

# **Pilipino Americans and the Scholastic Aptitude Test at the University of Hawai'i at Manoa: A Review of the Literature**

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The Scholastic Aptitude Test is one of the traditional measures of academic potential used by many colleges and universities in their admission decisions. Combined with high school grade point average (HSGPA) and extracurricular activities, the SAT acts as a screening device for the selection of freshman students. The history of the the SAT and its use with ethnic minorities has been one of controversy. In many colleges across the nation, the SAT has been criticized as an inadequate measure of minority performance due to cultural and test bias (Thorndike, 1971; Cleary, 1968; Sue and Abe, 1988). In Hawai'i, with its diverse ethnic population, the SAT has met similar criticism (Ikeda, Pun and Totto, 1985; Social Science Research Institute, 1988; Cabras, 1987; 1988; 1990).

The purpose of this paper is to review the current literature on the SAT and Pilipino American academic performance at the University of Hawai'i at Manoa (UHM). From this review, conclusions about the SAT and its use with Pilipino Americans will be drawn with recommendations about future directions for research.

Essentially, two types of research have been conducted on the SAT with ethnic minorities: descriptive and predictive. The descriptive studies are presented first.

## **Descriptive Research**

Four studies have examined the pattern of SAT scores and college grade point average. The first study to be reviewed focused upon a proposed policy change that would increase university cutoff scores on the SAT and raise the minimum high school grade point average (HSGPA) (Ikeda, Pun and Totto, 1985). The next study examined the freshman performance of Native Hawaiian, Pilipino American, Japanese American and all students at the University of Hawai'i at Manoa from 1979 to 1981 (SSRI, 1988). Another study confirmed data from previous works (Takeuchi, 1988), and a final paper examined the performance of freshman Pilipino American students from 1979 to 1985 (Cabras, 1989b).

In 1985, Ikeda, Pun and Totto studied a proposed increase in admission criteria. UHM's Admissions and Records Office set the SAT cutoff score for each subtest at 430 points. The combined minimum score is 860. The minimal entering high school grade point average is 2.5 on a 4.0 scale. The proposed change would raise the current SAT cutoff point for each subtest from 430 to 450, thereby raising the combined total score to 900. Concurrent with the increase in SAT scores, the minimum high school grade point average would be raised from 2.5 to 2.8. In an effort to determine if the new admissions criteria would be equitable for the diverse Hawai'i population, the researchers focused upon ethnicity as related to SAT scores and university performance.

The subjects consisted of first-time resident freshman, enrolled for fall semester 1983. Evaluation of the proposed changes in admissions criteria was based upon the percent of correct decisions made by rigorous application of each criterion. Hence, any person with a score under 430 on the verbal or math portions would not be an acceptable candidate based upon the current criteria. With the proposed changes, anyone with a score of 450 or less would be eliminated. The performance of Chinese American, Pilipino American, Native Hawaiian, Korean American, Japanese American, Caucasian/Hispanic American, mixed ethnicity and other students was observed for the freshman year with comparisons made among the above mentioned groups. These contrasts were based upon Type I error rates. A Type I error is often referred to as a false negative and indicates, for the purposes of this paper, a decision making error that denies admission to students capable of university academic success. Academic success is defined as a 2.0 or above on a 4.0 grade scale. The ideal criterion for selection reduces Type I error to a minimum.

Results supported the current criteria as predicting fewer false negatives than the proposed change. Findings found the proposed criteria would make more Type I errors, thereby eliminating a greater number of students able to maintain academic standing, than current standards. The undergraduate student population at UHM would be dramatically reduced should the new criteria take effect. When combined with the new minimum high school GPA, 70.1% of the freshman population would be eliminated for the first semester, and would climb to 74.5% for the second semester.

Additionally, the study found that in practice, the Admissions Office did not adhere strongly to the 430 or 860 cutoff. In some instances, more weight appears to be placed on the minimum 860 combined score than upon any single subtest score. Thus a student with a verbal score of less than 430 can make up for this deficit by scoring high enough on the math portion to meet the combined

minimum. In other cases, the admissions criteria combined with entering GPA sufficiently outweighed poor SAT scores. Had the current criteria been based solely upon subtest cutoff scores, 75.3% of the first-time freshman class would have been denied admission.

