

**Texas School Survey
of Substance Use
1998
Methodology Report and Validity Analysis**

For the Texas Commission on Alcohol and Drug Abuse

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Introduction

The Public Policy Research Institute (PPRI), in conjunction with the Texas Commission on Alcohol and Drug Abuse (TCADA), conducted the sixth statewide survey of drug and alcohol use among Texas elementary and secondary students in the Spring of 1998. Originally implemented in 1988 as a component of a larger survey assessing substance use among the state's general population, the school survey has since become an ongoing, independent project. District surveys are offered every year and a statewide survey is conducted every two years. The 1998 assessment provides follow-up data reflecting changes over the past eight years in grades four through twelve.

The Texas School Survey project has two primary objectives. First, it serves to inform state and local policy-makers about the extent and nature of the substance use problem in Texas schools. Second, the statewide survey provides a standard of comparison for districts conducting local assessments of drug and alcohol use.

The purpose of this document is to describe the methodology used to administer the 1998 Texas School Survey of Substance Use. Following a brief introduction to the survey instrument itself, attention is then focused on sample selection and survey administration procedures. Next, methods for data processing and quality control are described. The report concludes with a review of standard error estimates.

Survey Instrument

Two versions of the 1998 Texas School Survey of Substance Use were developed and administered. The first was a six-page questionnaire designed for students in grades seven through twelve. The second was a simplified, three-page instrument created for students in grades four through six. The elementary survey differs from the secondary survey in that it has simplified language and some complex questions were omitted. Elementary students were asked about only four types of substances including tobacco (cigarettes, snuff, and chewing tobacco), alcohol (beer, wine, wine coolers, and liquor), inhalants, and marijuana. Secondary students were asked about the same substances, as well as a broader range of illicit drugs including powdered cocaine, crack, hallucinogens, uppers, downers, steroids, ecstasy, Rohypnol, and heroin. Other sets of questions, in both the elementary and secondary instruments, were designed to assess behavioral correlates of substance use and students' perceptions of support available to help them cope with substance-related problems.

The questionnaire was in a format that could be scanned optically, similar to that used for standardized testing. It was designed for anonymous self-administration by students with the aid of a school district staff member to pass out the survey, read a common set of instructions, monitor the class during survey administration, and collect the instruments after they are completed. The survey instruments are included in Appendix A.

Survey Modifications

While the 1998 Texas School Survey of Substance Use content remained essentially the same as that used in previous surveys, items on the elementary and secondary questionnaires were revised. Modifications, particularly with regard to the secondary questionnaire, were implemented in order to increase accuracy of response and to reduce the length and repetition of

the questionnaires. Revisions were made to ensure compatibility with previous survey data. Survey modifications are outlined in Appendix B.

Modifications to the Elementary Questionnaire

One modification and one addition to the elementary survey instrument were made. The modification was to remove gin from the list of alcoholic beverages and to include tequila. Additionally, a question was included in the 1998 survey that solicited information on parental involvement in school-sponsored open houses and meetings.

Modifications to the Secondary Questionnaire

More substantial modifications were made to the secondary survey. In general, they included clarification of the instructions; modifications to drug use questions and lists; changes in the time periods for which drug use was assessed; and the addition of questions soliciting information on the use of marijuana and the gambling habits of students.

Slight modifications were made to clarify survey instructions. For example, the 1998 survey instructs students to "darken one bubble only," in contrast to the previous instructions to "only choose one" answer. Other modifications included the capitalization of some drug categories, such as inhalants, in order to emphasize the question matrices. Additionally, the phrase "to get high" was added to follow each substance name (i.e., "use glue to get high") in the inhalant question matrix (Q16). The phrase was originally added to the question in 1994 to distinguish between the legitimate use of pharmaceuticals and recreational substance use. The current modifications were intended to further emphasize recreational use.

