Module Code	NM5205
Module Title	COGNITION AND (NEW) MEDIA
Semester	Semester 2, 2010/2011
Modular Credits	4
Faculty	Arts & Social Sciences
Department	Communications And New Media Programme
Tags	--
Teaching Staff	**DR Zhang Weiyu** cnmzw@nus.edu.sg Lecturer
Weblinks	

Aims & Objectives | Prerequisites | Teaching Modes | Schedule | Syllabus | Assessment | Workload

Aims & Objectives   Top

This graduate seminar is devoted to psychological aspects of human-computer interaction (HCI) and computer-mediated communication (CMC). Theories and empirical research from communication, psychology, user behavior and human-computer studies will be used to explore:

- Paradigm changes in studying new media psychology;
- Research methods in studying new media psychology;
- Uses and effects of unique technological features such as interactivity and navigability upon individual users' thoughts, emotions, and behaviors;
- Emerging user behaviors afforded by technological features such as multitasking and multimedia and their effects.

The primary goal of the seminar is to envision students the most recent development in the field of new media psychology as well as enable students to design and run their own research in this field.

Prerequisites   Top
None. But highly recommend NM2102 and NM2209.

Teaching Modes   Top
Weekly 3 hour seminars

Schedule

W – Weiyu
M – Maria

Week no.		Date	Themes
1.	**W**	**10 Jan**	Introduction
1.	**W**	**17 Jan**	Methodology-Experiments
1.	**W**	**24 Jan**	Methodology-Cognitive ethnography
1.	**M**	**31 Jan**	Theory - Information processing
1.	**W**	**7 Feb**	Topic - Multimedia
1.	**W**	**14 Feb**	Topic - Navigation
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1.	**M**	**28 Feb**	Topic - Virtual environments as new media
1.	**M**	**7 Mar**	Theory -Distributed cognition
1.	**W**	**14 Mar**	Topic - Interactivity
1.	**W**	**21 Mar**	Theory -Situated action
1.	**W**	**28 Mar**	Topic - Multitasking
1.	**W**	**4 Apr**	Student presentations
1.	**W**	**11 April**	Student presentations

Syllabus

Date	Theme and readings
10 Jan	**Introduction** Suppe, F. The structure of scientific theories. University of Illinois Press. (Read: pp. 135-151 (b) Kuhn) Harrison, S., Tatar, D., & Sengers, P. (2007). The three paradigms of HCI. http://people.cs.vt.edu/~srh/Downloads/TheThreeParadigmsofHCI.pdf Walther, J. B., Gay, G., & Hancock, J. T. (2005). How do communication and

	technology researchers study the Internet? *Journal of Communication, 55*, 632-657.
17 Jan	**Methodology - experiments** Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). <u>Experimental and quasi-experimental designs for generalized causal inference</u>. Boston: Houghton Mifflin. (Read: Ch. 1 & 8) Mitchell, M.L. and J.M. Jolley. (2007). <u>Research Design Explained, 6th edition</u>. Belmont, CA: Thomson Wadsworth. (Read: Ch. 11). Walther, J. B. (2001). Is a picture worth a thousand words? Photographic images in long-term and short-term computer-mediated communication. *Communication Research, 28*(1), 105-134.
24 Jan	**Methodology – cognitive ethnography** Lave, J. (1988). Cognition in practice: Mind, mathematics and culture in everyday life. Cambridge, UK: Cambridge University Press. (Read Ch. 1 introduction) Suchman, L. A. (1992). Plans and situated actions: The problem of human machine communication. Cambridge, UK: Cambridge University Press. (Read Ch. 6 cases and methodology). Bodker, S. (1996). Applying activity theory to video analysis: How to make sense of video data in HCI. In B. A. Nardi (Ed). *Context and consciousness: activity theory and human-computer interaction,*pp. 147-174. Cambridge, MA: MIT Press.
31 Jan	**Information Processing Paradigm** Proctor, R. W. & Vu, K. L. (2009). The Cognitive Revolution at Age 50: Has the Promise of the Human Information-Processing Approach Been Fulfilled? *International Journal of Human-Computer Interaction, v. 25*, p. 729- 784. Miller, G. A. (2003). The cognitive revolution: a historical perspective. *Trends in Cognitive Sciences, v. 7*, pp. 141- 144.
7 Feb	**Multimedia** Mayer, R. (2001). *Multimedia Learning*. Cambridge: Cambridge University Press. Chapter 14. Rockwell, S. C. & Singleton, L. A. (2007). The Effect of the Modality of Presentation of Streaming Multimedia on Information Acquisition. *Media Psychology, 9*, 179-191. Oviatt, S., Coulston, R., & Lunsford, R. (2004). When do we interact multimodally?: Cognitive load and multimodal communication patterns. *Proceedings of the 6th International Conference on Multimodal Interfaces (ACM)*, 129–136.
14 Feb	**Navigation** Pan, B., Hembrooke, H., Joachims, T., Lorigo, L., Gay, G., and Granka, L. (2007). In Google we trust: Users' decisions on rank, position, and relevance. *Journal of Computer-Mediated Communication, 12* (3). Retrieved on January 8, 2009 from http://jcmc.indiana.edu/vol12/issue3/pan.html

