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Acknowledgments

Contents

Abstract

This study examined the relationship between students' self-reported high school grade point average (HSGPA) from the SAT® Questionnaire and their HSGPA provided by the colleges and universities they attend. The purpose of this research was to offer updated information on the relatedness of self-reported (by the student) and school-reported (by the college/university from the high school transcript) HSGPA, compare these results to prior studies and provide recommendations on the use of self-reported HSGPA. Results from this study indicated that even though the correlation between the self-reported and school-reported HSGPA is slightly lower than in prior studies ($r = 0.74$), there is still a very strong relationship between the two measures. In contrast to prior studies, students underreport their HSGPA more often than they overreport it. This shift could be due to a variety of factors, including changes in grading practices in high schools such as grade inflation, increased student confusion in reporting weighted averages, variation in recalculations of HSGPA by colleges and universities, and other methodological factors.

Examining the Accuracy of Students' Self-Reported High School Grade Point Average

It is not uncommon to make use of self-reported information from students, such as high school grades, test scores, and extracurricular activities, in higher education research. Primarily due to the difficulty and legality in obtaining official school records or documentation of such information, researchers and higher education administrators are forced to rely on and make inferences using students' self-reported information. The question then remains whether or not the self-reported information is trustworthy or accurate. In particular, this paper will focus on the accuracy of self-reported HSGPA across all students, as well as by selected subgroups, including gender, race/ethnicity, parental education and income level, and SAT score band.

Prior research has examined the accuracy of students' self-reported grades as compared to their actual grades and has shown that there is a high correlation between the two. Maxey and Ormsby (1971) analyzed a sample of almost 6,000 students from 134 high schools, and found that the correlation between self-reported and actual grades ranged from 0.81 to 0.86. They did not find any bias in the accuracy of reporting grades by race/ethnicity or socioeconomic status, although they did find that females tended to report their grades slightly more accurately than males. Maxey and Ormsby indicated that their findings support the validity of self-reported grades for use in higher education research.

After reviewing a number of studies on this topic, Baird (1976) also agreed that self-reported grades are as useful as school-reported grades, citing that correlations generally ranged from 0.80 to 0.96. Sawyer, Laing, and Houston (1988) analyzed self-reported grades in various courses with students' actual grades from high school transcripts. The results showed a median correlation of 0.80, with higher accuracy for more content-specific courses, such as chemistry, than for more diverse or open-ended course work, such as "other history" (p. 11). Similarly, in 1991, Schiel and Noble found the median correlation between self-reported and actual grades in various courses by sophomores from 83 high schools in one Southern state to be 0.79. They concluded that while self-reported grades appear to be sufficiently accurate for use in research, they may not be the best information to use when making crucial decisions about students, such as admission decisions.

Most recently, Kuncel, Credé, and Thomas (2005) conducted a meta-analysis of the validity of self-reported HSGPA among other academic measures. They examined 37 studies that included 60,926 students and found the correlation between self-reported HSGPA and actual HSGPA to be 0.82. The correlations were also computed by gender and race/ethnicity. Kuncel et al. did not find large differences in the validity of self-reported HSGPA between females and males (0.82 versus 0.79, respectively); however, they did find that the validity of self-reported HSGPA was greater for white students than for nonwhite students (0.80 versus 0.66, respectively). Additionally, they found that lower actual academic performance, based on SAT scores, was associated with lower reliability of self-reported grades. Kuncel et al. argued that self-reported grades may be valuable and accurate reflections for academically higher-performing students but are of much less use for academically lower-performing students.

The SAT® Questionnaire and Self-Reported HSGPA

The SAT Questionnaire, completed at the time of SAT registration, asks students a number of questions regarding their demographic and educational backgrounds, as well as their academic interests and preferences in college or university characteristics. This questionnaire is revised periodically and is widely used in College Board research, as well as by other researchers requesting these data. One item from this questionnaire, commonly used in educational research, asks students to indicate their HSGPA on a 12-point scale ranging from a high of A+ to a low of E or F (see Figure 1). Research by Boldt (1973) on the first version of the SAT Questionnaire, formerly known as the Student Descriptive Questionnaire (SDQ), found a median correlation of 0.87 between self-reported and school-reported HSGPA, and that 79 percent of self-reported and school-reported HSGPAs matched exactly (as cited in Baird, 1976).

When there was a major revision to the SAT Questionnaire in the 1985-86 academic year, Freeberg (1988) studied the accuracy of student responses on this updated instrument and found the correlation between self- and school-reported HSGPA to be 0.79. Additionally, 87 percent of the sample of 6,039 students had a self-reported HSGPA that matched their actual HSGPA. However, it should be noted that Freeberg's definition of an exact match was extremely broad, with an A+ through a B–, for example, considered as one grade unit or an exact match. Of those students whose self-reported HSGPA did not match their actual HSGPA, Freeberg found that students were much more likely to overreport rather than underreport their HSGPA. Freeberg noted that there were only very slight differences in overreporting or underreporting by gender and by race/ethnicity when controlling for prior academic performance; however, students with a lower actual HSGPA were far more likely to overreport their HSGPA than were higher-performing students.