Notable modifications were made to substance use questions and drug lists in the 1998 questionnaire. Primarily these were the addition of heroin and the abbreviation of the drug lists in some questions. The 1998 Texas School Survey of Drug and Alcohol Use included eight separate questions about drug use, each of which was asked for 17 different drugs. With the addition of heroin, modifications were deemed necessary to reduce the length of the survey and forestall respondent roll-off. Therefore, long drug lists were broken up into several abbreviated lists, including licit substances (tobacco and alcohol products), and illicit substances (marijuana, cocaine, etc.). The long drug list, including all 18 substances, was used in only three questions: the age of first use; frequency of use; and availability of substances. All other substance use questions utilized the shortened drug lists.

In the previous survey, separate questions asked "how many times" respondents used a substance in their lifetime, in the past year, and in the past thirty days. In 1998, these time periods were used as response categories to eliminate the need for separate "use-over-time" questions. A single question format asked respondents to evaluate "how recently" they had used substances, from no use ("Never heard of/Never used"), use in the past month, use in the past school year, and use in their lifetime. The combination of "Never heard of" and "Never used" in 1998 also reduced the collection of essentially repetitive data.

Finally, five new questions were included in the 1998 Texas School Survey of Drug and Alcohol Use; one question was deleted, and one was modified. The new questions included one to measure how students perceive how their parents feel about teenage cigarette smoking. A second was designed to solicit information regarding the ways in which students smoke marijuana (i.e.

joints, pipes, etc.). Additionally, three questions were included to solicit information about gambling, including the purchase of lottery tickets and the amount of money spent on gambling in the past year. Students were no longer asked whether they used substances during school or on weekends.

The comparability of responses to the revised secondary instrument with those elicited from the 1996 questionnaire was evaluated twice. An initial pilot test in one school district showed greater disparity between the two instruments than expected by chance. Because students appeared to be under-reporting lifetime use, Items #17 and #18 in the new survey were further revised to ask “How recently, if ever,” each of the substances had been used “even one time.”

A second pilot test assessed responses to this latter version of the 1998 secondary school survey. A random sample of 456 students in one district were administered the new instrument and 270 individuals in this same district responded to the 1996 version. The table below gives the percentages of participants who said that they had ever (i.e., in their lifetime) used each substance. As can be seen, the values are in most cases highly similar across both surveys. The differences that occurred were relatively small and inconsistent in direction—i.e., they were not consistently higher for one survey than for the other. The version tested in this second pilot study therefore constituted the final 1998 secondary school survey.

**TABLE 1. Pilot Test Results: Lifetime Use as Reported in the 1996
And Final 1998 Secondary Surveys**

SUBSTANCE	1996 SURVEY	1998 SURVEY
Any Tobacco Product	57.4	60.6
Cigarettes	54.7	56.8
Smokeless Tobacco	18.0	18.1
Any Alcohol Product	80.0	80.7
Beer	68.9	65.7
Wine Coolers	70.5	69.5
Wine	61.5	60.2
Liquor	63.2	64.9
Marijuana	41.5	42.6
Cocaine	11.8	13.3
Crack	5.7	5.5
Hallucinogens	16.3	18.7
Uppers	18.5	17.2
Downers	12.0	14.0
Rohypnol	6.3	8.3
Steroids	1.7	4.4
Ecstasy	8.9	11.0
All Inhalants	24.9	28.9

TABLE 1. Pilot Test Results (cont.)

SUBSTANCE	1996 SURVEY	1998 SURVEY
Liquid or Spray Paint	9.4	14.7
Whiteout, Correction Fluid	9.3	14.9
Gasoline	4.6	7.0
Freon	1.3	2.9
Poppers, Locker Room, etc.	3.7	3.0
Glue	6.0	8.4
Paint or Lacquer Thinner	7.2	9.3
Octane Booster	0.7	1.1
Other Sprays	5.0	5.5
Other Inhalants	12.0	11.4
Any Illicit Drug	44.7	46.4

Survey Sample

The sample of students for the 1998 survey was designed to be a random sample of all public school students between the fourth and twelfth grades in the state. In order to make administration practical, students were selected using a multi-stage cluster sampling procedure. This involved sampling districts, schools within districts, and classrooms within districts. All students in a sampled classroom were asked to participate in the survey.

