



TEXAS HIGHER EDUCATION OPPORTUNITY PROJECT

SENIOR WAVE 3

Report of Survey Methodology

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INTRODUCTION

STUDY BACKGROUND

This report documents the design and implementation of the third wave of interviews with a cohort of Texas high school seniors who graduated in 2002. The longitudinal survey is the centerpiece of the Texas Higher Education Opportunity Project (THEOP), a study of college-going behavior following the implementation of the top 10% law that guaranteed automatic admission to high school students who graduated in the top decile of their senior class.

The Texas Higher Education Opportunity Project conducted baseline surveys with seniors in the state of Texas in the spring of 2002. The study universe consisted of all seniors attending regular, public high school in the state that included 10th and 12th grades. Students attending charter schools, those in special education classes or schools and those attending schools with fewer than 10 seniors were excluded from the sampling universe. The baseline interviews were mainly collected in class using self-administered scannable survey booklets, although a small portion of students were mailed the survey booklet and returned it by mail. A total of 13,803 surveys were completed. The project has continued to refer to this cohort as “seniors” throughout the various waves of this longitudinal study even though the term no longer describes the students’ level in school. For further detail of the methodology used for the senior baseline survey, refer to “Texas Higher Education Opportunity Project (THEOP) Baseline Survey: Methodology Report” at http://theop.princeton.edu/surveys/baseline/baseline_methods_pu.pdf.

In 2003, a follow-up survey (Wave 2) was conducted by telephone with a random subsample of 8,345 baseline seniors. This subsample was selected from the group of baseline seniors who had signed a consent form and could be identified by name. Sub-sampling stratification variables (from the baseline survey) were: race/ethnicity, military, college, technical school, work, and all else. All eligible seniors who indicated in the baseline survey that they were African American, Asian, or intending to join the military were included in the subsample. Proportionate sampling was used to select the remainder of the subsample. The Wave 2 Study yielded 5,836 responses, giving a 70% response rate. For further detail of the methodology used for the Wave 2 senior survey, refer to “Texas Higher Education Opportunity Project (THEOP) Senior Wave 2 Survey: Methodology Report” at http://theop.princeton.edu/surveys/senior_w2/senior_w2_methods_pu.pdf.

SURVEY OBJECTIVES

The Senior Wave 3 survey is the second follow-up interview with the subsample of 8,345 baseline seniors. The Wave 3 survey sought to determine students’ educational pursuits and levels of attainment, and other life choices, four years after high school graduation. For students following a four-year path through college or university, graduation would occur in 2006, but a special strength of Wave 3 is its ability to identify delayed college entry; transitions among post-secondary institutions, including transfers to and from community colleges; withdrawal from college; and variation in school-to-work trajectories for students according to class rank.

SURVEY INSTRUMENTS

The Senior Wave 3 survey used two instruments: a respondent questionnaire, which also contained a section to be completed by proxy for respondents who were unreachable due to service in the military, and a separate proxy questionnaire for respondents unavailable to complete the interview for other reasons, as elaborated below.

The main survey instrument for respondents was a computer-assisted-telephone interviewing (CATI) questionnaire that averaged 17 minutes to administer. A small percentage of surveys were completed in person using a paper questionnaire that was the same as the CATI questionnaire. An introductory paragraph informed respondents that the survey was being conducted on behalf of Princeton University and was part of a study about educational opportunity in the state of Texas. Respondents were reminded their participation was totally voluntary. The questionnaire (see Appendix A) solicited information about post-high school activities, particularly focusing on higher education, employment and military service. Table 1 summarizes the content of the survey instrument.

TABLE 1: WAVE 3 QUESTIONNAIRE SECTIONS

Q1	Activity status (school/work/military) in October 2005
SECTION A	Recapture information for respondents who did not complete Wave 2 (high school diploma or GED attainment)
SECTION B	Military service – asked of respondents who were in the military in Wave 2
SECTION C	Higher education
SECTION D	School information for those currently or formerly enrolled in higher education
SECTION E	Military service - for those who were not in the military in Wave 2
SECTION F	Employment
SECTION G	Self esteem, agency and control
SECTION H	Demographic information
SECTION P	Military Proxy – for respondents unreachable due to military service

The main survey instrument consisted of four different paths depending on whether respondents were interviewed in Wave 2. Respondents who did not complete Wave 2, designated “Recaptures”, followed Path 1 (see Table 2). A second path was created for respondents who completed Wave 2 **and** were serving in the military when re-interviewed in 2003. Respondents who completed Wave 2 and were not in the military during Wave 2 followed Path 3. If the respondent was unreachable due to service in the military when contacted for the Wave 3 interview, a Military Proxy interview (Path 4) was administered, irrespective of whether or not the respondent was in the military in Wave 2. The Military Proxy section (Section P) consisted of a subset of questions from most sections of the general questionnaire, with the exception of Sections D: Currently or Formerly in School, and G: Self Esteem, Agency and Control. The Military Proxy interviews averaged slightly less than eight minutes.

