



UNC
SCHOOL OF INFORMATION
AND LIBRARY SCIENCE

Collaborative Information Seeking by the Numbers

Robert Capra
Javier Velasco-Martin
Beth Sams

School of Information and Library Science
University of North Carolina at Chapel Hill

rcapra@unc.edu
jvelasco@unc.edu
bsams@unc.edu

3rd International Workshop on
Collaborative Information Retrieval
(held as part of CIKM 2011)
October 28, 2011
Glasgow, Scotland

- Goal
 - Gain insight into collaborative information seeking and sharing activities across a range of users, situations, and types of cooperation
- Related studies
 - Morris (2008)
 - 204 knowledge workers
 - Evans and Chi (2008, 2010)
 - 150 mTurkers
 - Turner, Qvarfordt, Biehl, Golovchinsky, & Back (2010)
 - 32 knowledge workers

- Survey using Amazon mTurk + Qualtrics
- Asked details about **specific** recent searches
 - 2 searches in which they shared results found
 - 1 search “in cooperation with other people”
 - 1 known-item (individual)
 - 1 exploratory (individual)
- Asked about **general** practices and frequency
 - For sharing results of searches
 - For cooperating with other people on searches

We used the phrase “searches in cooperation with other people” to be more accessible than “collaborative search”

Demographics

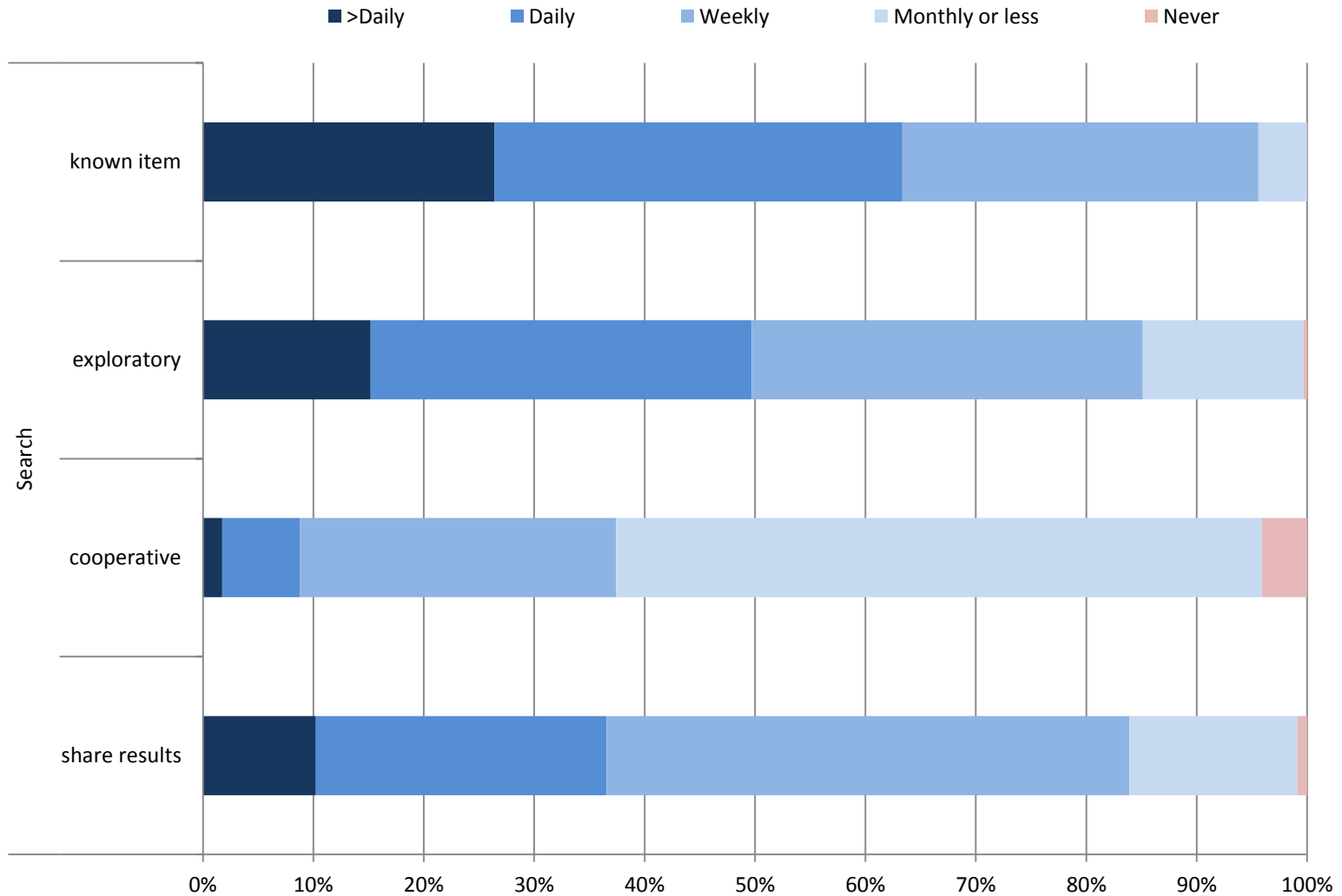
- 452 started, 344 completed & paid
- 64% female, 36% male
- Age: avg = 32, median = 28, stdev = 11

