

Follow Up to the Summer 2001 ROLE Survey: Spring 2002¹

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The 249 respondents to the ROLE summer 2001 survey were contacted by e-mail and requested to complete an on-line survey about their earlier summer research experience². One hundred and four students from the four research sites (Grinnell College, Harvey Mudd College, Hope College, and Wellesley College) responded to the request in the latter part of May, 2002. This report summarizes the results.

Demographics

Respondents to the follow up survey represented the four research sites well (Table 1).

Table 1.

College	% of original cohort responding	Number of respondents
Grinnell	50.8	30
HMC	35.9	14
Hope	42.2	38
Wellesley	41.8	22

Thirty-eight percent of the original senior respondents, 44% of the original junior respondents, and 54% of the original sophomore respondents contributed to the follow up. Sex, ethnicity, and major do not show any unusual patterns.

Consistency of Postgraduate Plans

A question from the summer survey was repeated in the follow up survey. In the summer survey approximately 43% planned to go to graduate school and an additional 20% planned to go to professional school (e.g., medicine). Table 2 shows a cross-tabulation from the follow up.

Table 2.

Graduate or professional school	Response on summer 01 survey: Yes.	Response on summer 01 survey: No.
Response on follow up survey: Yes.	52	7
Response on follow up survey: No.	16	27

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² See "Short term impact of UR" on the Grinnell College ROLE webpage.

The cases in which the respondent has changed plans are currently being analyzed.

Timing of decisions

Earlier results did not clarify when a student set a goal of going into graduate school. Therefore, in the follow up students who indicated they were planning on graduate work were asked three additional questions. The questions and the frequency of responses are given below. The data indicate that some students make plans for graduate work early in their undergraduate careers.

Table 3a.

Question	Freshman year of college or before	Sophomore year of college	Junior year of college	Senior year of college
When were your first aspirations to attend graduate school?	25	8	11	1

Table 3b.

Question	Freshman year of college or before	Sophomore year of college	Junior year of college	Senior year of college	I am not certain
When did you decide for sure to attend graduate school?	11	7	9	11	7

Table 3c.

Question	I was still deciding if I was interested in pursuing graduate studies	I had already decided to attend graduate school
At the initiation of your research project, how would you have described yourself?	19	26

Effect of experience on later academic behavior

Respondents were asked if they had taken courses in the same department as their summer research project since the time of their summer research. Ninety-four

respondents replied that they had. They were then asked to complete the following questions.

Table 4a.

Question	Yes	No
Do you feel that your research experience affected your behavior in these courses?	64	30

Table 4b.

Question	No change	Small change	Moderate change	Large change	Very large change
I feel that I have become more able to think independently and formulate my own ideas.	4	8	29	17	6
I feel that I have become more intrinsically motivated to learn.	10	12	21	18	3
I feel that I have become a more active learner.	8	11	20	18	7

Overall satisfaction

The summer 01 survey asked respondents to rate their overall satisfaction with their research experience on a scale of 1 (I feel very dissatisfied) to 5 (I feel very satisfied). The question was repeated on the follow-up survey. The responses at end of summer and in spring were positively correlated ($r = +0.38$). The variation in satisfaction ratings from summer to spring are shown in the following table.

Table 5.

	<i>Rating in Summer 01</i>				
	Very dissatisfied	Moderately dissatisfied	Neutral	Moderately satisfied	Very satisfied
<i>Rating in Spring 02</i>					
Very dissatisfied	0	0	1	1	0
Moderately dissatisfied	0	0	0	0	0
Neutral	0	1	0	3	1
Moderately satisfied	0	4	2	20	11
Very satisfied	1	0	2	12	45

As Table 5 indicates, there is variation both up and down in the satisfaction ratings.

Ratings of 11 benefits

In the summer 01 survey respondents were asked to report their gains on 45 potential benefits of doing undergraduate research. An analysis of the results indicated that the 45 benefits could be factor analyzed into 11 groups. For the follow-up survey, one benefit from each group was presented, and the respondent was asked to rate their gain. The table shows the average rating in the summer of 2001 and in the follow-up survey. The summer data represent these current respondents only.

Item	Mean rating summer 01	Mean rating follow-up spring 02	Correlation between ratings
Understanding how scientists think	3.16	3.46	+0.52
Enhancement of your professional or academic credentials	4.04	4.06	+0.48
Laboratory techniques	4.18	3.83	+0.53
Understanding how current research ideas build upon previous studies	3.67	3.50	+0.49
Self-confidence	3.24	3.29	+0.52
Ability to read and understand primary literature	3.28	3.45	+0.51
Learning to work independently	3.59	3.42	+0.48
Developing a continuing relationship with a faculty member	3.82	3.89	+0.45
Interest in a discipline	3.30	2.98	+0.45
Opportunities for communication	3.91	3.04	+0.21
Learning a topic in depth	4.10	3.57	+0.49

Although there are some fluctuations in the means that we will analyze further, it seems from the significant positive correlations that summer and follow-up ratings are

reasonably consistent, and that the higher and lower rated benefits hold their positions as higher and lower rated benefits over time.

Analysis of the data will continue to determine the relation between satisfaction and gains in the spring data, as well as how well the original summer 01 data predicts the follow-up results.