Another finding in the Ikeda, Pun and Totto study (1985) was a significant disparity between the verbal and mathematics scores of all ethnic groups on the SAT. Math scores were, on the average, 100 points higher than the verbal scores. The researchers suggested that the math subtest may be the least culturally ambiguous and therefore a better reflection of student abilities than the verbal portion.

As regards verbal mean scores, European Americans scored highest, followed by Japanese Americans, Native Hawaiians, Chinese Americans, Pilipino Americans, and Korean Americans. Korean Americans had the highest mean SATM score, followed by Chinese Americans, Japanese Americans, European Americans, Native Hawaiians and then Pilipino Americans.

The researchers found all ethnic groups increased their second semester cumulative GPA over the first semester. Of the students who dropped out or withdrew during the first semester and who did not re-enroll in the second, Native Hawaiians had the largest percentage (11%) of all groups. Japanese American and Chinese American students displayed the lowest attrition rates (4%).

Finally, Ikeda, Pun and Totto (1985) found that in actual practice, the Admissions Office does not rigorously apply the current 430 subtest score minimum. They do allow math scores to attenuate verbal score deficits by considering combined scores rather than individual subtest scores. As with any university, the admission decision is not solely based upon SAT scores. Other aspects of the pre-college experience such as high school GPA and extracurricular activities are also utilized.

In 1988, Alu Like, Inc. commissioned a study by the University of Hawaii Sociology Department and the Social Science Research Institute (SSRI) to assess the status of Native Hawaiian students in the University of Hawai'i System. A portion of this study systematically traced the progress of first-time Native Hawaiian, Japanese American and Pilipino American freshmen from the years 1979 through 1981 at the Manoa campus. Information contained in the report covers pre-college admission characteristics, demographic characteristics, educational achievement at UHM, and graduation rates for both first-time freshmen and community college transfer students. In regard to SAT scores,

Table 1

Mean SAT Verbal Scores of First Time Freshman  
Fall 1979 - Fall 1985\*

Year	Ethnicity																	
	Pilipino American	Native Hawaiian	Japanese American	European American	Chinese American	All	N	SATV	sd	N	SATV	sd	N	SATV	sd			
1979	106	389	75	69	413	100	970	429	84	275	490	98	302	409	103	2,098	432	95
1980	114	389	75	125	419	73	934	435	79	256*	484*	94*	307*	408*	100*	2,028	431	87
1981	132	377	83	136	411	78	941	427	77	238	478	90	312	408	97	2,047	424	90
1982	124	390	81	109	430	79	865	440	79	236	478	82	273	411	102	1,889	435	89
1983	146	408	86	117	423	86	910	433	84	245	471	87	290	411	96	2,033	431	91
1984	138	395	91	93	414	78	735	433	83	189	471	85	253	404	95	1,730	426	91
1985	153	402	76	120	424	83	767	444	84	181	490	95	218	419	95	1,745	437	91

\* scores for Chinese - American and European - American students prorated for 1980.

Table 2

Mean SAT Math Scores of First Time Freshman  
Fall 1979 - Fall 1985\*

Year	Ethnicity																	
	Pilipino American	Native Hawaiian	Japanese American	European American	Chinese American	All	N	SATV	sd	N	SATV	sd	N	SATV	sd	N	SATV	sd
1979	104	481	91	69	463	104	970	532	95	275	521	99	302	537	92	2,096	522	98
1980	114	471	90	125	499	78	933	542	87	256*	519*	93*	306*	547*	97*	2,027	529	93
1981	132	465	89	136	493	94	941	530	88	237	516	87	311	557	102	2,045	521	94
1982	124	481	91	108	484	92	865	537	86	236	517	91	273	561	103	1,888	527	94
1983	146	490	85	117	490	90	910	537	90	245	519	109	290	555	97	2,033	529	96
1984	138	496	80	93	491	91	735	543	85	189	513	95	252	564	91	1,728	531	91
1985	153	489	82	119	508	97	767	546	85	181	528	101	218	551	91	1,744	532	91

\* scores for Chinese - American and European - American students prorated for 1980.