The current study examined the accuracy of self-reported HSGPA, based on responses to the 2005–2006 version of the SAT Questionnaire, versus students' school-reported HSGPA. This study was primarily undertaken in order to provide updated information on the relatedness of self-reported and school-reported HSGPA, compare the results to previous studies, and offer recommendations on the use of self-reported HSGPA in future research.

Method

Sample

The students included in the sample were taken from the national SAT admission validity study sample (for a full description see Kobrin, Patterson, Shaw, Mattern and Barbuti, 2008), whereby colleges and universities provided first-year student performance data for the entering class of fall 2006 to the College Board to validate the use of the SAT for admission and placement in higher education. Participating colleges and universities transmitted their data to the College Board via the Admitted Class Evaluation Service℠ (ACES℠). ACES allows institutions to design local admission validity studies, and includes an option of providing either HSGPA or HS rank from their institutional records or from students' self-reported HSGPA or rank from their SAT Questionnaire responses. Students with valid SAT scores and first-year grade point averages (FYGPA), and who attended institutions that chose to supply their own HSGPA (based on transcript information from their own admission records), were included in the sample. Students from institutions that supplied high school rank were not studied because there were a limited number of such instances. Ultimately, 40,301 students from 32 institutions were included in the sample for this study.

Materials

SAT Scores

Official SAT scores obtained from the 2006 college-bound senior cohort database were used in the analyses in order to determine students' academic performance subgroups. This database is composed of the students who have an SAT score and reported to graduate from high school in 2006. The SAT is composed of three sections — critical reading, mathematics, and writing — and the score scale range for each section is 200 to 800. Students' most recent scores were used.

SAT Questionnaire (SAT-Q) Responses

Self-reported HSGPA, gender, race/ethnicity, and parental income and education level were obtained from the SAT-Q, which is completed at the time the student first registers for the SAT, and is updated by the student when he or she chooses to retake the test. The accompanying instructions on the SAT-Q note that student responses help provide information about their academic background, activities, and interests to aid in planning for college and to help colleges find out more about students. They are also told

that the Student Search Service®[1] uses their responses, provided that they give permission to do so.

School-Reported HSGPA

Students' school-reported HSGPAs were based on high school transcript information in their admission records and were provided by the colleges and universities they chose to attend. These HSGPAs were reported by colleges and universities on a variety of scales, which are shown in Table 1. Students at institutions reporting HSGPAs on 0.00–4.00, 0.00–4.33, or 0.00–100.00 were included in the sample ($k = 32$), as HSGPAs on other scales (e.g., 0.00–160.00) were too difficult to interpret and translate for this study. Additionally, most institutions reported HSGPAs on the 0.00–4.00 scale ($k = 22$), so the school-reported HSGPA scale used in this study was 0.00–4.00; HSGPAs between 4.00 and 4.33 were coded as 4.00.

Self-Reported HSGPA

Self-reported HSGPAs were obtained from the SAT-Q completed by students during SAT registration (see Figure 1). The self-reported HSGPA is on a 12-point scale ranging from A+ (97–100) to E or F (below 65). This scale can be translated to a conventional 12-point numeric GPA scale ranging from 0.00 to 4.33. To be consistent with the scale used by most colleges and universities in the study and to avoid the artificial inflation of students' overreporting their HSGPA, the self-reported HSGPA scale was truncated to a 0.00–4.00 or an 11-point scale. That is, the self-reported HSGPAs that were reported as 4.33 were truncated to 4.00. See Table 2 for self-reported and school-reported numeric and letter-grade HSGPA equivalents.

Design and Procedure: Cleaning and Scaling the HSGPA Data

In order to determine matches and discrepancies between self-reported HSGPA and school-reported HSGPA, both measures had to be on the same scale. In keeping with national research on HSGPA from the 2005 U.S. Department of Education High School Transcript Study (Shettle et al., 2007) and because it was the primary HSGPA scale used by colleges and universities in the sample (20 percent), it was determined that a 0.00 to 4.00 scale would be the most appropriate for the study.

Therefore, the self-reported HSGPA scale of 0.00–4.33 (5 percent of institutions) was truncated to 0.00 to 4.00 to prevent results from falsely indicating that students were overreporting their own HSGPAs. In addition, four institutions with HSGPAs on a 0.00–100.00 scale were translated to the 0.00–4.00 scale (see Table 2 for the scale translation details). The 0.00–4.00 scale can be considered to be an 11-point ordinal scale that includes the values 0.00, 1.00, 1.33, 1.67, 2.00, 2.33, 2.67, 3.00, 3.33, 3.67 and 4.00.

