Oral Histories and Computing Education

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Some Computing-Related Oral History Collections (1)

• Charles Babbage Institute Oral History Collection
  – http://www.cbi.umn.edu/oh/
  – includes computer scientists such as Dijkstra, Minsky, and Knuth, a large selection of interview with people in the computer industry, and interviews from special projects

• ACM Oral Histories
  – http://portal.acm.org/toc.cfm?id=1141880&type=proceeding&coll=ACM&dl=A
  – Project of ACM History Committee (established 2004)
  – Oral history interviews with ACM's surviving presidents from 1970s and earlier
  – Plan for interviews with winners of ACM Turing Award
Some Computing-Related Oral History Collections (2)

- Computerworld Oral Histories
  - Interviews in conjunction with Computerworld Honors Program
  - include some big names such as Bill Gates, Seymour Cray, Michael Dell, Gordon Moore and Larry Ellison
  - http://www.si.edu/harcourt/nmah/lemel/Pioneer.htm
  - http://invention.smithsonian.org/Resources/Fa_Comporalhist_Index.Aspx
  - AFIPS-Smithsonian oral histories project was first organized effort to preserve the history of computing
  - Oral histories with many computing pioneers involved with the computers of the 1940s and 50s

Some Computing-Related Oral History Collections (3)

- Silicon Genesis collection at Stanford University
  - http://silicongenesis.stanford.edu/complete_listing.html
  - Interviews with well known Silicon Valley figures such as Regis McKenna and Gordon Moore, as well as many of the important chip designers of the 1970s and 80s.
- SIAM History Project
  - http://history.siam.org
  - A funded study by SIAM (Society for Industrial and Applied Mathematics) of the history of scientific computing and numerical analysis
  - A growing selection of oral history interviews and other useful materials, which includes William Kahan, Cleve Moler, Jack Dongarra, Fritz Bauer, Bill Gear, Gene Golub and Pete Stewart
A specific example: CEOHP, the Computing Educators Oral History Project

• Seed of an idea: SIGCSE 2003 in Reno, NV
  – Eric Roberts’ keynote talk; Margolis & Fisher lunchtime talk; discussion in the corridors, at receptions, etc.
• Initial momentum: SIGCSE 2004 breakfast meeting
• Concrete foundation: ITiCSE 2005 Working Group
• Testing the ideas: early interviews
• Gaining momentum: NSF Planning Grant, January 2007
• Southwestern capstone to flesh out ideas
• Publicizing the project: SIGCSE, ITiCSE, Hopper, …
• Ongoing development
  – Prototype website
  – Additional interviews
• URL: http://www.ceohp.org/

The CEOHP Vision

• Short term:
  – An “oxygen tank” resource for telling young people (especially women) what computer scientists and computing educators do:
    • Teachers
    • Advisors
    • University faculty
• Long term:
  – Become part of the historical record, for use by historians and social scientists
  – A resource for the future — as research in and of itself
  – Outlive the need for providing this type of role models
Some of the target audiences

- Pre-college children with inspirational stories and role models
- College students to understand differences in paths, gain mentoring / role models
- Early career individuals to get ideas, avoid pitfalls
- Mid-career individuals to feel less isolated
- Late career individuals to position themselves in what others have experienced
- Institutions wanting ideas for recruiting / retaining faculty
- Social scientists looking for trends, problems, possible solutions
- Historians interested in understanding this aspect of the history of computing

Inspiring the “next level down”:
A tiered approach to mentoring
What information will the collection include?

- General information
  - About the project itself
  - About the field and its history
  - About the various organizations with a role
  - About the techniques of oral history (links?)
- Specific information (about the people)
  - Interviews with relevant artifacts, including transcripts
  - Materials about individuals who passed away before they could be interviewed
- “Slicing” the information
  - Targeted toward specific audiences
  - Organized around specific themes

Who will be represented in the collection?

- Span of desirable characteristics, with goal of balance
  - Age, gender, education, experience
  - Type of institution
  - Geographic region
- Potential pools
  - Professional organizations
  - Winners of various computing education awards
    - SIGCSE’s Outstanding Computing Educator
    - ACM’s Karlstrom Award
- Should the collection include key individuals who are already deceased?
How should we present the collection?

