

How We are Searching Cultural Heritage

A qualitative analysis of search patterns and
success in The European Library

Vivien Petras, Juliane Stiller, Maria Gäde

Lida 2014, 17.06.2014

BRAM STOKER
DRACULA

PR
6037
.T617
D7
2010

GRAVITY'S RAINBOW | THOMAS PYNCHON

PS
3566
.Y55
G7
2006

VOLTAIRE
CANDIDE

PQ
2082
.C3
E5
2005

KEROUAC
The Original
ON THE ROAD

PS
3521
.E735
Q5
2008

KEN KESSEY

ONE FLEW OVER THE CUCKOO'S NEST

PS
3561
.E667
Q5
2007

PABLO NERUDA

TWENTY LOVE POEMS AND A SONG OF DESIRE

ONCE UPON A TIME
The Picture of Dorian Gray

PR
5819
.A1
2010

EDITH WHARTON

THE HOUSE OF MARRIAGE

PENGUIN
CLASSICS

PT
8950
.U5
K713
2005

KRISTIN
LAVRANDATTER
Translated by TINA NUNNALLY

Leo
Tolstoy
WAR
AND
PEACE

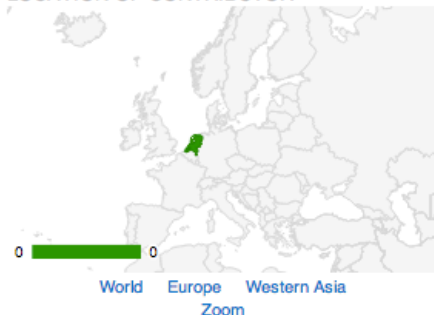
A New
Translation by
Anthony Briggs
Introduction by
Orlando Figes

PG
3366
.V6
2006b

Surrogates & Metadata



LOCATION OF CONTRIBUTOR



Onverbreekbare banden

Harvard-Style Citation

UFA (Berlin), n.d. Onverbreekbare banden. (s.l.): (s.n.)

Description

Zarah Leander

Creator

UFA (Berlin)

Contributor

UFA (Berlin)
Mettes, Frans
Mes & Bronkhorst

Source

BG E17/3 (affiche), 150 jaar Nederlandse reclame, ReclameArsenaal

Services

➞ [Access Online](#)

➞ [At Contributor](#)

➞ [See other versions \(2\)](#)

➞ [See similar works \(3\)](#)



[Similar in CORE](#)



[Add to Mendeley](#)



[Add to ZOTERO](#)

