Quality Evaluation of Health Answers in Yahoo! Answers: A Comparison Between Experts and Users

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LIS 6919 Proseminar
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Problem Statement

• The popularity of sharing health information in social contexts

• Importance of the quality of health information shared

• Little is known about people’s perceptions of quality criteria for evaluation
Purpose and Significance

- To compare quality evaluation between three different groups:
  - Yahoo! Answers questioners
  - Health reference librarians
  - Nurses
Research Questions

• How do health reference librarians, nurses, and questioners in Yahoo! Answers evaluate the quality of health answers provided in Social Q&A?

• How are their ratings on health answers different from one another?
Roles and Tasks

**Adam**
- Research Collaboration
  - Assist in reviewing literature
  - Recruit, conduct online surveys with librarians
  - Collect and analyze librarian data

**Yong**
- Research Assistant
  - Recruit, conduct online surveys with questioners
  - Collect and analyze questioner data

**Both**
- Help with human subjects (IRB) approval
- Code for question/answer appropriateness
- Help design and implement survey

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## Recruitment

### Questioners (40)
- Population: Those who asked health-related questions in Yahoo! Answers during May 2011
- Sorted, sampled randomly
- Invited via message feature
- E-mailed Yong or Adam to express interest
- $10 compensation

### Librarians (40)
- Mailing lists
  - Medical Library Association
  - Florida Ask-a-Librarians
  - jESSE
- Collected contacts for health science librarians in FL, GA, other states
- $30 compensation
Random sample

- 500 questions and their “best answers”

Coding

- Remove
  - No meaning
  - Excessive cursing / explicit content
  - Pure survey / opinion

Re-random sample

- 400 questions and answers
Method

• Online surveys
• 10 questions and answers each
• Evaluation criteria (1 to 5, or N/A)
  • Accuracy
  • Completeness
  • Relevance
  • Objectivity
  • Source credibility
  • Readability
  • Politeness
  • Confidence
  • Knowledge
  • Efforts

• Demographic and other questions
Problems Encountered

• Extraction of data
  – SQL database hosted by Virginia Tech
  – Encoding, selection, export to Excel

• Recruitment
  – Fewer responses than expected from questioners
  – Reminders necessary

• Survey software
  – Quirks and issues
  – Extraction and analysis of results
Findings

<table>
<thead>
<tr>
<th>Metric</th>
<th>Librarians</th>
<th>Questioners</th>
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</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>2.55</td>
<td>3.54</td>
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<tr>
<td>Completeness</td>
<td>2.03</td>
<td>3.18</td>
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<td>Relevance</td>
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<td>Objectivity</td>
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<td>Source Credibility</td>
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<td>Readability</td>
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<td>Politeness</td>
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<td>Confidence</td>
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</tr>
<tr>
<td>Effort</td>
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<td>2.55</td>
</tr>
</tbody>
</table>
Findings (continued)

• The average ratings
  – librarians (M=2.85) < questioners (M=3.63).

• Additional criteria from librarians
  – helpfulness
  – authority of answerers
  – safety
Ongoing Work

• Surveys with nurses

• Comparing the results of quality evaluation by nurses with laypeople (Yahoo! Questioners) and reference librarians

• Analysis of qualitative comments
  – Per question: resources used, additional comments
  – Overall: impression, suggestions, other comments
Implications

• For research and practice
  – Suggestions for users and patients: be critical in using online health information
  – Education and instruction for laypeople: how to judge the quality of health information given by non-experts in social contexts

• For us
  – What we personally got out of it
  – How it relates to our own research
Thank you!

Questions?