TABLE 2: WAVE 3 SURVEY PATHS IN MAIN INSTRUMENT

Path	Description	Questionnaire Sections
1 - Recapture	Respondents who did not complete Wave 2.	Q1 SECTION A: High School Graduation SECTION C: Higher Education SECTION D: Currently or Formerly in School SECTION E: Military SECTION F: Employment SECTION G: Self Esteem, Agency, and Control SECTION H: Demographics
2 – Military	Respondents who completed Wave 2 and were in the Military . May have been enrolled in higher education at Wave 2 or not.	Q1 SECTION B: W2 Respondents in the Military SECTION C: Higher Education SECTION D: Currently or Formerly in School SECTION F: Employment SECTION G: Self Esteem, Agency, and Control SECTION H: Demographics
3 - All Others	All other respondents. May have been enrolled in higher education in Wave 2 or not.	Q1 SECTION C: Higher Education SECTION D: Currently or Formerly in School SECTION E: Military SECTION F: Employment SECTION G: Self Esteem, Agency, and Control SECTION H: Demographics
4 – Military Proxy	Asked of proxy for respondents unreachable due to military service.	SECTION P: Proxy Questions <i>Contains a subset of questions from the following sections:</i> SECTION A: High School Graduation SECTION E: Military SECTION C: Higher Education SECTION F: Employment SECTION H: Demographics

An “expanded proxy survey” was developed in Summer 2006 for administration to parents, siblings, spouses, and other relatives of respondents (ages 18 or over) who could not be reached after multiple attempts. This version of the survey was administered by telephone and in-person, and averaged 12 minutes in length. It contained the same sections as the respondent questionnaire (see Table 3), with a subset of approximately one third the number of questions as the respondent survey (see Appendix B). The exception is Section G: Self Esteem, Agency and Control, which was *not* asked of proxies.

TABLE 3: EXPANDED PROXY SURVEY SECTIONS

Path	Description	Questionnaire Sections
Expanded Proxy (For use with Recapture, Military or All Others)	Asked of proxy for respondents unreachable during interview period.	<i>Contains a subset of questions from the following sections:</i> Q1 SECTION A: High School Graduation SECTION B: W2 Respondents in the Military SECTION C: Higher Education SECTION D: Currently or Formerly in School SECTION E: Military SECTION F: Employment SECTION H: Demographics

PRETEST

A pretest was conducted in January 2006 to evaluate the survey instrument flow and clarity of questions, ensure the sample file data loaded correctly into CATI, establish the integrity of the CATI application logic and skip patterns and to examine survey data output to verify data structure. Twenty-three surveys were completed during the pretest. All of the various paths through the survey, determined by Wave 2 data (“recapture”, “military”, “all others” and “military proxy”), were tested. As a result of the pretest a few questions were deleted, two questions were combined into one, several questions were added, and some wording clarifications were made. The data was reviewed and verified that the skips and questionnaire programming and logic were working properly. The cases completed during the pretest were combined with cases collected later and included in the final delivery files.



STUDY PROCEDURES

SAMPLE DESIGN AND SELECTION

All seniors who were subsampled into Wave 2 were eligible to be interviewed in Wave 3. Thus the sample design for Wave 3 is the same as that for Wave 2. A key sampling issue for both Wave 2 and Wave 3 was the need to oversample certain subgroups to meet the survey objectives (specifically, that of conducting subgroup analysis for the specified domains of racial-ethnic groups and post high-school intentions). Therefore the strategy of certainty selection for Blacks, Asians and those with the intention of joining the military post-high school was employed. The section titled “Comparison of Subsample and Wave 3 Respondents/Non-Respondents” on page 10 examines the subsample and Wave 3 respondents in further detail while the section titled “Analytic Weights” on page 13 discusses the sample design and weighting more specifically.

