INTRODUCTION

The Schools of Education Research Project (SERP), which is funded by foundations and housed at Teachers College, Columbia University, conducted a study of the state of schools, colleges, and departments of education. As part of its research, SERP did systematic surveys of key constituencies involved in the preparation of teachers, administrators and other educators. The four surveys covered the following constituencies:

- Deans of Schools of Education and Chairs of education programs
- Education school faculty
- Alumni of schools of education
- School principals

Synovate, formerly named Market Facts during the time of the surveys, met with the SERP staff at Market Facts on December 1, 2000 and at Teachers College in New York on December 13, 2000 to discuss the design of the project.

This report describes the methods used to conduct the survey of faculty of colleges and departments of education.

METHOD

1. Sample

The goal of the sample design was to provide a statistically representative yet efficient sample to represent the faculty of programs in education throughout the United States and to over-emphasize larger programs without diminishing the role of smaller programs.

The sample frame consisted of the 1,206 programs identified by project staff and sampled in the dean's survey. The list was matched to the U.S. Department of Education 1998 IPEDS database for a measure of size (number of education degrees granted). Schools with fewer than 20 degrees awarded were removed from the sampling frame, including some schools that have education programs but do not award a degree in education.

The sample design created a two-way stratification of all the schools and departments of education in the frame. Programs were stratified by geographic region (East, Midwest, South and West), excluding schools in Puerto Rico, U.S. Virgin Islands, and Guam. Within regions, programs were stratified by size into three strata having approximately equal numbers of degrees granted within each.

Of the 1,206 schools identified and sampled in the dean's survey, Market Facts randomly selected 250 schools to participate in the surveys of faculty and alumni. This design, using a common sample of schools in all three surveys would support matched analyses in which data from deans, faculty and alumni from the same schools could be analyzed jointly. Such analyses could go beyond describing characteristics of programs and their outcomes to explore determinants of success in meeting their objectives.

A primary sample of 150 programs and a back-up sample of 100 additional programs were selected. The back-up sample was intended for use to replace programs in the primary sample for which faculty or alumni lists could not be obtained. The primary sample was generated by allocating the 150 programs to regions proportionate to the number of known programs within each region. Then an equal number of programs were allocated to each size stratum within each region. The resulting number of programs was then sampled randomly from among all programs within each region-by-size stratum. While it was initially intended to sample just 150 programs with back-ups as needed, the project team later decided to survey all 250 programs selected.

2. Respondent Eligibility

Market Facts compiled the faculty lists from college and university web sites. Eligible faculty were those who had full-time appointments for at least nine months of the 2000-2001 academic year. We excluded emeritus and visiting professors. We then selected all eligible faculty members up to a maximum of 25. For schools with more than 25 eligible faculty members, we selected 25 randomly.

For some schools, we were unable to determine from their web sites the status of faculty members, and their lists may have included part-time, emeritus, and adjunct faculty. For those schools, we selected up to 30 faculty to improve the chances of sampling sufficient numbers of full-time faculty. We further screened out part-time faculty by requesting that they check the appropriate response to Question 1 and return the survey without completing it. We were successful in compiling faculty lists for 244 of the 250 schools initially sampled. The list of schools surveyed is in appendix A.

3. Questionnaire Design

The faculty 12-page questionnaire was developed in collaboration with the project staff. The questions included satisfaction with various aspects of the faculty member's own institution, and how faculty perceive schools of education and the field of education. It also addressed teacher preparation issues for faculty who teach or advise students who are preparing for a career as a teacher. The final questionnaire is in Appendix B.

4. Mail Procedures

Surveys were mailed to sampled faculty on three different occasions, and each batch was followed at appropriate intervals by reminder mailings and e-mails. This section details the mailing activities we implemented to achieve the highest possible response rate.

A questionnaire and cover letter were mailed to 4,825 faculty on April 20, 2001. The cover letter briefly described the study and its purpose and stressed the importance of respondent participation. The cover letter was printed on SERP stationery. The return address was Schools of Education Research Project, Teachers College, Columbia University, P.O. Box 94602, Palatine, IL 60094-9923. A reminder letter was sent on May 9, 2001.

On May 15, Market Facts mailed an additional 520 surveys to faculty lists we obtained after the first mailing. This group was sent a reminder letter on June 5, 2001.

On August 14, 2001 Market Facts sent a reminder mailing consisting of letter and questionnaire to 3,761 faculty who had not responded to the April 20 and May 15 mailings.