Publication

22-06-2004

Resource type

Still image

Extent

1000 x 650 mm


Medium

text/xml

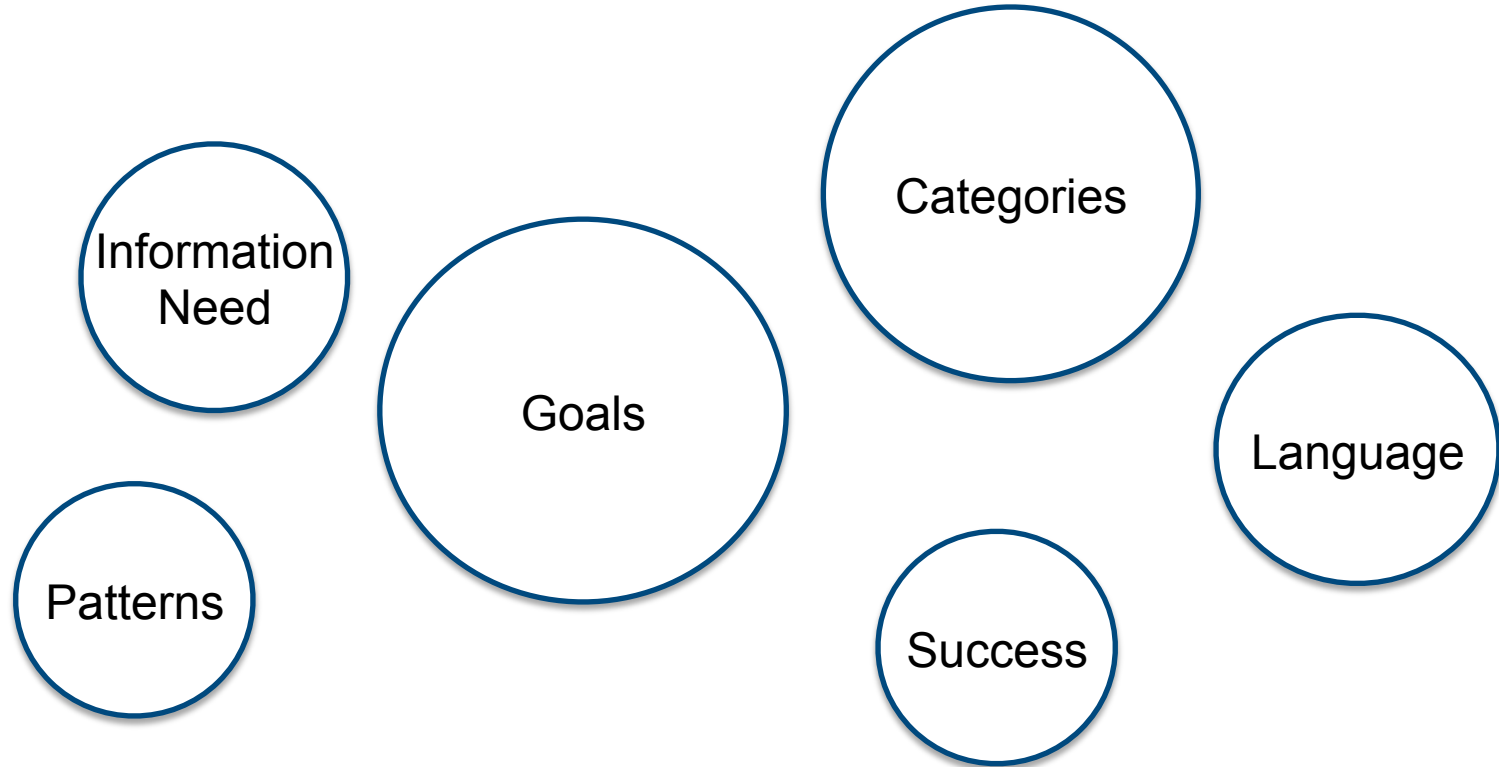
Format

affiche

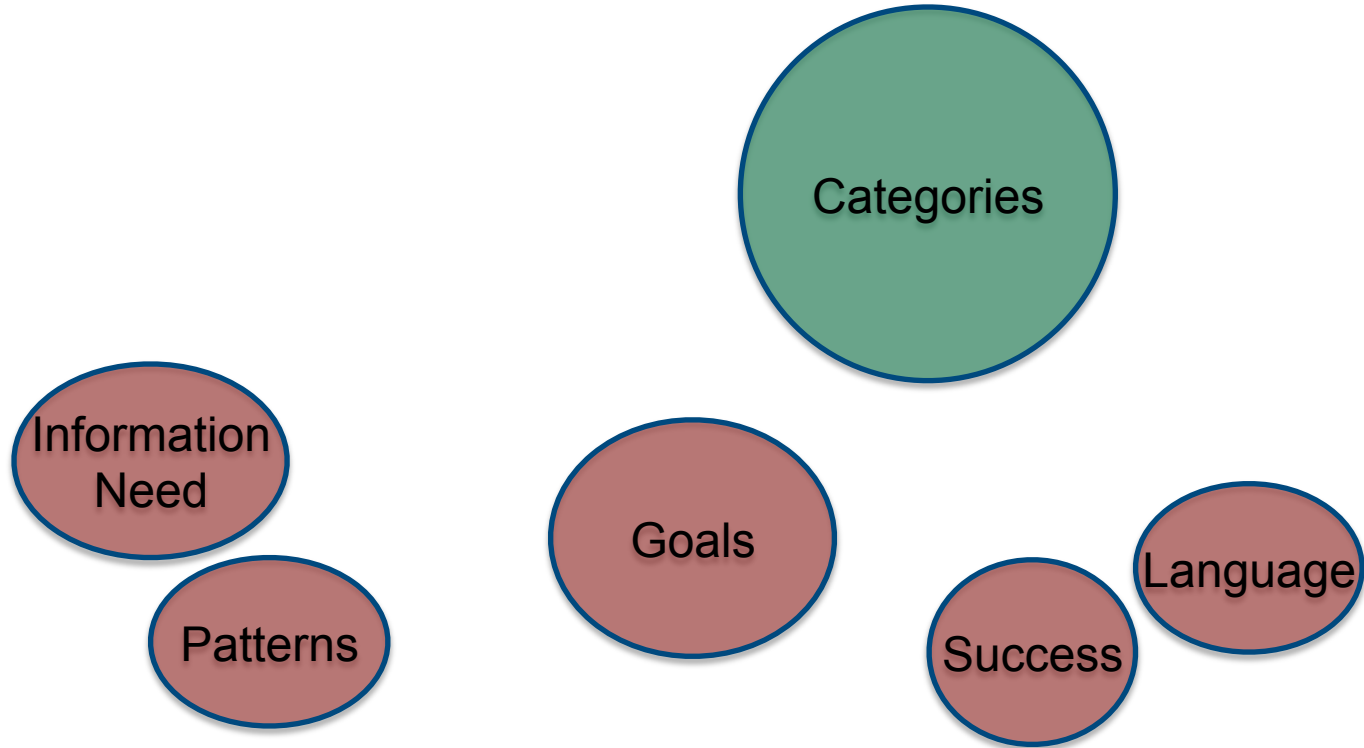
Query Statistics

Search Term ?	Total Unique Searches ? ↓	Results Pageviews / Search ?	% Search Exits ?	% Search Refinements ?	Time after Search ?	Average Search Depth ?
	186,148 % of Total: 100.00% (186,148)	3.93 Site Avg: 3.93 (0.00%)	37.89% Site Avg: 37.89% (0.00%)	21.45% Site Avg: 21.45% (0.00%)	00:02:36 Site Avg: 00:02:36 (0.00%)	0.25 Site Avg: 0.25 (0.00%)
1. *.*	3,948 (2.12%)	7.15	53.09%	6.60%	00:04:58	0.88
2. "photo" OR "foto" OR "photographie" OR "photography" OR "fotografie" OR "fotografia"	984 (0.53%)	3.66	47.26%	34.25%	00:02:15	0.10
3. photo" OR "foto" OR "photographie" OR "photography" OR "fotografie" OR "fotograf" 	604 (0.32%)	2.99	60.60%	43.21%	00:01:41	0.08
4. what:"map"	470 (0.25%)	6.07	62.98%	6.80%	00:06:05	0.27
5. what:"TEXT"	330 (0.18%)	1.31	27.27%	12.70%	00:00:43	0.99
6. europeana_collectionName:90402*	326 (0.18%)	5.92	59.20%	7.04%	00:02:52	0.30
7. what:"Image"	260 (0.14%)	1.73	28.46%	15.78%	00:01:14	0.93
8. 1	243 (0.13%)	1.01	98.77%	1.22%	00:00:01	0.01