FIELD PROCEDURES

The field procedures for the Senior Wave 3 Survey were as follows:

- 1) Princeton Survey Research Center provided contact information that was updated by Accurint (a division of LexisNexis) and the National Change of Address file of the United States Post Office in Spring 2005. This updated information was used to mail the advance letter and updated telephone numbers were loaded into the CATI system.
- 2) An advance letter (see Appendix C) was issued to students with "mailable" addresses. The advance letter contained a \$2 incentive as well as a post card for updating contact information.
- 3) Students with usable telephone numbers were phoned and the CATI instrument conducted.
- 4) Locating efforts for respondents lacking a valid telephone number were conducted using:
 - Contact information provided by the student at the Baseline and Wave 2 surveys,
 - Free web based person finders,
 - University listings of students, and
 - Subscription based person finders on the web.
- 5) A number of special strategies were implemented to increase response:
 - A letter was sent in May 2006, addressed to the “Parents of <Respondent Name>” for Wave 2 Respondents at the address the respondent provided in the baseline survey (see Appendix C). The baseline survey was administered during the respondent’s senior year in high school therefore this address was likely the parents’ address. The mailing included a post card and a promise of a \$10 incentive to respondents who completed the survey. The mailing was sent to the parents of nearly 3,100 Wave 2 respondents who were still active cases (meaning that none of the following had occurred: completion of the Wave 3 survey, final refusal, or coded as deceased). If the respondent advance letter was mailed to the same address and returned as undeliverable, a second letter was not sent. Outbound telephone dialing followed the mailing of the letter to the parents. Of the cases that were sent the parent letter, 30% (927) ultimately completed the survey mainly via outbound telephone dialing (74% of the 927 were surveys completed by telephone with the respondent). Of the 927 surveys, 255 were conducted in the first month following the mailing.

- University and college websites for the Wave 2 principal institution were researched to obtain updated contact information for respondents. The effort yielded mainly email addresses. The email addresses were sent to Princeton in June so that Princeton could email respondents with a request to contact NuStats (an email coming from Princeton was thought to be more effective than one from NuStats). No inbound calls or emails resulted directly from this effort. Of the 270 cases on the email list, 134 eventually became respondents (50%), however, this was mainly due to outbound CATI dialing rather than replies to the email. The email from Princeton may have provided validation of the survey and a subsequent increase in cooperation.
- Princeton researched the use of the National Student Clearinghouse for locating information. The Clearinghouse provided address information in July for 238 out of 399 cases but did not provide telephone numbers. Of the returned cases with an address, 21% ultimately resulted in a completed survey.
- NuStats conducted a test (n=100) of People Chasers, a firm that specializes in locating difficult-to-reach populations. Given the conditions of this test, conducted in July, and that NuStats had already conducted extensive research and locating efforts, the People Chasers results were not compellingly better to justify the added cost.
- A sample of “location uncertain, active” cases (n=130) was selected for a test of an extremely focused and targeted research and relocation effort followed by outbound telephone dialing in July. This approach was deemed unsuccessful when it yielded a lower number of completed surveys per hour than the standard outbound dialing.
- Slightly fewer than 5,000 records were sent to LexisNexis in July for updating with the LexisNexis “Fullboat” product in batch-processing mode and 4,329 were returned with appended information. The “Fullboat” record included up to three current/recent addresses for the respondent, up to five former addresses, up to five individuals identified as relatives, and up to three individuals identified as associates. This updated information was used for the personalized mailing (see next bullet), outbound calling attempts and in-person interviewing (see item 7 of this list). Of the cases sent for the “Fullboat” appension of contact information, 18% resulted in a completed interview (n=884). For these completed surveys, 58% were attained with the respondent by telephone, 7% with the respondent in person, 29% with a proxy by telephone, and 6% with a proxy in person.
- A creative personalized mailing was tested in August that utilized a small invitation-sized envelope (4 3/8 inches by 5 3/4 inches) on cream-colored linen paper, hand-addressed and mailed using a regular stamp. The personalized mailing (see Appendix C) asked the respondent to call in on a study-specific toll-free telephone number, send an email or return a postcard with updated contact info and be registered to win several prizes by raffle. A \$2 incentive was included in half of the mailings. The mailing was sent to 852 cases randomly assigned to this test group at the best address obtained through the LexisNexis “Fullboat” search. In the month of interviewing following the mailing, 33 cases who received the personalized mailing (4%) completed the survey. Of the approximately 3,000 cases in the pool for the active outbound calling effort, 69 cases (2%) who were not sent the mailing completed the survey. This mailing effort was deemed unsuccessful and discontinued. By the close of interviewing, 161 cases who received the creative personalized mailing had completed the survey (19%) due to continued efforts to locate and interview respondents or proxies by telephone or in person.
- Refusal conversion was attempted periodically with study participants who initially refused to complete the survey or partially completed but refused to finish the survey (n=104). Of these cases 45% were converted into completed cases (n=47). Thirty-seven surveys were completed

with the respondent by telephone, three in person, six by telephone with a proxy, and one in person with a proxy.