Selection of Districts

The primary analytic cluster was the school district since the approval needed to administer the survey had to be obtained at that level. Districts are sampled with the probability of selection proportionate to size. Districts were stratified according to how urban the counties were in which they were located. The most urban strata involved counties with metropolitan populations of 1,000,000 or more, the next strata with those between 250,000 and 1,000,000, and the third strata with those metropolitan areas with less than 250,000. The remainder of the state constituted the final major strata. Due to their large size relative to other districts, a total of nine districts were sampled with a probability of one. This means that these districts are always selected as part of the sample.

The strata were further subdivided by relative size of the districts, so that each stratum had large and small districts. In addition, two of the strata also had substrata of probability-one districts. The strata are listed in Table 2.

TABLE 2. Distribution of Selected Districts by Urban Class Size

Stratum	Group
1-A	Large Urban Counties-larger districts
1-B	Large Urban Counties-smaller districts
1-P1	Large Urban Counties-probability-one districts
2-A	Medium Urban Counties-larger districts
2-B	Medium Urban Counties-smaller districts
2-P1	Medium Urban Counties-probability-one districts
3-A	Small Urban Counties-larger districts
3-B	Small Urban Counties-smaller districts
4-A	Non-Urban Counties-larger districts
4-B	Non-Urban Counties-smaller districts

Districts were selected for the state sample in the following manner:

1. The selected districts were listed separately for each of the four urbanization classes (1, 2, 3, and 4).
2. Within each urbanization class, districts were subdivided into probability-one districts (P1), other large districts (A), and small districts (B). Ignoring the districts in P1, the large and small district division is determined by ranking the districts in order total enrollment. The list is divided so that half the total enrollment in the strata is in the districts above the dividing point and half below it.
3. Within each stratum, except the probability-one strata, the districts are reordered based on a random number weighted by the size of the district. As many districts as were required were taken from the top of the list in each strata. The number of districts sampled from each stratum is listed in Table 2.
4. If a district refused to participate in the survey, and all conversion strategies failed, it was replaced with the next available district in that list of urban class and size stratum.

Obtaining cooperation from those districts that were randomly selected for the state sample was sometimes a problem. Two potential barriers to participation were addressed as school districts were recruited. Both concerns centered on the costs of the survey. Some schools were simply unable to afford the costs of the survey and survey administration. Others wanted to participate and pay for the survey with federal Drug Free School funds. However, federal law mandated that all assessments paid for through Drug Free School grants obtain active parental consent prior to survey administration.¹ Due to the large number of students surveyed, the additional burden upon

¹ Active parental consent requires that a parent or guardian sign a waiver allowing the school district to administer a survey to his/her child. The 1998 Texas School Survey of Drug and Alcohol Use was already required by Texas A&M's Internal Review Board of Human Subjects and Research to obtain passive consent from parents. Parents were informed about the survey and its administration date, and were offered the opportunity to deny (in written form) the school district permission to survey their children. Accordingly, parental notification was made and tacit consent was obtained for all survey participants.

school district staff, and the potential effects on the survey sample, efforts to obtain active consent were not viable. Accordingly, TCADA allocated non-federal funds so that the project was able to waive participation and sampling fees, and pay all shipping costs for all participating sample districts. As an additional incentive, districts were also offered discounted fees for participating the following year, and discounted campus level analyses fees.

Forty-nine of the original 85 selected districts participated in the study. Thirty-six districts were not able to participate, and most declined due to the lack of time and resources involved in survey administration. Many districts were preparing students for TAAS testing, and expressed concerns about diverting resources away from that preparation. In lieu of the declining districts, 19 additional districts were included in the final sample.

A total of sixty-seven secondary and sixty-six elementary districts **agreed to be surveyed as part of the** state sample, although two districts (Beeville ISD and Whitesboro ISD) provided no elementary-level data (See Table 4). The cooperation rate of the originally sampled districts was 58 percent, with rates ranging from 20 to 80 percent among the sampled strata. The cooperation rate was lowest for smaller districts in medium sized urban counties (Strata 2), however there were no consistent differences in cooperation rates between larger and smaller districts. In general, there was a trend for non-urban districts to have low cooperation rates (See Table 3). Attempts were made to replace non-participating districts with randomly selected districts within the same strata. A total of 64 percent of the students in the schools originally sampled were in the final sample.

