Information is user-constructed

Information seeking is situated

Question Negotiation and Information Seeking

Information is user-constructed

Information seeking is situated

(Choo, Detlor, Turnbull 2000)
1. Information Needs

**Affective Factors**
- Uncertainty, anxiety (Kuhlthau)
- Stress and coping (Wilson)
  Monitors vs blusters

**Cognitive Factors**
- Sensemaking Gaps (Dervin)
- Knowledge Gaps (Allen)

**Situational Factors**
- Problem Dimensions (MacMullin & Taylor)
- Environmental Complexity (Daft)

(Choo, Detlor, Turnbull 2000)
Sensemaking Gaps (Brenda Dervin)

Decision stop: two or more roads ahead
Barrier stop: one road ahead, but blocked
Spin-out stop: no road
Wash-out stop: road disappears
Problematic stop: being dragged down a road
Perceptual embeddedness: how foggy is the road
Situational embeddedness: how many intersections
Social embeddedness: how many people also travelling

(Choo, Detlor, Turnbull 2000)
2. Information Seeking

**Affective Factors**
- Motivation, Interest
- Self-efficacy, Personal Mastery (Wilson)

**Cognitive Factors**
- Relevance, Usefulness
- Reliability, Accuracy

**Situational Factors**
- Time, Effort to Contact Source, and Extract Information
- Task Complexity

*(Choo, Detlor, Turnbull 2000)*
Information Seeking: Accessibility & Quality

- Task Complexity
  - Source Perception
    - Selection
      - Interaction
  - Personal Motivation

Perceived Source Quality
  - How relevant?
  - How useful?
  - How reliable?
  - How trustworthy?

Perceived Source Accessibility
  - How much time and effort to:
    - Contact source
    - Interact with source
    - Extract information
3. Information Use

**Affective Factors**
- Avoid Embarrassment, Conflict, Regret
- Maintain Self-Image
- Enhance Status, Reputation

**Cognitive Factors**
- Cognitive Styles
- Cognitive Simplifications

**Situational Factors**
- Group/Professional Norms
- Culture and Politics

**Avoidance/Maintenance**
- Selective Processing
- Rules Norms

(Choo, Detlor, Turnbull 2000)
Myers-Briggs Type Indicator

MBTI profiles your cognitive style

- Introversion vs Extraversion
- Sensing vs Intuiting
- Thinking vs Feeling
- Judging vs Perceiving
Mooers’ Law

An information retrieval system will tend not to be used whenever it is more painful and troublesome for a customer to have information than for him not to have it.

(Mooers 1959, p.1)
Human Information Seeking: A Model

Streams of Experience

INFORMATION NEEDS

Uncertainty/Stress
Cognitive Gaps
Situational Complexity

Perception of gap in state of knowledge, ability to make sense

INFORMATION SEEKING

Anxiety/Motivation
Information Quality
Information Accessibility

Incidental Information
Selected Information

INFORMATION USE

Avoidance/Maintenance
Selective Processing
Rules, Norms

Understanding, Acting

Suppress, avoid problem
No information seeking

(Choo, Detlor, Turnbull 2000)
Information Seeking and Question “Negotiation”

- identify needs of the user through interview

- come to a compromise between the needs of the user and the constraints of the system and/or the information itself.

(Freund 2003)
Taylor’s 4 Levels of Information Need

Q1 - Visceral need:
Actual, but unexpressed need for information
Feeling of unease, doubt, uncertainty
Vague sense of dissatisfaction
Hard to express in words

(Taylor 1968)
Taylor’s 4 Levels of Information Need

Q2 - Conscious need:
Conscious, mental description of the need
Running statement or narrative
Examples, analogies, multiple themes

Q3 - Formalized need:
Formal statement of the need
Qualified, rational statement
Question or topic with defined boundaries

(Taylor 1968)
Taylor’s 4 Levels of Information Need

- Q4- Compromised need:
  Question as presented to system
  Question is recast in in anticipation of what the system can deliver
  Search statement or query

From which level should the search intermediary work in order to be effective?

(Taylor 1968)
Interview Question Types

Open Questions
- No limits to user response
- Users state need in own terms
- Encourage conversation
- User oriented
- May lead off track

Closed Questions
- Yes/No or select from options
- Based on assumptions
- Confirm understanding
- System oriented
- Confirm satisfaction

(Dervin and Dewdney 1986, Freund 2003)
Interview Question Types

Open Questions

- Please tell me more about your topic?
- How much information do you need?
- What do you already know about …?
- Can you give me some examples?

Closed Questions

- Is this what you mean by ….?
- Do you want information on …?
- Do you need current or historical information?
- What type of information do you need: books, magazine articles, or newspaper stories?
Interview Question Types

Neutral Questions

- Subset of open questions
- Based on sense-making (Dervin)
- Used to discover the user’s motivation and objectives without asking “why” questions
  
  - What is the most important thing about this problem that you need to know?
  - Describe how you come to be interested in this topic.
  - How do you plan to use this information?
  - How would this information help you?

(Dervin and Dewdney 1986, Freund 2003)
Interview Skills

Communication Skills
- Be able to put the person at ease and open the channels of communications

Subject Elicitation Skills
- Effective use of questions, probes, pacing
- Knowledge of system and databases

(Freund 2003)
### Reference Interview Stages

<table>
<thead>
<tr>
<th>Stage</th>
<th>Sets of Behaviors</th>
<th>Specific Minimum Required Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Set the tone</td>
<td>Approachability</td>
<td>Smile.</td>
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<td></td>
<td></td>
<td>Make eye contact.</td>
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<td></td>
<td>Give friendly greeting.</td>
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<td></td>
<td></td>
<td>Be at same eye level as client.</td>
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<tr>
<td>Get the facts</td>
<td>Comfort</td>
<td>Speak in relaxed tone.</td>
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<tr>
<td></td>
<td></td>
<td>Be mobile, go with client.</td>
</tr>
<tr>
<td></td>
<td>Interest</td>
<td>Maintain eye contact.</td>
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<tr>
<td></td>
<td></td>
<td>Make attentive comments.</td>
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<tr>
<td></td>
<td></td>
<td>Give client full attention.</td>
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<tr>
<td></td>
<td>Listening</td>
<td>Do not interrupt client.</td>
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<td></td>
<td></td>
<td>Paraphrase or repeat to demonstrate understanding.</td>
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<tr>
<td></td>
<td></td>
<td>Ask clarifying questions if not sure of client's question.</td>
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<tr>
<td></td>
<td>Inquiring</td>
<td>Ask open questions.</td>
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<tr>
<td></td>
<td></td>
<td>Verify specific questions before searching.</td>
</tr>
<tr>
<td></td>
<td>Searching</td>
<td>Keep client informed of progress of search.</td>
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<tr>
<td></td>
<td></td>
<td>Offer referral if answer not found.</td>
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<tr>
<td>Give information</td>
<td>Informing</td>
<td>Speak clearly and distinctly.</td>
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<td></td>
<td></td>
<td>Check with client to be sure answer is understood.</td>
</tr>
<tr>
<td>Offer Closure</td>
<td>Closing</td>
<td>Cite sources.</td>
</tr>
</tbody>
</table>
Summary

- Interview/Negotiation is a key part of the online searching process
- The client, content and context are all part of understanding the information need
- Do not take queries at face value - ask, verify
- Use interpersonal communication skills
- Use subject elicitation skills
- Reflect and evaluate to improve the process

(Freund 2003)
References