- 6) Incentives were offered to increase participation rates. A post survey incentive of \$10 was paid to 434 respondents in June and July, 2006. In October the incentive was increased to \$20 cash, paid to 337 respondents and \$10 cash post-survey paid to 270 to proxy respondents.
- 7) Because of a lower than desired response rate, field interviewers were used to physically locate respondents or proxies in selected cities (Austin, Houston and San Antonio) and conduct the interview in-person from October to February as a pilot effort to test the effectiveness of this method of interviewing. A total of eight in-person interviewers were trained, however, personal circumstances prevented two of the interviewers from participating in the project. If new contact information was gathered for the respondent during an in-person proxy interview, an attempt was made to contact the respondent directly and complete the full interview over the telephone. Roughly 25% of the in-person proxy interviews that yielded new contact information resulted in a survey completed by the respondent via telephone. A total of 112 surveys were completed in person.¹

Summary

The final results suggest that persistence pays off, as each strategy yielded additional completed cases; however, cost-benefits differ and must be weighed carefully. For any longitudinal study, the quality of the baseline contact information is very important, including full names with middle initials for study participants and for their family members. In retrospect the full name of a parent would have been helpful. Name and contact information of a close friend in high school was collected at the baseline but was not particularly useful. Social security number was requested and provided by more than half of the study participants and this proved very helpful. The difficulties of tracking and locating study participants during this highly mobile stage of life (early twenties), coupled with an ever-increasing reliance on cell phones should not be underestimated.

FIELD PERIOD

The pretest was conducted January 6 to 9, 2006. The full study began January 31, 2006 and ended March 6, 2007. In-person interviewing began October 27, 2006 and ended on February 20, 2007.

¹ Proxy interviews that yielded new contact information *and* resulted in a survey completed by the respondent via telephone are not included in this number. Rather they are counted as respondent surveys completed by phone.



WAVE 3 RESULTS

SAMPLE OUTCOMES

A respondent or proxy survey was completed for 49% of the total sample while 2% of sample members refused to participate in the survey (see Table 4).

For approximately 20% of the non-final not-interviewed cases all contact information and research leads were considered exhausted. Resource and time limitations precluded further effort on the remainder of non-final cases whose contact information had not yet been determined to be exhausted.

TABLE 4: SAMPLE OUTCOMES

	N	Percent
Completed Full Survey	3630	43%
Completed Proxy Survey	469	6%
Completed Partial Survey	15	<1%
Respondent Deceased	32	<1%
Duplicate ²	1	<1%
Special Circumstances (Exchange Students, Special Education)	6	<1%
Final Refusal from Respondent	196	2%
Not Interviewed (For approximately 20% of these study participants all research leads were considered exhausted)	4,079	49%
TOTAL SAMPLE	8,345	100%

Table 5 shows the survey participation distribution of respondents selected for the longitudinal subsample. Of the subsample, 41% participated in all three waves of the survey, 29% participated in Waves 1 and 2, while another 9% were not interviewed in Wave 2, but were interviewed in Waves 1 and 3. Just over one-fifth of the longitudinal sample cases was only interviewed in Wave 1.

TABLE 5: SENIOR SURVEY COMPLETIONS FOR LONGITUDINAL SUBSAMPLE

	N	Percent
Completed Waves 1, 2 and 3	3,403	41%
Completed Waves 1 and 2	2,433	29%
Completed Waves 1 and 3	711	9%
Completed Wave 1 Only	1,798	22%
Total Subsample	8,345	100%

² This respondent is believed to have completed the Baseline survey twice. The respondent did not participate in Wave 2.

The majority of the Wave 3 surveys (88%) were completed by study participants (see Table 6). Of those completed by proxy, one-third respondents' were unreachable due to military service. For the remaining cases completed via the expanded proxy instrument, the respondent could not be located to participate³.

TABLE 6: COMPLETED SURVEYS

	N	Percent
Respondent	3645	88%
Military Proxy	159	4%
Expanded Proxy	310	8%
Total	4114	100%

In-person locating and interviewing was conducted in Austin, Houston and San Antonio, Texas. Of the respondent completed surveys, sixty-one were administered in-person (2%) and fifty-one of the expanded proxy surveys (16%) were administered in-person (see Table 7). None of the military proxy surveys were administered in-person.

TABLE 7: SURVEYS COMPLETED IN-PERSON

	In-Person N	Total Completed N	In-Person Percent
Respondent	61	3645	2%
Military Proxy	0	159	0%
Expanded Proxy	51	310	16%
Total	112	4114	3%

The sample for Wave 3 was coded into three sample types depending on response status in Wave 2. Those respondents who did not complete Wave 2 were "Recaptures", respondents who were in the military in Wave 2 were coded as "Military" and those who responded to Wave 2 and were not in the Military were coded as "All Others". Table 8 shows the frequency and percentage of each sample type among completed surveys.

