

ITEM SAMPLING IN SERVICE QUALITY ASSESSMENT  
SURVEYS TO IMPROVE RESPONSE RATES AND  
REDUCE RESPONDENT BURDEN:

THE “LibQUAL+® Lite” RANDOMIZED CONTROL TRIAL (RCT)

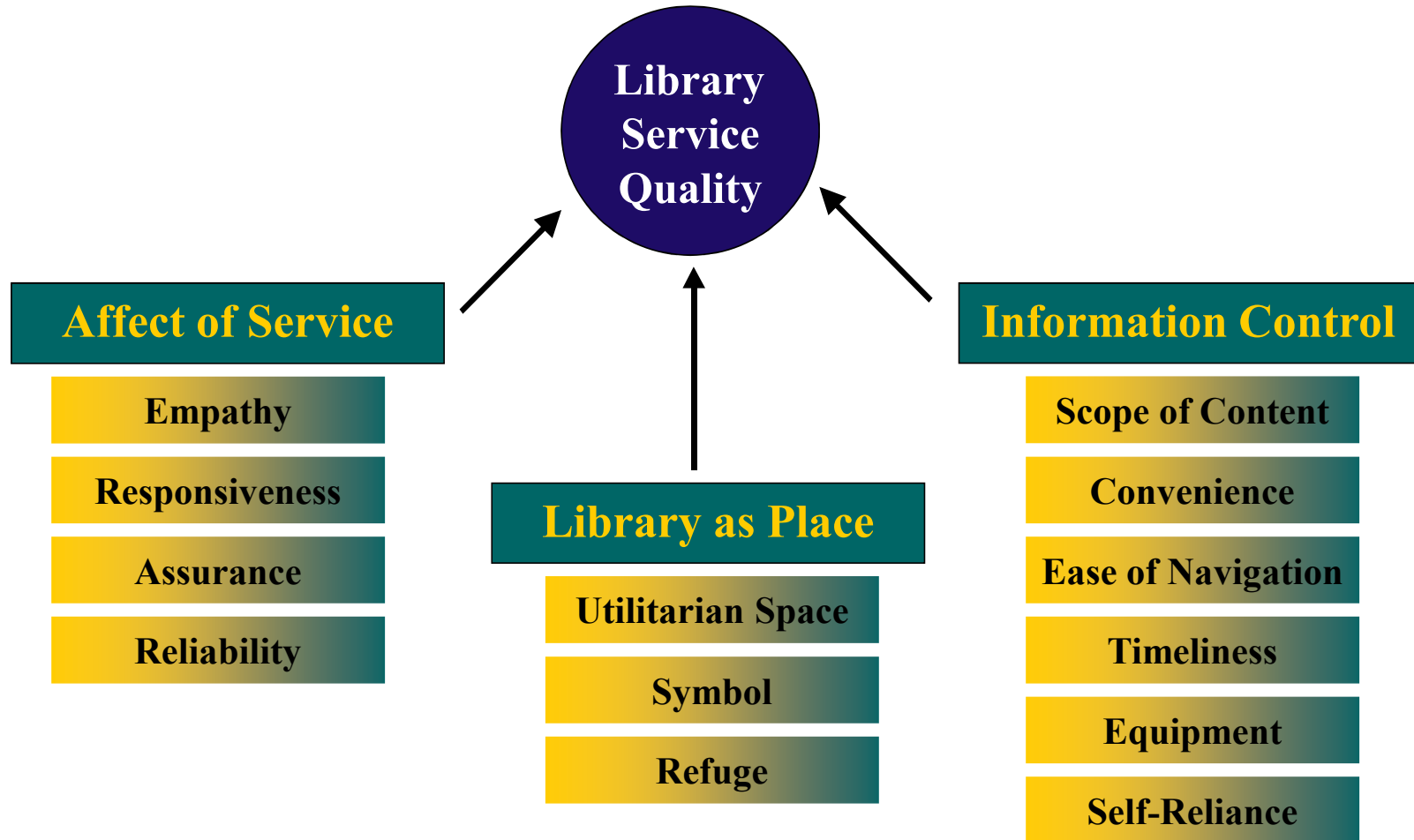
Martha Kyrillidou  
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Colleen Cook

Chania, Crete  
May 26, 2010

# R&D

- Colleen Cook, “*A MIXED-METHODS APPROACH TO THE IDENTIFICATION AND MEASUREMENT OF ACADEMIC LIBRARY SERVICES*” (PhD diss., Texas A&M University, 2001).
- Martha Kyrillidou, “*ITEM SAMPLING IN SERVICE QUALITY ASSESSMENT SURVEYS TO IMPROVE RESPONSE RATES AND REDUCE RESPONDENT BURDEN: THE ‘LibQUAL+® Lite’ RANDOMIZED CONTROL TRIAL (RCT)*” (PhD diss., University of Illinois at Urbana-Champaign, 2009)

# Figure 3: Dimensions of Library Service Quality





# Web surveys

The measurement strategy we are about to describe, used in 'LibQUAL+ Lite,' could be used in **ANY** Web local survey with more than a few questions, to:

1. maximize response rate
2. minimize burdens on respondents
3. ascertain quality of the information gathered when shortening survey length

# LibQUAL+<sup>®</sup> Lite RCT

LibQUAL+<sup>®</sup> Lite is a survey methodology in which (a) **ALL** users answer a **few, selected** survey questions, but (b) the remaining survey questions are answered **ONLY** by a randomly-selected subsample of the users. Thus, ***(a) data are collected on ALL QUESTIONS, but (b) each user answers FEWER QUESTIONS, thus shortening the required response time***

# Matrix sampling: LibQUAL+® Lite

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Item	Person				
	Bob	Mary	Bill	Sue	Ted
Service Affect #1	X	X	X	X	X
Info Control #1	X	X	X	X	X
Service Affect #2		X		X	
Library as Place #1	X	X	X	X	X
Service Affect #3	X	X			
Info Control #2				X	X
Library as Place #2			X	X	

Randomization within sets of questions in each block (within-block design)

## A. Configure Your Survey

Preferences Customization Optional Questions Branch/Library Options Custom Options

### Preferences

Please follow the instructions below to select your survey preferences.