TABLE 3. Cooperation Rate by Strata

	Strata 1A	Strata 1B	Strata 1P1	Strata 2A	Strata 2B	Strata 2P1	Strata 3A	Strata 3B	Strata 4A	Strata 4B
Total Cooperation Rate (58%)	50%	80%	80%	80%	20%	50%	80%	80%	47%	33%

TABLE 4. State Sample by Strata

Original State Sample		Actual State Sample	
Strata 1 A	N=10	Strata 1 A	N=7
Arlington		Arlington	
Aldine		Garland	
Cypress-Fairbanks		Irving	
Fort Bend		Mesquite	
Garland		Pasadena	
Katy		Plano	
Klein		Spring Branch	
Pasadena			
Plano			
Richardson			

Strata 1 B N=10

Birdville
Denton
Judson
Harlandale
Goose Creek
Grand Prairie
Grapevine-Colleyville
Keller
Lamar Consolidated
Mansfield

Strata 1 B N=9

Birdville
Denton
Grand Prairie
Grapevine-Colleyville
Harlandale
Judson
Keller
Mansfield
Spring

Strata 1P1 N=5

Dallas
Houston
Fort Worth
San Antonio
Northside

Strata 1P1 N=4

Dallas
Fort Worth
Houston
Northside

Strata 2A N=5

Beaumont
La Joya
McAllen
Socorro
Weslaco

Strata 2A N=5

Beaumont
La Hoya
McAllen
Mission Consolidated
Socorro

Strata 2B N=5

Eanes
Leander
Nederland
Port Neches-Groves
San Marcos

Strata 2B N=5

Del Valle
Donna
Edcouch-Elsa
Flour Bluff
San Marcos

Strata 2P1 N=4

Austin
El Paso
Ysleta
Corpus Christi

Strata 2P1 N=2

Austin
Ysleta

Strata 3A N=6

Brownsville
Clear Creek
Midland
Tyler
United
Wichita Falls

Strata 3A N=6

Brownsville
Clear Creek
Harligen
Midland
Tyler
United

Strata 3B	N=10	Strata 3B	N=9
Alvin		Alvin	
Brazosport		College Station	
College Station		Copperas Cove	
Copperas Cove		Dickson	
Dickson		Friendswood	
La Marque		Longview	
Longview		Los Fresnos	
Los Fresnos		Pearland	
Pearland		Texas City	
Texas City			

Strata 4A	N=15	Strata 4A	N=11
Alice		Beeville	
Bay City		Brownwood	
Denison		Corsicana	
Eagle Pass		Denison	
Granbury		Granbury	
Jacksonville		Jacksonville	
Kingsville		Levelland	
Lufkin		Plainview	
Plainview		Roma	
Roma		San Angelo	
San Felipe-Del Rio		Sherman	
San Angelo			
Sherman			
Victoria			
Waco			

Strata 4B	N=15	Strata 4B	N=9
Bellville		Alpine	
Bridgeport		Bridgeport	
Brooks		Brooks	
Commerce		Commerce	
Cotulla		Coldspring Oakhurst	
Crockett		Cuero	
Crystal City		Hearne	
Cuero		Robinson	
Devine		Whitesboro	
Diboll			
Lyford			
Madisonville Consolidated			
Muleshoe			
Palacios			
Robinson			

Participation of Border School Districts

In order to enable further analysis of substance use among students living on the Texas-Mexico border, school districts along the border were encouraged to participate in the 1998 Texas School Survey. The survey was offered at no cost to border districts, and data was collected from a broadly defined 28-county area. Subsequent analyses will focus on this larger area and a more strictly defined 13-county border region.

Districts in this designated special study area were encouraged to survey all eligible students. A total of 40 districts across 16 counties participated, a list of which is found in Appendix C. A total of 102,224 students were surveyed as part of this special assessment, consisting of 42,319 elementary students and 59,905 secondary students. In addition, 14 of the border districts surveyed were also included in the state survey sample. Since data were collected for all students in these 14 districts, a sample of students was selected for inclusion in the state analyses.

