Common resources for supporting Human-Computer Interaction (HCI) Education. These resources were compiled following a review of 52 (primarily graduate) courses in HCI, as part of the 2011-2014 SIGCHI Project on HCI Education. The review was conducted primarily in 2012, drawing primarily on syllabi from the 2011-2012 academic year. Updated versions of some of these resources are now be available.

Stand-alone Textbooks

1. Card, S., Moran, P & Newell, A. (1983). *The Psychology of Human-Computer Interaction.* Hillsdale, NJ: Laurence Erlbaum Associates.

   This textbook provides an in-depth look at the psychology behind HCI principles and usability theory and practice.

2. Cooper, A., Reimann, R. & Cronin, D. (2007). *About Face 3: The Essentials of Interaction Design.* Indianapolis, IN: Wiley Publishing, Inc.

   A textbook on how to design digital products and services taking into account every stage in the design/development lifecycle.

3. Dix, A., Finlay, J., Abowd, G. & Beale, R. (2004). *Human-Computer Interaction* (3rd Edition). Harlow, England: Pearson Education Limited.

   This is a general textbook that separates introductory from more advanced material. The authors apply classic principles to current technology.

4. Rogers, Y., Sharp, H. & Preece, J. (2011). *Interaction Design: Beyond Human-Computer Interaction* (3rd Edition). West Sussex, UK: Wiley & Sons, Ltd.

   Rogers, Sharp & Preece use cross-disciplinary theory to inform practical examples. Case studies are included in many chapters.

5. Shneiderman, B., Plaisant, C., Cohen, M. & Jacobs, S. (2009). *Designing the User Interface: Strategies for Effective Human-Computer Interaction* (5th Edition). Boston, MA: Addison-Wesley.

   This textbook teaches students and practitioners how to design build, manage, and maintain HCI systems.

Other Books

1. Baecker, R., Grudin, J., Buxton, W. & Greenberg, S. (Eds.). (1995). *Readings in Human-Computer Interaction: Toward the Year 2000*. San Francisco, CA: Morgan Kaufmann Publishers.

   A compilation of key concepts and research in HCI.

2. Beyer, H. & Holtzblatt, K. (1998). *Contextual Design : Defining Customer-Centered Systems*. San Diago, CA: Academic Press.

This textbook introduces contextual inquiry, a methodology where designers conduct user research in the actual context of use.

3. Buxton, W. (2007). Sketching user interfaces: Getting the design right and the right design. Canada: Morgan Kaufman.

   Buxton argues that sketching is a crucial component of low-fidelity prototyping.

4. Card, S., Mackinlay, J. & Shneiderman, B. (1999). *Readings in Information Visualization: Using Vision to Think.* San Francisco, CA: Morgan Kaufmann Publishers.

   This book compiles numerous essays on information visualization, including both theoretical and applied contributions.

5. Dumas, J. & Redish, J. (1999). *A Practical Guide to Usability Testing*. Bristol, UK: Intellect Books.

   Dumas and Redish offer a comprehensive guide to planning, conducting, and analyzing usability tests.

6. Johnson, J. (2010). *Designing with the Mind in Mind: Simple Guide to Understanding User Interface Design Rules*. Burlington, MA: Elsevier Inc.

   Johnson explains key concepts in perceptual and cognitive psychology, and how these concepts inform design rules.

7. Lewis, C. & Reiman, J. (1994). *Task-Centered User Interface Design*. Shareware available from http://hcibib.org/tcuid/.

   A practical guide to designing user interfaces. This resources if offered as shareware, with a suggested donation of $5.

8. Mullet, K. & Sano, D. (1994). *Designing Visual Interfaces: Communication Oriented Technologies*. Upper Saddle River, NJ: Prentice Hall.

   Draws on common principles, techniques, and aesthetics from diverse fields in design to inform interaction design and HCI.

9. Norman, D. (2002). *The Design of Everyday Things*. New York, NY: Doubleday.

   Norman argues for the importance of user-centered design, drawing on important theory from cognitive psychology and related fields.

Book Chapters, Journal Articles, and Conference Proceedings

1. Blomberg, J., Burrell, M. & Guest, G. (2002). An ethnographic approach to design. In A. Sears & J. Jacko (Eds.), *The Human-Computer Interaction Handbook* (pp. 964-986). New York, NY: Laurence Erlbaum Associates.