9. what:"text"	223 (0.12%)	1.80	23.77%	17.21%	00:01:39	1.02
10. what:"Photo"	222 (0.12%)	1.58	28.38%	14.00%	00:01:17	1.14
11. what:"Text"	193 (0.10%)	1.44	24.87%	25.27%	00:01:35	1.03
12. what:"photograph"	178 (0.10%)	1.60	22.47%	14.04%	00:01:20	1.34
13. what:"d day" OR "normandy landings"	170 (0.09%)	3.06	93.53%	1.54%	00:02:08	0.13
14. who:(Massi-Lehre)	147 (0.08%)	1.17	77.55%	1.16%	00:00:19	0.21

Beyond Statistics: Semantics



So far...



Query Categories

Named Entities

- Person
- Work title
- Geographic
- Event
- Organization

Non - Named Entities

- Topical
- Other



THE BIGGER PICTURE

QUERIES IN CONTEXT

The European Library

[About](#)[Membership](#)[For Current Partners](#)[Log in](#)[English \(en\)](#)[HOME](#)[DISCOVER](#)[ACCESS OUR DATA](#)[GO](#)[Advanced search](#)

Designed to meet the needs of the research community worldwide, our online portal offers quick and easy access to the collections of the **48 National Libraries of Europe** and **leading European Research Libraries**.

Users can cross-search and reuse over 24,121,397 digital items and 149,304,072 bibliographic records.

To facilitate further research, links are also provided to other websites in the [Europeana](#) group.



