

# Levels of “Working Together” in Collaborative Information Seeking and Sharing

Robert Capra  
Javier Velasco-Martin  
Beth Sams

Collaborative Information Seeking  
GROUP 2010 Workshop  
November 7, 2010  
Sanibel Island, FL



UNC  
SCHOOL OF INFORMATION  
AND LIBRARY SCIENCE

- Conducted sp2010 using Amazon Mturk
- Asked about general CIS / search results sharing behaviors and practices (esp. freq)
- Asked about five specific recent searches
  - 2 searches in which they shared results found
  - 1 search in cooperation with other people
  - 1 known item search
  - 1 exploratory search

\*\*\*Results presented here are preliminary\*\*\*

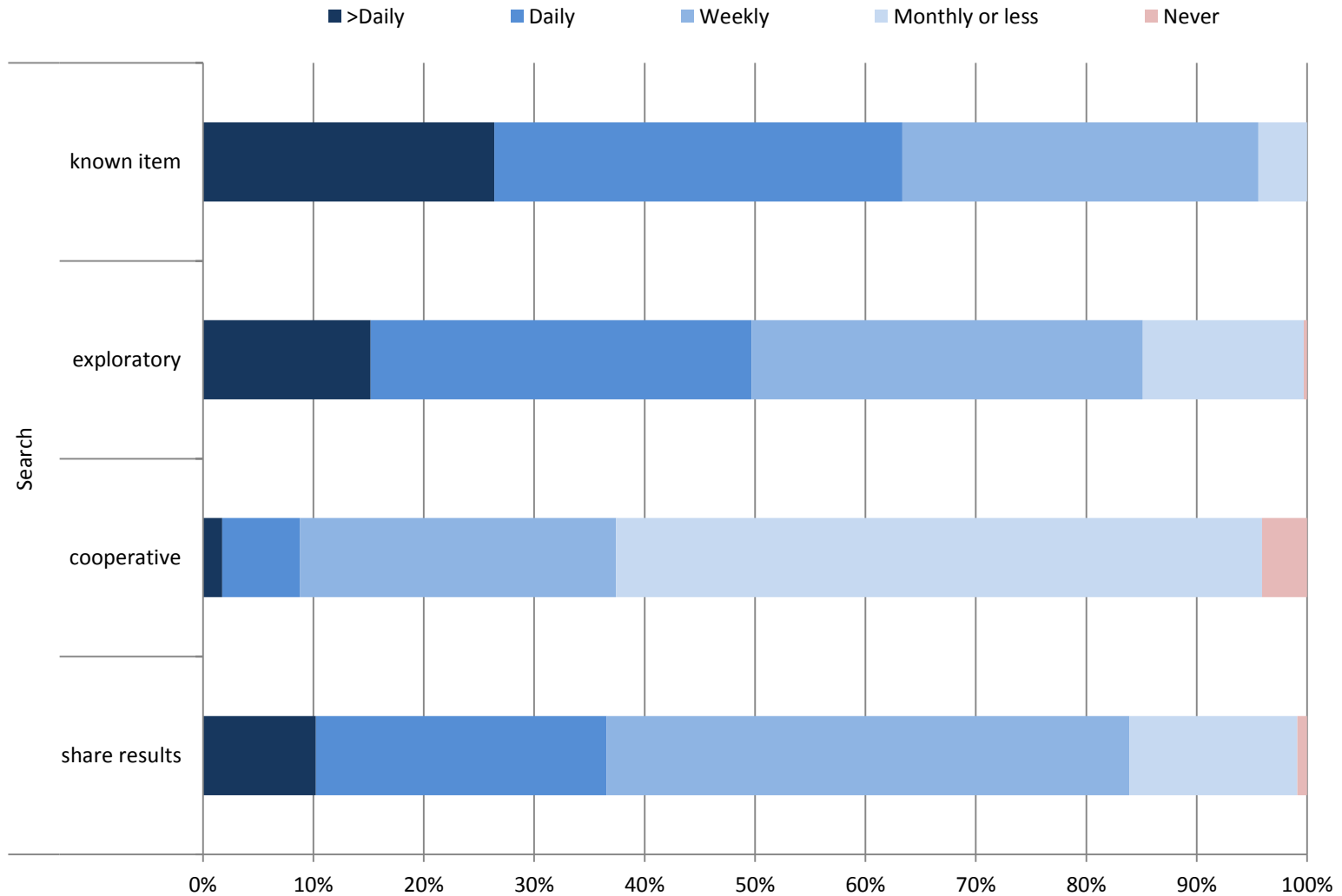
# Demographics

- 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%)	