Allocation of Surveys among Districts

The state survey sample was designed to collect data from a minimum sample of about 5,555 students per grade, however, many districts chose to survey more than the minimum number of students specified in the state sampling plan. Some extremely small districts received somewhat more than a strict proportional allocation because, while the data were only needed from one or two students per grade, the survey was administered to the entire classroom. Similarly, in a few extremely large (urban) districts, fewer students were needed for accuracy than would result from a true proportional allocation. All surveys submitted from a cooperating district were included in the sample. Accordingly, in the final analyses, the data were weighted to provide an accurate proportional allocation.

Thus, although it had been estimated that the state sample would include at minimum 50,000 students, it actually included 91,168 elementary students and 158,616 secondary students (See Table 5). This significantly improves the accuracy of estimates.

TABLE 5. Number of Surveys Included in State Sample

	Total Non-blank Surveys	Number of Useable	Number Rejected*	Percent Rejected
Secondary	165,731	158,616	7,115	4.3%
Elementary	<u>92,858</u>	<u>91,168</u>	<u>1,690</u>	<u>1.8%</u>
Total	258,589	249,784	8,805	3.4%

*Surveys were rejected because the responses indicated exaggeration or the survey could not be matched to a sampled school and grade.

Allocation of Surveys among Classrooms and Campuses

Once the number of surveys to be administered in each district was established, the next step was to determine the number of classrooms to be surveyed per grade. This was achieved by dividing the number of questionnaires per grade (ascertained for each district using proportional population calculations) by the average number of students per class---20 for grades four through six, 22 for grades seven through twelve. The result of this computation indicated the total number of classes to be surveyed. These classes were selected so that as many different campuses as possible were in the final sample. Ideally, the classrooms surveyed were evenly distributed across all campuses in the district. If there were more campuses containing a given grade than classrooms needed, then a simple random selection procedure was used to determine which campuses would be sampled. In general, once a campus was selected, all relevant grades at that campus were surveyed. Therefore, campus selection was not independent between grades.

TABLE 6. Survey Distribution by Grade

	Grade	Number of Usable Surveys	Percentage
Elementary	4 th	28,554	31.3%
	5 th	32,274	35.4%
	6 th	30,340	33.3%
		91,168	100%
Secondary	7 th	31,188	19.7%
	8 th	29,892	18.8%
	9 th	31,304	19.7%
	10 th	24,729	15.6%
	11 th	22,445	14.2%
	12 th	18,758	11.8%
	158,616	100%	

Selection of Classrooms within Campuses

After the total number of classrooms to be surveyed in each grade at each campus was determined, it was necessary to identify specific classrooms. This selection procedure was performed by district personnel based on a set of guidelines provided by PPRI (illustrated in Appendix D). Members of district staff, under the direction of the Drug Free Schools representative, were asked to make a list by grade (according to teacher's last name or some other convenient method) of all classes held during a selected class period.

Some school districts sampled all students in all or some of the grades. In these districts, the methodology outlined above did not apply to the grades sampled at 100 percent. The Houston ISD and Austin ISD used a list of all students from which to conduct a random sample of the students. Therefore, there are no campuses and classrooms sampled.

Survey Administration Procedures

Districts selected for inclusion in the state sample were notified about the project via letter and were sent a descriptive brochure, illustrated in Appendix E. State sample districts that planned to administer a local drug and alcohol survey had virtually no procedural changes resulting from their involvement in the statewide project. In those districts that surveyed grades four through twelve, sufficient data was collected from all relevant campuses to meet the data collection needs of the statewide survey. These districts benefited from their inclusion in the state survey project because they were not charged for the surveys that became part of the state database. The larger number of surveys from these districts were weighted down so that their contribution to the final sample was in correct proportion.

In those instances where state sample districts were collecting local data for an incomplete combination of grades, or where they were not conducting local surveys at all, the campus and classroom selection procedures described above were applied. Arrangements for giving the survey were established on an individual basis with these districts. Since those not doing local surveys did not stand to gain directly from having the survey administered in their district, an effort was made to be as accommodating as possible. PPRI was able to arrange survey administration in the selected schools and classes by school personnel.