Results

Descriptive statistics for all academic measures were computed, as well as correlations between the self-reported and school-reported HSGPAs for the total sample and by subgroup. Also, the percentage of students underreporting, matching and overreporting their own HSGPAs (self-reported) as compared to their school-reported HSGPAs was calculated.

Descriptive Statistics

The mean, standard deviation, minimum and maximum for each academic measure examined in this study are presented in Table 3. Of note, the mean difference in the self-reported HSGPA minus the school-reported HSGPA was near zero (–0.04), indicating that on average, students accurately report their HSGPA with a slight tendency to underreport (negative value) their HSGPA in comparison to their school-reported HSGPA. In other words, the mean school-reported HSGPA ($M=3.58$, $SD=0.43$) was slightly higher than the mean self-reported HSGPA ($M=3.54$, $SD=0.45$). The notion that students are underreporting or that schools are overreporting HSGPAs is contrary to prior research, specifically Freeberg's (1988) study.

Reliability: Correlations Between Self-Reported and School-Reported HSGPA

The relationship between self-reported and school-reported HSGPA for the total group as well as subgroups, including gender, race/ethnicity, parental education, parental income and SAT score band, is presented in Table 4. Specifically, the correlations[2] and percentages of

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1. When students take the SAT, for example, the College Board's Student Search Service (SSS®) allows them the option to give their names and information to colleges and scholarship programs that are looking for students like them. The following student information can be sent to colleges and universities: name, address, gender, birth date, high school code, graduation year, ethnic identification (if provided), intended college major (if provided), and e-mail address (if provided).

2. As the HSGPA scales are ordinal, nonparametric statistics would seem to be the most appropriate for examining correlations with these data. However, because there are 11 HSGPA categories and a comparison of Pearson's r and Spearman's *rho* yielded extremely similar results, the Pearson correlations (parametric statistics) are reported in the tables.

students underreporting, matching and overreporting were computed. Furthermore, the percentage of students whose self-reported HSGPA was within +/– three grades of their school-reported HSGPA was also computed.

Among all students, the correlation between self-reported and school-reported HSGPA was 0.74. With regard to gender, the correlation was slightly lower for females ($r = 0.73$) than for males ($r = 0.75$). For race/ethnicity, these correlations ranged from 0.65 for Asian students to 0.76 for white students. For parental education level, there was a correlation of 0.73 between self-reported and school-reported HSGPA for students whose parents have earned less than a bachelor's degree, while there was a correlation of 0.75 for students whose parents have earned higher than a bachelor's degree. For parental income level, the correlation for students in the lowest income bracket was 0.70, while the correlation for students in the highest income bracket ($100,000+) was 0.77. The correlations by SAT score band show a large variation with a correlation of 0.62 for the lowest score band (600–1200) and a correlation of 0.71 for the highest score band (1810–2400).

Next, the percentage of students whose self-reported HSGPA exactly matched their school-reported HSGPA was computed along with the percentage of students who underreported their HSGPA by three grade points and those who overreported their HSGPA by three grade points (see Table 4). If one thinks of the 11-point HSGPA scale ranging from 0.00 to 4.00, a student reporting to have a B+/3.33 when their college also reported their HSGPA as a B+/3.33 is considered to be an exact match. A student reporting to have a B/3.00 but who overreported by one grade point from the school would have a B–/2.67 school-reported HSGPA. If the same student had underreported by two grade points, he or she would have an A–/3.67 school-reported HSGPA. By summing the percentage of students underreporting and overreporting within plus or minus three grade points, one can determine a more comprehensive are HSGPA match (e.g., all grades from A+ through B+ considered to be matching HSGPA).

For the total sample, 52 percent of students reported an HSGPA that precisely matched their school-reported HSGPA. Of the remaining 48 percent, 29 percent underreported their HSGPA and 19 percent overreported their HSGPA. Figure 2 depicts the distribution of exact matches, underreporting and overreporting for the sample. The percentage of students with a self-reported HSGPA that was within one full grade (e.g., range of B+ through B–) of the school-reported HSGPA was 89 percent (22 percent + 52 percent + 15 percent). These findings suggest that when inaccurate reporting does occur, the inaccuracy tends to be minimal in magnitude. That is, for students who do not report an exact match, they are likely to be off by only one grade point, which translates to a 0.33 on the 0.00 to 4.00 scale. This is in keeping with the mean difference found between self-reported HSGPA and school-reported HSGPA (–0.04). The same analyses were conducted by gender, race/ethnicity, parental education and parental income subgroups and are also presented in Table 4.