- Survey Title**—Please choose a label to display on your results report. This label should not be more than 60 characters long.
  - English (British): Test (EE)
  - German: Test (German)
- Survey Start and End Dates**—Please indicate the dates you intend to open and close the survey at your institution. Note that these dates are for our information only and are not binding. **You must manually open and close your survey.**
  - Start Date: 01/01/2008 (month)
  - End Date: 12/31/2008 (month)
- Lite-view Percentage**—There are two versions of this survey: the full version with 22 core questions and a "lite" version with 8 core questions. Please enter the percentage of patrons who should receive the shortened "lite" survey.
  - Lite Views: 50%
- SPSS Data File Delivery**—Please check the box if you would like an SPSS datafile e-mailed to your institution's primary contact. This will be delivered to you a few months after a session closes. Note the raw data from the survey are available in a .CSV format automatically as soon as you close your survey.
  - Send me an SPSS data file

next step >

## B. Preview Your Survey

Preview the LibQUAL+® survey as it will appear to users at your institution. This step allows you to ensure live at your institution. You must view and complete a preview of your survey in every language in which it is being offered before you will be permitted to launch your survey. Use the checklist at the right to ensure all previews have been completed.

English (British) Preview Survey

German Preview Survey

## C. Launch Your Survey

Click the button below to launch your survey and receive your URL(s) for distribution. Note that the button will not be activated until all previews are completed. Also be aware that once your survey is launched, no further changes or customizations can be made.

Launch

Ability to customise, preview, and launch dual language surveys in one interface

Ability to set your Lite View Percentage





# Core Items – Lite version

When it comes to...	My Minimum Service Level Is		My Desired Service Level Is		Perceived Service Performance Is		N/A	
	Low	High	Low	High	Low	High		
1) The electronic information resources I need	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="checkbox"/>	N/A
2) Library space that inspires study and learning	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="checkbox"/>	N/A
3) Employees who deal with users in a caring fashion	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="checkbox"/>	N/A
4) The printed library materials I need for my work	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="checkbox"/>	N/A
5) Employees who are consistently courteous	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="checkbox"/>	N/A
When it comes to...	My Minimum Service Level Is		My Desired Service Level Is		Perceived Service Performance Is		N/A	
	Low	High	Low	High	Low	High		
6) Print and/or electronic journal collections I require for my work	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="checkbox"/>	N/A
7) Community space for group learning and group study	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="checkbox"/>	N/A
8) Employees who have the knowledge to answer user questions	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9	<input type="checkbox"/>	N/A

# Comparison Table

## LibQUAL+® Lite

## LibQUAL+®

### Core Questions

IC10

LP03

AS13

IC(random)

AS(random)

IC(random)

LP(random)

AS(random)

AS01 Employees who instill confidence in users

IC02 Making electronic resources accessible from my home or office

LP03 [Library space that inspires study and learning](#)

AS04 Giving users individual attention

IC05 A library Web site enabling me to locate information on my own

AS06 Employees who are consistently courteous

IC07 The printed library materials I need for my work

LP08 Quiet space for individual activities

AS09 Readiness to respond to users' questions

IC10 [The electronic information resources I need](#)

AS11 Employees who have the knowledge to answer user questions

LP12 A comfortable and inviting location

AS13 [Employees who deal with users in a caring fashion](#)

IC14 Modern equipment that lets me easily access needed information

AS15 Employees who understand the needs of their users

IC16 Easy-to-use access tools that allow me to find things on my own

LP17 A getaway for study, learning or research

AS18 Willingness to help users

IC19 Making information easily accessible for independent use

IC20 Print and/or electronic journal collections I require for my work

LP21 Community space for group learning and group study

AS22 Dependability in handling users' service problems

# Participating Institutions

<i>Pilot</i>	<i>Beta</i>
<b>University of Alberta Libraries</b>	<b>University of Arizona</b>
<b>Arizona State University Libraries</b>	<i>Belmont Technical College Learning Resource Center</i>
University of North Texas	University of Central Florida
<b>Texas A&amp;M University Libraries</b>	University of Glasgow Library (UK)
	Illinois Institute of Technology
	<i>Lorain Community College</i>
	<b>Oklahoma State University</b>
	Point Park University
	Radford University
	<b>University of Haifa</b>
<b>NOTE: Bold indicates ARL member library</b>	

# Research Questions

1. How much do **participation rates** differ between the long and the Lite version of the LibQUAL+® protocol?
2. How much do **completion times** differ between the long and the Lite version of the protocol?
3. Are the perception scores on the LibQUAL+® overall score, the three dimension scores (Affect of Service, Information Control and Library as Place), as well as the three linking items the **same between the long and the Lite version** of the protocol?
4. Are the scores on the total, subscale and linking item scores the same between the long and the Lite version of the protocol **for each one of the participating libraries?**
5. Are the scores on the overall, the three dimensions and the three linking items the same between the long and the Lite version of the protocol **within each user group (undergraduates, graduate students, and faculty)** across all participating institutions?
6. If there are **score** differences what are the **adjustments** we need to implement to convert scores from one version of the protocol to the other (long form scores to Lite ones and Lite form scores to the long form).