Table 3  
Mean SAT Combined Scores of First Time Freshman  
Fall 1979 - Fall 1985\*

Year	Ethnicity																	
	Pilipino American		Native Hawaiian		Japanese American		European American		Chinese American		All							
	N	SATV sd	N	SAT	sd	N	SATV	sd	N	SATV	sd	N	SATV	sd				
1979	106	860	161	69	876	186	970	960	156	275	1011	165	302	946	156	2,098	953	164
1980	114	860	138	125	918	128	934	977	142	256*	1001*	159*	307*	952*	157*	2,028	960	150
1981	132	842	150	136	903	151	941	957	141	238	991	153	312	963	159	2,047	944	154
1982	124	871	135	109	910	137	865	977	140	236	995	146	273	972	160	1,889	962	151
1983	146	989	143	117	910	153	910	970	150	245	990	172	290	966	151	2,033	959	156
1984	138	890	145	93	905	151	735	976	144	189	983	148	253	966	145	1,730	957	152
1985	153	891	136	120	927	165	767	990	146	181	1017	170	218	969	145	1,745	969	155

\* scores for Chinese - American and European - American students prorated for 1980.

findings presented in Tables 1 to 3 indicate that the average SATV score for Native Hawaiians over a six year period was lower than those of Japanese American students and higher than for Pilipino American students. The Alu Like study also found that despite SAT scores below the university cutoff, most Native Hawaiians, Pilipino Americans and Japanese Americans attained grade point averages of 2.0 or better. Although verbal scores below the cutoff point were not adequate discriminators of college performance, Native Hawaiians had the highest attrition rate across all ethnic groups at the end of the freshman year: Native Hawaiian (12.2%); Pilipino American (6.7%); Japanese American (3.2%); and all students (5.9%).

Another study (Takeuchi, 1988) found that SAT scores reflected the same pattern as in the Alu Like study. Takeuchi found that Pilipino Americans scored the lowest on the SAT, with Korean American, Native Hawaiian, Japanese American and Chinese American students all scoring higher. Similarly, graduation rates for Native Hawaiian students were the lowest (34%), while graduation rates for Chinese American students were highest (70%). The Pilipino American graduation rate was 50%.

In a study that focused exclusively on the academic performance of Pilipino American students using the Alu Like database (SSRI, 1988), Cablas (1989b) reported that in a seven year period (Fall 1979 through Fall 1985) Pilipino Americans had the lowest SAT scores of all groups studied with a greater range restriction than European Americans. In terms of the other ethnic groups, Native Hawaiians had the second lowest scores, with Chinese Americans and Japanese Americans in between the European Americans who had the highest scores. Academically, Pilipino Americans had an average first semester GPA higher than that of Native Hawaiians and lower than Japanese American students (see Table 4). Of those students who scored below the 430 SATV cutoff, approximately 70% performed at or above a 2.00 grade point average during the first semester of university study (see Table 5). Findings support the differential validity hypothesis for Pilipino Americans regarding SAT scores.

In brief, Pilipino Americans score consistently lower on entrance exams than Native Hawaiian, Japanese American, European American and Chinese American students. Yet, most of the Pilipino American students maintain academic standing. Fortunately for low scoring minority populations, the Admissions Office criteria entrance exam cutoff scores are not rigidly applied (Ikeda, Pun and Totto, 1985), especially since the SATV scores of minorities are generally 100 points lower than their SATM scores. In short, the laxity in application of admission standards by the university regarding SAT cutoff scores

Table 4  
First Semester GPA of Ethnic Groups of the  
Freshman Classes of 1979 thru 1981

Freshman Class	Ethnicity							
	Pilipino American		Native Hawaiian		Japanese American		All	
	N	GPA	N	GPA	N	GPA	N	GPA
1979	119	2.44	85	2.25	1,023	2.48	2,271	2.50
1980	137	2.36	152	1.96	986	2.60	2,225	2.51
1981	146	2.32	159	2.12	975	2.58	2,228	2.55