National Library of Denmark

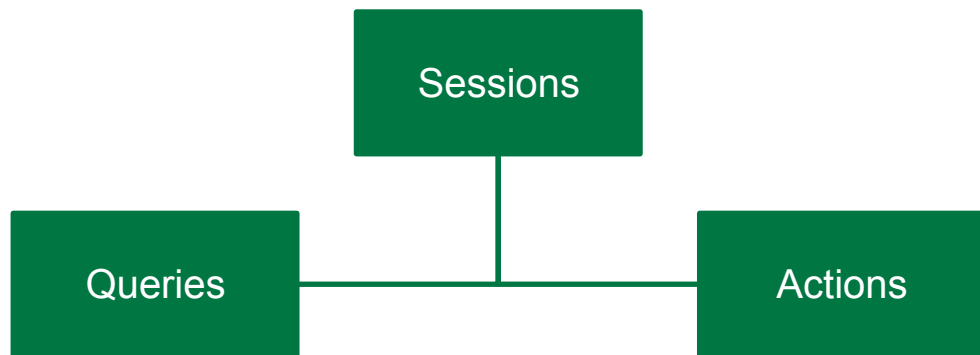
This beautiful building that is office to the National Library of Denmark is known as The Black Diamond. Image courtesy; National Library of Denmark.

FEATURED COLLECTIONS

[Historic Newspapers](#)[Reading Europe \(1078\)](#)[Exhibition Foyer](#)[Manuscripts and Prince... \(34\)](#)


DISCOVER CONTRIBUTORS






Sessions

How We Are Searching Cultural Heritage

[About](#) [Membership](#) [For Current Partners](#) [Log in](#) [English \(en\)](#) 

 **The European Library**
Connecting knowledge

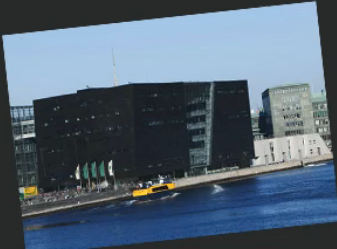
[HOME](#) [DISCOVER](#) [ACCESS OUR DATA](#)

[GO](#) [Advanced search](#)

Designed to meet the needs of the research community worldwide, our online portal offers quick and easy access to the collections of the **48 National Libraries of Europe and leading European Research Libraries**.

Users can cross-search and reuse over 24,121,397 digital items and 149,304,072 bibliographic records.

To facilitate further research, links are also provided to other websites in the [Europeana](#) group.



National Library of Denmark

This beautiful building that is office to the National Library of Denmark is known as The Black Diamond. Image courtesy; National Library of Denmark.

FEATURED COLLECTIONS

[Historic Newspapers](#)

[Reading Europe \(1078\)](#)

[Exhibition Foyer](#)

[Manuscripts and Prince... \(34\)](#)

[Science and medicine... \(818\)](#)

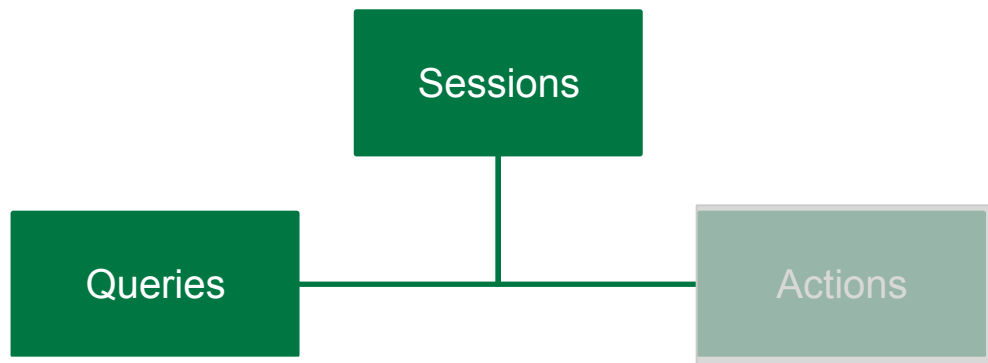
DISCOVER CONTRIBUTORS



[More contributors](#)