TABLE 8: WAVE 3 COMPLETED SURVEYS BY SAMPLE STRATA

Wave 3 Sample Strata	Completed Surveys in Wave 3 N	Total Sample for Wave 3 N	Completion Percent of Sample Type
Recapture	711	2509	28%
Military in Wave 2	191	318	60%
All Others	3212	5518	58%
Total	4114	8345	49%

³ An average of nearly 40 call and research attempts were made on these cases prior to completing the survey with a proxy.

These sample strata corresponded to the survey paths in the questionnaire (respondents who did not complete Wave 2 followed the “Recapture” path, respondents who were in the military in Wave 2 followed the “Military” path and those who responded to Wave 2 and were not in the Military followed the “All Others” path). The Wave 3 survey also contained a path for respondents who were unreachable due to *current* military service. Respondents following this path called “Military Proxy” (n=159) could have been from any of the three sample types as Table 9 illustrates.

TABLE 9: MILITARY PROXY COMPLETED SURVEYS BY SAMPLE TYPE

	Completed Surveys N	Percent of Military Proxy Surveys
Recapture	60	38%
Military in Wave 2	71	44%
All Others	28	18%
Total	159	100%

COMPARISON OF SUBSAMPLE AND WAVE 3 RESPONDENTS/NON-RESPONDENTS

The key sampling variables used to select the longitudinal sample were race/ethnicity and Wave 1 post-high school intentions.⁴ Table 10 presents the baseline characteristics of the subsampled cases selected for the longitudinal sample.

TABLE 10: BASELINE CHARACTERISTICS OF THE LONGITUDINAL SAMPLE

Intended Destination	White	Black	Hispanic	Asian	All Else	TOTAL
College	39%	19%	25%	9%	7%	100%
	76%	74%	59%	87%	39%	67%
	2194	1078	1393	487	414	5566
Tech School	24%	22%	39%	4%	10%	100%
	3%	5%	5%	2%	3%	4%
	75	69	121	11	32	308
Work	33%	14%	41%	3%	9%	100%
	7%	6%	11%	4%	5%	7%
	205	88	255	20	56	624
Military	35%	13%	42%	1%	9%	100%
	7%	5%	10%	1%	5%	7%
	196	73	238	8	53	568
All Else	18%	12%	28%	3%	40%	100%
	8%	10%	15%	6%	48%	15%
	227	153	357	32	510	1279
TOTAL	35%	18%	28%	7%	13%	100%
	100%	100%	100%	100%	100%	100%
	2897	1461	2364	558	1065	8345

⁴ Tables 10, 11 and 12 display the race/ethnicity and primary intention after high school as reported by respondents during the Baseline survey.

Cells present *Row Percentages*, Column Percentages, and Cell Count

Table 11 distributes Wave 3 respondents by the longitudinal sample criteria. Wave 3 respondents are similar to the selected subsample. The areas of divergence are in the percentages of whites, black/African Americans, and the post high-school intentions of college and ‘all else’⁵. The respondents are slightly more likely to be white, and less likely to be black/African American than the subsample. The respondents are also slightly more likely to have given their post-high school intention as attending college.

TABLE 11: BASELINE SUBSAMPLING STRATA OF WAVE 3 RESPONDENTS

Intended Destination	White	Black	Hispanic	Asian	All Else	TOTAL
College	44%	16%	24%	9%	7%	100%
	82%	77%	64%	89%	43%	72%
	1304	461	717	262	214	2958
Tech School	25%	18%	42%	3%	12%	100%
	2%	4%	5%	1%	3%	3%
	30	22	51	4	15	122
Work	33%	13%	40%	4%	11%	100%
	6%	6%	9%	3%	6%	6%
	88	34	106	10	28	266
Military	36%	11%	41%	2%	9%	100%
	6%	5%	9%	2%	5%	6%
	94	29	107	5	24	259
All Else	16%	10%	29%	3%	42%	100%
	5%	8%	13%	5%	43%	12%
	83	49	148	14	215	509
TOTAL	39%	14%	27%	7%	12%	100%
	100%	100%	100%	100%	100%	100%
	1599	595	1129	295	496	4114

Cells present *Row Percentages*, Column Percentages, and Cell Count

⁵ The ‘all else’ residual category includes ‘homemaker (without other job outside the home)’, ‘taking a break from school and work’, ‘Other’, ‘Don’t Know’, and Missing Data. Missing Data means the respondent did not complete the question on the Baseline survey.

