ABSTRACT
                This study addresses the validation of a holistic English
assessment process used at Cabrillo College (California). The process of
prompt development, scoring rubrics, reader training, scoring, and
administration procedures have remained largely unchanged over the years.
This report provides new evidence on content validity, consequential and cut
score validity, reliability, test bias review, and disproportionate impact.
To provide data for the validation study, 18,398 English assessments between
fall 1994 and fall 2000 were used. Information was derived from the CAPP
system and Cabrillo's MIS database. Procedures and standards of the
California Community College Chancellor's Office for assessment instrument
validation provided the framework for the analyses in this report. A
representative committee of three English faculty reviewed the assessment
test for content validity. For each course content item, reviewers checked
off the essay grading criteria that would test for that course content item.
All 3,932 essays from fall 1999 to fall 2000 were reviewed for interrater
reliability. In general, Cabrillo's assessment appears to place students with
reasonable accuracy. Proportions of placements were significantly different
between ethnicities and between genders. About three-quarters of Cabrillo
assessed students felt they were appropriately qualified for the English
class in which they were enrolled. Logistic regressions were run to determine
the interaction of educational background and demography. (JA)

Cabrillo College

English Holistic Assessment Validation

submitted to

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Introduction

Cabrillo College has maintained a locally managed holistic English assessment process. This process previously received full approval from the Chancellor's office and is now due for validation renewal. The process of prompt development, scoring rubrics, reader training, scoring, and administration procedure have remained largely unchanged. Current prompts are presented in Table 1 and current scoring rubrics are attached. This report provides new evidence on content validity, consequential and cut score validity, reliability, test bias review, and disproportionate impact.

Table 1. English Assessment Prompts

1. We constantly get advice from others about the way we should live. Describe a piece of advice you have received that you agree or disagree with and use an example or experience to show why you agree or disagree with it.
2. Write about a turning point in your life.
3. Our first impression of a person often turns out to be inaccurate. Describe how your impression of a person improved after you got to know him or her.
4. Describe a past experience (mental or physical), which has taught you something about your values, expectations, or beliefs.

Methods

18,398 English assessments between Fall 1994 and Fall 2000 provided data for the validation study. Information was derived from the CAPP system and Cabrillo's MIS database. Procedures and standards of the California Community College Chancellor's Office for assessment instrument validation provided the framework for the analyses in this report. Data were analyzed with SPSS 10.0.7.

Content Validity

A representative committee of three English faculty reviewed the assessment test for content validity. The committee was provided with the prompts, anchor papers, reader norming documents, and target course outlines. They were given a matrix (see attachment) with essay grading criteria on one axis and course content for target courses on the other axis. For each course content item, reviewers checked off the essay grading criteria that would test for that course content item. English has three target courses for the assessment process: English 290, a basic skills course; English 100, a pre-transfer level course; and English 1A, a transfer level course. Each member of the committee found that every course content item was covered by at least one essay grading criterion. The high degree of agreement between the test and course content is expected as the faculty who teach the target courses designed our assessment.

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Table 2. English Assessment Content Validity

Eligibility for:	Measured Prerequisites	Unmeasured Prerequisites	Unrelated Criteria	% Faculty Agreement
English 100	6	0	0	100
English 1A	7	0	0	100

Reliability

All 3,932 essays from Fall 1999 to Fall 2000 were reviewed for interrater reliability. All essays are initially reviewed by two reviewers and in the case of a tie, a third reader makes the determination. Readers generally consist of English faculty and instructional assistants. Readers receive training on the scoring rubric including anchor papers that are examples of writing at a given level. Periodic norming sessions are conducted to promote interreader consistency especially when a new reader has been added to the pool. Readers are typically unaware of other readers' scores but additional measures could be taken to ensure this is the case. The initial two readings place students into the same class 90.9% of the time and agree exactly 81.7% of the time and showed a 0.83 correlation indicating an adequate reliability.

Consequential and Cut Score Validity

To assess the accuracy and validity of placement, randomly selected English sections were given surveys midway through the Fall 2000 semester. Students rated on a 5 point scale how qualified they felt for the class they were in. Likewise, instructors in these sections rated on a 5-point scale how likely they felt each student was to pass their class. Only data from those students who enrolled through Cabrillo's assessment process are presented here. 392 Cabrillo assessed students responded to the survey and instructors rated 337 Cabrillo assessed students. In general, Cabrillo's assessment appears to place students with reasonable accuracy. About three-quarters of Cabrillo assessed students felt they were appropriately qualified for the English class in which they were enrolled (Table 3). Almost 90% of Cabrillo assessed students were rated as able to pass their class by their instructors (Table 4). The assessment process appeared to work best for placement into the highest level of English. The lowest level has a number of students who do not feel prepared. This concern has been echoed by some of the English faculty who feel that a portion of students in basic skills English would benefit from taking an ESL or adult literacy class before attempting English 290. However, enrollment in basic skills classes cannot be restricted and assessment processes by law cannot direct these students to alternative courses.

