SERVICE QUALITY OF WEB INFORMATION SYSTEMS

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Plan

- Web service quality
- E-Qual Index
- Factor analysis and dimensions
- Comparison of two different web sites
- Conclusion
Web Service Quality

Successful Information Systems

User expectations

Quality of service

User satisfaction
Research Setting and Method

- Online bookstore “Idefix”
  National information center “ULAKBIM”
- Data => 1,900 users
- Tool => E-Qual Index
- Factor analysis
E-Qual Index

Usability
1. I find the site easy to learn to operate
2. My interaction with the site is clear and understandable
3. I find the site easy to navigate
4. I find the site easy to use
5. The site has an attractive appearance
6. The design is appropriate to the type of site
7. The site conveys a sense of competency
8. The site creates a positive experience for me

Information Quality
9. Provides accurate information
10. Provides believable information
11. Provides timely information
12. Provides relevant information
13. Provides easy to understand information
14. Provides information at the right level of detail
15. Presents the information in an appropriate format

Interaction Quality
16. Has a good reputation
17. It feels safe to complete transactions
18. My personal information feels secure
19. Creates a sense of personalization
20. Conveys a sense of community
21. Makes it easy to communicate with the organization
22. I feel confident that goods/services will be delivered as promised
Research Questions

- How do users perceive the service quality of web sites in terms of information quality, usability and service interaction?
- Which service dimensions do users value most?
Findings
Suitability & Reliability Tests

- Suitable for factor analysis:
  Idefix KMO=0.946, p<0.05; ULAKBIM KMO=0.930, p<0.05

- Reliable:
  Idefix $\alpha = 0.934$; ULAKBIM $\alpha = 0.968$
Idefix-Factor Analysis

- Eigen value= 1
- Five factors after rotation
- Explain %75 of total variance
- Dimensions:
  - Quality of Information (questions 9-15)
  - Trust (questions 16-18, 22)
  - Usability (questions 1-4)
  - Design (questions 5-8)
  - Empathy (questions 19-21)
## Idefix-Mean Scores

### Mean scores of factors (Idefix)

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Perception</th>
<th>Importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Information</td>
<td>4.0</td>
<td>4.6</td>
</tr>
<tr>
<td>Trust</td>
<td>4.3</td>
<td>4.8</td>
</tr>
<tr>
<td>Usability</td>
<td>4.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Design</td>
<td>3.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Empathy</td>
<td>3.3</td>
<td>3.7</td>
</tr>
</tbody>
</table>

\[ \bar{X} : 3.6 \quad \bar{X} : 4.3 \]
ULAKBIM M-Factor Analysis

- Four factors after rotation
- Explain %77 of total variance
- Dimensions:
  - Quality of Information & Trust (questions 9-18, 22)
  - Usability (questions 1-4)
  - Design (questions 5-8)
  - Empathy (questions 19-21)
Mean scores of factors (ULAKBI M)

<table>
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<tr>
<th>Dimensions</th>
<th>Perception $\bar{X}$</th>
<th>Importance $\bar{X}$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality of Information &amp; Trust</td>
<td>4.0</td>
<td>4.7</td>
</tr>
<tr>
<td>Usability</td>
<td>3.6</td>
<td>4.5</td>
</tr>
<tr>
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<td>4.0</td>
</tr>
</tbody>
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$\bar{X}$: 3.6  $\bar{X}$: 4.3
Comparison of factors

**Idefix**

<table>
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<tr>
<th>Quality of Information</th>
<th>Empathy</th>
<th>Trust</th>
<th>Design</th>
<th>Usability</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>3.0</td>
<td>2.0</td>
<td>1.0</td>
<td>1.0</td>
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</table>

**ULAKBIM**

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QQML’09, Chania, Crete, Greece, 26-29 May 2009
Conclusions-1

- Similar dimensions for two different web sites:

  **Idefix**
  - Quality of Information
  - Trust
  - Usability
  - Design
  - Empathy

  **ULAKBIM**
  - Quality of Information & Trust
  - Usability
  - Design
  - Empathy
Conclusions-2

- Most important issues for the users of both sites:
  - Quality of Information
  - Trust
Conclusions-3

- The perceived usability and design principles were not taken into consideration in designing the non-profit web site.

- Users of both sites are less satisfied with the dimensions:
  - Quality of Information
  - Trust
  - Usability
Conclusions-4

- Web users require “good quality information”.
- Web users tend to think the web sites are information resources.
- Differences among the web sites may disappear in the near future.
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