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ABSTRACT

The College-Level Academic Skills Test (CLAST) is a mandated examination of the achievement of college students in communications skills and mathematics that must be passed by students in Florida public institutions of higher education to receive an Associate's degree or entrance into upper-level courses. This report gives test results on the CLAST for 1990-91 for the four subtest areas of mathematics, reading, English language skills, and essay writing. In 1990-91, student performance was better in English language skills and reading, followed by mathematics, but was poorer for the essay. Fifty-five percent of public community college students passed the CLAST, and 56% of private college and university students passed. The passing rate for public college students at other than community colleges was 71% in 1990-91. Racial and ethnic differences in achievement are discussed. Fourteen tables and 16 figures present study findings. Three appendixes list standing committee members and present test results by institution and subtest. (SLD)

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STUDENT ACHIEVEMENT OF COLLEGE-LEVEL COMMUNICATION AND MATHEMATICS SKILLS IN FLORIDA: 1990-91

Standing Committee on Student Achievement
of the
Articulation Coordinating Committee

February 1992

State of Florida
Department of Education
Tallahassee, Florida
Betty Castor, Commissioner
Affirmative action/equal opportunity employer

STUDENT ACHIEVEMENT OF COLLEGE-LEVEL COMMUNICATION AND MATHEMATICS SKILLS IN FLORIDA: 1990-91

EXECUTIVE SUMMARY

Analysis of trends has shown that performance of first-time test-takers has remained relatively stable since the application of CLAST standards in 1984. Projections based on applying the original 1989 standards to student data suggested that unacceptably large numbers of students would fail CLAST if the 1989 standards were placed into effect. Therefore, the State Board of Education adopted a revised set of standards that would be in effect from August 1, 1989, to September 30, 1991. The standards in effect for the time period covered in this report were:

Time Period	Mathematics	Reading	Eng Lang Skills	Essay
8/1/89 to 9/30/91	285	295	295	4

In the past, results in this report have been presented for the state as a whole. While statewide results continue to be reported, institutional profiles have been included also. The institutional profiles depict trends for first-time test-takers over time and the progress made by racial or ethnic cohorts upon retaking failed subtests (see Appendix C).

PART 1. PLACEMENT TEST RESULTS

The achievment of first-time-in-college (FTIC) community college students appears to be on a plateau for the years 1986-87 through 1989-90. It is apparent that first-time-in-college students in Florida vary in their preparedness in communication and mathematics. Almost half of public community college students are eligible for college preparatory instruction in mathematics and about one-fourth lack competence in English language skills and in reading. SUS university students appear to be better prepared because less than ten percent are judged to need college preparatory instruction upon entry to the university. This finding should not be too surprising since SUS university admission requirements include satisfactory completion of college preparatory courses in high school as well as high performance on traditional indicators such as admission test scores and high school grade point average.

Because it has been difficult to establish the concordance among cut-off scores of all of the state-approved entry tests, the State Board of Education adopted a rule requiring the Department of Education to prepare a plan for developing and implementing one entry level test. A single test will be extremely helpful in making equitable placements in college preparatory courses and more readily interpretable statements about the preparedness of students in communication and mathematics upon entry to Florida's community colleges and universities.

PART 2. STATEWIDE PERFORMANCE ON CLAST FOR 1990-91

In 1990-91, the level of student CLAST performance appeared to vary according to the specific subtest involved and to the kind of institution in which students were enrolled. Students tended to do best in English Language Skills and Reading followed by Mathematics. SUS university students tended to demonstrate highest levels of performance overall. Public community college students and private college and university students had similar levels of performance. While the

current CLAST performance of postsecondary first-time test-takers is higher than the baselines established in October 1982, their performance seems to increase and decrease slightly over time rather than maintain a steady increase or steady state at a high level.

Some of the fluctuations in performance can be explained by changes in eligibility. In 1988-89 and 1989-90 students were permitted to take CLAST during their first semester on campus. Many chose to do so as can be inferred by the large increases in first-time test-takers during those two years because doing so allowed them to be judged by lower standards than those that were about to increase in August 1989. However, the CLAST performance for many of these students appeared to be relatively low because they had not yet taken all communication and mathematics courses required under the "Gordon Rule." During its 1990 session the legislature passed a law which required students to have completed at least 18 credit hours before being eligible to take CLAST.