The baseline subsampling strata for the Wave 3 **non-respondents** is presented in Table 12. Compared with the subsample, non-respondents are similar. The areas of divergence are the inverse of the respondent group. Thus the non-respondents are less likely to be white, and more likely to be black/African-American. They are also less likely than the subsample or respondents to have selected college as their primary activity in the fall after leaving high school.

TABLE 12: BASELINE SUBSAMPLING STRATA OF WAVE 3 NON-RESPONDENTS

	White	Black	Hispanic	Asian	All Else	TOTAL
College	34%	24%	26%	9%	8%	100%
	69%	71%	55%	86%	35%	62%
	890	617	676	225	200	2608
Tech School	24%	25%	38%	4%	9%	100%
	3%	5%	6%	3%	3%	4%
	45	47	70	7	17	186
Work	33%	15%	42%	3%	8%	100%
	9%	6%	12%	4%	5%	8%
	117	54	149	10	28	358
Military	33%	14%	42%	1%	9%	100%
	8%	5%	11%	1%	5%	7%
	102	44	131	3	29	309
All Else	19%	14%	27%	2%	38%	100%
	11%	12%	17%	7%	52%	18%
	144	104	209	18	295	770
TOTAL	31%	20%	29%	6%	13%	100%
	100%	100%	100%	100%	100%	100%
	1298	866	1235	263	569	4231

Cells present *Row Percentages*, *Column Percentages*, and *Cell Count*

ANALYTIC WEIGHTS

Analytic weights were developed for the Wave 3 senior follow-up survey data. The weights reflect two components:

- a sampling weight
- post-stratification adjustment that corrects for student level and school level nonresponse.

The sampling weight is simply the reciprocal of the probability of selection. The selection probability of a student is equal to the product of the student's baseline selection probability and the follow-up stratum-specific subsampling probability used to define sample size targets for the follow-up sample. Letting the baseline selection probability of the student i in subsampling stratum k be π , and the stratum specific subsampling rate be defined by λ , then overall selection probability of a student (v) is:

$$v_{ik} = \pi_i \times \lambda_{ik}$$

The values of the subsampling weight, $1/\lambda$, for each follow-up stratum are presented in the Table 13 below:

Intentions:	White	Black	Hispanic	Asian	All else
College	1.827	1.0	1.827	1.0	1.827
Tech school	1.844	1.0	1.835	1.0	1.853
Work	1.668	1.0	1.670	1.0	1.409
Military	1.0	1.0	1.0	1.0	1.0
All else	1.971	1.0	1.936	1.0	1.872

Table 13 reflects the certainty selection of Blacks, Asians, and those indicating intentions to join the military after attending high school.

The sampling weight is simply the inverse of the v for each student (i):

$$w_i = 1/v_i$$

The nonresponse weight adjustment ψ_h is designed to reduce bias that may arise from differential nonresponse by race-ethnicity of the students. The adjustment is simply the inverse of the weighted nonresponse rate for each Race-ethnicity cell:

for each cell of Race-ethnicity (h):

$$\psi_h = B_h / R_h$$

where B_h is the weighted total students in Race-Ethnicity cell h and R_h is the corresponding weighted of Wave 3 students in the same cell using weights w_i .

The post-stratification adjustment, $A(h)$, was developed by taking the ratio of the *published* population totals $T(h)$ for each PSU to the *weighted survey totals* $S(h)$ for each PSU k :

$$A(k) = T(k)/S(k)$$

where

$$T(k) = \sum_i t_{ik}$$

(i denotes summation across all schools in the TEA school file that belong to PSU k) and

$$S(k) = \sum_i \eta_i \delta_{ik}$$

(δ denotes an indicator variable that is equal to 1 if student is in a school belonging to PSU k and equals 0 otherwise; the i denotes summation across all students in the survey file whose schools belong to PSU k). The weight η_i is the product of the sampling weight and non-response adjustment:

$$\eta_i = w_i \times \psi_i$$

The *final analytic weight* θ is the product of the selection probability and the post-stratification weights:

For each student i .

$$\theta_i = w_i \times A_i$$

The post-stratification adjustments ensure that the weighted data will align with the published totals across the original baseline sampling strata.

The following table shows the baseline subsampling strata for respondents with the weight applied. And, in the next section of the report data from the Texas Education Agency for 2001-2002 12th graders provides comparisons of weighted respondent data to the sampling universe.

Tables 14a and 14b show the baseline subsampling strata of the Wave 3 and Wave 2 respondents with the weight applied.