On September 13, 2001 we provided project staff with e-mail addresses for 2,512 of the 3,236 non-respondents. We also provided the staff with the IDs and passwords of faculty so that they could immediately provide that access information to faculty who preferred to complete the survey on-line. The project staff sent reminder e-mails to faculty who had not responded to the questionnaire. While information about which faculty had not responded and their e-mail addresses were provided to project staff for follow-up purposes, their responses themselves were kept confidential.

Finally, after reviewing prelinary tabulations of completed surveys, the project team decided that there had been too few returns from institutions in the Carnegie classifications BLA and M1. An additional 19 BLA and M1 schools were sampled, and on November 30, letters and questionnaires were mailed to 124 more faculty members. No web option was offered to these late sampled faculty. A reminder mailing was sent to those faculty on January 8, 2002.

5. Internet Option

Market Facts established a web site where faculty could respond to the survey as an option to completing and mailing the printed questionnaire. The letters contained a project ID code and a unique password for each faculty member. The web site was programmed to administer the questionnaire, following all logical skip patterns, and to capture responses to each question.

6. Response Rate

The field closed on the faculty survey for the first time on October 12, 2001; it closed finally on January 25, 2001 after the supplemental mailing to BLA faculty. Table 1 displays the sample disposition and response rates.

Responses were received from 2,163 faculty for a total response rate of 39.6 percent. Of the questionnaires returned, 139 were from part-time faculty and 30 were blank, so the total useable questionnaires numbered 1,994 for a useable response rate of 36.5 percent. If we assume the blank returns were from ineligible faculty (they were instructed to mark only question 1 and return the questionnaire uncompleted), then 169 or 6.4 percent of the 2,163 returns were from ineligible faculty. If we assume further that the same percent of the initial sample were ineligible, then the eligible sample base was .936*5,469 or 5,119, and the response rate among eligible faculty was 1,994/5,119 or 39.0 percent. Of the useable questionnaires, 1,740 were completed by mail and 254 by internet.

TABLE 1
SAMPLE DISPOSITION

	Number	Percent
Total Sample	**5,469**	**100**
Total Respondents	**2,163**	**39.6**
Part-time faculty	139	2.5
Blank	30	.5
Total Useable	**1,994**	**36.5**
Mail respondents	1,740	31.8
Internet respondents	254	4.6

7. Data Preparation and Processing

Marginal frequency tables were delivered to SERP on November 7, 2001. After reviewing those frequencies, the project staff decided on the following banner plan. The variables of region, domain, Carnegie classification and size were not survey variables; they were added as analytical variables:

Banner 1	Banner 2
Total (1)	Total (1)
Region (4)	Q3 Tenure status (4)
East Midwest South West	Tenured
Domain (2)	Not tenured, on tenure track
Public Private	Not on tenure track (c, d, e)
Carnegie Classification (7)	No tenure system
BG BLA (SIO TR SP) DRE DRI M1 M2	Q15 Student vs faculty oriented (2)
Size (3)	Student or emphasis (a, c)
Small Medium Large	Faculty or emphasis (b, d)
Q2 Academic rank (4)	Q16 Impartial researchers vs activists (2)
Professor	Impartial researcher or emphasis (a, c)
Associate professor	Engaged activist or emphasis (b, d)
Assistant professor	Q18 Description of school (2)
Instructor/Lecturer (d, e)	Arts and Sciences and emphasis (a, c)
	Professional school and emphasis (b, d)
	Q19 Teaching/research orientation of self (2)
	Primarily or emphasis on teaching (a, b)
	Primarily or emphasis on research (c, d)
	Q48 Gender (2)

	Female Male
Q49 & Q50 Race	(5)
	American Indian, Alaskan Native
	Asian, Pacific Islander
	African American
	White, Caucasian
	Hispanic origin (from Q50)

Survey Quality Measures

All data are subject to some type of error. Sample surveys such as this one are subject to sampling error, and that is evaluated by standard statistical techniques. In this survey, programs in education were sampled from the universe of programs. Within sampled programs eligible faculty were sampled with certainty unless there were more than 25 eligible faculty listed on the web site, in which case 25 were selected randomly. If it could not be determined which faculty were part-time, up to 30 were sampled. The stratified design of the sample reduced sampling error at the program level. Because all or a majority of faculty were generally sampled within programs, sampling error at that level should be negligible, approaching that of a census.

However, both sample and census data may contain nonsampling error. Nonsampling error can lead to improper conclusions about the data if the errors are not taken into consideration.

