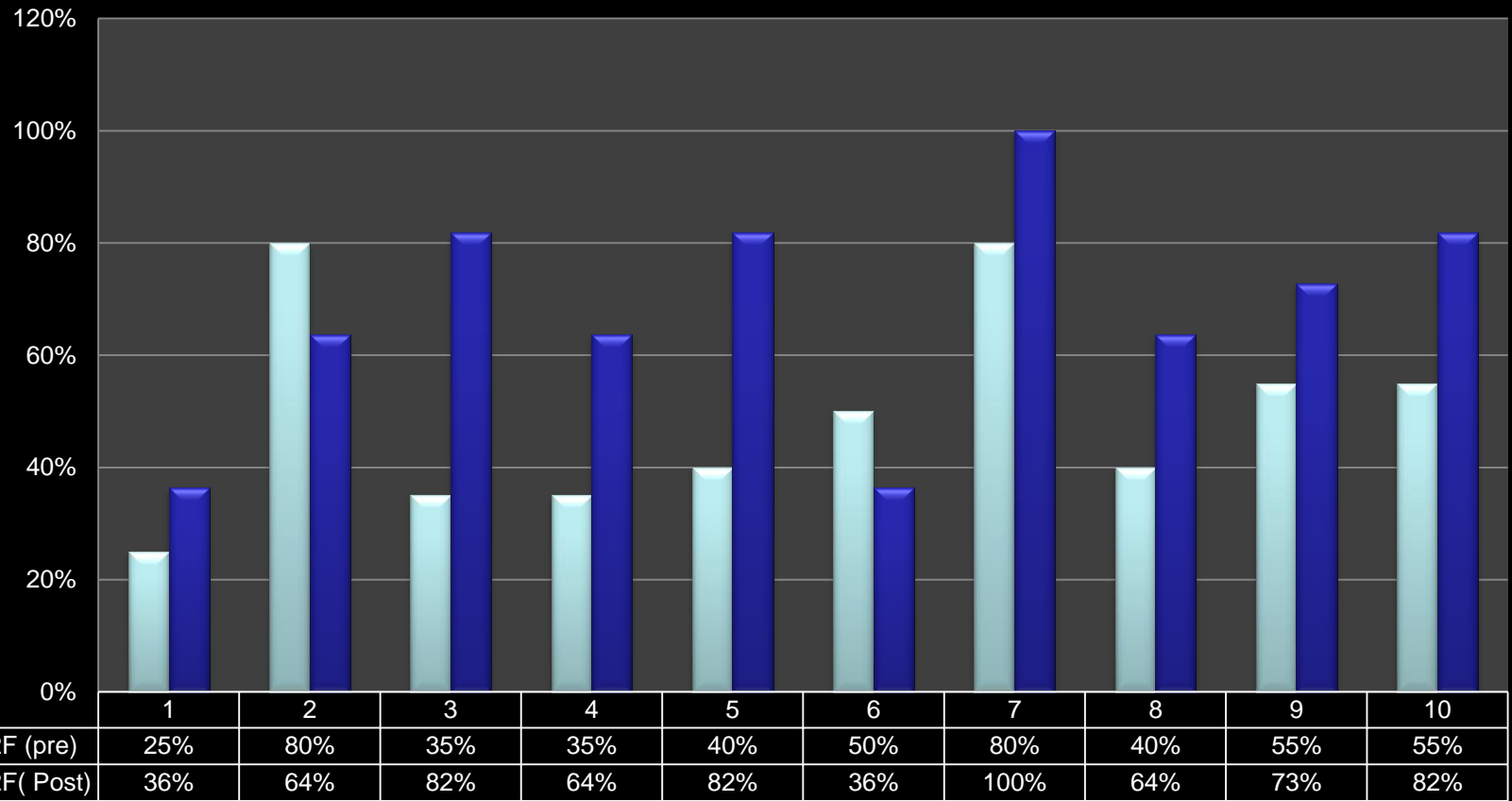


Pre- vs. Post test for F2F

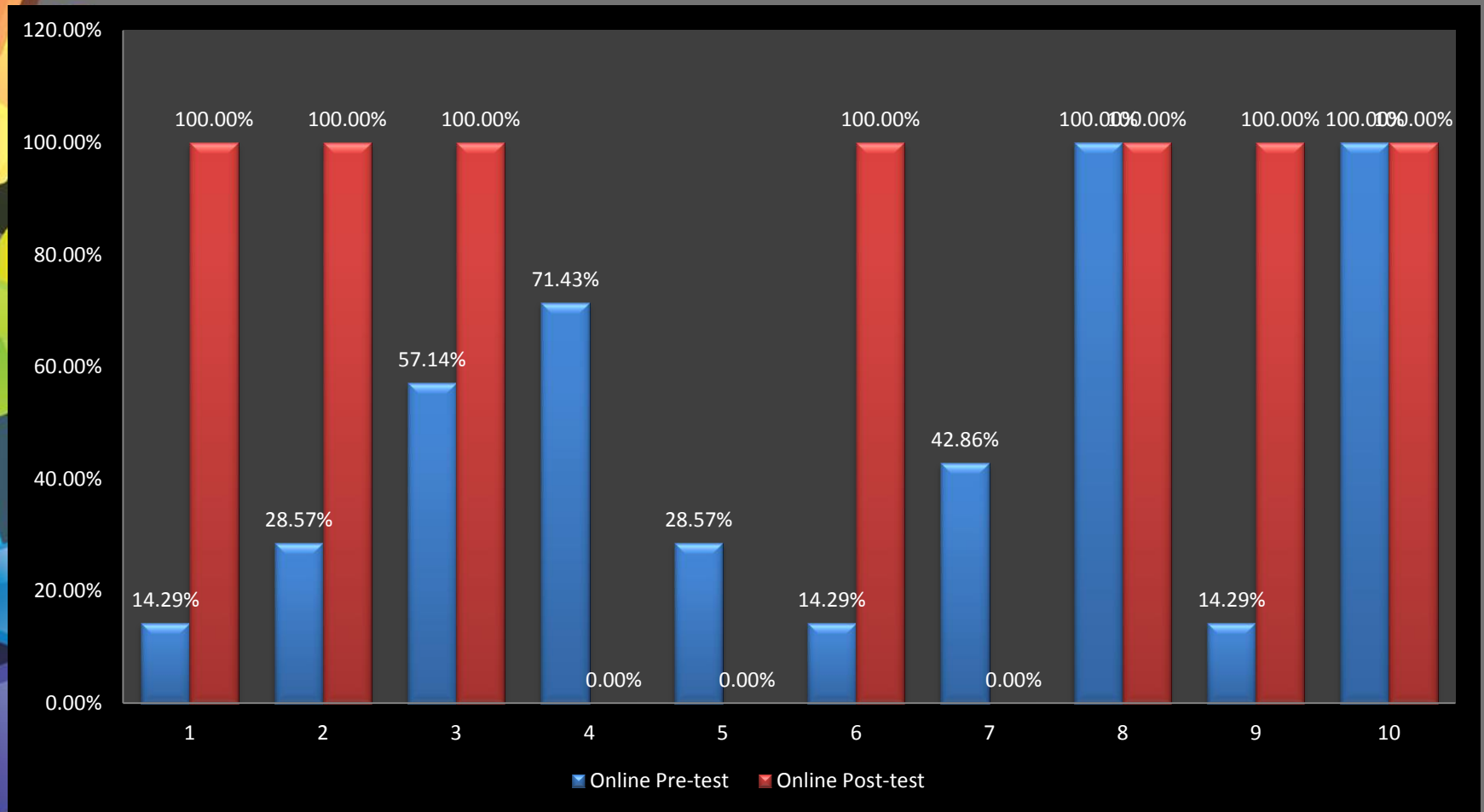


CIS-385 Pre- and Post Tests

CIS 385



Online Pre- and Post Test



Problems in the Study

1. The faculty-tests not a requirement. So the response rate for pre-test is 63% and post test 84%.
2. Technical problem-Google Docs-lost 18 responses from post test
3. Small number of students in both classes (26 F2F vs. 12 online). Findings are not conclusive.
4. The captured lecture with online classes. Not sure if students really listened to it or not. No control.
5. The captured lecture-hard to fit the lecture and demos into a short captured video.
6. Time limit in creating a captured lecture to repeat what is taught in the class.
7. Students took library instruction before?

[illegible]



Which Is More Effective? – Study 1

Date: 2012

Setting: University of Arizona Libraries

Purpose: Evaluate the effectiveness of 10 week one credit online library course with F2F one-shot 50 min library session.

Research method: pre- and post-tests covering the same concepts by 660 students.

Findings: Students who participated in the online course demonstrated significant improvement in their test scores compared to the other students.



Which Is More Effective? – Study 2

Date: 2010

Setting: Rogers State University Library

Purpose: Evaluate the effectiveness of online with traditional F2F library instruction in three classes

Research Method: Citation analysis on term papers

Findings: No difference in citation patterns.

Which Is More Effective? – Study 3

Date: 2011

Setting: Loyola Marymount University, CA

Purpose: Evaluate effectiveness of library instruction delivered via a "blended" combination of face-to-face and online instruction vs. online instruction alone.

Research method: Compared scores from worksheets from blended instruction (2 module online and 3 modules F2F, 100 worksheets) vs. online (five modules 46 worksheets)

Findings: Computer-assisted instruction is equally or more effective than blended instruction

Which Is More Effective? – Study 4

Date: 2011

Setting: State University of New York at Oswego, NY

Purpose: Evaluate the effectiveness of online vs. F2F library instruction to graduate students for their research skills

Research method: Compared pre- and post-test scores; citation analysis.

