

**National Science Foundation  
Industry/University  
Cooperative Research Centers**



***FINAL***

***June 2010***

***2008-2009 Process Outcome Survey Results***

***Descriptive Statistics Compiled from Industry and Faculty Surveys***

***D.O. Gray, S.E. DeYoung, & L.C. McGowen  
Department of Psychology  
Psychology in the Public Interest Program  
North Carolina State University***

***Note: Please do not quote or cite without permission of the authors***

## CONTENTS

### Overview

Report Processing & Data Issues	2
Response Rates	3
Long Faculty Form vs. Short Faculty Form	3

### Industry Results

Table 1: Research Program	4
Table 2: Benefits	5
Table 3: Center Administration and Operations	7
Table 4: General Evaluation	7

### Faculty Results

8

## **REPORT PROCESSING & DATA ISSUES**

This report provides descriptive statistics on the IUCRC Process Outcome Questionnaires. Data were collected during the fall of 2009 and refer to the Center activity for FY 2008-2009.

Since most evaluators use this report to benchmark their Center compared to a program-wide “norm”, we have reported “Center-level” means and standard deviations, with the exception of question #5 on the Industry Questionnaire (see below). That is, means (unweighted) for each center were used to calculate a Center-level mean. Because questions that require a numeric answer (e.g. number of dollars) often have highly skewed distributions, we also reported the medians for these variables. For forced choice questions, frequencies and standard deviations for individual respondents were also reported.

### ***Industry Questionnaires***

All data were collected using a single industry questionnaire form; the short and long versions of industry questionnaires used in past data collection are no longer utilized.<sup>1</sup>

Beginning with the 2006-7 report, question #5 on the Industry Questionnaire (the dollar value of center-stimulated projects) has been reported based on forced choice categories. This change was made to avoid coding problems and ambiguities raised with open-ended answers. Descriptive statistics for this question are reported three ways: member-level, center-level and IUCRC Program-level. Also, we report an individual-level mean, median, and standard deviation for dollar value for cases reporting at least one project. Because unweighted center means were highly skewed and misleading, individual-level data were used to calculate these statistics.

### ***Faculty Questionnaires***

The faculty questionnaire includes two versions: a long version (13 items) that is used by centers in year 1-5 and a short version (6 items) that is used by centers in year 6-10<sup>2</sup>. Since both the faculty long and faculty short questionnaires share some of the same questions, data for these shared questions were pooled for analysis. In the tables below, questions only included in the long version are noted as follows: (L).

---

<sup>1</sup> The industry questionnaire was revised as of 2006-2007 data collection. *The current industry questionnaire has been significantly shortened (from 44 (L) and 27 (S) to 16 questions).*

<sup>2</sup> The faculty questionnaire was revised as of 2006-2007 data collection. The primary changes made include: some questions used in past questionnaires were dropped (old version was 29 questions), and two versions of the faculty questionnaire were created.

## RESPONSE RATES

Category	Center Level		Individual Level	
	Industry	Faculty	Industry	Faculty
<b><i>Response Frequency</i></b>				
Continuing Population from CD report	34	34	624	535
1 <sup>st</sup> Year Reporting Population from CD report	+2	+2	+8	+15
Retired/Defunct Centers <sup>a</sup>	3	3	73	55
Retired/Defunct Centers Reporting <sup>b</sup>	+2	+2	+4	+12
Population <sup>c</sup>	38	38	636	562
Centers Excused from Evaluation <sup>d</sup>	2	3	26	35
Centers that did not return data	2	3	22	18
Available Population <sup>d</sup>	34	32	588	509
Data Received	34	32	234	212
Received / Population	89.5%	84.2%	36.8%	37.7%
Received / Available Population	100%	100%	39.8%	41.7%

- This year one center retired more than a year ago reported data. However since they have been out of the program for more than a year, no individual frequencies were available for response rates. This center is included in the “retired/defunct centers reporting” row, but not in the “retired/defunct centers” row.
- Retired, defunct, and new Centers that are not required to submit data, but some do submit some data. If relevant, those data were included in the analysis.
- Population was defined as centers that were at least 1 year old.
- Centers were excused for reasons such as being in the midst of center restructuring and respondent refusal to complete surveys.
- Numbers based on population minus excused and not returned counts.

## LONG FACULTY FORM VS. SHORT FACULTY FORM

	Long Form	Short Form
<b># of items</b>	13	6
<b># of questions in common</b>	6	6
<b># of unique questions</b>	7	0
<b># of Centers using form*</b>	19	13
<b>Sample size</b>	105	107

\*One center used the long form for all responses except for one form. The N reported is based on the version used by the center as a whole.