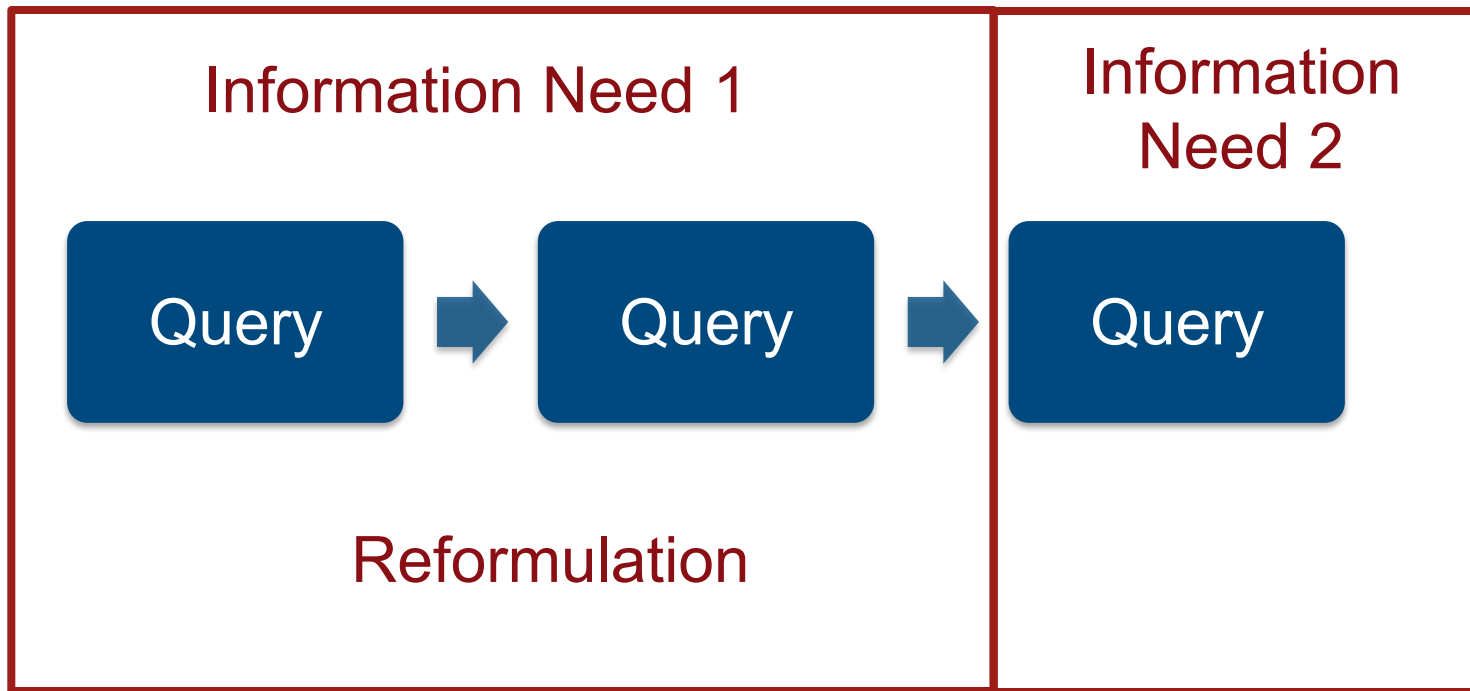
Case Study





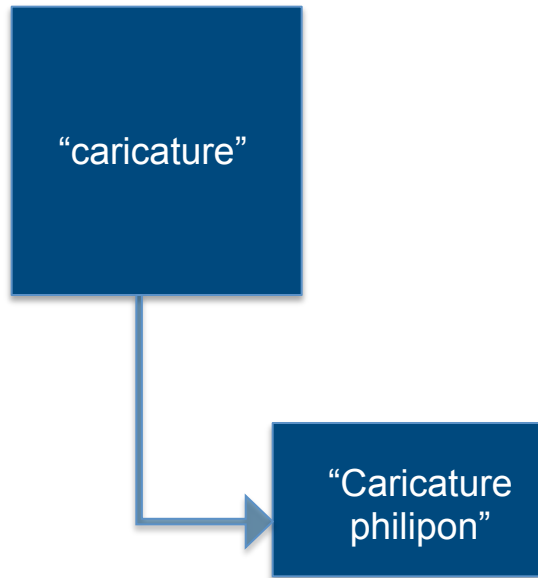
Query Goals

Information Needs & Reformulations

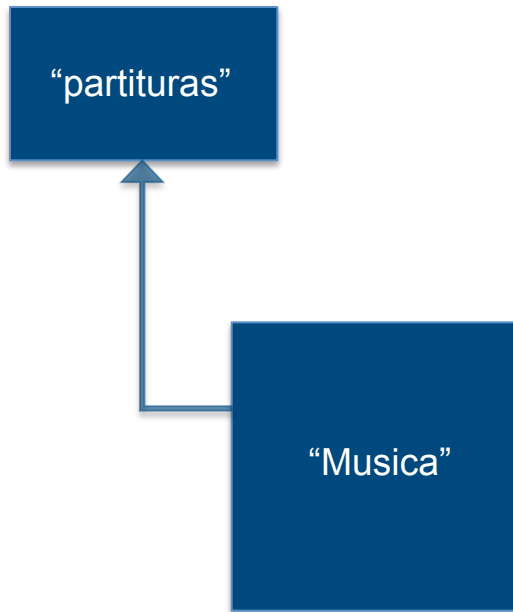


Query Reformulation Patterns

Specialization



Generalization