Table 5  
First Time Freshman by Ethnic Group Maintaining  
Academic Standing with SAT Verbal Scores  
Below Admission Cutoff in the First Semester

Year	Ethnicity							
	Pilipino American		Native Hawaiian		Japanese American		All	
	N	%	N	%	N	%	N	%
1979	77	68.8	40	60.0	514	69.8	1,062	71.3
1980	80	72.5	73	49.3	432	76.6	1,001	73.1
1981	97	70.1	83	60.2	478	75.3	1,063	74.7

may reflect a greater emphasis upon other pre-college admission criteria or upon combined scores.

**Predictive Studies**

Four recent studies examined the predictive validity of the SAT for ethnic minorities at UHM. Of these, two focused on the long-term prediction of persistence of four ethnic groups (Kerkvliet, Nagtalon-Miller and Cablas, 1987; Cablas, 1988a). Another studied the predictive and differential validity of SAT scores for Pilipino Americans and Native Hawaiians (Cablas, 1989a). The final work also focused upon the predictive and differential validity of the SAT for eleven ethnic groups at UHM during a ten year period (Cablas, 1990).

The prediction of long-term persistence study involved four ethnic groups: Pilipino Americans, Native Hawaiians, Japanese Americans and European Americans (Kerkvliet, Nagtalon-Miller and Cablas, 1987; Cablas, 1988a). Findings support the descriptive research in that SAT mean scores followed the same incremental pattern when ranked from lowest to highest, Pilipino Americans scored lowest. However, SAT scores successfully predicted the graduation rates of all European Americans and Pilipino American males. However, the traditional predictors of college performance did not work with Japanese American students who had the highest graduation rates. Furthermore, findings indicate that many Pilipino American, European American and Japanese American students who withdrew from UHM did not do so based upon academic standing. Most of those who did not re-enroll maintained a college GPA of 2.00 or better, indicating that academic ability was not a factor in the withdrawal of these students. As a result, SAT scores are poor indicators of graduation from UHM for these ethnic groups.

In another study, Cablas (1989a) assessed the differential and predictive validity of the SAT for Pilipino Americans and Native Hawaiians at UHM. The average cumulative college GPA (CMG) for the freshmen class of 1981 for both ethnic groups was used as the criteria. The various SAT scores were used as the predictors (SATV, SATM, SATC). Pilipino Americans (n=99) had a CMG of 2.47 (sd = .68) and a SATC = 779, SATV = 363, SATM = 458, while Native Hawaiians had 2.09 (sd = .94), 802, 411, 478, respectively. These findings indicate differential validity for Pilipino American students. On the average, Pilipino Americans scored below the admissions cutoff on the verbal portion of the test and had a lower combined admissions test score than Native Hawaiians. Yet Pilipino Americans performed adequately in college. Thus the lower scores

of Pilipino Americans support differential validity in that they maintained academic standing. In fact, the SATV score was the only predictive test score for this group. However, predictive validity was not supported for Native Hawaiians. The SAT did not work for Native Hawaiians even though they did perform within academic standards. However, generalization of this study to the whole population of Pilipino Americans and Native Hawaiians remains difficult because of its limitations. The sample was small and restricted to only one freshman class. College cumulative GPA was inclusive of all data and not just grades for the end of the freshman year.

In 1990, Cablas expanded his research to include ten years of freshman data from 1979 to 1988. Unlike previous predictive studies, this work focused only on the prediction of freshman year performance. The study examined the differential and predictive validity of the SAT. Additionally, norms were developed for eleven ethnic groups in Hawai'i: European Americans, Japanese Americans, Pilipino Americans, Korean Americans, African Americans, other Asian Americans, Portuguese Americans, Native Hawaiians, Chinese Americans, Pacific Islanders, Chicano/Latinos, and mixed ethnicity. Differential validity was confirmed for first year performance by testing the orientation of the hyperplanes for the regression equations for each ethnic group. The hyperplanes for each group were significantly different and indicated that separate regression equations for the various ethnic groups were necessary and appropriate. Furthermore, the criterion referenced norms revealed that the UHM cutoff scores require adjustment for each ethnic group. In other words, the subtest cutoff of 430 and the combined score minimum of 860 may exclude many students who are able to succeed at UHM. Cablas summarized these results and formed six categories. Table 6 presents a synopsis of these results. In brief, a single cutoff score does not apply equally well across ethnic groups. Different cutoffs for each ethnic group would indicate judicious use of the SAT if it is to remain a part of the screening process in admission decisions.

