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Using synchronous chatting to improve online learning experience

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Presentation Outline




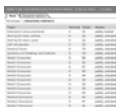
- Motivation
- Study design – Case study
- Study results
- Summary
- Future Directions

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Distance learning – an asynchronous learning style

- Video lectures 
- Text book chapters and other readings 
- Homework 
- Discussion in a discussion forum 

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Distance Learning -- Advantages

- Flexibility – time, location, pace
- Interactivity
 - email,
 - discussion boards
 - electronic tools for submitting and grading assignments and quiz answers
 - online resources,

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Distance Learning -- Problems

- Personal and interpersonal *communication* is *lessened* in ALN environment (Lawhead et al. 1997)
- Social isolation (hentea et al. 2003)
- Built of academic community is hindered (Rovai, 2001)
- *Procrastination* of the communication and lack of incentives (Fich and Hiltz, 1999)

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Prospect of online chat in distance learning

- In 2002 ~ 2003, a field study was conducted to investigate the use of online chat as a non-mandatory component of distance learning classes (Spencer and Hiltz, 2003)
 - 18 asynchronous DL classes with online "office hours" and discussion times
 - Half of the students used online chat in their DL courses
 - Students found chat was rewarding
- Light, easily available, at no additional cost

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Research Questions

- RQ1: Will formal chat sessions improve the students' online learning experience by compensating some of the deficiencies of asynchronous learning?
 - RQ1.1 instructor's social presence
 - RQ1.2 course interaction

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Research Question II

- RQ2: What are the advantages and disadvantages of the chat sessions in a distance-learning environment?
- RQ3: What chat configurations are better in facilitating learning?

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Case Study - Background

Course	Course Level	No. of chat sessions	Chat Size
Principle of IS (CIS 677)	Graduate	4	4-6 members/group
Fundamental of Information Systems and Technology (CIS211)	Under	2	18 members
Multimedia Information Systems (CIS270)	Under	3	4-6 members/group
Business Process Innovation (CIS684)	Graduate	3	4-6 members/group

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Case Study – Research Methods

- Background questionnaire
- Post chatting survey
 - Structured Likert Scale
 - Interaction (student-instructor, student-student)
 - perceived social presence,
 - motivation to learning,
 - enjoyability of course chat,
 - perceived subject-matter learning, skill development,
 - overall satisfaction with the course,
 - perceived quality of the educational experience
 - Open-ended (chat configuration, factors)
- Data Analysis

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Case Study Results

- Response Rate 71%(54/76)
- In general
 - ☺ Positive feedback from small groups
 - ☹ More negative feedback from the large group

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Case Study Results – Pros

- ☺ Real time interaction
- ☺ Feeling of community
- ☺ Impetus to learn
- ☺ Encourage active thinking
- ☺ “gave life” to the course materials

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Case Study Results – Cons

- ⊗ Lack of flexibility
- ⊗ Difficult to communicate complicated problems
 - ⊗ "a response to a question may require a few sentences at a minimum, but since only short sentences/fragments are usually typed in a chat session, it makes it difficult to communicate the response effectively." "If the response is broken up using several short sentences/fragments, then it becomes difficult to follow if others are concurrently typing messages."
- ⊗ Lack of emotion
- ⊗ Hard to focus (for large group)

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Case Study Results – Proposed Solutions

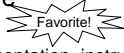
- flexible arrangements
- Chatting tool training/practice before hand
- Small group
- Allow longer time
- Moderate the chat
- Establish a communication protocol

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Case Study Results – Chat Configurations

- Size: small group (e.g. 4 to 5 participants)
- Possible structure
 - Instructor initiate  Favorite!
 - Student virtual presentation, instructor raise questions
 - All members ask/answer questions
 - Free flow
 - Prepare answers in advance
 - Post chat log afterwards

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Case Study Results – Factors affecting chatting quality

- Typing speed
- Reading speed
- Chat protocols
- Information overload was NOT a problem

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Case Study Results – Factors

- student-instructor interaction (72%)
- student-student interaction (94.4%)
- perceived social presence (77.8%)
- impact on motivation to learning (83.3%)
- enjoyability of course chat (94.4%)
- perceived subject-matter learning (88.9%)
- perceived skill development (88.9%)
- overall satisfaction with the course (72.2%)
- perceived quality of the educational experience (94.4%)

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Case Study - Discussion

- Conducting synchronous chat
 - at the beginning of the semester
 - helps students start up
 - during the semester
 - helps the instructor to obtain a sense of how well the students master course materials
- semi-structure
- chat log



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Conclusion

- RQ1: Will formal chat sessions improve the students' online learning experience by compensating some of the deficiencies of asynchronous learning?
 - RQ1.1 instructor's social presence → YES
 - RQ1.2 course interaction → YES



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Conclusion

- RQ2: What are the advantages and disadvantages of the chat sessions in a distance-learning environment?
 - Advantages
 - Real time interaction
 - Motivation to study
 - Forming community
 - Disadvantages
 - Less convenient
 - bandwidth



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Conclusion

- RQ3: What chat configurations are better in facilitating learning?
 - Most favorite: instructor initiated discussion
 - Design communication protocol
 - Add emoticon



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Future Direction

- Will more regularly scheduled chat session present more benefits?
- Wider range of classes

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Thank you

Any Questions?

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