1. Response Error or Measurement Error

Response error or measurement error means that the data obtained about a member of the population are incorrect. This can result from the population member providing incorrect data due to improper instructions, improperly designed forms or questionnaires, or unwillingness or inability on the part of the population member to provide the information. Several of the key variables in this survey are difficult to measure and thus are relatively prone to measurement error. For example, individuals do not always know the precise definition of alternative certification and may thus answer those questions based on their own definition

As is true for any multimodal survey, it is likely that the measurement errors associated with the different modalities are somewhat different. To the extent that certain types of individuals may be relatively more likely to respond by one mode compared with another (mail versus internet), the multimodal approach may have reduced bias somewhat by encouraging broader participation.

2. Coding Error or Recording Error

With this type of error, correct data are obtained, but errors are made in coding or recording the data. In this survey we used quality control and edit procedures throughout the survey process to reduce errors made by data entry personnel.

3. Coverage Error

This occurs when members of the population are not represented in a sample because they never had a chance to be included in the sample. To the extent that lists of faculty published on Web sites and other documents failed to include all eligible faculty, this survey may be subject to under-coverage error. To the extent that ineligible faculty listed on web sites could not be distinguished and removed, some responses may have come from persons who were not in the population of interest.

4. Non-response

Non-response occurs when people who are selected to participate in a research study fail to respond to the survey for one of several reasons including that they are unavailable or not interested in the subject. If there is a systematic difference between those who responded and those who did not respond to the survey, then the survey results are subject to non-response bias. Non-response causes an increase in variance, due to the decrease in the effective sample size, and may cause bias if the non-respondents and respondents differ with respect to the characteristic of interest.

ANALYSIS OF RESPONDING SCHOOLS

The school sample was selected using a stratified design such that region and size defined the strata. We did this for two reasons:

- to control the geographic distribution of the schools. By stratifying by region, we eliminated the chance that all the schools would come from one part of the country.

- to control the distribution of schools by size. Stratification by size insured that the many schools with a very few students would not dominate the sample. The approach we took over-sampled the larger schools that had the predominant number of students.

Implications of the Sample Design:
If we look at the number of students represented by their institutions, our sampling plan represents a very large percentage of students. On the other hand, it still provides a place for the smaller schools. When we first provided the plan, we pointed out that we over-sampled the large schools, and by doing so, we over-sampled the DRE, DRI, and M1 Carnegie Classification schools. Alternatively, we under-sampled the M2, BG, and BLA schools. (See following Table) This would provide results that are more powerful, i.e. we would have large sample sizes for the larger schools.

Sample Characteristics:
We mailed to the faculty of 244 schools for which faculty lists could be obtained out of the 250 schools in the initial sample and to 19 additional BLA and M2 schools. Two or more returns were received from 236 schools. The following tables present analyses of the characteristics of respondents and the schools they represent. Tables 2, 3, and 4 show the percentages of schools with more than one return by Carnegie classification, size and region compared with the distributions of schools to which surveys were mailed and the population of schools.

TABLE 2
DISTRIBUTION OF SCHOOLS BY CARNEGIE CLASSIFICATION

Carnegie	Schools with more than 1 return (%)	Schools with Faculty that were sent Surveys (%)	Original Sample (%)	Total Population (%)
BG	7.2	8.3	8.9	22.3
BLA	4.2	8.1	7.4	11.1
DRE	23.2	20.9	20.4	11.4
DRI	13.9	12.5	12.3	7.5
M1	44.7	43.0	43.5	38.7
M2	5.9	6.5	6.7	7.9
SP	0.8	0.7	0.7	1.0

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Table 2 shows that the distributions of schools to which surveys were mailed and from which two or more were returned are uniform across Carnegie Classifications with the exception of the BLA schools. The response rates were consistent across classifications, providing us with a representative pool of schools that closely reflects the original sample design.

TABLE 3
DISTRIBUTION OF SCHOOLS BY SIZE

Size	Schools with more than 1 return (%)	Schools with Faculty that were sent Surveys (%)	Original Sample (%)	Total Population (%)
Large	34.2	30.8	30.5	7.6
Medium	32.5	29.7	30.1	15.1
Small	33.3	39.5	39.4	77.3

Table 3 shows the distribution of schools, sampled and returned, by size classification The distributions are highly similar, and the slight differences are not statistically significant (Chi-square = 1.61, df = 2). We can conclude that there were no differences in tendency of schools to respond across the size categories and that the attained sample of schools closely represents the designed sample.

TABLE 4
DISTRIBUTION OF SCHOOLS BY REGION

Region	Schools with more than 1 return (%)	Schools with Faculty that were sent Surveys (%)	Original Sample (%)	Total Population (%)
East	23.2	25.1	25.3	24.8
Midwest	27.8	28.5	27.9	28.6
South	29.5	28.5	29.0	31.6
West	19.4	17.9	17.8	14.9

Table 4 shows by region the distributions of schools with two or more returns, those that were mailed surveys, and the original sample. All three distributions are very similar, and there is no evidence of bias.