Briefly, the predictive studies have focused on long-term prediction and the predictive and differential validation of the SAT for select minority groups. Although the SAT was not designed to predict university persistence, it was successful with European Americans and Pilipino American males. It was not predictive of Native Hawaiian performance. Both of the above studies are limited in that they used one freshman class and the research results may reflect a cohort effect. Cablas (1990) focused upon freshman year performance for ten freshman classes. This study found that the SAT was not a consistent predictor of minority performance and confirmed differential validity for the various

ethnic groups in the study. Hence, separate cutoff scores are necessary to screen accurately prospective students of differing ethnic backgrounds.

As related specifically to Pilipino Americans, it appears that the males within this group are, in long term prediction, as predictable as European Americans. In terms of first year performance, the SAT was differentially valid for Pilipino Americans and required a separate regression equation for improved prediction. Additionally, Pilipino Americans succeed at the UHM with low SAT scores.

### Discussion

Many of the issues that surround the SAT and U.S. mainland minority populations appear applicable to ethnic minorities in Hawai'i. For example, both mainland and island minority populations generally have lower scores with a greater restricted range than European American counterparts. As with mainland minorities, the restricted range may produce lower validity and endanger the reliability of the results for island minorities. Thus, there appears to be consistency in the arguments of test bias and measurement error as a result of a measurably decreased score range. Self-selection issues may also play an important role in Hawai'i since it is costly to send an island student to a mainland college. Hence, those who remain in Hawai'i may be from lower socioeconomic (SES) background. It is known that SES is very much a confounding factor on the SAT (Pedhauzer, 1988). Those from low SES backgrounds tend to score lower than their middle and upper SES peers.

Additionally, the question of item discrimination among ethnic groups remains. Apparently the items do not discriminate well between Pilipino Americans and Native Hawaiians. However, there does appear to be better item discrimination among Chinese American and Japanese American students. The standard deviations of Chinese American and Japanese American students resemble the European American sample more than any other minority group (Cablas, 1989b). Chinese American students in Hawai'i have the highest mean SATM score among the different ethnic groups. They also have the greatest standard deviation indicating a broader range of scores. Yet European Americans still have the highest total mean for combined SAT scores. All island minority groups have lower SATV scores and, in some instances, higher SATM scores than European Americans. Interestingly, the lower verbal score was predictive of long term performance rather than the higher math score.

Table 6  
Six Categorical Findings Based  
Upon SAT scores and First Year GPA

Category	Definition	Ethnic Group
I	SAT scores near university cutoff range perform as expected.	Portuguese-American
II	SAT scores perform in the expected direction, however, established cutoff scores do not distinguish increases in criterion performance.	Pilipino-American, Korean-American, Mixed Ethnic
III	No effect of SAT score. Students perform consistently above chance levels regardless of test score.	Chinese-American, European-American, Japanese-American
IV	Increased SAT score may not mean increased criterion performance.	Pacific Islander, Native Hawaiian
V	Combined SAT scores provide more consistent information about performance than either the math or verbal sections separately.	Other Asian-American
VI	Inconsistent findings, groups not otherwise classifiable.	Chicano/Latino