	Employed	Not employed	
Student	52	56	108 (32%)
Not student	150	84	234 (68%)
	202 (59%)	140 (41%)	

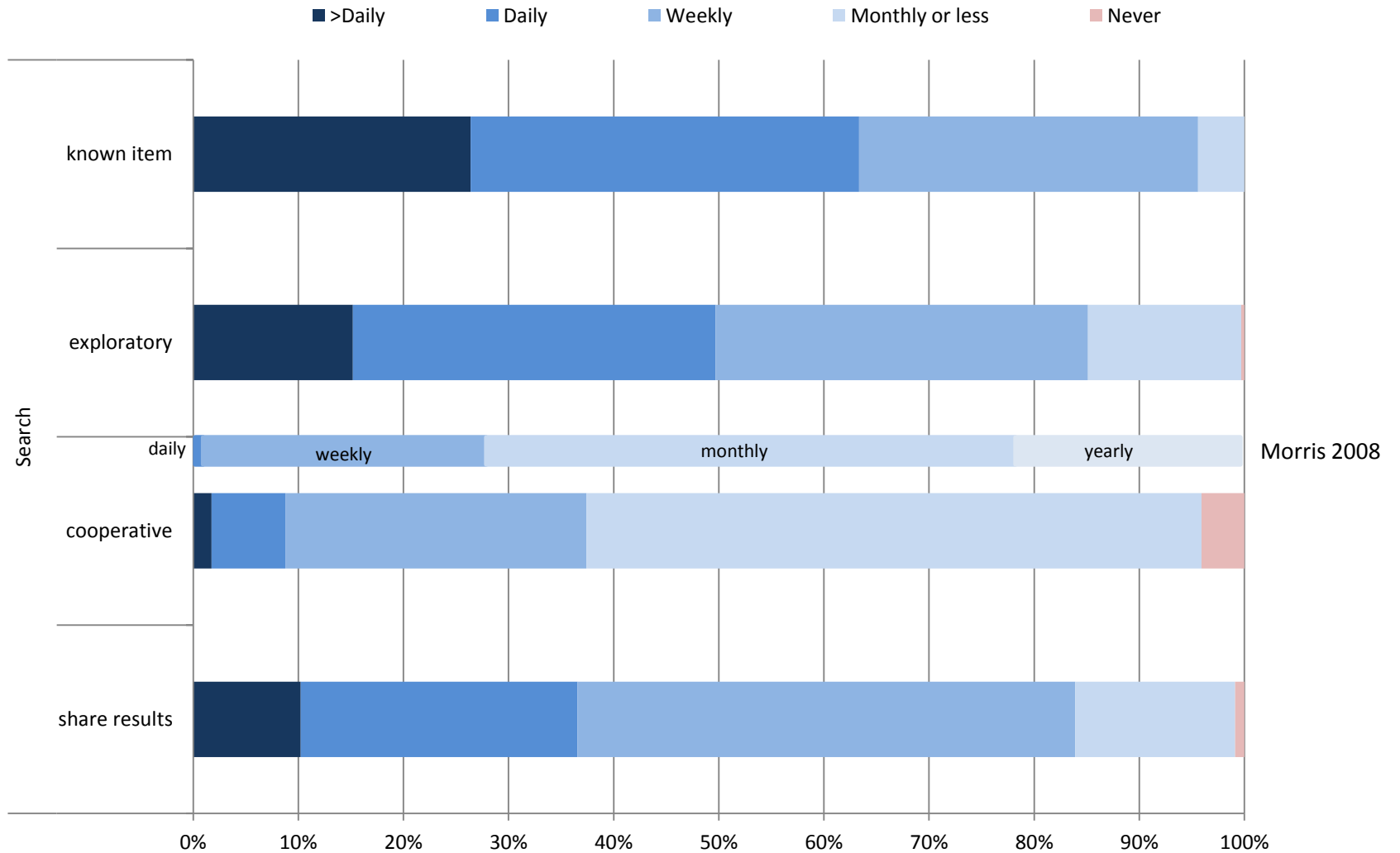
Of the 108 students: 47% pursuing Bachelor's degree, 27% Master's