Houston ISD and Austin ISD district used a computer-drawn random sample of all students. On each campus where the students are located, the students are requested to go to a specified room where the survey is conducted. Once in the room, the survey is conducted as it would be in a classroom in the other districts.

Relevant personnel in the selected districts and campuses were provided with complete instructions and materials necessary to administer the survey (see Appendix F). Classrooms were selected randomly by PPRI based on information from a computer printout from the district or Campus Information Form. Teachers in selected classrooms were given a script to read so that all students would receive a standardized set of instructions. Teachers were also asked to complete a Classroom Identification Form that provided data on the number of students that should have taken the survey but were absent, and the number that were present but failed to complete the survey. This information was useful for computing error estimates. After the surveys were administered in each classroom, they were sealed in an envelope along with the Classroom Identification Form. The envelopes from all participating classrooms were collected and returned to PPRI.

Data Entry and Analyses

As noted earlier, the format of the survey instruments enabled them to be scanned optically. Upon receipt at PPRI, the instruments were logged in, coded, and scanned by staff or trained personnel.

Exaggerated Responses

Because the Texas School Survey data are based entirely upon respondents' description of their own behavior, it is inevitable that some students will under- or over-report their use of drugs or alcohol, and to the extent possible PPRI attempted to identify and eliminate data from those respondents. Two checks were incorporated into the data analysis program to identify

exaggerators. First, both elementary and secondary students were asked about their use of a false drug call “cosma.” Data from students claiming to have used this substance were considered suspect and dropped from the analyses.

Second, checks were run to identify any students claiming extremely high levels of drug and alcohol use. Unbelievable high substance use for elementary students was defined as the use of five or more substances on 11 or more occasions in the past year or over a lifetime. Secondary students were defined as exaggerators based on the following criteria: (1) students reported that they had five or more drinks of two or more beverages every day; (2) students reported that they had consumed three or more alcoholic beverages every day; or (3) students reported that they used four or more drugs (other than cigarettes, alcohol, or steroids) eleven or more times in the past month. As with those cases in which students reported using “cosma,” data from students reporting exaggerated use were also dropped from the analyses. Less than two percent (1.8%) of the total elementary sample exaggerated. The percentage of secondary school students who exaggerated (4.3%) was more than twice that of elementary students.

Unreported Grade Levels

When students failed to report their grade level, it was impossible to determine unequivocally in which grade these students’ data should be analyzed. When a grade level was missing, an estimate of the grade was made based on the students’ age and the data were retained. Table 6 identifies the range of students’ ages and the corresponding grade levels that were assigned. If both grade and age were missing, the data were dropped from the analyses.

TABLE 6. Age-Based Grade Assignments.

Age	Elementary Grade Level	Age	Secondary Grade Level
9	4 th Grade	12	7 th Grade
10	5 th Grade	13	8 th Grade
11	6 th Grade	14	9 th Grade
		15	10 th Grade
		16	11 th Grade
		17 or older	12 th Grade

Quality Control Measures

To ensure the quality of the statewide survey data, a number of internal checks were put into place to guide survey processing. First, a quality control analyst oversaw the implementation of all pre- and post-analysis quality control procedures. As the following paragraphs describe, many aspects of PPRI’s plan for quality control were embedded in automated procedures. However, there is no replacement for human oversight. The quality control analyst monitored and tracked the processing of each district’s surveys from the initial mailing through the

production of the final state report. Responsibilities included ensuring that surveys were properly coded and scanned and checking for anomalies in the final table of results.

In addition to the safeguards resulting from careful project oversight, there were also a number of procedural checks against error. For example, there was a possibility, however remote, that after the bindings of a set of survey instruments were cut, the instruments could be dropped or otherwise placed out of order. If this occurred, it is conceivable that some pages of data could have been read into the incorrect computer record. To resolve this problem, each instrument used in the 1998 survey was printed with a five-digit "litho-code" number. With this coding process, every page of a given instrument is printed with the same scannable number, but a unique number is assigned to every instrument. By using the litho-code, when each page of an instrument is scanned it will automatically be read into the correct computer record. In this way, even if the pages from different instruments were shuffled together and read randomly, all data derived from the same instrument would automatically be read to the same data record.