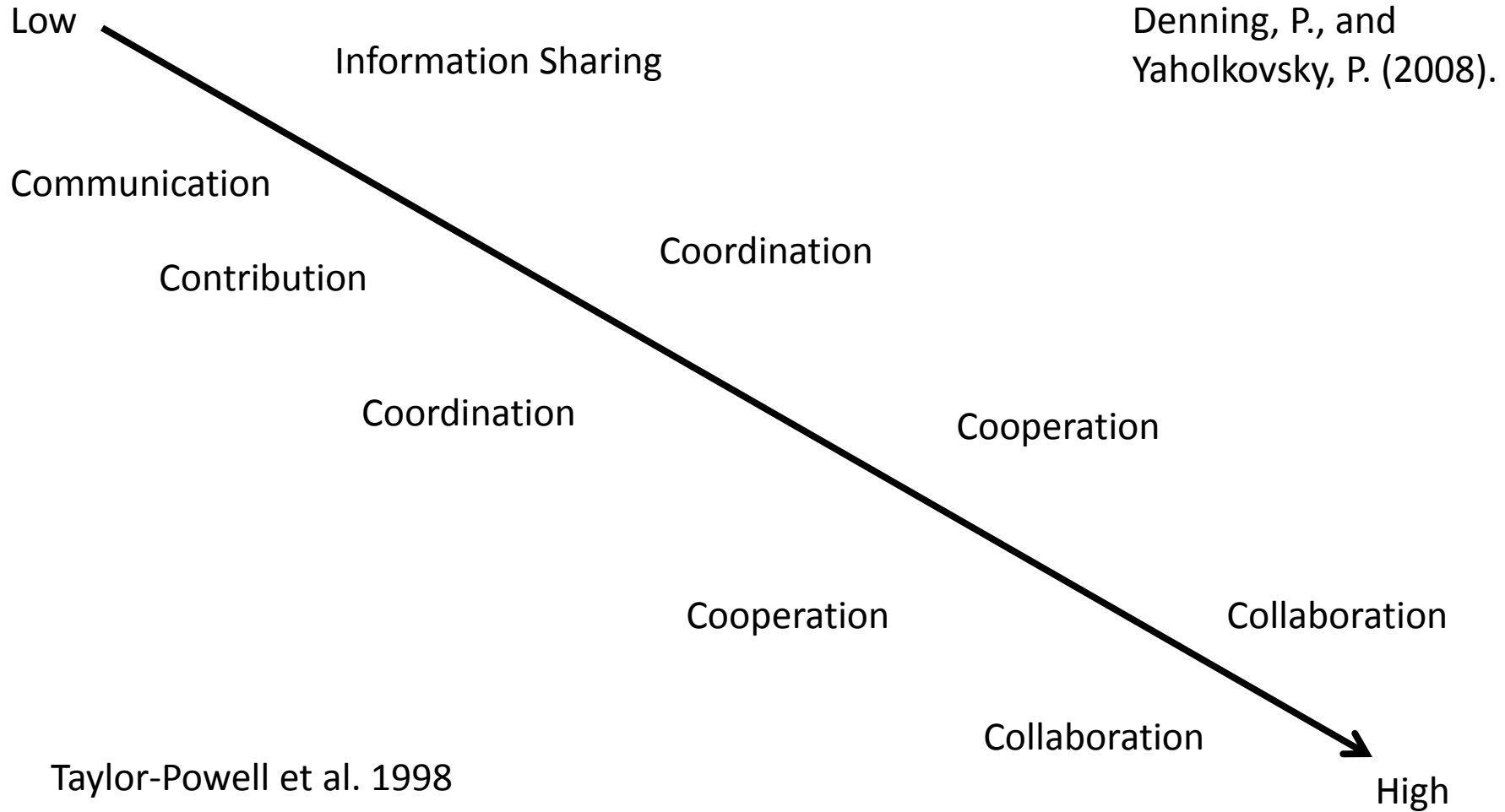
Of the 108 students: 47% pursuing Bachelor's degree, 27% Master's

# Frequency of Search Activities



Authors	Topics
Twidale et al. (1997)	spatial, temporal; product vs. process peers or power differential
Hansen & Järvelin (2005)	sync/async; CMC or human-human tight or loose coupling
Golovchinsky et al. (2009)	intent, depth, concurrency, location implicit collab vs. explicit collab
Morris (2008)	process: co-location, IM, task division product: methods for collab
Morris and Teevan (2008)	group membership (implicit or explicit) group longevity (task-based v. trait-based)
Evans and Chi (2008)	social networks; shared social workspaces co-located search
Reddy & Jansen (2008)	triggers to go from individual → collab
Denning & Yaholkovsky (2008); Taylor-Powell et al. (1998); Shah (2008)	Levels of collaboration

# Levels of Collaboration



**Coordination** involves information sharing and some planning and division of roles. There may be longer-term goals, but each party involved may have their own short term goals and retains some autonomy.

Example: Two people searching for free software, where one had asked the other for help – “Most of the work was coordinated through Facebook and the phone. He did most of the searching. I searched Google and Yahoo, he searched other sites. We sent each other links through Facebook.”

**Cooperation** is a situation in which the parties involved have similar interests and work toward joint goals, but still maintain their own identities.

Example: Two people who wanted to buy the same purse – “I searched on one store website and my friend in another. Once we found something we liked she would give me the web address so I could see it and vice versa.”



**Collaboration** involves parties with different perspectives, but who are working together as a group to extend what they could do individually.

Example: Two co-workers researching a legal case they were writing about – “One person typed, both people discussed what to search and what search option to choose.”

Example: A team planning to compete in an international solar car event – “It was a humongous task... We were each in charge of separate items to research. Work was divided based on past experience and interest.”

- **Self-initiated sharing**
  - “Because I thought it was cool”
- **Perceived interest**
  - “We were discussing this earlier”
  - “He is an avid golfer as well”
- **Expressed interest**
  - “She asked for the information
  - “To help her with the paper.”
- **Explicit collaboration**
  - “We were looking to buy a new phone and we wanted some information”
  - “We were working on a project”

# Two self/others dimensions

