Self-Generated Versus Imposed Tasks in Collaborative Search

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Categories from prior survey

• Self-initiated sharing
  – “Because I thought it was cool”

• Perceived interest
  – “We were discussing this earlier”
  – “He is an avid golfer as well”

• Expressed interest
  – “She asked for the information
  – “To help her with the paper.”

• Explicit collaboration
  – “We were looking to buy a new phone and we wanted some information”
  – “We were working on a project”
Two self/others dimensions

- **Proving a point / Resolving a debate**
- **Self-initiated** (e.g. “it was cool”)
- **Expressed interest** (request for info)
- **Perceived Interest**
- **Cooperation & Collaboration**

- **search**
  - prompted by others
- **share**
  - self-initiated
Self-Generated vs. Imposed

• “...people are seeking information not because they have identified an information need themselves, but because they have been set on that course by another. The information need or question he or she wishes to answer is not his or her own in the sense that it was generated in his or her own mind or out of the context of his or her own personal life. Rather, the question has been imposed upon him or her by someone else.” (Gross, 1995, p. 236)
Imposed queries are common

• 25% of library reference desk queries
  – Gross & Saxon, 2001

• 33% social searches
  – Evans and Chi, 2008
Evidence of differences

• Imposed rated library ref higher (Gross, 2002)
• Kids used greater variety of sources for imposed (Gross, 1999)
• Kids prefered & more successful at self-gen (Bilal, 2002)
• More use of “direct” and “safe” strategies for imposed (Thatcher, 2006)
• Less interaction with others for self-generated (Evans & Chi, 2008)
Method

- Lab study, 12 pairs of undergraduates
- Sync, collab search using Coagmento + our mods
- Communicate via chat & shared bookmarks
- Work on each task as long as wish

<table>
<thead>
<tr>
<th>Task type</th>
<th>Task description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transactional</td>
<td>What is the URL that would let you add a KitchenAid 3-speed blender to your shopping “bag” on the Kohl”s website?</td>
</tr>
<tr>
<td>Fact-finding</td>
<td>What is a prime factor?</td>
</tr>
<tr>
<td>Exploratory: collecting</td>
<td>Research for a report on the effects of childhood obesity in the U.S for a class on public health.</td>
</tr>
<tr>
<td>Exploratory: decision/planning</td>
<td>Find activities you would like to do on a spring break trip to Tucson, AZ (chosen since it would be an unfamiliar city to our participants)</td>
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</tbody>
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Self-Generated Task

- Self-generated task chosen by the participants
- At sign-up time, each pair was asked to think of a short list of topics or tasks
- At the time of the study, each pair decided on their topic
Balancing task orders

- **1 & 2**
  - fact-finding
  - transactional tasks

- **3 & 5**
  - The self-generated task

- **3&4 or 4&5**
  - exploratory collecting
  - Exploratory planning/decision
• Engaged

How you felt when you were completing the task

Not absorbed intensely
Attention was not focused
Did not concentrate fully
Not deeply engrossed

Absorbed intensely
Attention was focused
Concentrated fully
Deeply engrossed

• Additional measures of
  – time on task
  – use of division of labor
  – Enjoyment
  – use of the chat log
  – number of problems encountered
“Mapped” Task

• Since only one self-generated task, it could be confounded with task type (fact-finding, transactional, exploratory collect, exploratory planning)

• We mapped the one self-gen task to one of the four imposed tasks for comparison
Engagement

- Fact-finding
- Transactional
- Exploratory - collecting
- Exploratory - decision
- Self-generated
- Mapped

The chart illustrates engagement levels across different categories.
• An independent-samples t-test showed a significant difference in the engagement
  – self-generated (M=5.89, SD=0.76), and
  – mapped (M=5.16, SD=1.36) tasks
  – t(46) = -2.29, p = 0.03

• The participants felt more absorbed on the self-generated task than on the mapped task.