1. How much do **participation rates** differ between the long and the Lite version of the LibQUAL+® protocol?



Table 2. Percentages of Participants Who (a) Completed the Survey and (b) Met Inclusion Criteria Across Institutions and Administration Formats

Institution	Total respondents			Valid respondents			%	%	Difference
	Long	Lite	Total	Long	Lite	Total			
A	437	436	873	161	224	385	36.8%	51.4%	14.5%
B	601	613	1,214	369	451	820	61.4%	73.6%	12.2%
C	327	786	1,113	130	430	560	39.8%	54.7%	15.0%
D	252	233	485	130	159	289	51.6%	68.2%	16.7%
E	699	704	1,403	287	342	629	41.1%	48.6%	7.5%
F	605	631	1,236	309	382	691	51.1%	60.5%	9.5%
G	1,189	2,827	4,016	668	1,868	2,536	56.2%	66.1%	9.9%
H	2,337	2,402	4,739	819	1,090	1,909	35.0%	45.4%	10.3%
I	472	119	591	230	69	299	48.7%	58.0%	9.3%
J	410	408	818	187	224	411	45.6%	54.9%	9.3%
K	1,208	1,219	2,427	426	627	1,053	35.3%	51.4%	16.2%
L	496	531	1,027	165	236	401	33.3%	44.4%	11.2%
M	250	272	522	99	152	251	39.6%	55.9%	16.3%
N	749	771	1,520	225	318	543	30.0%	41.2%	11.2%
Total	10,032	11,952	21,984	4,205	6,572	10,777	41.9%	55.0%	13.1%

2. How much do **completion times** differ between the long and the Lite version of the protocol?

- Overall, it took a mean 418 and median 302 seconds to complete the Lite version (Table 4) and a mean of 659 and a median of 507 seconds to complete the long version (Table 5).
- This is a difference of 241 seconds for the mean (4.01 minutes) and 205 seconds (3.41 minutes) for the median.
- Up to 2 years time saving overall across 250+ participating institutions every year --  
**LibQUAL+® Lite is a remarkable improvement in terms of both time efficiency and maximizing the value of respondents' time.**

3. Are the perception scores on the LibQUAL+® overall score, the three dimension scores (Affect of Service, Information Control and Library as Place), as well as the three linking items the **same between the long and the Lite version** of the protocol?

Table 6. ANOVAs of LibQUAL+® Total, Subscale and Linking Item Scores by Lite Form (Overall results)

	N	Mean	(SD)	95% CI for Mean		$\eta^2$
Lite						
<b>Total Score</b>						
no	4,047	6.979	(1.168)	6.943	7.015	0.52%
yes	6,410	6.797	(1.257)	6.766	6.827	
Total	10,457	6.867	(1.227)	6.844	6.891	
$F_{scale} = 55.05$ ; $df = 1/10,455$ ; $P_{scale} = 1.27E-13$						
<b>Affect of Service</b>						
no	4,036	7.262	(1.246)	7.223	7.300	0.00%
yes	6,311	7.257	(1.397)	7.222	7.291	
Total	10,347	7.259	(1.340)	7.233	7.284	
$F_{scale} = 0.032$ ; $df = 1/10,345$ ; $P_{scale} = 8.57E-01$						
<b>Information Control</b>						
no	4,047	7.235	(1.183)	7.198	7.271	0.71%
yes	6,398	7.013	(1.341)	6.980	7.046	
Total	10,445	7.099	(1.286)	7.074	7.123	
$F_{scale} = 74.411$ ; $df = 1/10,443$ ; $P_{scale} = 7.26E-18$						
<b>Library as Place</b>						
no	4,006	6.934	(1.451)	6.889	6.979	0.86%
yes	6,195	6.626	(1.719)	6.583	6.669	
Total	10,201	6.747	(1.626)	6.715	6.779	
$F_{scale} = 88.357$ ; $df = 1/10,199$ ; $P_{scale} = 6.64E-21$						