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Table 3. English Assessees' Rating of their Preparedness for their English class.

| | | Student Rating | | | |
		Not Qualified	Qualified	Overqualified	Total
ENGL-290	n	14	55	7	76
	%	18.4	72.4	9.2	100
ENGL-100	n	33	180	37	250
	%	13.2	72.0	14.8	100
ENGL-1A	n	4	57	5	66
	%	6.1	86.4	7.6	100
Total	n	51	292	49	392
	%	13.0	74.5	12.5	100.0

Table 4. Instructor Rating of Possibility of Success of English Assessees.

| | | Instructor Rating | | |
		Will Fail	Will Pass	Total
ENGL-290	n	8	65	73
	%	11.0	89.0	100
ENGL-100	n	24	183	207
	%	11.6	88.4	100
ENGL-1A	n	2	55	57
	%	3.5	96.5	100
Total	n	34	303	337
	%	10.1	89.9	100

Disproportionate Impact

Placement rates of students were compared between ethnic groups, genders, learning disability groups, and ages. Proportions of placements were significantly different between ethnicities and did not meet the Chancellor's Office 80% standard, which states that the relative frequency of one ethnicity should be at least 80% of all other ethnicities' relative frequencies (Table 5). The difference are most striking between the two predominant groups, Whites and Hispanics, with Whites being 3.4 times more likely to be placed in transfer level English than Hispanics. Proportions of placements were significantly different between genders and did not meet the Chancellor's Office 80% standard (Table 6). Females were 1.6 times more likely than males to place into transfer level English. Reasons for this difference are currently unknown. Proportions of placements were significantly different between those with learning disabilities and those without and did not meet the Chancellor's Office 80% standard (Table 7). Those without known learning disabilities were 2.9 times more likely to place into transfer level English than those who identified themselves as learning disabled. An explanation for this finding is currently not known. There was a statistically

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significant but practically small difference in the mean ages of placement groups with a slight trend of older students placing in more advanced classes (Table 8).

Causative factors for these impacts are unknown but may be related to differences in educational backgrounds or socioeconomic status that vary with demographics. One possible causal factor explored was high school origin as high schools in the area differ in demographics and may differ in instructional quality so that what appears to be differences between ethnicities may actually reflect differences in the quality of high school instruction. To test this possibility, placement rates between ethnicities within groups who attended the same high school were compared. The overall placement patterns were replicated within each high school so that it appears that differences in placement rates between ethnicities cannot be adequately explained by high school origin.

At Cabrillo, those who place into lower classes are significantly less likely to be high school degree holders, have fewer years of English course work, have lower self-reported English grades, and lower overall high school GPA's. Compared to Whites, Hispanics are significantly less likely to report having a high school diploma, to have taken fewer years of English, lower grades in their last English class, and lower high school GPA's. Learning disabled students are significantly less likely to have high school diplomas, report lower grades in their last English class, and report lower high school GPA's. Females report significantly higher grades in their last English class and overall highs school GPA's. The oldest 25% of students are significantly less likely to report having high school diplomas and have had fewer years of English. Further, while socioeconomic data is not routinely collected but we see that those placing in the lower levels were significantly more likely to apply for financial aid, which may be taken as an indicator of socioeconomic status that may be related to access to pre-collegiate educational opportunities (Table 9).

Multinomial logistic regression shows that a model with variables of ethnicity, gender, disability, age, high school origin, high school education, high school GPA, years English, and grade in last English class can significantly predict English placement (Nagelkerke R^2 = 0.232). Further logistic models tested interactions between variables used to predict English placement. For ethnicity, there were significant interactions with high school GPA and grade in last English class (Nagelkerke R^2 = 0.390). For gender, there were significant interactions with high school origin, high school degree, high school GPA, and grade in last English class (Nagelkerke R^2 = 0.197). For learning disability status, there were significant interactions with high school origin, high school GPA, and grade in last English class (Nagelkerke R^2 = 0.193). For age, there were significant interactions with high school origin, high school degree, high school GPA, and grade in last English class (Nagelkerke R^2 =

0.173). These relations between educational background and demographics suggest that the disproportionate impact observed in placements may be due to factors present prior to a student's appearance at Cabrillo.

Further research to identify the cause of these impacts and strategies to reduce these impacts will continue. In the meantime, Cabrillo College does offer a substantial set of matriculation services to support students such as our acclaimed Tutorials Center, Disabled Students Services, Fast Track to Work office for CalWORKs students, EOPS program for historically underrepresented students, and MESA center for economically disadvantaged and first generation college students.