Occupations: teacher, delivery man, operations specialist, automotive assembler, business manager, scientist, police officer, research assistant, and riding instructor

Frequency of Search Activities



Frequency of Search Activities



Searching in cooperation with other people

Next, we would like you to think about some times that you have done Web searches **in cooperation with other people**. This could be while you were in the same location, or at different locations. You might have been doing the searching at the same time as the other people, or at a different time.

Think about a situation in which you have done a Web search in cooperation with another person (or several people) and describe it below.

Follow-on questions asked:
One session or multiple sessions?
Sync, async, or mix?
Co-located, remote, or mix?

Answer the following questions based on the situation you described above.

Common collaboration scenarios

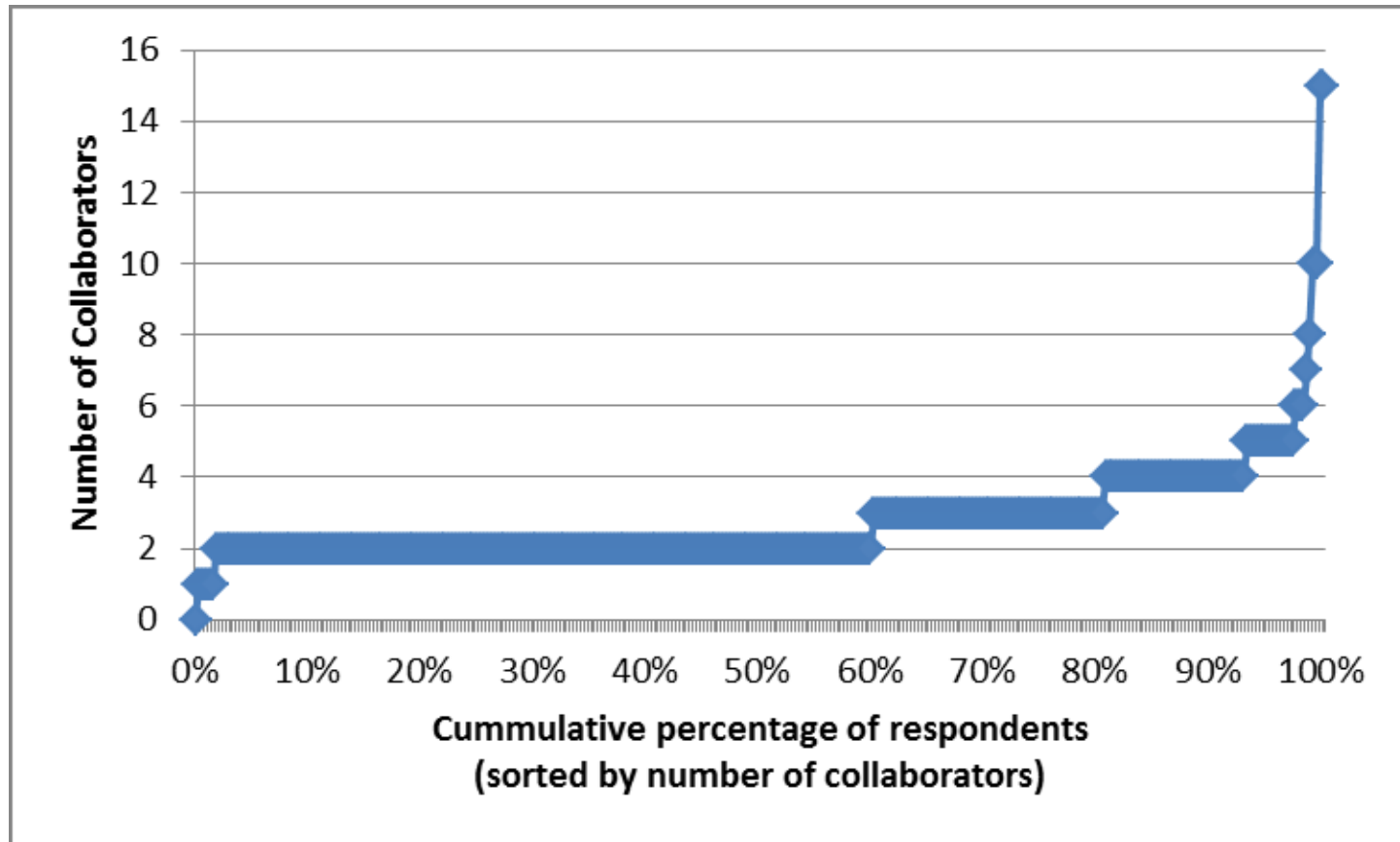
		Co-Loc	Remote	Mix	Σ
ONE SESS	Sync	82 (25%)	37 (11%)	3 (1%)	122 (37%)
	Async	0 (0%)	11 (3%)	4 (1%)	15 (4%)
	Mix	10 (3%)	5 (1%)	4 (1%)	19 (6%)
MULT SESS	Sync	19 (6%)	10 (3%)	2 (1%)	31 (9%)
	Async	4 (1%)	44 (13%)	6 (2%)	54 (16%)
	Mix	12 (4%)	33 (10%)	48 (14%)	93 (28%)
	Σ	127 (38%)	140 (42%)	67 (20%)	334

Five scenarios account for 75%:

- Single session; synchronous; co-located (25%)
- Multi-session; mix sync/async; mix loc. (14%)
- Multi-session; asynchronous; remote (13%)
- Single session; synchronous; remote (11%)
- Multi-session; mix sync/async; remote (10%)

Number of collaborators

How many people were cooperating on the search?