With regard to gender, females more accurately reported their HSGPA, with 54 percent of females having an exact match compared to males with a 50 percent match rate. Interestingly, males and females overreported at relatively the same rate (20 percent and 19 percent, respectively) as well as underreported at relatively the same rate (29 percent and 28 percent, respectively). Using the more liberal criteria of matching within one grade level, the match rate increased to 89 percent for males and 91 percent for females. For race/ethnicity, African American students had the lowest exact match rate (42 percent), whereas Asian/Asian American/Pacific Islander students had the highest exact match rate (55 percent). These percentages increased to 85 percent and 90 percent, respectively, when self-reported and school-reported HSGPAs were matched within one grade level of each other. As for parental education and income, the match rate tended to increase with education and income level. Finally, the largest discrepancies of match rates occurred in SAT score band groups. For students in the lowest SAT score band, their exact match rate was 30 percent (76 percent matched within +/– one grade) compared to 64 percent for students in the highest SAT score band (94 percent matched within +/– one grade). That is, higher-ability students were more than twice as likely to accurately report their HSGPA. These results led to an investigation of the match between self-reported and school-reported HSGPA by students' self-reported HSGPA (see Table 5). The darkest shaded diagonal in Table 5 shows the percentage of HSGPAs that exactly match. The lighter shades indicate the percentage overreporting and underreporting within one grade by self-reported HSGPA, with the lower row indicating overreporting and the higher row indicating underreporting by the student. The percentage of self-reported HSGPAs that exactly matched the school-reported HSGPAs steadily decreased as the school-reported HSGPA decreased, ranging from a 78 percent match for an A to a 10 percent match for a C.[3] The number of students reporting to have an HSGPA equivalent to an A is 13,658 and decreases down to 48 for students reporting to have an HSGPA equivalent to a C–. The percentage of students overreporting their HSGPA steadily decreased as the HSGPA decreased, and the percentage of students underreporting their HSGPA increased as the HSGPA decreased.

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3. Self-reported grades with less than 15 students in the group were not reported.

To disentangle the effects of accuracy of self-reported HSGPA as a function of academic ability (SAT) versus demographic characteristics, the percentage of students exactly matching, and overreporting and underreporting their HSGPA by gender, race/ethnicity, parental education and income level by SAT score band was computed and is provided in Table 6. Within all subgroups, there is a consistent increase in the percentage of HSGPAs that exactly match as the SAT score band increases. Similar to Table 5, this indicates that most subgroup differences related to the exact HSGPA match percentages are linked to prior academic performance rather than particular racial/ethnic or parental income group membership, for example.

Discussion

The results of this research show that students are essentially accurate in reporting their HSGPA. The uncorrected correlation between self-reported and school-reported HSGPA was 0.74, which is lower than in earlier studies but still a strong correlation. Even more encouraging, when the two measures were examined by the traditional method of a match rate within one full grade level (e.g., a self-reported A would be considered a match to a school-reported A–), there was 89 percent agreement, indicating that any discrepancies between the two measures are very small.

In contrast to previous studies, this research found that when students' self-reported HSGPAs did not match the school-reported information, their indication of HSGPA was more likely to be *lower* than the school-reported HSGPA. Previous studies showed more students overreporting rather than underreporting their HSGPA (Baird, 1976; Freeberg, 1988; Kuncel et al., 2005; Maxey & Ormsby, 1971). The reasons for the increase in underreporting by students could be the result of numerous influences, including changes in grading practices such as grade inflation in high schools, increased confusion in reporting weighted averages and other methodological factors.

One possible explanation for the increase in the underreporting of students' self-reported HSGPA is grade inflation in U.S. high schools. Widespread grade inflation in high schools over the past many years has been well documented and discussed (see Camara, Kimmel, Scheuneman, and Sawtell, 2003; Woodruff and Ziomek, 2004), with the largest proportional increases at the higher end of the grade distribution (Camara, 1998; Ziomek and Svec, 1995). With students actually receiving higher high school grades, there is less "room" for the students to overreport their HSGPA or indicate earning higher HSGPAs than they have actually received. This is

clear when examining Table 5. Sixty-three percent of all school-reported HSGPAs are at or above an A– (or 3.67).

There has also been an increase in the number of students enrolled in honors, dual enrollment and Advanced Placement® (AP®) courses throughout the country (College Board, 2008), which can lead to some confusion in the reporting of students' weighted HSGPAs. In 1971, Maxey and Ormsby explained that a slight drop in the correlation between self-reported and school-reported HSGPA was primarily the result of the introduction of dual grading systems in the U.S. With increased honors courses offered to students, there appeared to be confusion when reporting weighted grades. Although students are not often aware of their recalculated, or weighted HSGPAs, colleges and universities are more likely to be examining and reporting students' recalculated HSGPAs that may take into account advanced-level courses or attendance at more academically competitive high schools (Rigol, 2003). This certainly leads to a larger discrepancy between self-reported and school-reported HSGPA measures — and this discrepancy would likely result in the school-reported HSGPAs being the higher of the two.