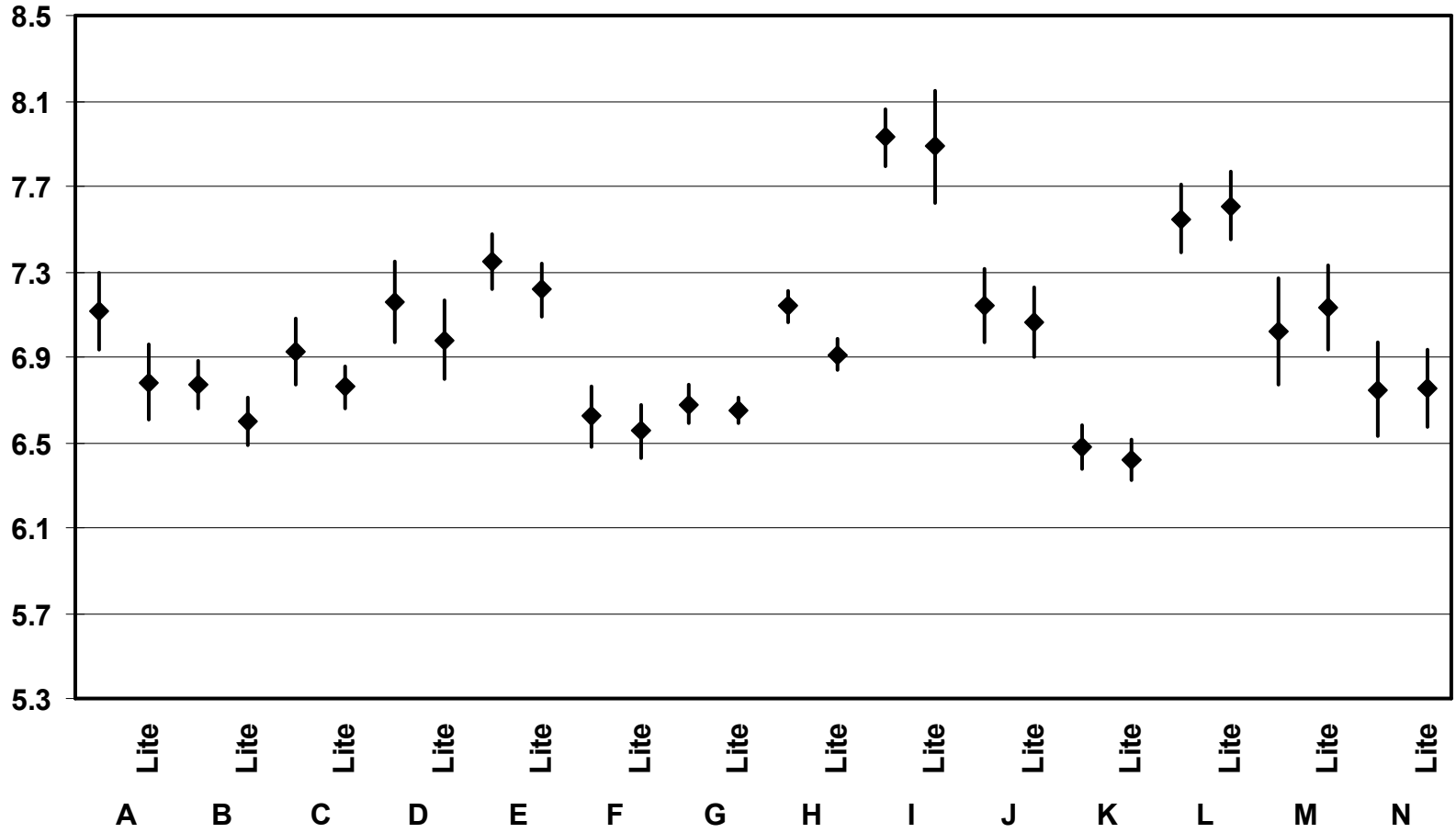


3. Are the perception scores on the LibQUAL+® overall score, the three dimension scores (Affect of Service, Information Control and Library as Place), as well as the three linking items the **same between the long and the Lite version** of the protocol? *(continued)*

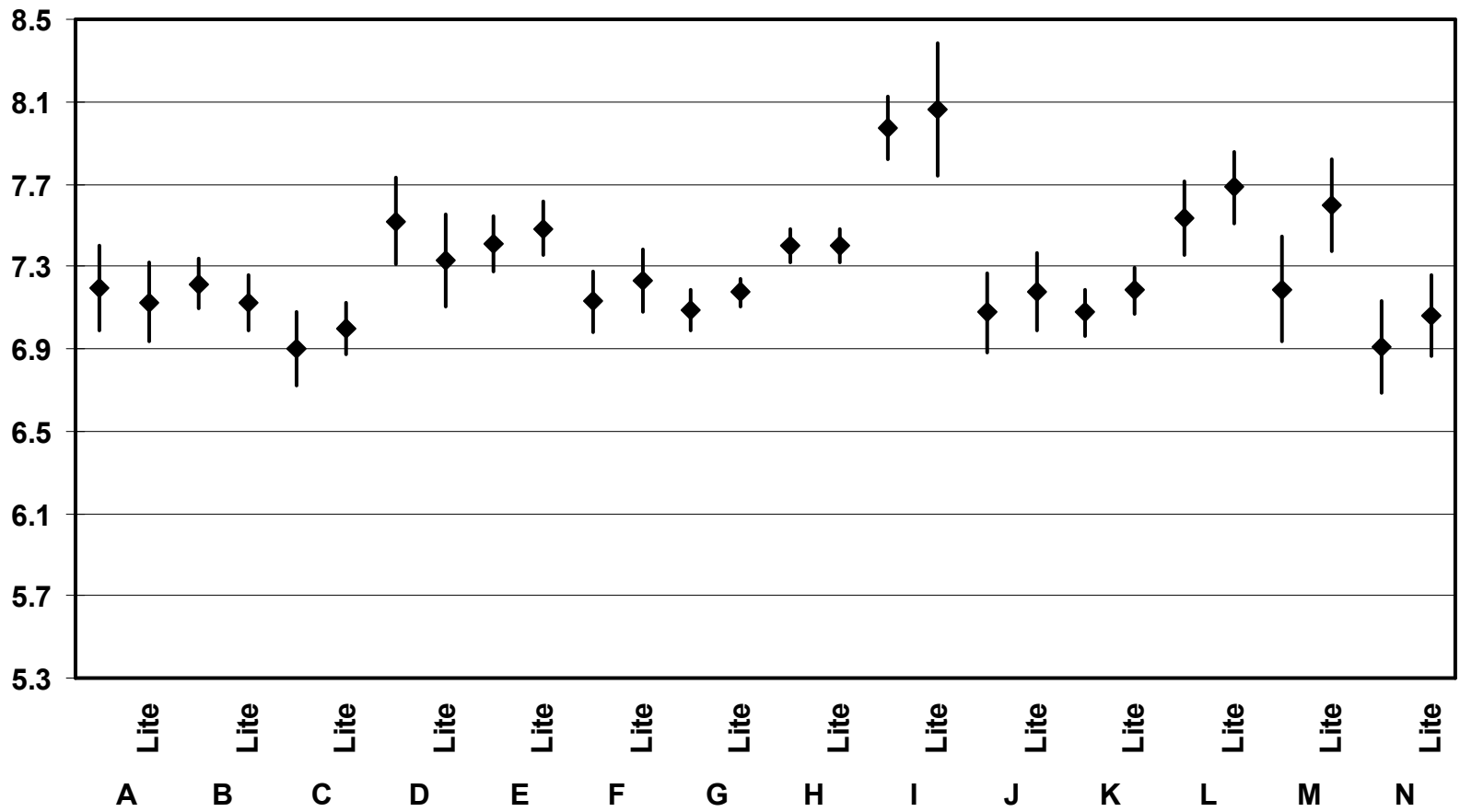
Employees who deal with users in a caring fashion						
no	3,855	7.370	(1.510)	7.322	7.418	0.01%
yes	6,167	7.335	(1.610)	7.295	7.375	
Total	10,022	7.349	(1.572)	7.318	7.379	
$F_{calc} = 1.187 ; df = 1/10,020 ; p_{calc} = 2.76E-01$						
The electronic information resources I need						
no	3,912	7.285	(1.489)	7.238	7.331	1.16%
yes	6,259	6.939	(1.597)	6.899	6.978	
Total	10,171	7.072	(1.566)	7.041	7.102	
$F_{calc} = 118.900 ; df = 1/10,169 ; p_{calc} = 1.56E-27$						
Library space that inspires study and learning						
no	3,912	6.699	(1.866)	6.640	6.757	0.27%
yes	6,075	6.496	(1.935)	6.447	6.544	
Total	9,987	6.575	(1.911)	6.538	6.613	
$F_{calc} = 26.947 ; df = 1/9,985 ; p_{calc} = 2.13E-07$						

4. Are the scores on the total, subscale and linking item scores the same between the long and the Lite version of the protocol for each one of the participating libraries?