Table 5. Ethnicity of English Assessees from Fall 1994 to Fall 2000.

Ethnicity		Basic English	English 100	Transfer English	Total
African-American	n	80	238	50	368
	%	21.7	64.7	13.6	100
Asian	n	85	302	99	486
	%	17.5	62.1	20.4	100
Filipino	n	61	157	33	251
	%	24.3	62.5	13.1	100
Hispanic/Latino	n	1621	2372	340	4333
	%	37.4	54.7	7.8	100
Native American	n	39	203	61	303
	%	12.9	67.0	20.1	100
Other	n	126	582	221	929
	%	13.6	62.6	23.8	100
Pacific Islander	n	6	55	19	80
	%	7.5	68.8	23.8	100
White	n	919	6695	2785	10399
	%	8.8	64.4	26.8	100
Unknown	n	362	666	221	·1249
	%	29.0	53.3	17.7	100
Total	n	3299	11270	3829	18398
	%	17.9	61.3	20.8	100
Chi-Square	2126.8				
df	16				
p	< 0.0005				
Cramer's V	0.240				

Table 6. Gender of English Assessees from Fall 1994 to Fall 2000.

		Basic English	English 100	Transfer English	Total
Male	n	1752	5172	1307	8231
	%	21.3	62.8	15.9	100
Female	n	1321	5723	2404	9448
	%	14.0	60.6	25.4	100
Unknown	n	226	375	118	719
	%	31.4	52.2	16.4	100
Total	n	3299	11270	3829	18398
	%	17.9	61.3	20.8	100

Chi-Square	421.1
df	4
p	< 0.0005
Cramer's V	0.107

Table 7. Learning Disability Status of English Assessees from Fall 1994 to Fall 2000.

		Basic English	English 100	Transfer English	Total
Learning Disabled	n	296	510	66	872
	%	33.9	58.5	7.6	100
Not Learning Disabled	n	2530	9878	3501	15909
	%	15.9	62.1	22.0	100
Unknown	n	473	882	262	1617
	%	29.3	54.5	16.2	100
Total	n	3299	11270	3829	18398
	%	17.9	61.3	20.8	100

Chi-Square	392.4
df	4
p	< 0.0005
Cramer's V	0.103

Table 8. Age Descriptives of English Assessees.

	Median	Mean	sd	N
Basic English	19	22.0 a	7.2	2635
English 100	18	21.7 a	7.3	9872
Transfer English	19	23.3 b	9.3	3449

Note: Means with different subscripts are significantly different from each other.

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Table 9. ESL Placement by Financial Aid Application Submission as a Socioeconomic Indicator.

	Financial Aid	
Placement	Did not apply	Applied
Basic English	45%	55%
English 100	56%	44%
Transfer English	60%	40%
Chi-square	195.0	
df	3	
p	< 0.0005	

Bias

15 individuals were asked to review the writing prompts and state if they felt any of them were biased and if so to explain why. Demographics of respondents generally represented a variety of groups found at Cabrillo College (Table 10). Two-thirds of respondents did not indicate any bias concerns with the prompts. None of the prompts were said to be biased in and of themselves but there were concerns about possible biases of the part of the reader. For example, the 4th prompt asked about "values, expectations, or beliefs", which some respondents felt could result in the essay readers judging the student on their values. Fortunately, Cabrillo readers are trained to evaluate on the use of language rather than the content of the essay. Further, at least two different readers score the essays, which helps to minimize the bias of a single judge. Finally, assessees are allowed to choose between two different prompts so that fear of being negatively judged on one prompt can be avoided by choosing another prompt. While these safeguards address the concerns expressed, I recommend that future prompts created by the English department avoid asking about beliefs or values.

Table 10. Demographics of Bias Survey Respondents

Age	
Min	20
Max	50
Mean	30.5
sd	8.7

Gender	Frequency
Female	11
Male	4

Ethnicity	Frequency
African-American	1
Asian	2
Latino/Hispanic	6
White	6

Disability	Frequency
Not Disabled	11
Disabled	4

Sexual Orientation	Frequency
Bisexual	2
Heterosexual	11
Homosexual	1
Unknown	1

Religion	Frequency
Buddhist	2
Christian	5
Pagan/Wiccan	1
None	4
Other	2
Unknown	1

Language	Frequency
English	8
Russian	1
Serbian	1
Spanish	4
Vietnamese	1

Conclusion

The English Holistic Assessment generally appears to meet or exceed minimum standards for use especially if problematic prompts are replaced. In addition, Cabrillo should continue to research possible causes of differential placement and continue student support services for historically underrepresented or disadvantaged students.

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