There are also methodological influences that may contribute to increased underreporting rather than overreporting. In this study, there is probably a time lapse between *when* the two sources of information on HSGPA were collected. The students' self-reported information was collected at the time of their latest SAT administration, whereas school-reported information was collected at the time of their application to college. Students may take the SAT in March of their junior year of high school but apply to college in January of their senior year. The later (school-reported) HSGPA could be higher due to increased opportunities for growth and maturity that could contribute to improved grades. It could also be related to the increased opportunity for seniors to take elective courses that tend to be more in line with students' interests and can sometimes be less academically demanding. Students are also able to drop some of their more advanced math and science courses in their senior year, which could lead to higher HSGPAs. In addition, the students in this sample had already been admitted to college. As the results of this study show, academically stronger students are less likely to overreport their HSGPAs. Had the sample also included students who ultimately did not go to college — or perhaps included students from two-year institutions or less selective institutions than those in the sample — the students may have been less likely to underreport their HSGPAs.

Similar to previous research, there were small differences between race/ethnicity subgroups and students of varying income levels, with regard to the relationship between self-reported and school-reported

HSGPA (Freeberg, 1988; Kuncel et al., 2005; Maxey and Ormsby, 1971; Sawyer et al., 1988). For gender, the correlations for males and females were quite similar. With regard to race/ethnicity, white students had higher correlations between self-reported and school-reported HSGPA than did nonwhite students. While there was very little difference in the correlations by parental education level, there was some difference by parental income level, with the highest correlation for students in the highest income category and the lowest correlation among students in the lowest income category. Rather than being related to actual wealth, this finding is likely related to the association between greater social and financial resources being linked to higher academic performance that, in turn, is linked to more accurate reporting of HSGPA. This was supported by the results provided in Table 6. Students in the lowest SAT score band had the lowest correlation between self-reported and school-reported HSGPA among all subgroups analyzed. For students in the lowest SAT score band, their exact match rate was 30 percent (76 percent for a match within +/– one grade) compared to 64 percent for students in the highest SAT score band (94 percent for a match within +/– one grade). These findings echo the recent meta-analysis on the validity of self-reported HSGPA by Kuncel et al. (2005), whereby higher-ability students reliably self-reported their HSGPA, while lower-ability students were much less reliable.

Limitations

There are a few limitations of this study that deserve mention. Most of these limitations, however, are not unique to this particular study but are characteristic of the research in this domain. First, research examining the comparability of self-reported and school-reported HSGPA must first ensure that the measures are on the same scale, which naturally introduces error into the relationship. First, the researchers had to interpret the many different school-reported HSGPAs and place them all on one standard scale (after the college or university had presumably done the same translation during the admission process). Second, there is some error in self-reported HSGPA as students from high schools with various grading policies and standards must report their HSGPA on the given SAT Questionnaire scale. Students may be unsure as to the role of weighting in their HSGPA and may also be unsure of whether to report their weighted or unweighted HSGPA on the SAT Questionnaire. Added instructions to this item or perhaps the opportunity to write or "bubble" in their precise HSGPA may ameliorate this issue.

Similarly, the accuracy of the match between self-reported and school-reported HSGPA is highly reliant on the operationalization of that grade match. Larger bands of grades considered to be the same will result in much higher match rates than exact matches of self-reported and school-reported HSGPAs. This notion is particularly important in comparing the results of prior studies in this domain to each other and to the current study. In order to be transparent and arm the reader with the most complete information, this study presents the results based on various categories of grade matches. Furthermore, any discrepancies between the self-reported and school-reported HSGPAs could be due to temporal differences in the request and receipt of such information.

Conclusion

This research analyzed the relationship between self-reported and school-reported HSGPA among a large, national sample of students. Findings suggest that students are quite accurate in reporting their HSGPA. While the correlation between the self-reported and school-reported HSGPA is lower than the correlations found in prior research, a strong relationship between the two measures remains. In contrast to earlier related studies, students underreported their HSGPA more often than they overreported it. This shift could be due to a variety of factors, including changes in grading practices in high schools, increased student confusion in reporting weighted averages, variation in recalculations of HSGPA by colleges and universities, and other methodological factors that include a time lapse in collection of the two HSGPAs and a college-going sample.