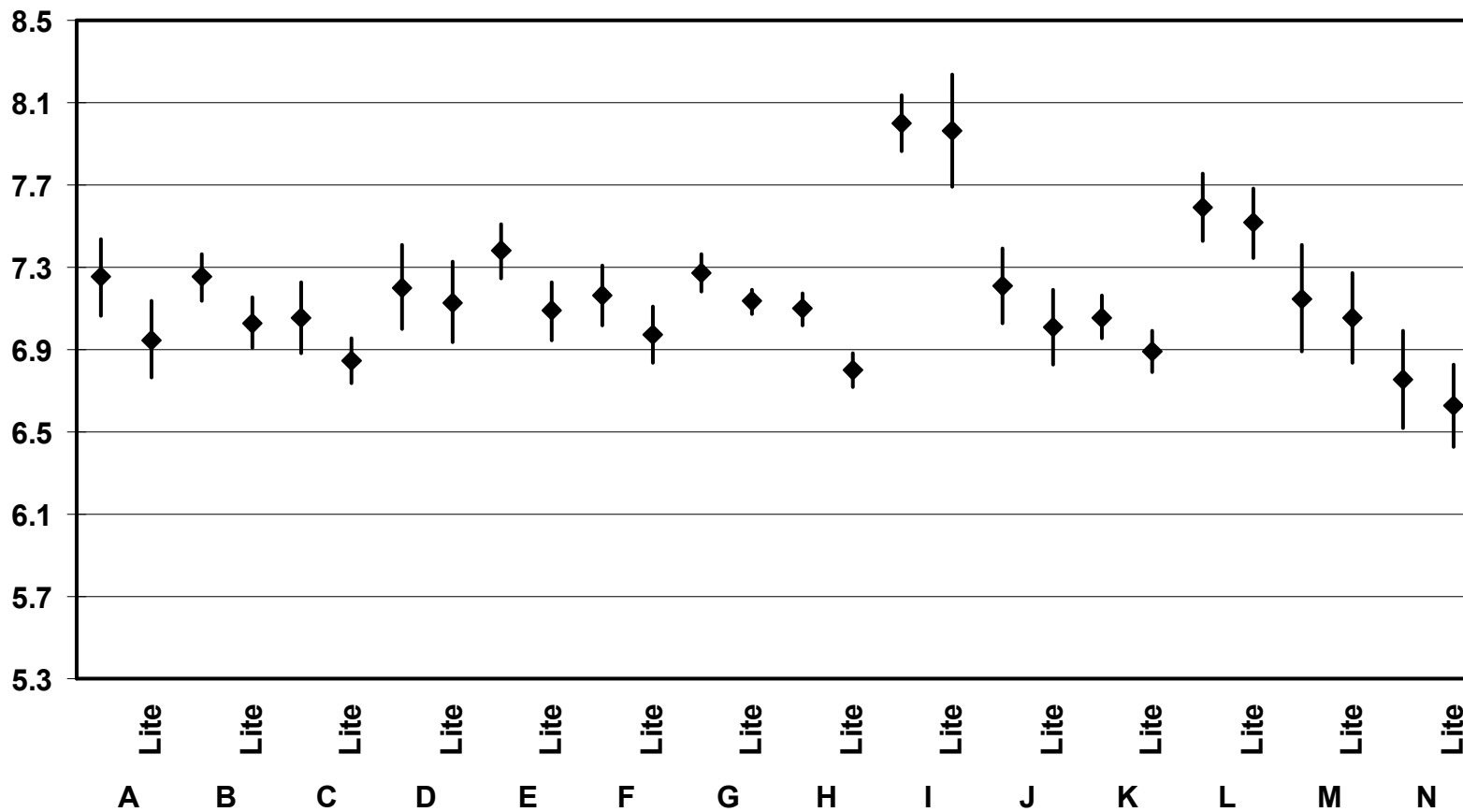
**Total Score: 95% confidence intervals around the means per institution on the long and Lite protocols**