# Industry Results: 2008-2009

**Table 1: Research Program**

1. What percentage of Center research projects do you take an active interest in?											<b>Center Level</b>	
0-19%		20-39%		40-59%		60-79%		80-100%		Missing Data		
(1)		(2)		(3)		(4)		(5)				
N	%	N	%	N	%	N	%	N	%	N	Mean	S.D.
41	18.1	65	28.6	60	26.4	44	19.4	17	7.5	7	2.76	.58

3. During the past year, how satisfied were you with the following features of the Center's research program?													<b>Center Level</b>	
	<b>Individual Frequencies</b>													
	Not Satisfied		Slightly Satisfied		Somewhat satisfied		Quite Satisfied		Very Satisfied		Missing Data			
	1	2	3	4	5						Mean	S.D.		
	N	%	N	%	N	%	N	%	N	%	N			
a. Capabilities of the researchers & quality of the research program*	1	0.5	2	0.9	25	11.5	98	45.0	92	42.1	16	4.30	.39	
b. Breadth of the research topics covered	4	1.8	9	4.1	41	18.6	96	43.6	70	31.9	14	3.93	.55	
c. Focus of the research	2	0.9	7	3.0	54	23.1	108	46.2	50	21.4	13	3.85	.45	
d. Relevance of research to my organization's needs*	3	1.4	23	10.6	49	22.6	93	42.8	49	22.6	17	3.81	.52	

\* Item presented for the first time on the 2006-2007 Industry Questionnaire

**Table 2: Benefits**

5. During the past year, approximately how many Center-stimulated research projects were supported by your organization (include internal projects and projects contracted to outside performers)? Please estimate the dollar value of all Center-stimulated research projects. Exclude Center membership fee.

<b>Member Level Scores</b>	<b><u>Member Level</u></b>		
	<b>Mean</b>	<b>Median</b>	<b>S.D.</b>
<b>Includes All Cases</b>			
a. Number of center-stimulated research projects per respondent organization <i>Sample: N of members = 194; N of centers = 33</i>	2.99	1.00	17.96
b. Average dollar value of center-stimulated projects (in thousands) per respondent organization <i>Sample: all respondents: N of members =226 ; N of Centers= 33</i>	372.45	25.00	3337.35
<b>Includes Only Cases Citing 1 or more projects</b>			
c. Number of center-stimulated research projects per respondent organization <i>Sample: N of members = 142; N of Centers = 32</i>	4.09	2.00	20.91
d. Average dollar value of center-stimulated projects (in thousands) per respondent organization <i>Sample: N of members = 141; N of Centers = 32</i>	516.05	100.00	4203.69
e. Average dollar value of each center-stimulated project (in thousands) <i>Sample: N of members = 121; N of Centers = 32</i>	92.05	50.00	106.79
<b>Center Level Scores</b>	<b><u>Center Level</u></b>		
	<b>Mean</b>	<b>Median</b>	<b>S.D.</b>
<b>Includes All Cases</b>			
a. Number of center-stimulated research projects per center <i>Sample: N of members = 194; N of Centers = 33</i>	17.09	6.50	44.22
b. Average dollar value of center-stimulated projects (in thousands) per center <i>Sample: all respondents: N of members =226 ; N of Centers= 33</i>	2475.68	575.00	8554.03
<b>Program Level Scores</b>	<b><u>Program Level</u></b>		
f. Total number of center stimulated projects supported by respondent organizations <i>Sample: N of members = 194 ; N of Centers = 34</i>	581		
g. Total dollar value of center-stimulated projects supported by respondent organizations <i>Sample: all respondents: N of members = 142 ; N of Centers=34</i>	\$84,173,000		

\* It is worth noting that since only 37% of all members complete the questionnaire; this is a very conservative estimate of the value of center stimulated projects supported by members.

6. During the past year, how many students trained in the Center projects were hired by your organization?

*Sample: N of members = 213; N of centers =33*

<b>Member Level Scores</b>	<b><u>Member Level</u></b>	
	<b>Mean</b>	<b>S.D.</b>
a. Average number of students hired per respondent organization	.24	.79
<b>Center Level Scores</b>	<b><u>Center Level</u></b>	
	<b>Mean</b>	<b>S.D.</b>
b1. Average number of students hired per respondent organization per center	.32	.64
b2. Average number of students hired by respondent organizations per center	1.50	2.53
<b>Program Level Scores</b>	<b><u>Program Level</u></b>	
c. Total number of students hired by respondent organizations	51	



7. During the past year, to what extent has participation in the Center contributed to the following benefits for your organization?

	<u>Individual Frequencies</u>													<u>Center Level</u>	
	No Impact 1		Slight Impact 2		Moderate Impact 3		High Impact 4		Very High Impact 5		N/A 9		Missing Data		
	N	%	N	%	N	%	N	%	N	%	N	%	N	Mean	S.D.
<b>a. Research &amp; Development:</b> Enhanced via increased technical awareness, accelerated or new projects or development of intellectual property in my organization	18	8.6	47	22.4	63	30.0	46	21.9	29	13.8	7	3.3	25	3.12	.69
<b>b. Commercialization:</b> Enhanced via improved or new products, processes, services, improved sales, or new or retained jobs.	77	37.2	37	17.9	45	21.7	12	5.8	6	2.9	30	14.5	27	2.14	.78
<b>c. Professional Networking:</b> Enhanced via improved ability to recruit students, increased cooperation with other industrial members and scientists outside my organization	13	6.0	29	13.5	67	31.2	71	33.0	31	14.4	4	1.9	19	3.39	.54