	Wirth, W., Bocking, T., Karnowski, V., & von Pape, T. (2007). Heuristic and Systematic Use of Search Engines. *Journal of Computer-Mediated Communication, 12* (3). Retrieved on January 8, 2009 from http://jcmc.indiana.edu/vol12/issue3/wirth.html Sundar, S. S., & Kim, J. (2005). Interactivity and persuasion: Influencing attitudes with information and involvement. *Journal of Interactive Advertising*, *5* (2), 6-29. Article retrievable from: http://www.jiad.org/article59
28 Feb	**Virtual environments as new media** Stanney, K. & Zyda, M. (2002). Virtual Environments in the 21st century. InStanney, K. (Ed.),*Handbook of Virtual Environments: Design, Implementation, and Application*, pp. (1-14). Lawrence Erlbaum Associates.
7 Mar	**Distributed Cognition** Perry, M. (2003). Distributed Cognition. In J. Carroll (Ed.) *HCI Models, Theories, and Frameworks* (pp. 193 – 200). Moran Kauffmann Publishers: San Francisco, CA.
14 Mar	**Interactivity** Sundar, S. S. (2007). Social psychology of interactivity in human-website interaction. In A. N. Joinson, K. Y. A. McKenna, T. Postmes & U-D. Reips (Eds.), *The Oxford Handbook of Internet Psychology* (pp. 89-104). Oxford, UK: Oxford University Press. Chung, D. S. & Yoo, C. Y. (200?). Audience Motivations for Using Interactive Features: Distinguishing Use of Different Types of Interactivity on an Online Newspaper. *Mass Communication & Society, 11*: 375-397. Sundar, S. S., Kalyanaraman, S., & Brown, J. (2003). Explicating website interactivity: Impression-formation effects in political campaign sites. *Communication Research, 30* (1), 30-59.
21 Mar	**Situated Action** Nardi, B. A. (1996). Studying context: A comparison of activity theory, situated action models, and distributed cognition. In B. A. Nardi (Ed). *Context and consciousness : activity theory and human-computer interaction*, pp. 69-102. Cambridge, MA: MIT Press. Suchman, L. A. (1992). Plans and situated actions: The problem of human machine communication. Cambridge, UK: Cambridge University Press. (Read Ch. 4 situated action). Lave, J. (1988). Cognition in practice: Mind, mathematics and culture in everyday life. Cambridge, UK: Cambridge University Press. (Read Ch. 7 through the supermarket)
28 Mar	**Multitasking** Zhang, W., Jeong, S. H., & Fishbein, M. (2010). Situational factors competing for attention: The interaction effect between multitasking and sexual explicitness on TV recognition. *Journal of Media Psychology*, *22*(1), 2-13.

	Spink, A., Park, M., Jansen, B. J., & Pedersen, J. (2006). Multitasking during Web search sessions. *Information Processing and Management, 42,*264–275
	Foehr, U. G. (2006). *Media multitasking among American youth: Prevalence, predictors, and pairings*. The Henry J. Kaiser Family Foundation.
4 Apr	**Student presentations**
11 April	**Student presentations**

Assessment

Assessment for this module will comprise:

Class participation and attendance	**20%**
Lead discussion	**30%**
Project presentation	**10%**
Term paper	**40%**

Lead Discussion (30%)
Each student will select two or three articles and lead discussion in class. Lead discussants will critically analyze assigned readings, and summarize major theoretical assumptions, arguments, methods, findings, implications, and limitations. During class, they will present the summary (using hand-outs) and lead class discussion by addressing intriguing questions and discussion topics (45 min to 1 hour).

Prior to class, lead discussants will meet with a lecturer and discuss major issues pertaining to selected research topics. They will post questions on IVLE online forum by Sunday (3:00 pm) so that other students can prepare answers in advance.

Tips: It is really important to prepare GOOD questions and discussion topics. Don't ask too abstract or too simple questions. Keep in mind that you will need to lead discussion for about 45 minutes to an hour. Get prepared with interesting questions and topics that can elicit constructive debates/discussions among students.

Class Participation (20 %)
Your active participation is critical, both for your own learning and for your contribution to the course. Much of the course work involves class discussion and Q&As. The grade for class participation will be based on the followings: **active and productive contribution to in-class and online discussions**. Please keep in mind that class participation is up to 20% of your final grade. Every week, students are required to post at least one question (or discussion topic) on the IVLE forum prior to lecture (Monday, 5:00 pm). Alternatively, they can reply to questions posted by other students prior to class.

Final project (50%)

1)   Term Paper (40%)
Students will select a research topic relevant to HCI or CMC and write a research paper. It should be an empirical paper testing research hypotheses or exploring research questions using quantitative or qualitative data. Since it is a term paper, extensive data gathering is not required (for instance, experiments with sample size (n=20) would be sufficient). The paper should include introduction, literature review, research questions or hypotheses, methods, findings, and discussion and conclusions. Students will learn how to plan and implement basic research explorations into computer-mediated environments.

Paper length: 15 pages (12 pt fonts, double spaced) excluding references, tables, and figures.

    Due date: Week 13 (April 11th, 2011)

2)   Presentation (10%)
30 min for presenting research topic and output
15 min for Q&A

Plagiarism
Plagiarism is the intentional or unintentional use of other's ideas, words, data, figures, pictures, sequence of ideas, or arrangement of materials without clearly acknowledging the source.

Plagiarism encompasses the following:

1. Presenting as one's own the words, the work, or the opinions of someone else without proper acknowledgment.
2. Borrowing the sequence of ideas, the arrangement of material, or the pattern of thought of someone else without proper acknowledgment.

In this module, any plagiarized work will earn a "0" for the <u>entire</u> assignment.

Workload
3-0-0-3-4