PART 3. EXTENT TO WHICH THE REVISED 1989 STANDARDS WERE MET IN 1990-91

Interpreting the extent to which CLAST standards were met has become a complex task during the past three years. CLAST subtest cutoff scores were increased in August 1989. Eligibility requirements for taking CLAST were reduced in 1988-89 and then increased again in 1990-90. In light of this, interpreting changes in statewide performance is hazardous at best. Some tentative conclusions appear to be warranted nonetheless.

Passing rates of first-time test-takers appear to remain at relatively stable levels. Data presented in Part 2 show statewide CLAST averages varying from one year to the next. These changes appear to be relatively small and do not seem to have much impact on statewide passing rates. Increased standards in August 1989 resulted in reduced passing rates. One might have expected the change in eligibility to take CLAST would have resulted in improved passing rates in 1990-91. While this was true for public community college and private college and university students (they increased from 52% pass to 55% and 56% pass, respectively), SUS university student passing rates declined from 76% to 71% pass. Why this occurred is unclear from the information available. No doubt such surprises will be in store in subsequent years as CLAST standards continue to be increased gradually in both Mathematics and Essay.

PART 4. TRENDS IN THE PERFORMANCE OF RACIAL AND ETHNIC GROUPS

The primary concern of Part 4 was whether there are disproportional impacts on minority first-time examinees. Analysis of results suggested that, in general, SUS university students do better than their community college counterparts. And White SUS university students consistently perform highest. This can be best explained by differences in admission standards. SUS universities have specific entrance requirements in communications, mathematics, science and foreign language. Meeting RAISE requirements for high school graduation may not be sufficient since course work in communications, mathematics, science and foreign language must be at or above a specified level for admission to an SUS university. Public community colleges, on the other hand, tend to require only completion of a high school diploma.

That there are disproportional impacts on minorities is supported by the data in Part 4. Black and Hispanic students in public community colleges tend to do least well of all groups. While Black students in SUS universities do better than their community college counterparts, Blacks tend to do least well among university students.

Even though CLAST standards were raised in 1986 and again in 1989, these increases do not seem to have had much impact on the performance of first-time test-takers. Data presented in Part 4 show that there were few, if any, increases. Any increases that were observed were offset by subsequent decreases.

PART 5. RESULTS OF COHORT FOLLOWUP STUDIES

Previous sections of this report emphasized results based on first-time test-takers, Part 5 reported on the results of followup studies of students who retook failed subtests. While the performance of first-time test-takers may be interesting, the more critical issue is whether college students who lack skills in communication and mathematics acquire them during their college career. Monitoring students who fail CLAST is one way of determining how effective institutions are in providing academic support for students who have been admitted with deficiencies in one or more of the college-level skills in communication or mathematics.

It seems clear that the revised 1989 CLAST standards have had disproportional impacts on minority first-time test-takers. As the results presented have shown, Black and Hispanic first-time examinees tend to pass CLAST subtests at significantly lower rates than White examinees. However, the results of cohort followup studies show that these disproportional impacts tended to be ameliorated as Black and Hispanic students prepare for and retake failed subtests.

It seems appropriate to conclude that results based on cohort studies are far better indicators of institutional effectiveness. Postsecondary institutions should be held accountable for student results when they have completed their first two years of college-level course work. Students should take CLAST as early as possible to receive feedback so that corrective actions can be taken. If both students and college-level faculty have seriously addressed learning the skills in communication and mathematics, then it is reasonable to expect students to complete all CLAST requirements by the time they have completed lower divison course requirements regardless of the number of times they have to take CLAST to pass it.

PART 6. VARIABILITY IN CLAST INSTITUTIONAL PERFORMANCE RELATED TO MINORITY PARTICIPATION

The scatter plots presented in Part 6 lend additional credence to the conclusion that first-time test-takers who are minority are affected disproportionally. Institutions with substantial proportions of minority students (i.e., greater than 30% minority) tend to do least well on their first try. It may well be that minority students are less prepared when they enter college. Why this would be the case could be traced back to the kind of guidance and academic counseling they receive in high school.

Results presented in the followup scatter plots are encouraging because institutional efforts appear to have an impact on performance as students retake failed subtests. The vast majority of institutions (35 to 36 of 37) had passing rates of 90% or greater on each of the CLAST subtest areas five administrations after the initial attempt. It seems clear from the results of the cohort followup studies that taking appropriate college preparatory and college-level course work has had a positive impact on ameliorating the disproportional impacts of CLAST on minority students.