Findings: Online information literacy instruction is equivalent to F2F in terms of learning. Student feedback, however, showed a statistically significant difference between groups in student satisfaction, with the face-to-face group being more satisfied



Which Is More Effective? – Study 5

Study 5

Date: 2008

Setting: University of Rhode Island

Purpose: Evaluate online vs. F2F library instruction

Research Method: Pre- and post-tests

Findings: Online students performed slightly better than their face-to-face counterparts.



Which Is More Effective? – Study 6

Date: 2010

Setting: Nigeria public schools

Purpose: Compare the effectiveness of captioned videos with F2F instruction for hearing impaired kids

Findings: F2F and captioned video are equally effective.



Which Is More Effective? – Study 7

Date: 2008

Setting: Mount Sinai School of Medicine, NYC

Purpose: Evaluate students' satisfaction towards online (tutorials) vs. F2F instruction on PubMed

Research Method: Pre- and post tests by 455 first year medical students

Findings: Students who took the online tutorial were equally or more satisfied with the learning experience than students who attended classroom sessions

Which Is More Effective?- Study 8

- Date: 2005
- Setting: University of Central Florida
- Purpose: Evaluate self-efficacy and learning outcomes from three formats of delivery: library instruction in F2F, on campus Web based tutorials, and distance Web based tutorials with 49 students in three classes
- Research method: Pre- and post-tests
- Findings: Equal learning outcomes; Group of Web based tutorials shows higher self-efficacy.



Which Is More Effective-Study 9

Date: 2009

Setting: US Department of Education

Research Method: Massive analysis of data from all previous studies on online vs. F2F instruction across the disciplines.

Findings: Interesting



Which Is More Effective-Study 9-continued

“Students who took all or part of their class online performed better, on average, than those taking the same course through traditional face-to-face instruction”

“Elements such as video or online quizzes do not appear to influence the amount that students learn in online classes.”

“Instruction combining online and face-to-face elements had a larger advantage relative to purely face-to-face instruction than did purely online instruction”

“Studies in which learners in the online condition spent more time on task than students in the face-to-face condition found a greater benefit for online learning.”

Conclusion

Online library instruction is equally effective as F2F instruction.

Comparison of online vs. F2F may have the different findings across the disciplines.





Studies

Study 1

Mery, Y., Newby, J., & Peng, K. (2012). Why One-shot Information Literacy Sessions Are Not the Future of Instruction: A Case for Online Credit Courses. *College & Research Libraries*, 73(4), 366-377.

Study 2

Clark, S., & Chinburg, S. (2010). Research Performance in Undergraduates Receiving Face to Face versus Online Library Instruction: A Citation Analysis. *Journal Of Library Administration*, 50(5/6), 530-542.
doi:10.1080/01930826.2010.488599

Study 3

Archambault, S. (2011). Library Instruction for Freshman English: A Multi-Year Assessment of Student Learning. *Evidence Based Library & Information Practice*, 6(4), 88-106.

Study 4

Shaffer, B. A. (2011). Graduate Student Library Research Skills: Is Online Instruction Effective?. *Journal Of Library & Information Services In Distance Learning*, 5(1/2), 35-55. doi:10.1080/1533290X.2011.570546

Study 5

Burkhardt, J. M., Kinnie, J., & Cournoyer, C. M. (2008). Information Literacy Successes Compared: Online vs. Face to Face. *Journal Of Library Administration*, 48(3/4), 379-389.



Studies-Continued

Study 6

Atinmo, M., & Egunjobi, R. (2010). A Comparative Study of Captioned Video and Face-to-Face Instruction in Library Instruction for Secondary School Students with Hearing Impairment. *Library Philosophy & Practice*, 1-9.

Study 7

Schimming, L. M. (2008). Measuring medical student preference: a comparison of classroom versus online instruction for teaching PubMed. *Journal Of The Medical Library Association*, 96(3), 217-222.

Study 8

Beile, P. M., & Boote, D. N. (2004). Does the medium matter?: A comparison of a Web-based tutorial with face-to-face library instruction on education students' self-efficacy levels and learning outcomes. *Research Strategies*, 20(1/2), 57-68. doi:10.1016/j.resstr.2005.07.002

Study 9

Wadham, R. (2009). "Online learning vs. Face to Face" at <http://sites.lib.byu.edu/education/2009/08/24/online-learning-vs-face-to-face/> (accessed Oct 12, 2013).

US Department of Education(2009). "Evaluation of Evidence-Based Practices in Online Learning

- A Meta-Analysis and Review of Online Learning Studies" at <http://www2.ed.gov/rschstat/eval/tech/evidence-based-practices/finalreport.pdf> (accessed Oct 12, 2013).

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- Euzent, P, Martin, T, Moskal, P, & Moskal, P 2011, 'Assessing Student Performance and Perceptions in Lecture Capture vs. Face-to-Face Course Delivery', *Journal Of Information Technology Education*, 10, pp. 295-307.
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