Returns by faculty within schools by Carnegie classifications, size and region are shown in Tables 5, 6, and 7. The distributions are as expected and do not suggest any bias in faculty returns. Except to certain Carnegie classifications, completed sample sizes are adequate for comparisons among strata.

TABLE 5
RETURNS FOR SCHOOLS BY CARNEGIE CLASSIFICATION

Number of Faculty Returns per School	BG	BLA	DRE	DRI	M1	M2	SP	Total
0	2	5	0	0	3	1	0	11
1	3	5	0	1	4	2	0	16
2-5	15	10	2	3	25	9	2	66
6-8	1	0	11	8	24	4	0	48
9 or more	1	0	42	22	57	1	0	123
Totals	22	20	55	34	113	17	2	263
Total Faculty Returns	67	34	589	330	901	68	5	1,994

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TABLE 6
RETURNS FOR SCHOOLS BY REGION

Number of Faculty Returns per School	East	Midwest	South	West	Total
0	4	5	2	0	11
1	7	4	3	1	16
2-5	17	19	17	13	66
6-8	8	17	14	9	48
9 or more	30	30	39	24	123
Totals	66	75	75	47	263
Total Faculty Returns	452	530	608	404	1,994

TABLE 7
RETURNS FOR SCHOOLS BY SIZE

Number of Faculty Returns per School	Large	Medium	Small	Total
0	0	0	11	12
1	1	1	13	16
2-5	4	8	54	66
6-8	21	15	12	48
9 or more	56	54	13	123
	82	78	103	263
Total Faculty Returns	811	762	421	1,994

Reliability of Analysis

The sample sizes are relatively small for several of our groups. Here is a summary of the sampling errors for each group based on the sample sizes. The following table provides the sampling errors (margin of errors) at the 95 percent confidence levels for the faculty returns. The table reads: For DRI with a response percentage of about 50 percent, there is a margin of error of ±5.5% at the 95 percent confidence level.

TABLE 7
SAMPLING ERRORS FOR CARNEGIE CLASSIFICATIONS

Response Percentage	BG	BLA	DRE	DRI	M1	M2
50	11.8	25.7	4.1	5.5	3.3	14.5
80	9.4	20.6	3.3	4.4	2.7	11.6
90	7.1	15.4	2.5	3.3	2.0	8.7
Sample Size	76	16	624	345	948	50

In examining differences between the Carnegie classifications, Table 8 provides the degree of difference necessary to have a statistically significant result at a 95 percent confidence level. To read the table, a difference of more than 5.3 percentage points is necessary to see a statistically significant difference between DRE and M1 with an average response of 50 percent.

TABLE 8
REQUIRED DIFFERENCES FOR TESTS BETWEEN CARNEGIE CLASSIFICATIONS

Carnegie Classification	Response Percentage	BG	DRE	DRI	M1	M2
BLA	50	28.3	26.0	26.3	25.9	29.5
	80	22.6	21.1	21.0	20.7	23.6
	90	17.0	15.6	15.8	15.5	17.7
BG	50	-	12.5	13.0	12.3	18.7
	80	-	10.0	10.4	9.8	15.0
	90	-	7.5	7.8	7.4	11.2
DRE	50	-	-	6.9	5.3	15.1
	80	-	-	5.5	4.2	12.1
	90	-	-	4.1	3.2	9.1
DRI	50	-	-	-	6.5	15.6
	80	-	-	-	5.2	12.4
	90	-	-	-	3.9	9.3
M1	50	-	-	-	-	14.9
	80	-	-	-	-	11.9
	90	-	-	-	-	8.9

PROJECT DELIVERABLES

We produced cross tabulations including statistical testing of results based on the prelimary data set and delivered them on December 5, 2001. We delivered final tabulations, including the supplemental faculty mailing on April 26, 2002 Data for the records of all the respondents were provided in ASCII fixed format.

Market Facts transcribed responses to "other-specify" questions from the mail survey into an Excel file. The verbatim responses from the internet respondents were delivered in a separate file. At the request of SERP , we included analytical variables in the file of mail respondents to provide context to the verbatims. The analytical variables are: public or private institution; Carnegie classification; geographical region; institution size; survey ID, question number, and question text.

Deliverables

Deliverable	Date Delivered
Marginals	November 7, 2001
Cross tabulations with weighted data	December 5, 2001
Excel file of short answers, including verbatims from web respondents.	November 30, 2001
Cross tabulations with statistical testing (supp data included)	April 26, 2002
Data file and documentation	December 18, 2002