Objectives of this lecture

- Define terms related to users and information seeking
- Communicate the importance of users as the foundation for systems to organize information
- Link lecture’s concepts and terms to IOP Sections 1.2 and 1.3
- Prepare students for discussion and exercises

Users as the starting point

- Information organization is for users
  - Finding available information
  - Identifying and selecting appropriate information
  - Gaining access to the information
- A good organization system
  - Addresses the needs and behaviors of users
  - Is usable by the intended users
- Understanding users is the first step in designing an organization system

LIS perspective on users

- A user is someone who
  - has an information need
  - engages in some behavior to seek information in a certain information environment
- In the networked environment, we also have to consider users that are software programs accessing our systems!

What do these terms mean?

Definitions

- User: A person who seeks information and who uses information and/or information systems in some meaningful way. For example:
  - Patrons (end user)
  - Library staff (technical user)
- Information Need: Question, problem, task or situation that motivates a user to seek information

Definitions

- Information seeking: A user’s processes for obtaining information, from recognition of an information need through use of information to resolve an information need – what do they do?
- Information environment: The physical, organizational, social, and intellectual context in which information seeking and use takes place – where do they do it?
Definitions

- **Information behavior**: A person’s actions or reactions involving information including activities that are:
  - **Internal cognitive**
    - Thoughts
    - Decisions
    - Knowledge
    - Organization
  - **External physical**
    - Information organization
    - Seeking
    - Searching
    - Evaluation
    - Use

Understanding users

- A user information needs analysis asks…
  - Who are the users?
  - What do the users know?
  - Why do the users seek information?
  - What kinds of questions do the users ask?
  - What tasks do the users want to carry out?
  - How do the questions relate to the information objects?
  - What kinds of information results do the users want?

Describing Users

- **Demographics**: Observable, measurable characteristics such as:
  - Age
  - Gender
  - Education
  - Ethnicity
  - Occupation
  - Socioeconomic status
  - Language
  - Others?

User’s types of knowledge

- **General**: intelligence, experience, preferences
- **Domain**: understanding the subject area, its organization and vocabulary
- **System**: understanding a system, its structures, features, and organization
- **Information Seeking**: understanding the process of finding information, of information problems, and information use

Users’ information need

- Users are motivated to seek information to:
  - answer a question – “What is the population of Australia?”
  - solve a problem – “How do I fix a broken radio?”
  - complete a task – “Find a spreadsheet”
  - learn about a subject – “What is a constellation?”
  - verify a fact – “Did Nehru visit Washington?”

- **Information need situation**: The combined factors that motivate and shape information-seeking behavior

Users’ questions and problems

- Given an information need and situation, users will translate the need into questions or statements of need
- Users in a given group with similar demographics and knowledge, in a given information environment, tend to have similar information needs and ask the same kinds of questions
- Typical user questions begin with **who, what, when, where, why, how**
Questions and information objects

- Users’ questions suggest certain information object attributes (general characteristics)
- For example, a “who” question may suggest that the desired object has a creator
- Other questions may suggest that the object has a format, subject, size, etc.
- This points to how the information organization system should represent the objects (i.e., metadata elements)

Users’ expectation for results

- Users have certain desires and expectations for information retrieval results based on their knowledge and experience.
- Their evaluations of search results are critical to determining the effectiveness of the system.
- Two major measures of retrieval performance are precision and recall.

Users’ questions and problems

- Users also state expectations of desired precision and desired recall
  - Precision: “I need the book to be this precise”
  - Recall: “I need several books on this topic”
  - “I need two or three good books that will show me how to cook spaghettii”

P & R – user perception

- Precision: assesses how specific the user’s request is
  - Expressed as measurement: High, moderate, low
- Recall: assesses many things the user wants to carry out of the library
  - Expressed as measurement: High, moderate, low

This is what we will report in Draft 1!

Examples:

- “I want a dish with white, flakey fish, rice, a good sauce, not too spicy, with lots of pepper and oregano, but no onions”
  - Highly specific, highly precise
- “I want something tasty”
  - Very non-specific, non-precise

User groups can be confusing

- I need lots of simple short books about stuff
- I usually read stuff written by famous economists
- I want to watch videos about history
- I like to browse titles
We look for patterns

I need lots of simple short books about stuff

Patterns help us represent

Recall
Attribute: Length
Attribute: Subject
Precision

Concepts & terms
- Attributes
- Demographics
- Domain knowledge
- General knowledge
- Information behavior
- Information environment
- Information need
- Information need situation
- Information seeking
- Information seeking knowledge
- Needs assessment
- Precision
- Recall
- Relevance
- System knowledge
- Types of knowledge
- User
- User-centered design
- Users’ question and problems
- Users’ tasks