

Implications For Engineering Education

John B. Napp

Assistant Professor and Engineering Librarian
University of Toledo

# Before The University of Toledo



## Objectives

- Do most firms have a degreed librarian?
- Does size matter?
- How do firms without degreed librarians obtain needed information?
- Are new engineers able to find information without assistance?
- What are the information needs of working engineers?

## Methodology

- Developed one survey for principals, one survey for librarians
- Pre-tested the survey
- Purchased mailing list of Engineering News Record Top 500 Design Firms
- Sent survey to the heads of all 500 firms
- Return rate was 21.8% (n=109)

## About the ENR Top 500

Firms are included in the Top 500 according to revenue for design services performed in millions of dollars.



## About The Firms

- Firms ranged in size from 10 to 2000 employees (in local office)
- Firms ranged in size from 95 to 35,000 employees (for all offices)
- 81.6% have a library (self-defined)

# Even More About The Firms

- 25.6% have a librarian
- 20.1% of Firms have librarian with MLS
- 11.9% of Firms require MLS
- 3.6% outsource library research

## Avg. No. of Employees

- At firms with degreed librarian 2,115
- At firms without a librarian 801
- At firms with a non-degreed librarian 549



20.1% of firms (22 out of 109) said they did not have a librarian because they did not need one, but also said that new engineers cannot find information without assistance



## Why They Don't Have A Degreed Librarian

- "Multi-task roles by administrative support staff fills this need."
- "Five offices negate value of librarian."
- "Cannot find one."
- "Our library is Web-driven we use IT staff & technical writers to populate it and keep it evergreen."
- "You don't understand our business we do not have a need for any extensive research. We do application engineering and cutting edge work."

## Types of Information Sought

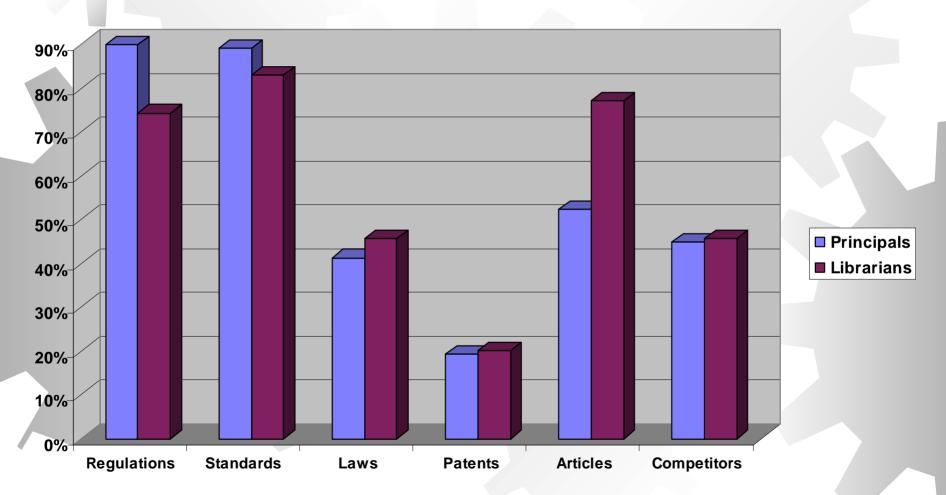
#### **Principals**

- 89.9% Regulations
- 88.9% Standards
- 52.2% Articles
- 44.4% Competitor Info
- 41.2% Laws
- 19.2% Patents

#### Librarians

- 82.8% Standards
- 77.1% Articles
- 74.2% Regulations
- 45.7% Laws
- 45.7% Competitor Info
- 20.0% Patents

### Types of Information Sought



### Typical Work Week For Librarians

- 17.0% Administrative Duties
- 16.4% Cataloging
- 15.2% Web Searching
- 14.7% Reference
- 10.0% Shelving
- 9.7% Other \*
- 7.6% Non-Library Duties



## Databases Subscribed To By Firms With Degreed Librarians

- Dialog 25.7%
- LexisNexis 11.4%
- OCLC 5.7%
- STN 2.8%



Information literacy is a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information."



## ABET 2003-2004

## Criterion 3. Program Outcomes and Assessment

Engineering programs must demonstrate that their graduates have:

- (i) a recognition of the need for, and an ability to engage in life-long learning.
- (k) an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

# Faculty & Students Need to Know

- Most firms do not have librarians
- Firm's librarian may not be degreed
- Librarian may be there part-time or have other primary job duties
- Most principals believe new engineers can find information on their own
- Firms subscribe to few databases