Reformulation

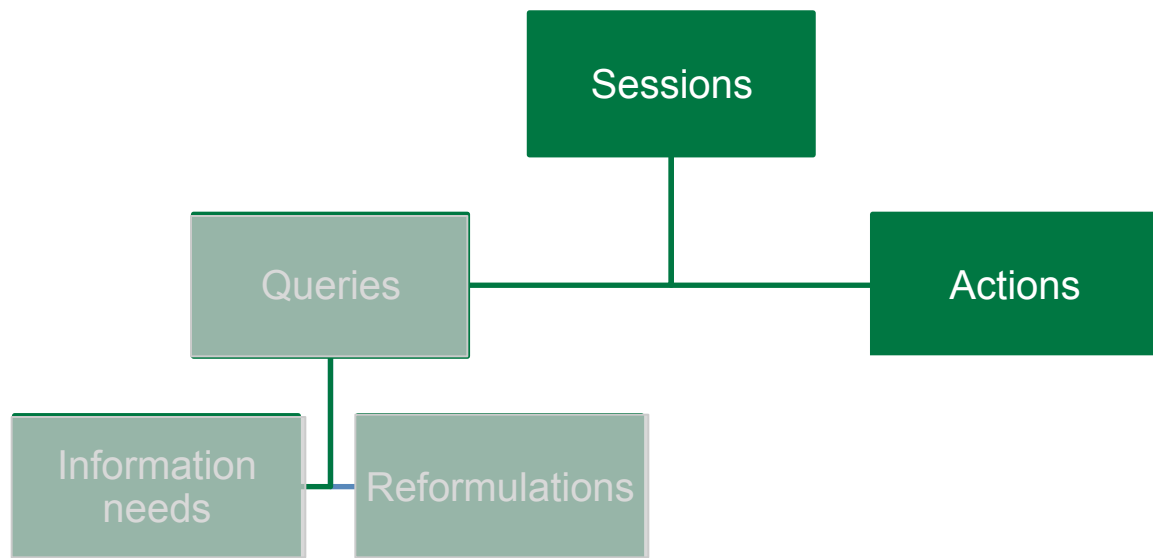


Course of a session



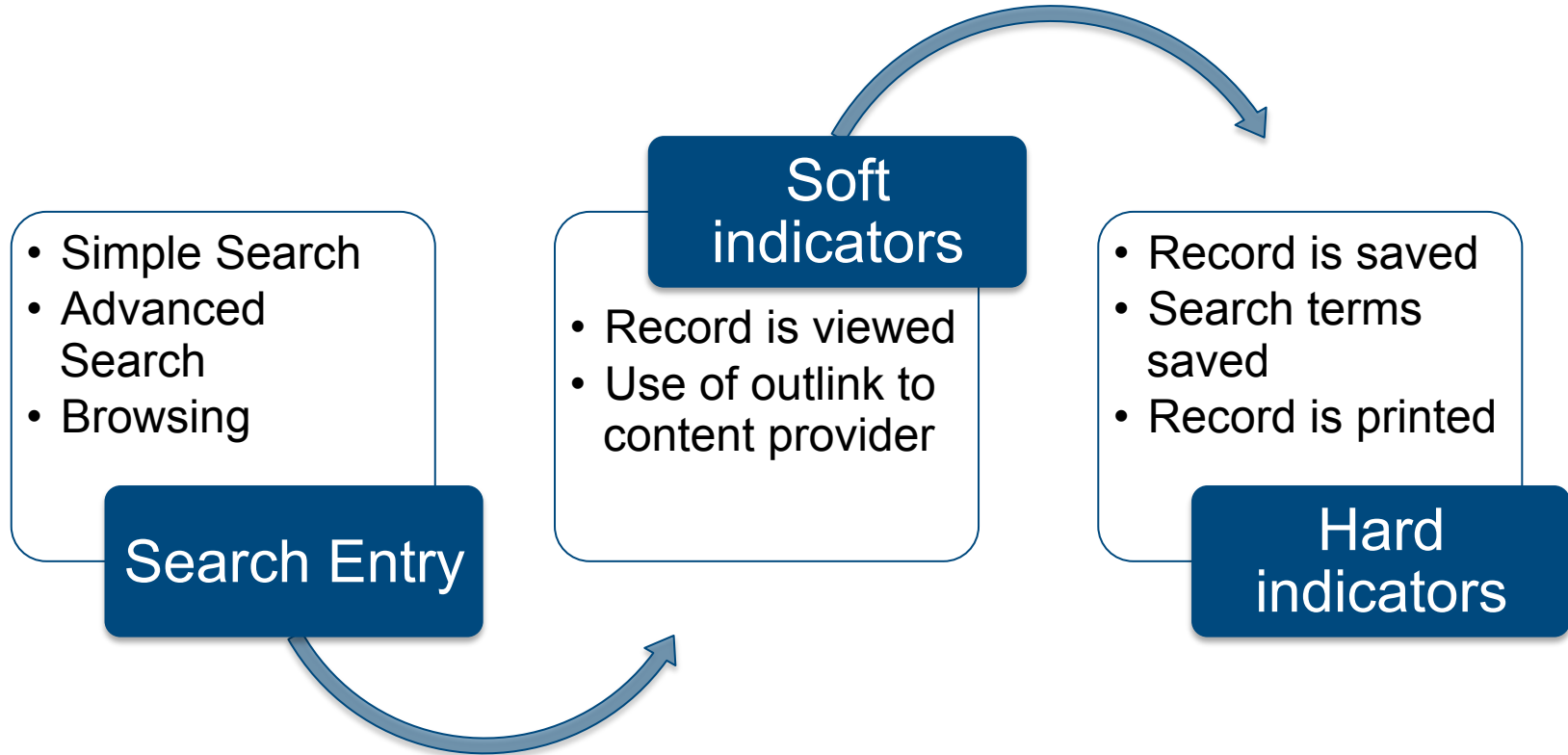
Reformulations in Digital Libraries

sword	GO	→	fencing	GO	Monolingual synonyms
schwert	GO	→	spada	GO	Multilingual parallel search
fencing	GO	→	fechtmeister	GO	Multilingual synonyms
collages	GO	→	colleges	GO	Correction
Romeo and Juliet	GO	→	Shakespeare	GO	Category change
peonides	GO	→	ΠΕΟΝΙΔΕΣ	GO	Transliteration
Marseille	GO	→	2753700303	GO	Exact field transformation