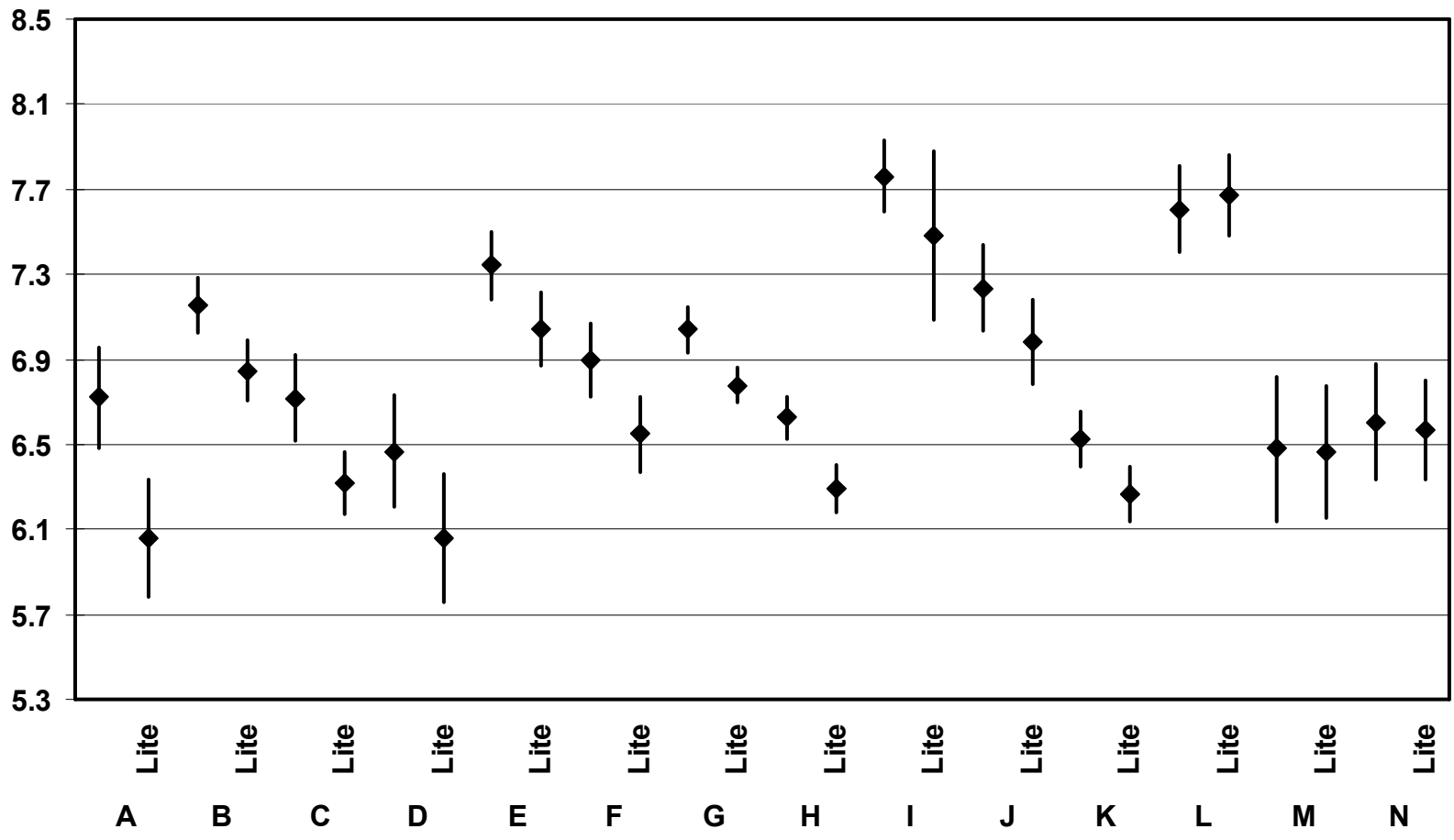
**Affect of Service: 95% confidence intervals around the means per institution on the long and Lite protocols**



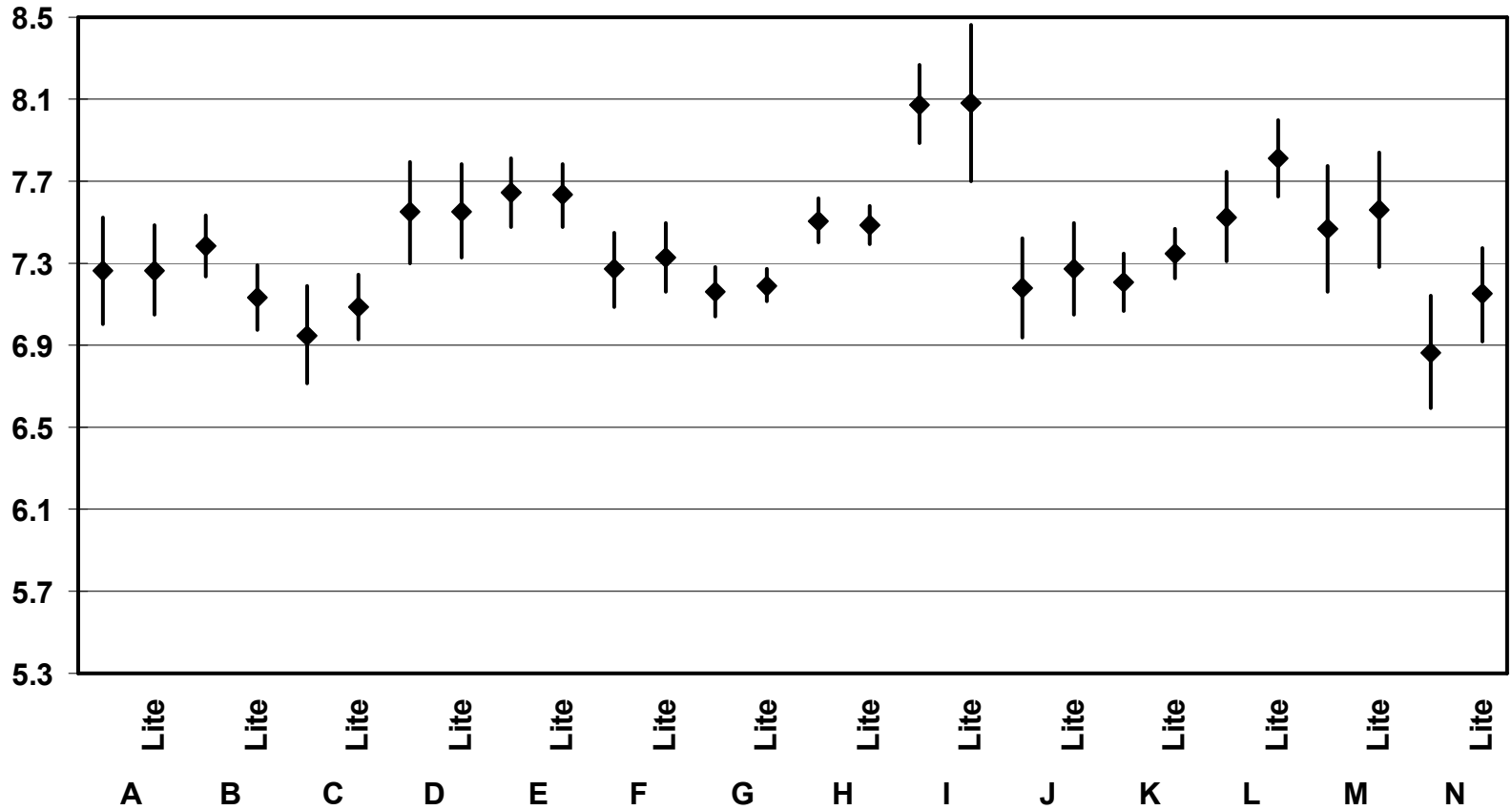
**Information Control: 95% confidence intervals around the means per institution on the long and Lite protocols**