- Electronic / Internet
  - Web portal: Allows searching, filtering, browsing, listening …
- Electronic / packaged
  - CDs / DVDs
  - “Program-in-a-box”
  - Podcasts
- Paper
  - “19 programmers” style of book
  - Pamphlets
  - Posters
- Non-traditional ideas
  - Theme doll with associated stories (in the style of American Girl)
  - Finger puppet set with associated stories (e.g. Einstein, Currie, etc.)

Approved Interviews (1)

- Richard Austing
  - World region: North America
- Judith Bishop
  - World region: Africa
- Tracy Camp
  - World region: North America
Approved Interviews (2)

- Nell Dale
  - World region: North America

- Gordon Davies
  - World region: Europe

- Jenny Edwards
  - World region: Australia

Approved Interviews (3)

- Judith Gal-Ezer
  - World region: Middle East

- Maria Klawe
  - World region: North America

- Joyce Currie Little
  - World region: North America
Approved Interviews (4)

- Dan McCracken
  - World region: North America

- Jane Prey
  - World region: North America

- Beth Simon
  - World region: North America

Approved Interviews (5)

- Joy Teague
  - World region: Australia

- Alison Young
  - World region: New Zealand
Probing questions (1a, 1b, 1c)

1a. Parents’ education:
• Did your parents have college degrees?
• Were either of your parents in computing-related fields such as mathematics, science, or engineering?

1b. Early education:
• Were you a good student?
• Did you take courses in mathematics and science that prepared you for college study of mathematics, science, or computing?

1c. Siblings:
• Did you have brothers and sisters who went on to college and a professional career?
• Were you given the same educational training and reinforced in the same career aspirations as your brothers and sisters?

Probing questions (1d, 2a, 2b, 2c)

1d. Other shaping influences:
• Was there a teacher or someone else in your early life who inspired you to pursue a career in mathematics, science, or computing?

2a. Undergraduate education:
• Why did you choose your undergraduate institution?
• Did you come to school knowing what you wanted for a major?

2b. MA or MS:
• Why did you decide to study for a master’s degree?
• Did you study something different in graduate school than your undergraduate major? If so, why and was it difficult to make the transition to a new field?

2c. Ph.D.:
• Did you enjoy your research experience or was it simply something you had to do?
Probing questions (3a, 3b, 4a)

3a. Interruptions:
• There is a gap in your resume. What did you do during that time?

3b. Career phase connections:
• Was there something about this work experience that influenced your later career?

4a. Career in computing education:
• I saw that you chose an X institution; what caused you to choose that (type of) institution? What was your course load? Were you expected to research as well as teach?
• Did someone on the faculty of that institution mentor you as a computing educator? Did someone outside of that institution mentor you? How has that affected your career?

Probing questions (4b, 4c)

4b. Teaching:
• Could you share your teaching philosophy?
• How has your teaching style changed over the years?
• What course or courses have been your favorite to teach? Why were those favorites?
• Do you have a particular story to relate about any of your students or classes?

4c. Professional organizations:
• To what types of professional organizations have you belonged (e.g. specific to computing topics or research, related to computing education, general education groups)?
• How has your involvement in professional organizations affected you and your career?
Probing questions (4e, 5)

4e. Professional service:
• What role has supervising undergraduate or graduate students played in your career?
• Have you spent time volunteering your professional services? If so, how has this affected your career?
• Have you found circumstances in which to serve as a mentor? If so, how, where, and what?

5. Challenges:
• Were there any particular challenges that you faced in your work environment, for example, juggling commitments at work and at home?

Probing questions (6, 7)

6. Compromises:
• What are some compromises that you have had to make in the course of your career?

7. Outside interests
• Do you have any strong outside interests that will enable us to understand you better?
• Are there outside interests that have had a shaping effect on your career?
Probing questions (8)

8. Wrap-up:
• If you could give advice to a young woman starting out, what would it be?
• If you could change one decision that you made along your career path, what would it be?
• Is there one story that you want to tell so that it will be remembered?