Finally, this study highlighted the difficulty in rescaling school-reported HSGPAs for comparison across colleges, as well as the difficulty that must occur when rescaling students' HSGPAs for comparison within an institution. When receiving thousands of applications with HSGPAs on a wide variety of scales from students, enrollment officers have the daunting responsibility of scientifically and fairly placing these important and complex admission criteria on the same scale for comparison. Just as this process introduced error into the current study, it is likely to introduce error into the admission process. Future research should focus on ways to fairly translate and recalculate HSGPAs at various schools. It should also focus on the most effective ways to increase the accuracy of students' self-reported HSGPA.

References

Baird, L. L. (1976). *Using self-reports to predict student performance* (Research Monograph No. 7). New York: The College Board.

Camara, W. J. (1998). *High school grading policies* (College Board RN-04). New York: The College Board.

Camara, W. J., Kimmel, E., Scheuneman, J., & Sawtell, E. A. (2003). *Whose grades are inflated?* (College Board Research Report No. 2003-04). New York: The College Board.

College Board. (2008). *The 4th annual AP report to the nation.* New York: The College Board.

Freeberg, N. E. (1988). *Analysis of the revised student descriptive questionnaire, phase I* (College Board Report No. 88-5). New York: The College Board.

Kobrin, J. L, Patterson, B. F., Shaw, E. J., Mattern, K. D., & Barbuti, S. M. (2008). *Validity of the SAT for predicting first-year college grade point average* (College Board Research Report No. 2008-5). New York: The College Board.

Kuncel, N. R., Credé, M., & Thomas, L. L. (2005). The validity of self-reported grade point average, class ranks, and test scores: A meta-analysis and review of the literature. *Review of Educational Research*, *75*, 63–82.

Maxey, E. J., & Ormsby, V. J. (1971). *The accuracy of self-report information collected on the ACT test battery: High school grades and items of nonacademic achievement* (ACT Research Report No. 45). Iowa City, IA: The American College Testing Program.

Rigol, G. W. (2003). *Admissions decision-making models: How U.S. institutions of higher education select undergraduate students.* New York: The College Board.

Sawyer, R., Laing, J., & Houston, M. (1988). *Accuracy of self-reported high school courses and grades of college-bound students* (ACT Research Report 88-1). Iowa City, IA: The American College Testing Program.

Schiel, J., & Noble, J. (1991). *Accuracy of self-reported course work and grade information of high school sophomores* (ACT Research Report 91-6). Iowa City, IA: The American College Testing Program.

Shettle, C., Roey, S., Mordica, J., Perkins, R., Nord, C., Teodorovic, J., Brown, J., Lyons, M., Averett, C., & Kastberg, D. (2007). *The nation's report card: America's high school graduates* (NCES 2007-467). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.

Woodruff, D. J., & Ziomek, R. L. (2004). *High school grade inflation from 1991 to 2003* (ACT Research Report 04-4). Iowa City, IA: The American College Testing Program.

Ziomek, R. L., & Svec, J. C. (1995). *High school grades and achievement: Evidence of grade inflation* (ACT Research Report 95-3). Iowa City, IA: The American College Testing Program.

Table 1

HSGPA Grading Scales Across Higher Education Institutions in the Study

Scale	k	% of Sample
Not provided	52	51%
0–1	1	2%
0–4	22	20%
0–4.33	6	5%
0–5	21	19%
0–20	1	0%
0–100	4	3%
0–110	2	1%
0–160	1	0%

Note: Students at institutions on the 0–1, 0–5, 0–20, 0–110 and 0–160 scales were not included in the analyses due to difficulty in interpreting the scale values.

Table 2

Recoding of School- and Self-Reported HSGPA

School- and Self-Reported HSGPA (0.00–100.00; 0.00–4.33)	Matched to 0.00–4.00 Scale	Matched to Letter Grades
93.00–100.00; 3.671–4.330	4.00	A
90.00–92.99; 3.331–3.670	3.67	A–
87.00–89.99; 3.001–3.330	3.33	B+
83.00–86.99; 2.671–3.000	3.00	B
80.00–82.99; 2.331–2.670	2.67	B–
77.00–79.99; 2.001–2.330	2.33	C+
73.00–76.99; 1.671–2.000	2.00	C
70.00–72.99; 1.331–1.670	1.67	C–
67.00–69.99; 1.001–1.330	1.33	D+
65.00–66.99; 1.000	1.00	D
Below 65.00; Below 0.999	0.00	E or F

Table 3

Descriptive Statistics for the Academic Measures (N = 40,301)

Academic Measure	M	SD	Min.	Max.
Self-Reported HSGPA	3.54	0.45	1.00	4.00
School-Reported HSGPA	3.58	0.43	1.33	4.00
Self-Reported HSGPA Minus School-Reported HSGPA	−0.04	0.32	−3.00	2.00
SAT Critical Reading	554.86	92.10	200.00	800.00
SAT Mathematics	571.92	92.78	200.00	800.00
SAT Writing	547.99	90.91	200.00	800.00