Disproportional impacts on minority first-time test-takers are likely to continue unless they receive appropriate academic guidance and are urged to take college preparatory courses in high school. But simply taking college preparatory courses is not enough: Students must also do well in them. Academic guidance would also be appropriate for the relatively large number of majority students who also fail CLAST on their first attempt. Effective academic guidance in high school will be more

essential in the future since CLAST standards in Mathematics and Essay are scheduled to increase in October 1991 and again in October 1992.

PART 7. IMPLICATIONS OF CURRENT STUDENT PERFORMANCE REGARDING CURRICULUM AND INSTRUCTION

The revised 1989 standards had the greatest impact on public community colleges and private colleges and universities. Not only did public community colleges have the largest number of students taking CLAST in 1990-91, they also had the lowest passing rate (55%). This means that approximately 14,381 students in Florida's public community colleges will need to retake one or more CLAST subtests if they wish to earn an Associate of Arts degree.

SUS universities had approximately 50% fewer students (16,645 versus 31,957) than the community colleges. The university student passing rate was 71% which means that approximately 4,827 of them will need to retake a failed subtest.

Private college and university students had a passing rate of 56%. Approximately 2,439 of the 5,543 students who took CLAST in 1990-91 will need to retake one or more failed subtests.

While it would be desirable for all students to pass CLAST on their first try, this may not be realistic. Therefore, students who take and fail CLAST subtests should have access to courses and other kinds of learning opportunities that will help them acquire required skills in communication and mathematics.

There is sufficient evidence presented in this report to conclude that minority students are affected disproportionally by CLAST subtests and the increased standards. Evidence obtained from the cohort studies also shows that minority students who failed subtests can be successful if they make the effort to prepare themselves to retake the ones they failed. Therefore, resources need to be made available so that minority students, and others failing CLAST, have access to the kind of guidance and instruction they need to do well on CLAST. Remediating minority students may require additional resources to overcome past educational inequities.

Teaching essay writing and tutoring in mathematics are labor intensive processes. Community colleges, private colleges and state universities need to determine effective ways to deploy their faculty to meet the challenge of the increased standards of 5 on the Essay and 290 on the Mathematics subtest.

PART 8. RECOMMENDATIONS

Data presented in Part 1 showed that almost half of the students who enter public community colleges are underprepared in mathematics and one-fourth are underprepared in reading and English language skills. Evidence presented in Part 2 showed that the performance of first-time examinees is relatively stable and has been on a plateau for several years. However, evidence based on cohort followup studies presented in Part 5 showed significant improvement in institutional passing rates as students prepared, retook failed subtests and passed them. Evidence derived from the cohort followup studies can serve as an important indicator of an institution's effectiveness in helping its students no matter what their entry level performance may have been. Therefore, improvement based on cohort followup studies is a far better measure of institutional accountability than the performance of first-time test-takers. With the foregoing discussion in mind, the Standing Committee on Student Achievement recommends that:

1. In its reporting of CLAST results, the Department of Education should place emphasis on the results of cohort followup studies for students with 60 or more hours of college-level credit.

2. The State Board of Community Colleges and State University System Board of Regents should add CLAST scores as standard data elements in their student-level databases, and private colleges and universities should be encouraged to do the same.

3. Institutions should be given flexibility to allow selected students to take CLAST earlier or later than 18 credits based on the institution's determination that the student has attained the skills needed to pass each subtest.

4. The number of waivers issued by each institution and reasons for granting them should be monitored by the State Board of Community Colleges and the SUS Board of Regents and reported to all institutions participating in the CLAST testing program; private institutions participating in the CLAST testing program should be encouraged to do the same.

5. The Department of Education should inform school superintendents, high school principals, and middle school principals about the importance of articulating high school courses of study with college entrance requirements and exit requirements related to CLAST and urge them to share this information with teachers, parents and all students.

6. Community college and university leaders and faculty should initiate efforts to involve parents, community groups such as churches, and the news media to encourage parents to become more involved in helping their children to seek information and guidance regarding college entrance and CLAST exit requirements.

7. The feasibility of requiring Associate of Science students to demonstrate skills in communication and mathematics should be explored.

CONTENTS

INTRODUCTION

Analysis of trends for first-time test-takers has shown that student performance has remained relatively stable since the application of CLAST standards in 1984. Expected increases have not materialized in spite of the fact that CLAST standards were raised in 1986 and again in 1989. However, the increases approved for 1989 were below those adopted originally.