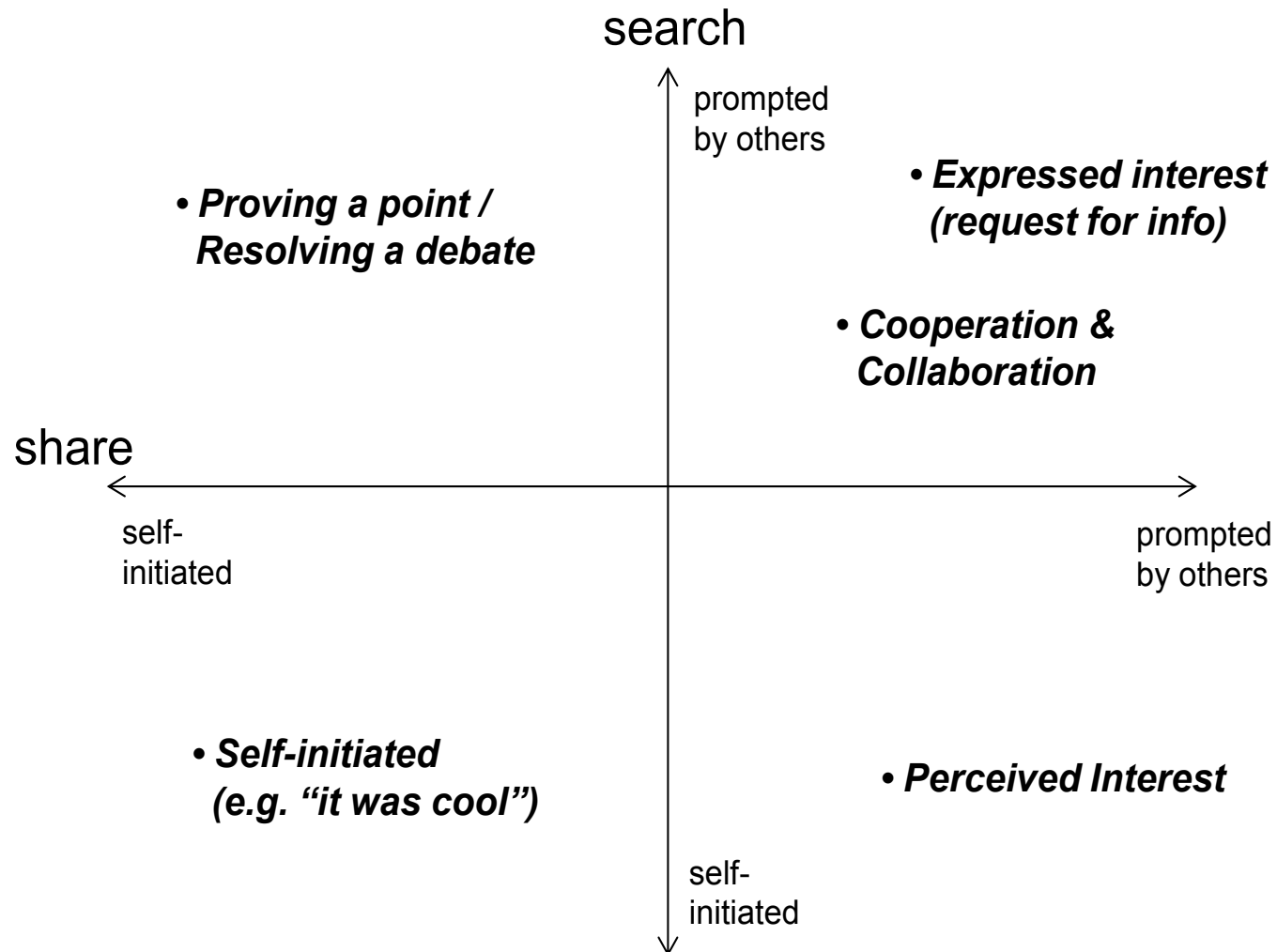


How did you communicate with the other people to cooperate on the search?
(choose all that apply)

	Morris (2008) – CIS use	Turner (2010) – Work use	Our survey – CIS use
F2F	88% watched & suggested queries	100%	68%
Phone	49%	~90%	34%
Email	86% links 60% summary	--	39%
Wiki / Web page	15%	~50%	1%
IM	30%	~79%	21%
Text Msg	--	--	16%
SNS	--	~70%	8%

- Assigned tasks
 - We noticed a large number in our data set
 - Assigned work tasks
 - Assigned school projects
 - To investigate, three authors coded
 - Assigned (38%)
 - Not assigned (62%)
- Imposed versus self-generated
 - This distinction has been examined in individual information seeking tasks
 - Gross (1995); Bilal (2002)
 - See our ASIS&T 2011 CIS workshop paper

Two self/others dimensions



- For questions, please contact
 - Rob Capra, rcapra@unc.edu

