



# Implications of the Information Visibility Model in Information Literacy Research and Practice

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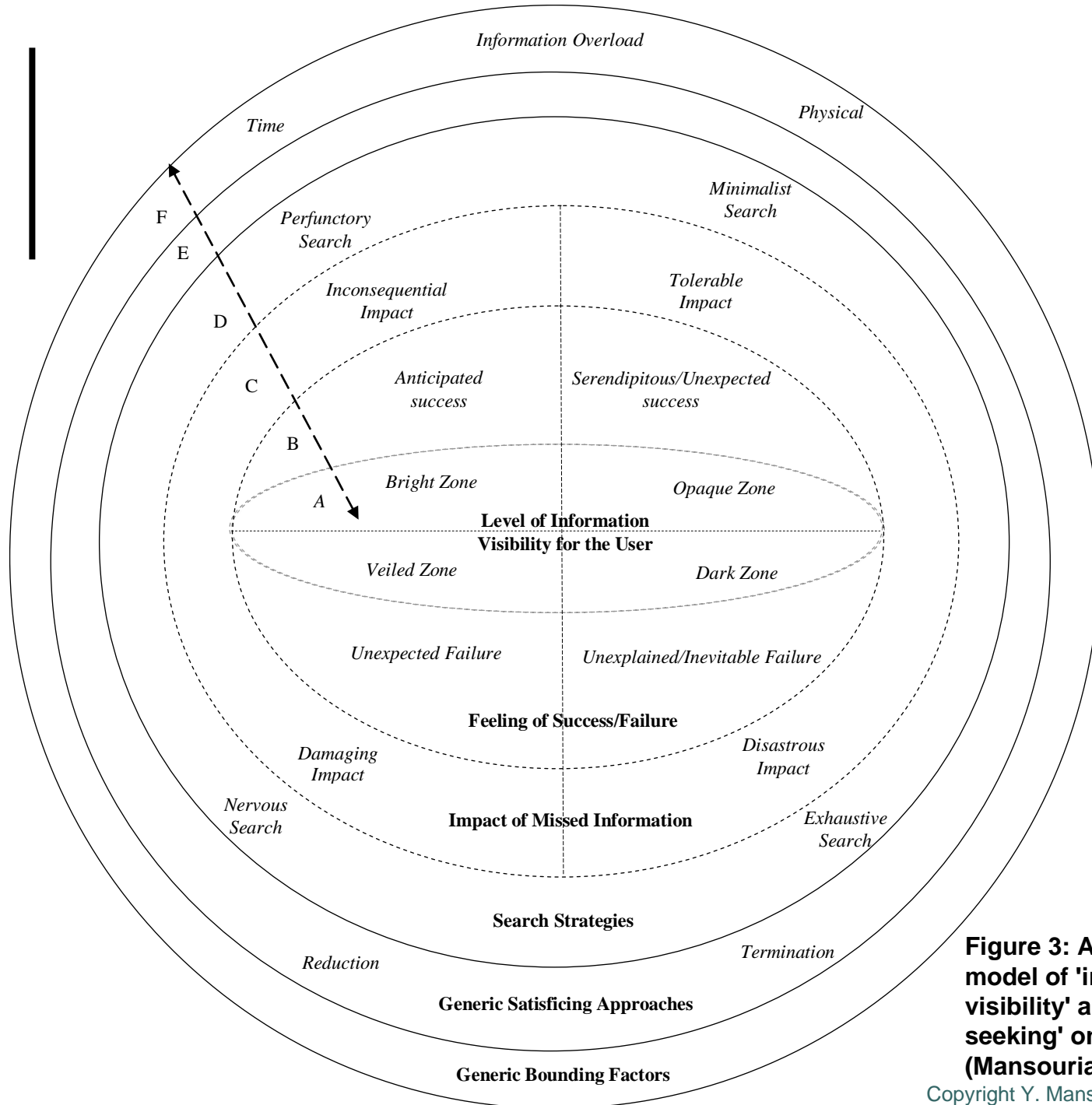