Table 4

Self-Reported Versus School-Reported HSGPA Accuracy: Correlations, Percentage of Exact HSGPA Match, Underreporting and Overreporting of HSGPA in Grade Steps by Race/Ethnicity, Parental Income, Parental Education Level and SAT Score Band

				Student Underreporting			*Exact Match*	*Student Overreporting*		
		n	*r*	*−3*	*−2*	*−1*		*+1*	*+2*	*+3*
Total Sample		40,301	0.74	1%	5%	22%	52%	15%	3%	1%
Gender	Female	22,073	0.73	1%	5%	22%	54%	15%	3%	1%
	Male	18,228	0.75	1%	5%	23%	50%	16%	3%	1%
Race/Ethnicity	American Indian/ Alaska Native	238	0.73	2%	5%	23%	52%	15%	3%	2%
	Asian/ Asian American/ Pacific Islander	4,559	0.65	1%	5%	23%	55%	12%	3%	1%
	African American	2,332	0.71	1%	7%	23%	42%	20%	6%	2%
	Hispanic	2,089	0.72	1%	7%	21%	50%	16%	5%	1%
	White	27,869	0.76	1%	5%	22%	53%	15%	3%	0%
	Other	1,347	0.72	1%	5%	23%	49%	17%	4%	1%
	No Response	1,867	0.71	1%	5%	21%	50%	18%	4%	1%
Parental Education	Less than Bachelor's	11,901	0.73	1%	5%	22%	50%	17%	4%	1%
	Bachelor's	12,919	0.76	1%	5%	23%	53%	15%	3%	0%
	More than Bachelor's	13,275	0.75	1%	5%	23%	54%	14%	3%	0%
	No Response	2,206	0.69	1%	5%	22%	49%	17%	5%	1%
Parental Income	Up to $20,000	1,599	0.70	2%	6%	23%	46%	17%	5%	1%
	$20,000 to $60,000	7,557	0.73	1%	5%	21%	52%	15%	4%	1%
	$60,000 to $100,000	9,182	0.75	1%	5%	22%	53%	15%	3%	0%
	$100,000 +	8,979	0.77	1%	5%	23%	53%	16%	3%	0%
	No Response	12,984	0.74	1%	5%	23%	52%	15%	3%	1%
SAT Score	600–1200	826	0.62	3%	10%	26%	30%	20%	7%	2%
	1210–1800	26,596	0.72	1%	6%	24%	47%	17%	4%	1%
	1810–2400	12,879	0.71	0%	3%	19%	64%	11%	2%	0%

Note: One grade step is equivalent to the difference in a B− and a B. Two grades steps are equivalent to the difference in a B− and a B+. Three grade steps are equivalent to the difference in a B− and an A−. Due to rounding, totals may not equal 100 percent. *r* represents the correlation between self-reported and school-reported high school GPA.

Table 5

Accuracy of Self-Reported HSGPA by HSGPA Value

| | | Self-Reported HSGPA | | | | | | | |
		A (*n* = 13,658)	A– (*n* = 10,214)	B+ (*n* = 8,066)	B (*n* = 5,671)	B– (*n* = 1,704)	C+ (*n* = 675)	C (*n* = 261)	C– (*n* = 48)
School-Reported HSGPA	A (*n* = 14,825)	**78%**	32%	8%	3%	1%	2%	3%	2%
	A– (*n* = 10,547)	17%	**45%**	34%	14%	4%	2%	3%	4%
	B+ (*n* = 7,795)	4%	17%	**39%**	35%	16%	7%	4%	8%
	B (*n* = 4,796)	1%	4%	17%	**35%**	40%	29%	18%	17%
	B– (*n* = 1,649)	0%	1%	2%	10%	**28%**	36%	32%	15%
	C+ (*n* = 550)	0%	0%	1%	2%	9%	**19%**	28%	29%
	C (*n* = 126)	0%	0%	0%	0%	2%	5%	**10%**	17%

Note: HSGPA groups with fewer than 15 students are not reported.

