

Student Perceptions, Grades, and Teacher Evaluation Ratings Comparing Online to On-Campus Teaching in Speech Pathology

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Research in On-line Instruction



- Researchers in many fields, including education and health have reported **positive teaching and learning** results with use of on-line instructional technologies and methods.
- Noted benefits of on-line instruction have been **increased student satisfaction, improved test scores, improved class participation, and increased student reflection practices** (Hughes, Ventura, & Dando, 2004; Litchfield, Oakland, & Anderson, 2002; Wills & Stommel, 2002)



On-line Instruction in Speech Pathology and Audiology

- Numerous programs use on-line technologies to provide instruction including University of Wyoming, University of Florida, Florida State University, and East Carolina University
- Unfortunately, the effects of this instructional medium on teaching and learning aspects of programming in speech pathology is not known.



Purposes of the Research

1. To determine students' perceptions of quality and efficacy of on-line instruction before and after course.
2. To compare student course grades from one year of on campus teaching to one year of on-line/hybrid teaching.
3. To compare teacher evaluations for online and on campus teaching.



Background: To Prepare for Online Course

- Both instructors attended the 9th annual Faculty Summer Institute in May, 2006, at the U of I, Springfield campus
 - 50 presentations, including hands-on workshops, forums, poster sessions, keynotes, and roundtable discussions focusing on providing a well-rounded introduction and overview of on-line teaching and technology
- Completed two introductory courses provided through the *Center for Teaching and Learning Technologies* at ISU
 - Introductory course in WebCT
 - Hosting on-line discussions



Course Development

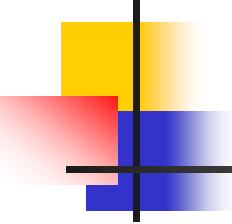
- *CSD 444, Neuropathologies of Speech* was chosen as the target course
- Background
 - Dr. Bailey taught the course 3 times, twice on-campus and once on-line/hybrid
 - Dr. Sawyer taught the course twice, both online/hybrid
- **Content/units, quizzes, and tests were identical for both professors:**
 - Neurological bases
 - Characteristics of motor speech disorders
 - Diagnosis and treatment of motor speech disorders
- **Identical On-Campus Meetings**
 - KASA project
 - Standardized assessments and subjective evaluation
 - Patient/case study videos and treatment planning practice
 - Tests administered on campus
- **Identical Topics for On-line and In Class Discussions**
 - Case study practice, evidence-based practice topics, content questions

Student Perceptions: Pre- vs. Post Course completion



- Participants
 - 37 Graduate students in Dept. of Communication Sciences and Disorders
 - All female
 - 41% had taken on-line class before outside of the department

- Instrument
 - 9 Pre-course
 - 10 Post-course
 - Likert Type Scale
 - 1=Strongly Disagree
 - 5=Strongly Agree
 - Demographics questions
 - Open-ended questions



Questions 1-3: (means in parentheses, p-values for significant differences)

1. Working independently and at my own pace was an advantage in this course. (3.46, 3.43)
2. I was able to participate more fully in an on-line format than in a traditional classroom taught on campus. (2.57, 2.43)
3. The course contained more content than I would have expected in a traditional classroom-based course. (2.70, 2.65)



Questions 4-6

4. My ability to use technology did not hinder my success in this course. (4.05, 4.70, $p=.001$)
5. I learned more in the on-line course than I would have learned if this course had been taught in a traditional format. (3.57, 2.19, $p=.000$)
6. Taking an on-line course was very convenient for me. (4.14, 4.03)



Questions 7-8

7. The on-line hybrid course meant more work for me than if the course had been taught in a traditional format. (3.30, 2.43, $p=.001$)
8. I would have benefited from the structure of regular class meetings to keep myself on schedule with assignments. (2.59, 3.65, $p=.000$)



Questions 9-10

9. Taking CSD 444 in an on-line format was an effective way for me to learn the course material. (2.59, 2.95)
10. I would like to enroll in other courses that are offered on-line/hybrid in the Dept. of Communication Sciences and Disorders. (2.85)



Students' Perceptions Pre-course Completion (Qualitative Questions)

1. What are your concerns about the format of the course?

Student comments:

- ability to keep up with course material
- familiarity with WebCT
- challenging content
- need to meet in person with professor for clarification
- I learn more from discussions with professors and students in class
- I learn better listening and taking notes
- I might miss extra information not given in handouts or on slides
- I'm worried about my dial-up internet connection
- That I might miss assignments or not understand assignments completely.



Students' Perceptions Post-course Completion

1. What worked well for you in this course?

Student comments:

- class discussions on WebCT
- flexibility, convenience, helped open my schedule
- teachers always available
- on-line quizzes and discussions
- more comfortable talking on-line than in class setting
- working at my own pace
- liked not having to come to campus, time and money savings
- notes well-organized and complete
- clear course expectations
- receiving feedback from my classmates
- provided "plenty" of opportunity to participate
- meeting in class several times for application activities



Students' Perceptions Post-course Completion

2. What did not work well for you in this course?

Student comments:

- learning the material on my own
- difficult to pace myself
- material too difficult for an on-line course
- couldn't ask questions personally
- didn't like getting all the notes at once
- on-line discussions were sometimes dominated by some class members
- problems with my computer
- learn better when I hear the course material and write notes
- discussions on-line don't flow as well as discussions in person
- lack of internet access across settings hindered ability to participate in discussions
- Getting participation points seemed more difficult (although there was ample opportunity). I don't have a problem speaking in class, but with the online class, I felt like I had to "make up" questions and comments
- I disliked the pressure to use the chat/discussion section. I think it's a valuable tool, but I think a lot of people posted things just to get points.



Students' Perceptions, cont.

3. List suggestions for course improvement.

Student comments:

- meet once a week to clarify material or ask questions
- add more discussions
- add more references to the course material
- add more on-line quizzes to keep me on track
- change the course to completely on-line, except for exams
- more on-campus meetings
- a suggested weekly reading outline as opposed to just readings for each unit



Summary of Student Perceptions

Positive trends

- Working independently was perceived as an advantage by most
- Students felt course content was manageable
- Student felt technology was not a problem
- Students appreciated the convenience this course allowed
- Students did not feel the course was more work than in a traditional format
- Students felt the on-line/hybrid format was an effective way to learn material

Negative trends

- Students felt class participation **decreased** in the on-line/hybrid format
- Students felt they **learned less** than in a traditional course
- Students felt they would have benefited from more in-class meetings



Question 2: Student Grades

- 38 students in On Campus Courses
 - Mean Final Percent: 92.02% (A)
 - 92-100 = A
- 72 students in Online Courses
 - Mean Final Percent: 90.50% (B)

*However...

t-test comparing means was **non-significant**
($p=.124$)



Question 3: Teaching Evaluations

- Online Teacher Evaluations, 2 semesters (1-7 scale, least effective to most effective)
 - Mean: 5.84
 - On Campus Teacher Evaluations, 2 semesters (same scale)
 - Mean 5.89
- Again, t-test comparing means was **non-significant** (p.=.790)



Summary of Student Grades and Teaching Evaluations

- Mean student grades lower (B average for online course vs. A average for on campus course), however, difference was not statistically significant.
- Mean teaching evaluations slightly lower for online course than on campus course, however, difference was not statistically significant.