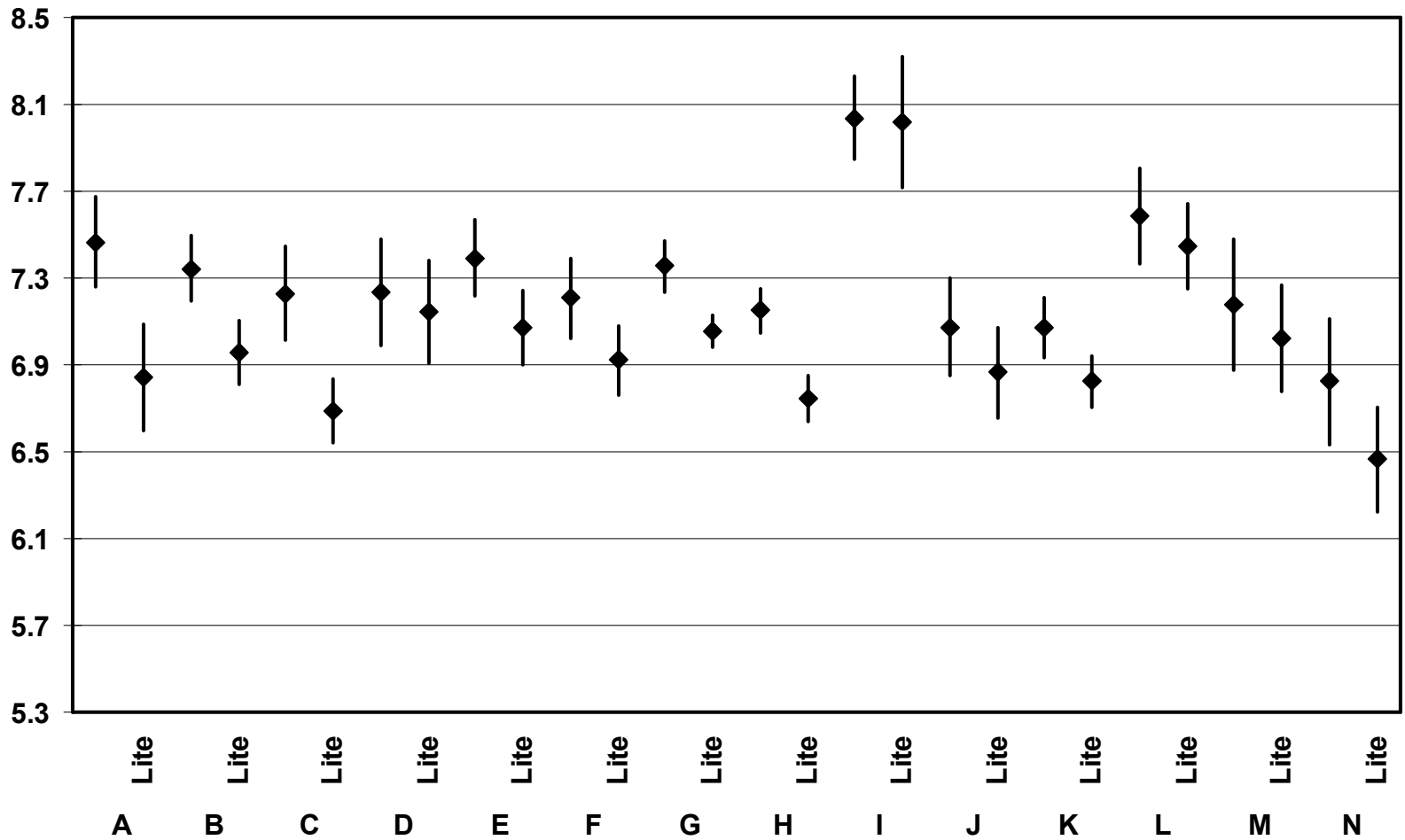
**Library as Place: 95% confidence intervals around the means per institution on the long and Lite protocols**



**Affect of Service linking item: 95% confidence intervals around the means per institution on the long and Lite protocols**