**Table 3: Center Administration and Operations**

9. During the past year, how satisfied were you with center administrative operations?												
<u>Individual Frequencies</u>											<u>Center Level</u>	
Not Satisfied (1)		Slightly Satisfied (2)		Satisfied (3)		Quite Satisfied (4)		Very Satisfied (5)		Missing Data		
N	%	N	%	N	%	N	%	N	%	N	Mean	S.D.
2	.9	8	3.7	37	16.9	91	41.5	81	37.0	15	3.93	.68

**Table 4: General Evaluation**

11. Will your organization renew its membership?												
<u>Individual Frequencies</u>											<u>Center Level</u>	
Definitely Not (1)		Probably Not (2)		Uncertain (3)		Probably Yes (4)		Definitely Yes (5)		Missing Data		
N	%	N	%	N	%	N	%	N	%	N	Mean	S.D.
2	.9	5	2.2	39	17.4	93	41.6	85	37.9	10	4.13	.49

13. Organization Type/Size

	<u>Individual Frequencies</u>	
	N	%
1. For-Profit Large (> 500 employees)	124	53.0
2. For-Profit Small (< 500 employees)	46	19.7
3. Non-Profit/Government	61	26.1
Missing Data	3	1.3

# Faculty Results: 2008-2009

1. Compared to the research projects that you typically conduct outside the Center, would you describe your Center funded research as: (L)\*

<b>Individual Frequencies</b>										<b>Center Level</b>		
Much more basic (1)		More basic (2)		Same (3)		More Applied (4)		Much more applied (5)		Missing Data*		
N	%	N	%	N	%	N	%	N	%	N	Mean	S.D.
2	1.9	4	3.9	38	36.9	53	51.5	6	5.8	2	3.57	.42

\* Indicates a question that is unique to the long version of the faculty questionnaire.

2. During the past year, how satisfied were you with the following?

	<b>Individual Level</b>										<b>Center Level</b>		
	Not Satisfied (1)		Slightly Satisfied (2)		Somewhat Satisfied (3)		Quite Satisfied (4)		Very Satisfied (5)		Missing Data		
	N	%	N	%	N	%	N	%	N	%	N	Mean	S.D.
a. Quality of the Center-supported research program	2	1.0	6	2.9	23	11.0	83	39.7	95	45.4	3	4.29	.39
b. Relevance of the Center's research program to my professional goals	2	1.0	7	3.3	28	13.4	78	37.3	94	45.0	3	4.25	.33

4. During the past year, what impact has participation in the Center had for YOU in the following areas? (L)\*

	<b>Individual Level</b>										<b>Center Level</b>		
	No Impact (1)		Somewhat Positive Impact (2)		Moderately Positive Impact (3)		Very Positive Impact (4)		Extremely Positive Impact (5)		Missing Data	Mean	S.D.
	N	%	N	%	N	%	N	%	N	%			
a. The feeling of accomplishment I get from the research I do.	3	3.0	2	2.0	21	21.2	37	37.4	36	36.4	6	4.00	.43
b. Opportunities for research contracts/grants.	6	6.1	10	10.2	16	16.3	30	30.6	36	36.8	7	3.74	.63
c. Recognition I receive for the work I do.	1	1.0	15	15.5	22	22.7	39	40.2	20	20.6	8	3.63	.53
d. Access to useful equipment.	19	20.0	8	8.4	24	25.3	20	21.0	24	25.3	10	3.28	.90
e. Ability to support graduate students.	8	8.2	10	10.3	17	17.5	26	26.8	36	37.2	8	3.65	.76
f. Ability to publish my work in quality proceedings and journals.	10	10.1	10	10.1	20	20.2	33	33.3	26	26.3	6	3.49	.49

\* Indicates a question that is unique to the long version of the faculty questionnaire.

5. Which option best expresses your current intentions?

	<b>Individual Frequencies</b>										<b>Center Level</b>		
	Definitely Not (1)		Probably Not (2)		Uncertain (3)		Probably Yes (4)		Definitely Yes (5)		Missing Data	Mean	S.D.
	N	%	N	%	N	%	N	%	N	%			
Next year I will submit my best research ideas in a center funded proposal*	1	.5	13	6.3	42	20.2	78	37.5	74	35.5	4	4.07	.42

\* Item presented for the first time on the 2006-2007 Industry Questionnaire

6. During the past year, how satisfied were you with center administrative operations?

	<b>Individual Frequencies</b>										<b>Center Level</b>		
	Not Satisfied (1)		Slightly Satisfied (2)		Somewhat Satisfied (3)		Quite Satisfied (4)		Very Satisfied (5)		Missing Data	Mean	S.D.
	N	%	N	%	N	%	N	%	N	%			
	6	3.0	4	2.0	23	11.4	80	39.5	89	44.1	10	4.23	.45