TABLE 14a: BASELINE SUBSAMPLING STRATA OF WAVE 3 RESPONDENTS - WEIGHTED

	White	Black	Hispanic	Asian	All else	TOTAL
College	51%	10%	26%	4%	11%	100%
	81%	75%	67%	89%	52%	72%
	76,884	14,398	38,663	5,409	16,183	151,537
Tech School	32%	14%	39%	1%	14%	100%
	2%	4%	4%	1%	3%	3%
	1,909	829	2,374	66	859	6,037
Work	45%	9%	34%	1%	10%	100%
	7%	7%	9%	3%	5%	7%
	6,778	1,427	5,200	188	1,515	15,108
Military	48%	9%	32%	2%	9%	100%
	5%	4%	5%	3%	3%	4%
	4,527	822	3,044	172	835	9,400
All Else	19%	6%	31%	1%	43%	100%
	5%	8%	15%	4%	38%	13%
	5,241	1,608	8,470	265	11,855	27,439
TOTAL	46%	9%	28%	3%	15%	100%
	100%	100%	100%	100%	100%	100%
	95,339	19,084	57,751	6,100	31,247	209,521 ⁶

TABLE 14b: BASELINE SUBSAMPLING STRATA OF WAVE 2 RESPONDENTS - WEIGHTED

	White	Black	Hispanic	Asian	All else	TOTAL
College	52%	9%	27%	4%	8%	100%
	80%	74%	64%	88%	46%	71%
	76,902	13,920	39,486	6,010	12,045	148,363
Tech School	40%	9%	40%	1%	9%	100%
	3%	4%	5%	1%	3%	4%
	3,166	721	3,185	77	750	7,899
Work	37%	11%	42%	2%	8%	100%
	6%	8%	10%	3%	4%	7%
	5,300	1,496	6,009	231	1,161	14,197
Military	51%	8%	32%	2%	7%	100%
	5%	3%	4%	3%	2%	4%
	4,351	645	2,708	200	564	8,468
All Else	20%	7%	35%	1%	37%	100%
	6%	11%	17%	5%	44%	15%
	6,041	2,031	10,780	323	11,417	30,592
TOTAL	46%	9%	30%	3%	12%	100%
	100%	100%	100%	100%	100%	100%
	95,760	18,813	62,168	6,841	25,937	209,519

Note: Weighted Numbers may differ from counts due to weighting

⁶ In SPSS the number of valid cases is different from the total count in the cross tabulation table because the cell counts have been rounded. Actual weighted N is 209,518.

Selected Substantive Wave 3 Results

The tables that follow display weighted and unweighted tabular results for Wave 3. For comparison with prior waves, Table 15 shows the weighted and unweighted racial and ethnic distributions of respondents for Waves 1-3. The race and ethnic status for Wave 3 is a combination of information supplied during Wave 2 (for respondents who participated in Wave 2) and Wave 3 for the “recapture” sample (i.e., Wave 2 non-respondents).⁷ Because demographic data was asked at the end of the baseline questionnaire, this information is missing for students who did not complete the survey. The weighted distribution with missing data removed more closely replicates the weighted distributions of Waves 2 and 3, which correspond closely to the population of high school graduates for 2002.

TABLE 15: RACIAL AND ETHNIC ORIGIN OF WAVE 3 RESPONDENTS – UNWEIGHTED AND WEIGHTED

	Wave 3 Unweighted N	Wave 3 Unweighted Percent	Wave 3 Weighted N	Wave 3 Weighted Percent	Wave 2 Weighted Percent	Wave 1 Weighted Percent	Wave 1 Weighted Percent with Missing Data Removed
White	1,731	42%	106,943	51%	49%	45%	51%
African American or Black	630	15%	21,536	10%	10%	9%	10%
Mexican, Mexican American or Chicano	1,051	26%	53,996	26%	28%	24%	27%
Other Hispanic	220	5%	10,459	5%	5%	4%	5%
Asian or Pacific Islander	308	7%	7,544	4%	4%	3%	4%
Native American	10	<1%	754	<1%	<1%	1%	<1%
Something Else	151	4%	7,745	4%	4%	3%	3%
Refused	6	<1%	247	<1%	<1%	0%	0%
Missing	7	<1%	294	<1%	0%	11%	Removed
TOTAL	4,114	100%	209,518	100%	100%	100%	100%

⁷ Note that respondents who completed Wave 2 were not re-asked their racial and ethnic origin in Wave 3.

For comparison, the Texas Education Agency 2001 – 2002 Student Enrollment Report⁸ presents the following ethnicities for Seniors in the 2001 - 2002 school year (see Table 16).