# Outline

- Introduction and background
  - The model of “Information Visibility”
  - The integrative model of information seeking and information visibly
- Some implications for information literacy
- Two examples of follow-up research
  - The first follow-up study (2006 in the UK)
  - The second follow-up study (2007 in Iran)
- Findings and comparison of the results
- Participants’ comments on the model
- Further research







**Figure 3: An integrative model of 'information visibility' and 'information seeking' on the Web (Mansourian, 2006)**



# Implications for information literacy researchers/instructors

- A conceptual framework to investigate users' information seeking behaviour on the Web
- To investigate the reasons for searchers' success/failure based on their perceptions
- To identify the contextual and conceptual elements in the search context



# Implications for end users

- To reflect on their search process
- To identify their search strengths and weaknesses
- To gain more realistic perceptions of their search outcomes
- To improve their search skills through lessons they learn from their successes and failures



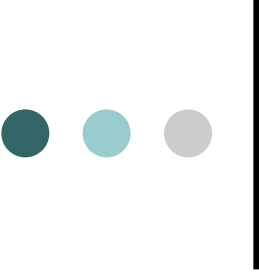
Now Two Examples ...



## Two follow-up studies in two different research sites

	<i>The First Study</i>	<i>The Second Study</i>
<i>Target group</i>	71 MA/MSc students	52 BSc students (final year)
<i>Gender</i>	39 Female & 32 Male	46 Female & 6 Male
<i>Participants' field of study</i>	LIS	LIS
<i>Time</i>	October 2006	December 2007
<i>Research site</i>	UK (Sheffield)	Iran (Tehran)
<i>Participants' Language</i>	English	Persian
<i>Data collection tool</i>	Questionnaire (CIT <sub>1</sub> )	Questionnaire (CIT)

1: CIT = Critical Incident Technique (Flanagan, 1954)



# Research questions

- To what extent is the model a useful theoretical framework for investigating Web users' information seeking behaviour?
- How can the model be used to investigate Web users' conceptualizations of the visibility of different Web resources?
- To what extent can the model help Web users to gain a better understanding of their information seeking outcomes?
- How does the model help Web users to improve their information literacy skills?



# Students' Mapping of their Successful Searches on the Model

<i>Perceived Zone for Successful Searches</i>	<i>Study 1</i>	<i>Study 2</i>	<i>Total</i>
<b>A1 (Bright Zone/Anticipated Success)</b>	41 (58%)	35 (67%)	76 (62%)
<b>A2 (Opaque Zone/Serendipitous Success)</b>	26 (36%)	15 (29%)	41 (34%)
<b>A3 (Opaque Zone/Unexpected Success)</b>	2 (3%)	2 (4%)	4 (3%)
<b>Not sure which zone it falls in</b>	2 (3%)	0 (0%)	2 (1%)
<i>Total</i>	71 (100%)	52 (100%)	123 (100%)



# Students' Mapping of their Failed Searches on the Model

<i>Perceived Zone for Failed Searches</i>	<i>Study 1</i>	<i>Study 2</i>	<i>Total (%)</i>
<b>B1 (Veiled Zone/Unexpected Failure)</b>	31 (44%)	34 (65%)	65 (53%)
<b>B2 (Dark Zone/Unexplained Failure)</b>	25 (35%)	15 (29%)	40 (33%)
<b>B3 (Dark Zone/Inevitable Failure)</b>	11 (15%)	3 (6%)	14 (11%)
<b>Not sure which zone it falls in</b>	4 (6%)	0 (0%)	4 (3%)
Total	71 (100%)	52 (100%)	123 (100%)



# What do the results tell us?

- ✓ Almost all of the students easily managed to map their successful and failed searches onto the model.
- ✓ Most of them found the model easy to follow.
- ✓ Despite some differences in the two target groups the results were fairly similar.
- ✓ Most successful searches (62%) were mapped onto the bright zone, suggesting the searchers have fairly realistic perceptions of the Web's features.
- ✓ More than half of the failed searches (53%) were mapped onto the veiled zone suggesting the students mainly ascribe their failure to the inefficiency of their search strategies.