Litho-coding also enabled PPRI to confirm that data from every survey instrument read was associated with the correct district. Survey instruments were mailed to participating districts in consecutive order. By recording the beginning and ending instrument numbers going to each district, PPRI was able to check the litho-codes scanned for a given district. In this way, any stacks of data that could potentially have been inadvertently mislabeled could be easily identified.

Programming checks were also incorporated into the data analysis program by cross-analysis. That is, the same data was run in several different ways using existing programs, and program outputs were then compared for consistency. Confidence is high that these quality control features ensured valid and reliable survey findings.

Weights, Standard Errors, and Confidence Intervals

Weights were applied to each case based on the strata (i.e., Urban Class I through IV), district, and campus. The weights were applied so that the aggregation of students in each campus, district, and strata reflected their proportions in the actual district, campus, and strata populations. The formulae used to determine these weights are presented in Appendix G.

Standard errors and confidence intervals were estimated for each grade and the aggregation. The formulae used are presented in Appendix H. The table of standard errors and confidence intervals for 30 day and lifetime use of substances by grades are presented in Appendix I.

Item Response Analysis

As with any survey, there were potential threats to the validity of the conclusions drawn from the data. Therefore it was important to examine the ways in which students' were responding to the questionnaire. Following the collection and TCADA approval of the data, all of the items on the survey were analyzed to assess the integrity of the data. We were specifically interested in exploring potential misinterpretation of questions, dishonest responses, and inattention to the survey questions and instructions.

Separate analyses were conducted for the total sample of elementary and secondary school survey responses. Additional analyses, exploring potential ethnic and grade-level differences were also conducted for the statewide secondary instrument.

Overall, the vast majority of students in both elementary and secondary schools appeared to have provided valid responses to the 1998 Texas Schools Survey of Substance Use. Few Students were classified as giving exaggerated responses. Likewise, any inconsistency that occurred was generally most likely due to inattention to survey instructions and questions, misinterpretation of the questions, or fatigue. Specific findings of the item analyses are highlighted below. A detailed discussion of the item analyses for both instruments is provided in Appendix J.

Elementary Survey

- Some students used the "Never heard of" and "Never used" response options interchangeably.
- When items concerning use of all substances were examined, generally less than 1.00% of the responses were inconsistent with initial reports of the most recent use.
- Students who responded inconsistently about substance use were more likely to have initially reported no use and then acknowledged use on a later question, than to have cited use and recanted the use later in the survey.
- Questions at the end of the survey were somewhat more likely to be left unanswered than those at the beginning.
- Students began answering most items that contained questions about multiple drugs, however, they routinely neglected to finish the item and answer questions about the final few drugs on the list.

Secondary Survey

- The largest percentages of inconsistent responses were most likely due to the survey's use of different terms for the same category substances across questions (i.e., cigarettes versus tobacco products, or spray paint versus inhalants).
- Other inconsistencies may be attributable to different interpretations of "use". Some students appear to interpret use in an answer as "regular use", whereas others seem to cite "use" when they may mean that they have "tried" a substance.
- Very few students who reported substance use in the past 30 days early in the survey subsequently denied use of the substance in later questions about the past 30 days.
- In contrast to the elementary students, secondary students (across all grades) were generally more likely to report use of a substance and later deny it, than visa versa.
- Asian and Caucasian students were more likely to respond consistently than students from other ethnic backgrounds.
- Students were more likely to leave questions at the end of the survey unanswered than those at the beginning.
- Some groups of questions were largely ignored by fairly large percentages of respondents.

Conclusion

The Texas School Survey has become a valuable policy tool for both state and local educators and policy-makers. The survey, performed every two years, provides timely and relevant information about current drug and alcohol use patterns among young people enrolled in the Texas' public schools. Furthermore, longitudinal analysis can provide insight into changes in drug and alcohol prevalence over time. As was noted in the introduction, every state survey culminates in a TCADA publication providing an overview of findings to date. Data is also available for independent analysis by policy-makers and academicians.