TABLE 16: TEXAS EDUCATION AGENCY 2001 - 2002 12TH GRADE STUDENT ENROLLMENT BY ETHNICITY

	N	Percent
White	113,108	50%
African American or Black	29,722	13%
Hispanic	74,896	33%
Asian or Pacific Islander	7,876	3%
Native American	575	<1%
TOTAL	226,177	100%

Respondents were split nearly equally by gender (see Table 17)

TABLE 17: GENDER

	Unweighted N	Unweighted Percent	Weighted N	Weighted Percent
Male	1984	48%	100,357	48%
Female	2126	52%	108,988	52%
Not Sure	4	<1%	172	<1%
Total	4114	100%	209,518	100%

The Texas Education Agency 2001 – 2002 Student Enrollment Report⁹ shows that the Senior class was 49% male and 51% female in the Fall of 2001 (see Table 18).

TABLE 18: TEXAS EDUCATION AGENCY 2001 - 2002 12TH GRADE STUDENT ENROLLMENT BY GENDER

	N	Percent
Male	111,914	49%
Female	114,263	51%
TOTAL	226,177	100%

⁸ This data is from the Texas Education Agency 2001 – 2002 Student Enrollment Reports, found at <http://www.tea.state.tx.us/adhocrpt/adste02.html>. The report was generated by selecting “Statewide Totals” grouped by “Grade, Ethnicity.” The student enrollment report is a “Fall Snapshot” taken the fourth Friday in October. Note that the Baseline survey population consisted of seniors attending public high schools in the state of Texas. Students in charter schools, special education classes or schools and schools with fewer than 10 seniors (based on TEA data on enrollment for the 2000-2001 school year) were excluded from the universe.

⁹ This data is from the Texas Education Agency 2001 – 2002 Student Enrollment Reports, found at <http://www.tea.state.tx.us/adhocrpt/adste02.html>. The report was generated by selecting “Statewide Totals” grouped by “Grade, Gender.”

Nearly nine out of ten respondents attended educational institutions including universities, colleges, vocational or technical schools since high school (Table 19).

TABLE 19: NUMBER OF EDUCATIONAL INSTITUTIONS ATTENDED

	Unweighted N	Unweighted Percent	Weighted N	Weighted Percent
0	505	12%	26,824	13%
1	1798	44%	88,040	42%
2	1273	31%	64,309	31%
3	400	10%	23,049	11%
4 or more	94	2%	5,283	3%
Don't Know	44	1%	2013	1%
Total	4114	100%	209,518	100%

The majority of students have had one or more jobs since high school, not including military service. Roughly eight in ten have held two or more different jobs and about one in ten have held five or more different jobs since high school (see Table 20).

TABLE 20: NUMBER OF DIFFERENT JOBS SINCE HIGH SCHOOL

	Unweighted N	Unweighted Percent	Weighted N	Weighted Percent
0	153	4%	6354	3%
1	601	15%	32,451	15%
2	1003	24%	48,829	23%
3	913	22%	43,928	21%
4	490	12%	26,556	13%
5 or more	475	12%	26,733	13%
Don't Know	10	<1%	411	<1%
Refused	2	<1%	145	<1%
Missing	3	<1%	51	<1%
Not Applicable – Not asked of those currently serving full-time in military	83	2%	3,686	2%
Not Applicable – Not asked of proxy (military proxy or expanded proxy)	381	9%	20,375	10%
Total	4114	100%	209,518	100%

Nearly three-quarters of respondents (Table 21) are single/never married while one eighth are married and another eighth report living in a marriage-like relationship.

TABLE 21: MARITAL STATUS

	Unweighted N	Unweighted Percent	Weighted N	Weighted Percent
Single, Never Married	3024	73%	150,082	72%
Not Married but Living in Marriage Like Relationship	480	12%	25,932	12%
Married	521	13%	29,716	14%
Divorced/Separated	67	2%	2856	1%
Widowed	2	<1%	342	<1%
Don't Know	3	<1%	64	<1%
Refused	3	<1%	97	<1%
Missing	14	<1%	429	<1%
Total	4114	100%	209,518	100%

DATA PROCESSING

Survey data were processed to ensure that all data items were valid, or reflected missing or inapplicable codes, as appropriate. The data matrix, showing survey items and their corresponding cleaning specifications, is the primary document for data processing. It is titled “Tx10SR3_FINAL_MATRIX.xls”.



APPENDICES – QUESTIONNAIRES

- Appendix A – Senior Wave 3 Questionnaire
- Appendix B – Expanded Proxy Questionnaire
- Appendix C – Letters