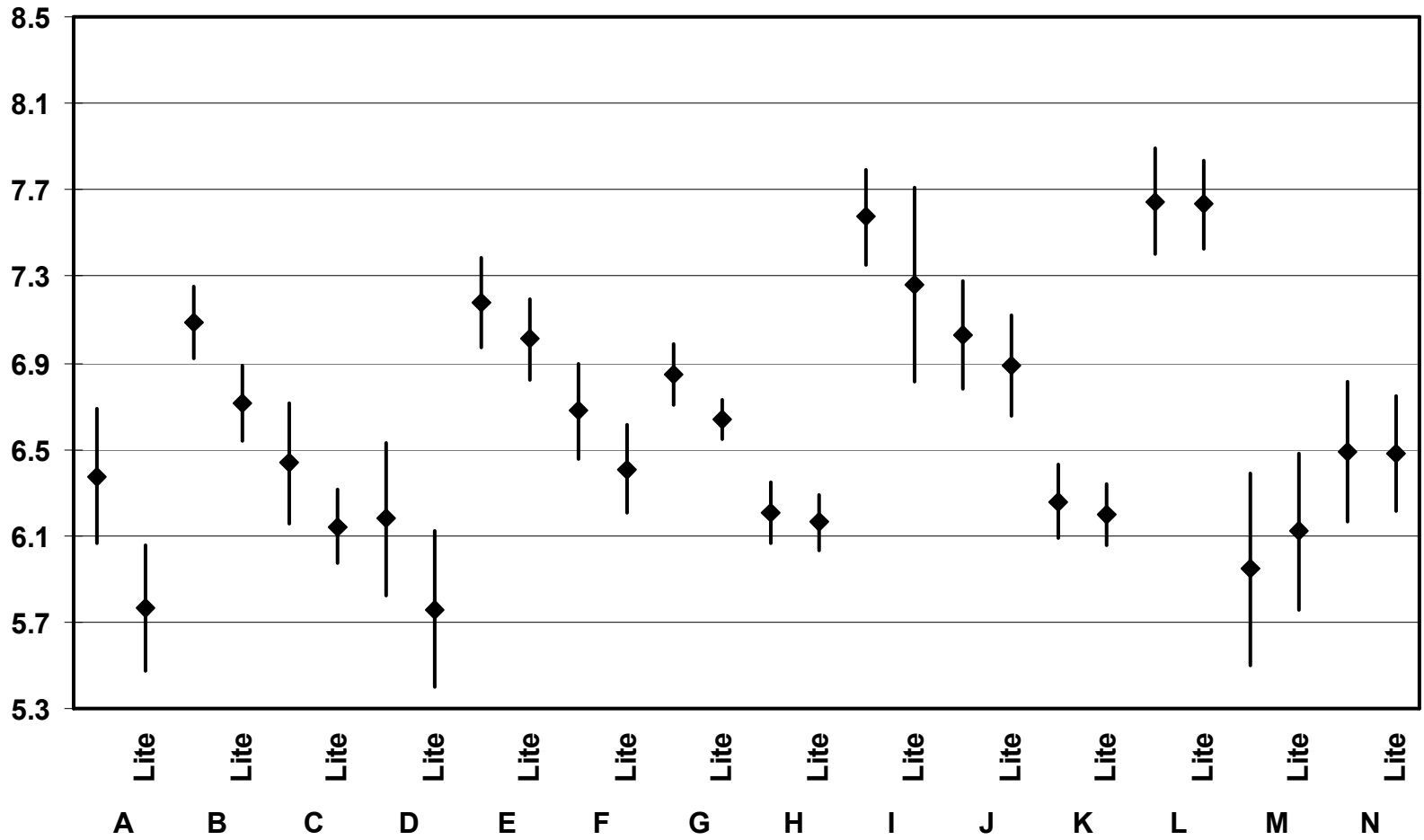


**Information Control linking item: 95% confidence intervals around the means per institution on the long and Lite protocols**





**Library as Place linking item: 95% confidence intervals around the means per institution on the long and Lite protocols**



# Score adjustments/conversion between long and Lite forms

- Bruce Thompson, Martha Kyrillidou, and Colleen Cook, “Item Sampling in Service Quality Assessment Surveys to Improve Response Rates and Reduce Respondent Burden: The LibQUAL+® Lite Example,” *Performance Measurement and Metrics* 1 (2009): 6-16.
- Bruce Thompson, Martha Kyrillidou, and Colleen Cook, “Equating Scores on “Lite” and Long Library User Survey Forms: The LibQUAL+® Lite Randomized Control Trials” *Performance Measurement and Metrics* (in press).

# Conversion is not needed

- The two protocols are not different from one another in terms of the respondents' scores; therefore the use of conversion formulas is not necessary. The conversion formulas provided here are presented mostly for theoretical considerations and for the exceptional occasion where results may indicate an important difference between long and Lite forms.

# Conclusions

- improved participation rates
- improved response times, and
- at least as good quality scores as one may expect from the long protocol (if not slightly better due to increased response)
- Scores between long and Lite forms are deemed equivalent and can be aggregated
- There are not important differences in the scores for Lite and long forms across different user groups and disciplines
- **LibQUAL+® Lite is the preferred and improved protocol with higher participation rates and reduced response times**
- **The matrix sampling method, the randomized control trial framework, and the statistical analysis methods** outlined in the current study are useful methods for any local library survey implementation whether for a physical or a digital library environment.



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#### This Month

1. Item sampling in service quality assessment surveys to improve response rates and reduce respondent burden: The "LibQUAL+@ Lite" randomized control trial (RCT) [total: 66]
2. Power System Control with Distributed Flexible AC Transmission System Devices [total: 66]
3. An experimental study of frequency droop control in a low-inertia microgrid [total: 27]
4. Resisting Lynching: Black Grassroots Responses to Lynching in the Mississippi

#### This Year

1. Item sampling in service quality assessment surveys to improve response rates and reduce respondent burden: The "LibQUAL+@ Lite" randomized control trial (RCT) [total: 779]
2. Advanced process development for contacts to algan/gan high electron mobility transistors (HEMTS) [total: 630]
3. Power System Control with Distributed Flexible AC Transmission System Devices [total: 397]
4. High Performance Network Intrusion Detection:

#### Overall

1. Power System Control with Distributed Flexible AC Transmission System Devices [total: 794]
2. Item sampling in service quality assessment surveys to improve response rates and reduce respondent burden: The "LibQUAL+@ Lite" randomized control trial (RCT) [total: 779]
3. Advanced process development for contacts to algan/gan high electron mobility transistors (HEMTS) [total: 630]
4. Studies of Protein-Protein and Protein-Water

# Areas for further study

- Soliciting and acting on insightful data and information while transforming library services
- What are the characteristics that would enhance the quality of information users receive from the library?
- How can we evaluate the impact and value of library services on faculty, undergraduate and graduate student learning, research and teaching?
- Is the library a concept of low or high salience and how can its impact, value, and importance be increased?
- What is the acceptable, desired, or enticing 'return on investment' (ROI) a user may wish to see from a library encounter especially as users want to be increasingly self-sufficient in the way they interact with information resources and services?

*Thank You*