The researchers examine how ethnography and other anthropological theory can be integrated into the design process, especially while eliciting user requirements.

2. Bush, V. (1945). As we may think. *The Atlantic Monthly, 176,* 37-47.

   Bush argues that humanity needs tools to strategically manage its knowledge, and sets the conceptual grounds for the first computer.

3. Gilbert, E. & Karahalios, K. (2009). Predicting Tie Strength with Social Media. In *Proc. of CHI '09.* New York, NY: ACM Press.

   Gilbert & Karahalios apply social network analysis to look at relationships in social media.

4. Gomoll, K. & Nicol, A. (1990). Discussion of guidelines for user observation. In *User Observation: Guidelines for Apple Developers.* Apple.

   An early text by Apple developers on how to observe users in the requirements gathering phase.

5. Greenberg, S. & Buxton, B. (2008). Usability evaluation considered harmful (some of the time). In *Proc. of CHI '08.* New York, NY: ACM Press.

   The authors argue that choosing the right methodology is crucial to conducting responsible and informative usability evaluation.

6. Hollan, J. & Stornetta, S. (1992). Beyond being there. In *Proc. of CHI '92.* New York, NY: ACM Press.

   Hollan and Stornetta discuss how to support communication through electronic media, arguing that mimicking face-to-face patterns is insufficient.

7. Hollan, J., Hutchins, E. & Kirsh, D. (2000). Distributed cognition: Toward a new foundation for human-computer interaction research. *ACM Transactions on Computer-Human Interaction (TOCHI), 7,* 174-196.

   Distributed cognition theory can help designers understand users of networked or distributed information systems.

8. Klemmer, S., Hartman, B. & Takayama, L. (2006). How bodies matter: Five themes for interaction design. In *Proc. of DIS '06.* New York, NY: ACM Press.

   Thinking through doing, performance, visibility, risk, and thick practice are five aspects of physical being that can inform interaction design.

9. Kohavi, R., Henne, R. & Sommerfield, D. (2007). A guide to controlled experiments on the web: Listen to your customers not to the HiPPO. In *Proc. of KDD '07.* New York, NY: ACM Press.

Using the internet, researchers can perform controlled experiments to learn about their actual users, not just the highest paid person in an organization.

10. McGrath, J. (1995). Methodology matters: Doing research in the behavioral and social sciences. In Baecker, R., Grudin, J., Buxton, W. & Greenberg, S., Eds. *Human-computer Interaction: Toward the year 2000.* San Francisco, CA: Morgan Kaufmann Publishers, Inc.

    Carves out a place for qualitative research in interaction design and HCI.

11. Myers, B., Hudson, S. & Pausch, R. (2000). Past present and future of user interface software tools. *ACM Transactions on Computer-Human Interaction (TOCHI), 7*, 3-28.

    An evaluation of past and present software tools with implications for future work.

12. Nielsen, J. (1994). Heuristic evaluation. In Nielsen, J. & Mack, R. (Eds.), *Usability Inspection Methods* (pp: 25-64). New York, NY: John Wiley & Sons.

    Jakob Nielsen talks about how experts can use an established set of principles to evaluate interfaces without talking to users.

13. Pruitt, J. & Grudin, J. (2003). Personas: Practice and theory. In *Proc. of DUX '03.* New York, NY: ACM Press.

    Outlines persona theory and explains why personas are superior to the use of scenarios alone.

14. Rettig, M. (1994). Prototyping for tiny fingers. *Communications of the ACM, 27,* 21-27.

    Describes the importance of low-fidelity prototyping and teaches developers how to construct low-fidelity prototypes.

15. Weiser, M. (1995). The computer for the 21st century. *IEEE Pervasive Computing, 1,* 19-25.

    Computers will become so ubiquitous that no one will notice their presence.

16. Wobbrock, J., Myers, B. & Kembel, J. (2003). EdgeWrite: A stylus-based text entry method designed for high accuracy and stability of motion. In *Proc. of UIST '03.* New York, NY: ACM Press.

    EdgeWrite users gestures to improve accuracy in text entry for both disabled and able-bodied users.