Table 6

Percentage of Exactly Matching, Underreporting and Overreporting of HSGPA by Demographic Characteristics in the SAT Score Band

		SAT Score Band	n	Student Underreporting %	Exact Match %	Student Overreporting %
Gender	Female	600–1200	524	40%	31%	30%
		1210–1800	15,065	30%	48%	21%
		1810–2400	6,484	21%	68%	12%
	Male	600–1200	302	42%	30%	28%
		1210–1800	11,531	31%	46%	23%
		1810–2400	6,395	25%	60%	15%
Race/Ethnicity	American Indian or Alaska Native	1210–1800	183	32%	48%	20%
		1810–2400	51	20%	65%	16%
	Asian, Asian American or Pacific Islander	600–1200	78	51%	27%	22%
		1210–1800	2,794	32%	50%	17%
		1810–2400	1,687	23%	64%	13%
	Black	600–1200	185	41%	24%	35%
		1210–1800	1,910	30%	42%	28%
		1810–2400	237	30%	54%	17%
	Hispanic	600–1200	98	38%	31%	32%
		1210–1800	1,602	30%	48%	22%
		1810–2400	389	22%	62%	16%
	White	600–1200	395	41%	34%	26%
		1210–1800	18,143	31%	48%	22%
		1810–2400	9,331	23%	65%	13%
	Other	600–1200	36	25%	28%	47%
		1210–1800	895	31%	44%	25%
		1810–2400	416	26%	60%	14%
	No Response	600–1200	30	37%	30%	33%
		1210–1800	1,069	30%	44%	26%
		1810–2400	768	24%	59%	17%
Parental Education	< B.A.	600–1200	459	42%	28%	29%
		1210–1800	9,406	29%	47%	23%
		1810–2400	2,036	21%	67%	13%
	B.A.	600–1200	205	39%	36%	26%
		1210–1800	8,620	31%	48%	21%
		1810–2400	4,094	23%	65%	13%
	> B.A.	600–1200	95	41%	31%	28%
		1210–1800	7,151	32%	47%	21%
		1810–2400	6,029	24%	63%	14%
	No response	600–1200	67	33%	27%	40%
		1210–1800	1,419	30%	45%	25%
		1810–2400	720	26%	58%	16%

11

Table 6 *continued*

Percentage of Exactly Matching, Underreporting, and Overreporting of HSGPA by Demographic Characteristics in the SAT Score Band

		SAT Score Band	n	Student Underreporting %	Exact Match %	Student Overreporting %
Parental Income	<$20K	600–1200	122	48%	17%	35%
		1210–1800	1,249	31%	46%	23%
		1810–2400	228	22%	63%	15%
	$20K–60K	600–1200	250	42%	33%	25%
		1210–1800	5,598	29%	48%	23%
		1810–2400	1,709	21%	69%	11%
	$60–100K	600–1200	148	39%	36%	26%
		1210–1800	6,332	31%	48%	21%
		1810–2400	2,702	22%	67%	12%
	>100K	600–1200	85	38%	33%	29%
		1210–1800	5,289	32%	47%	21%
		1810–2400	3,605	23%	61%	16%
	No Response	600–1200	221	38%	29%	33%
		1210–1800	8,128	31%	46%	22%
		1810–2400	4,635	24%	63%	13%

Note: Groups with fewer than 15 students are not reported.

The SAT Questionnaire allows you to provide information about your academic background, activities and interests to help you in planning for college and to help colleges find out more about you. The Student Search Service® also uses this information.

Indicate your cumulative grade point average for all academic subjects in high school.

- A+ (97–100)
- C+ (77–79)

- A (93–96)
- C (73–76)

- A– (90–92)
- C– (70–72)

- B+ (87–89)
- D+ (67–69)

- B (83–86)
- D (65–66)

- B– (80–82)
- E or F (Below 65)

GRADE POINT AVERAGE

A+	A	A–	B+	B–	C+	C	C–	D+	D	D–	E/F
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Figure 1. Self-Reported HSGPA Item on the SAT Questionnaire (2005–2006).
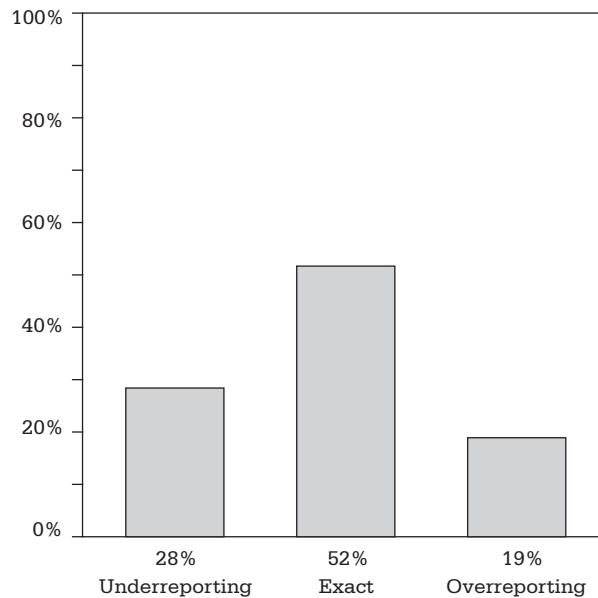

Figure 2. Percentages of students underreporting, exactly matching or overreporting their HSGPA.