Session Success

Successful Sessions



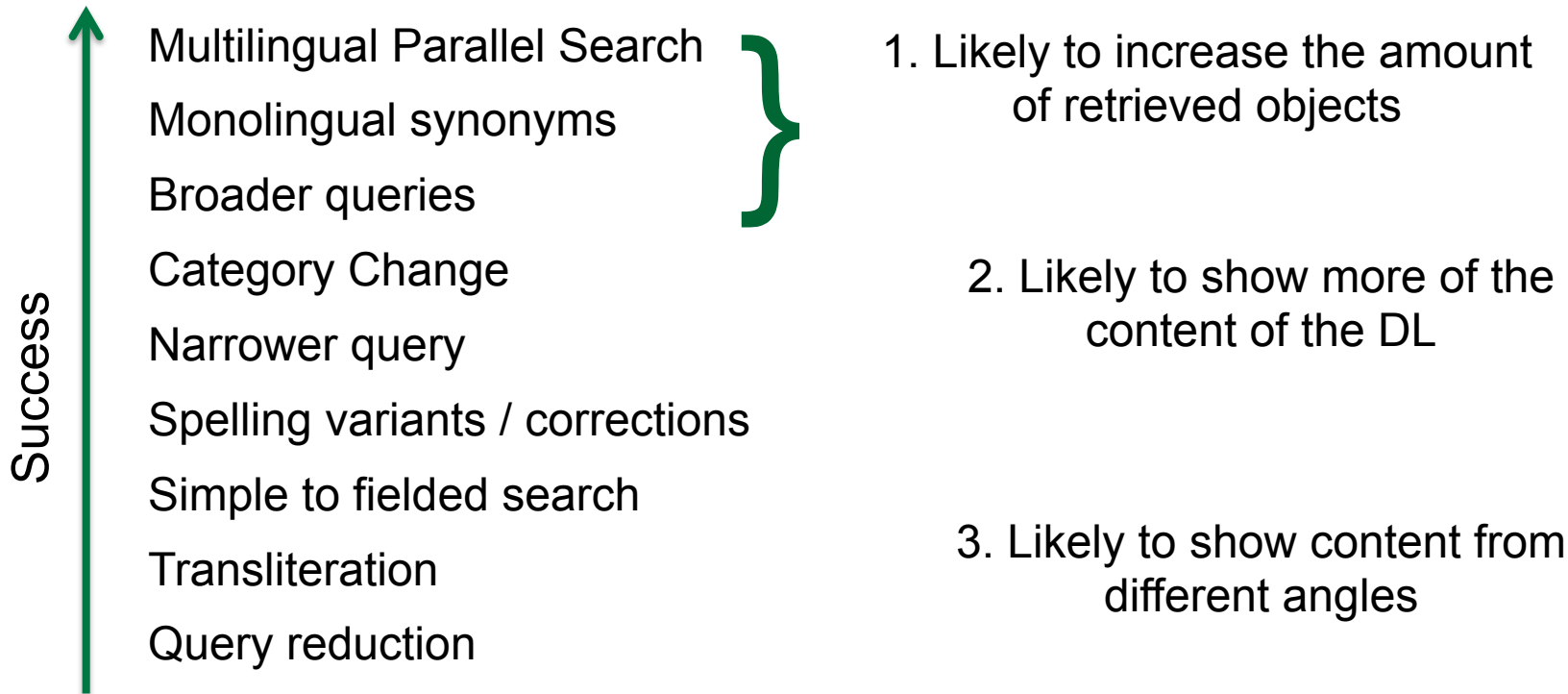
Success Rate

45%

of sessions are successful

Sessions with **multiple queries**
are **more successful** than the
ones with only one query

Success and Reformulations



Implications for Design

- Support user with query translation & query suggestion
- Match queries to vocabulary terms in query suggestion



Dominant and prevailing
search paradigm

Diving into Cultural Heritage

Extent of collections
is often elusive

User needs are
hardly researched

Majority of content
stays hidden

How to Surface Information

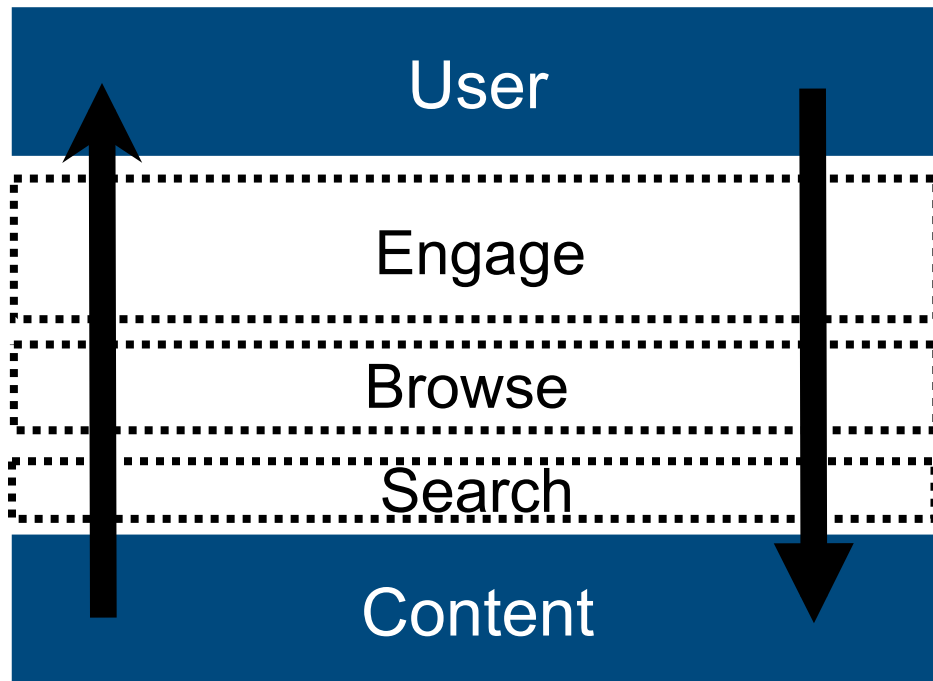
A background image of a person's head and shoulders underwater, looking up. Bubbles are rising from the mouth, and light rays penetrate the dark blue water.

Let the user
explore and
discover

Guide them
through
collections

Support new
users –
information
tourist

How We Are ~~Searching~~ Experiencing Cultural Heritage!



Thank you

vivien.petras

juliane.stiller

maria.gaede

@

ibi.hu-berlin.de