# Lessons learned from success (in the students' words)

- Using advanced searches

*“Use categories provided by search engines (e.g. images and videos)”*

*“Try to explore all the features that a web search engine gives. Many of them can be very useful.”*

- Using specialized search tools

*“If you know the information is in a certain domain, this is better to search that domain directly (if possible) instead of using a broader search engine, like Google.”*

- Importance of the domain knowledge

*“The more you know about what you are looking for the easier it is to navigate through probably useful search results.”*



# More lessons learned from success

- Specificity in search

*“If search is broad, continue to browse through the result pages to find relevant or interesting information.”*

- Persistence in search

*“Best results aren’t always on the first page”*

*“Don’t give up just because the relevant information isn’t displayed through Google, try to use different search engines for different areas”*

- Exploring various search strategies

*“Don’t get frustrated when you could not get the answer for the first search. Try a few more times by typing different keywords”*



# Lessons learned from failure

## ○Advanced searches

*“Learn more about search engines and how to effectively use them to achieve the required results.”*

## ○Persistence

*“Keeping calm when searching and being persistent. Also be creative with your search terms if something isn’t working. I think my searching has improved a lot since this incident of failure”*

## ○Using multiple tools

*“I could have been more persistent and tried other search engines”*

*“More than one search engine would have been better”*



# More Lessons Learned from Failure

- Using multiple sources

*“I should have used more search engines”*

- More realistic vision of the Web

*“Not everything is on the Internet.”*

*“Searching is an iterate process, try using different keywords and different techniques.”*

- Importance of the domain knowledge

*“Get some background readings on the topic before you search for the information.”*

*“Be really aware of what exactly you are looking for and what you hope to get out of the search”*



# Students' Comments on the Model

- Better understanding of the Web

*"It helped me to realise that not everything is black and white. As a user of web search engines one may find grey areas and it is important to know that many (un)controlled conditions can influence success/failure."*

*"I think some people expect to find information on any given subject without failure, when in fact not every question can be answered by the Web."*

- Reflection on web search process

*"I can think about the reasons of web searching failure and discover the weak parts of my search skills. I will consider the issue of the "Invisible Web" in future."*

*"It lets me reflect on my searching process and perhaps see what I can do to find the information I am looking for."*

- More realistic vision of the Web

*"It has enlightened me on the Web as not "so perfect" source of information. Also that there are many sources of information on the way that may not always be available to you by the search engines."*



# More comments ...

- Improving search skills

*“Thinking about failure helps to sharpen perceptions of success. Also, failure encourages the searcher to consider alternative strategies, where failure is defined according to YM’s matrix.”*

*“It has made me reflect on why that particular search failed which I hadn’t done before. It has also made me realize how much my search skills are improving.”*

*“It will encourage me to reflect on what it is that goes wrong when I have a search failure.”*

- Persistence in search

*“I may not become so frustrated when unable to locate sought information as I’ll fit into a category which many others have obviously fallen into too.”*

*“It will make me think more about whether I am expecting to find the information on the web before I start searching and I think this may well modify feelings of failure in particular instead of just assuming “it must be on the Web”.*



# Further implications for research

- Similar studies in different contexts (various groups of Web users, different ages, etc.)
- Exploring the effect of some specific elements on Web searching and information visibility (e.g. language or cultural elements)
- Longitudinal research based on the model
- Transferability of the model beyond the Web
- Quantitative research based on the model



# Further implications for practice

- Conceptual framework to be used in reference services
- Revealing graphically the need for librarians and for sources beyond search engines
- Using the model as a diagnostic tool in IL
- Educational tool to teach information seeking skills



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