Additionally, some of these issues take on a very different perspective when applied to minority groups in Hawai'i. For example, cumulative college GPA had no relationship with SAT scores for Native Hawaiians. Test scores did not account for the persistence of Japanese American students, who score the second highest of all groups on the entrance exam. Thus, it would seem that many people would erroneously conclude that since Japanese Americans do well in school and meet the SAT requirements, the SAT would be predictive of persistence. Furthermore, Pilipino Americans, who score the lowest of all ethnic groups on the SAT, perform as well as any other student group with higher scores. Native Hawaiians, who have higher SAT scores than Pilipino Americans, have the highest withdrawal rate and the lowest average college GPA (SSRI, 1988). Another related issue arises when considering the admittance of students with lower scores. Are academic standards lowered when a number of minority students with lower SAT scores are admitted into undergraduate studies? Do professors then reduce their standards of academic performance because the

class grading curve could be lowered as a result of admitting students with lower SAT scores? The assumption of less academic skills based on low SAT scores seems logically appropriate. However, grade point averages of these populations reflect a lower, but not significantly lower, GPA than their non-minority peers. Pilipino Americans have the lowest SAT scores, but they also have the highest entering GPA (Ikeda, Pun and Lotto, 1984; SSRI, 1988; Cablas, 1988b). Clearly, differential validity with concurrent assignment of meaning to SAT scores for different ethnic groups in Hawai'i becomes more pronounced.

### Conclusion

Research on the SAT at the University of Hawai'i has answered some vital questions about the SAT. First, unlike mainland ethnic groups, Hawai'i ethnic groups have a broader range of scores. Chinese American and Japanese American students in Hawai'i score higher than Chicano/Latino and African American students. Pilipino Americans and Native Hawaiians have scores equivalent to Chicano/Latinos and African Americans. However, like mainland ethnic groups, verbal scores are lower than the scores for mainstream students. Across all ethnic groups in Hawai'i and the mainland, verbal scores were markedly lower than scores for their European American counterparts. Unlike mainland students, island minority students' math scores are much higher than those of mainland minorities. Often some minority students have math scores that are higher than those of European Americans. Despite lower verbal scores, ethnic minorities succeed at UHM. However, not all minorities succeed even with acceptable admissions scores. Native Hawaiians, who score above the 430 and 860 criteria, do not perform as well as other ethnic groups. Pilipino Americans, who have the lowest entrance exam scores, perform acceptably. One study found that the SAT did not predict the long-term performance of Native Hawaiians. Native Hawaiians are the first group reported for which the SAT had no long-term predictive value, and this finding raised the issue whether the SAT is a useful measure for Native Hawaiians. The implications of this possibility may have serious repercussions for the SAT nationwide.

The issues raised regarding the psychometric integrity of the SAT for ethnic minorities are just as significant in Hawai'i as they are in the rest of the United States. The standardization group for the SAT remains problematic. Again, the group is not sufficiently diverse as the population that attends UHM. Range restriction is also problematic. Ranges are as restricted as for other minority groups, but there are some exceptions in the Hawai'i population. Chinese

American and Japanese American students appear to have ranges equivalent to the European American student population.

All ethnic minorities tested and admitted to the UHM scored markedly lower on the verbal portion of the test than on the math section. The European American population does not reflect this same difference. This finding supports previous claims of cultural bias within the verbal subtest (Thorndike, 1971; Goldman and Hewitt, 1976). Hawai'i minorities identified as capable of succeeding in college, such as Chinese American and Japanese American students, score low on the verbal section of the test.

In summation, Pilipino Americans demonstrated that despite low SATV scores, they are able to succeed at the university level. This finding has been consistent for ten years. Furthermore, at least in Hawai'i, differential validity does exist and is a factor when considering students from this ethnic group for admission. However, one major question remains to be answered and that is whether or not the Pilipino American population has met with adverse impact, or discriminatory selection processes, as a result of use of the SAT as a screening device.

Finally, another question arises as the new form of the SAT is prepared ("Test facing," 1990); will this new form create further barriers for ethnic minority students, especially Pilipino Americans, since it will include a written essay? It would appear that this written portion has a high probability of being fraught with the same problems as the current verbal subtest. Of course, the reality of this assumption remains to be seen, but it is clear that unless the new test is carefully pretested on selected ethnic groups, it is highly likely that it will be as problem laden for ethnic minorities as previous forms of the SAT.

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