Projections based on applying the original 1989 standards to student data suggested that unacceptably large numbers of students would fail CLAST if these standards were placed into effect. Therefore, the State Board of Education adopted a revised set of standards that would be in effect from August 1, 1989, to September 30, 1991. Cut-off scores for Reading and English Language Skills were set at 295 (consistent with the original 1989 standards). Because of projected high failure rates the cut-off score in Mathematics was raised from 275 to 285 and the cut-off for Essay was continued at a scale score of 4. These were the standards in effect for the time period covered in this report.

Increases will be implemented again in October 1991 when Mathematics will be raised to 290 and Essay to 5. (It should be noted that the Essay subtest will be graded using a new score scale based on six rather than 4 points.) The changes in CLAST standards may be summarized as follows:

Time Period	Mathematics	Reading	Eng Lang Skills	Essay
08/01/89 to 09/30/91	285	295	295	4
10/01/91 to 09/30/92	290	295	295	5
10/01/92	295	295	295	6

Other changes affecting the College-Level Academic Skills Program are pending. The State Board of Education has adopted a rule requiring the Department of Education to prepare a plan for developing and implementing one entry level test (in contrast to the four currently approved for use) for determining whether a student needs college preparatory instruction in communication or mathematics. Students meeting or exceeding a specified score on either the ACT or SAT would be exempted from having to take the entry level test.

In Florida, educational institutions are expected to be accountable for student outcomes. Since CLAST measures student achievement in communication and mathematics, CLAST scores can be considered as indicators of institutional accountability. However, a student's educational growth is influenced by a combination of factors. These are the student's socioeconomic status, racial or ethnic background, academic aptitude, previous course of study, and quality of instruction experienced. Students in Florida's community colleges and universities represent highly diverse groups. Therefore, interpreting differences in CLAST results among the institutions must be done with full knowledge of these factors. Analyses presented in this report attempt to take into account the proportion of minority students in an institution and improvement in passing rates based on cohort followup studies. As will be noted in the report, new insights emerged as such analyses were done.

In the past, results presented in this report have been presented for the state as a whole. However, participants at the 1990 CLAST conference stated that statewide results were not particularly useful for them at the institutional level. While statewide results will continue to be reported, institutional profiles have been included also. The institutional profiles depict trends for first-time test-takers over time and the progress made by racial or ethnic cohorts upon retaking failed subtests. While trends for first-time test-takers have remained relatively stable for most

institutions, the profiles for racial and ethnic student cohorts show significant gains being made when they prepare for and retake failed subtests (see Appendix C).

This report is presented in eight parts:

- Part 1 presents results of placement testing for first-time-in-college students, the questions that should be answered regarding the effectiveness of current entry testing and course placement practices, and findings.

- Part 2 reports on the status of statewide student achievement on the College-Level Academic Skills Test for the academic year 1990-91 and describes trends in performance since the beginning of the College-Level Academic Skills Program.

- Part 3 reports the extent to which the revised 1989 standards were met by students taking CLAST in 1990-91 and statewide trends for first-time test-takers in passing CLAST.

- Part 4 presents analyses of statewide trends regarding the performance of racial or ethnic groups on each of the CLAST subtests.

- Part 5 reports the results of cohort studies which show what happens to first-time test-takers as they retake failed subtests based on the revised 1989 standards.

- Part 6 analyzes variability in institutional performance as related to the percentage of minority participation. Scatter plots are presented showing results for first-time test-takers in October 1989 and improvement in their passing rates based on cohort followup results.

- Part 7 estimates the statewide impact of the revised 1989 standards and derives implications regarding which students will need to retake CLAST and information on the areas in which students are likely to have difficulty.

- Part 8 presents recommendations regarding testing practices and procedures for improving student performance on CLAST.

This report could not have been prepared without the assistance of many people. They include Dr. Thomas Fisher, Director of Assessment, Testing, and Evaluation, and his staff. CLAST results were provided by the Statewide Test Administrator's office at the University of Florida in Gainesville. Research assistants in the Department of Educational Leadership, Florida State University, provided assistance with data analysis and the production of tabular displays, graphics and drafts of this report. They include Marc Resnick and Dennis Tishken. The assistance of these individuals and agencies is gratefully acknowledged.

PART 1. PLACEMENT TEST RESULTS

Provisions of State Board of Education Rules 6A-10.0313(3) and 6A-10.0314(2), FAC, require that community colleges and state universities provide students entering college-credit programs with entry-level advising which uses placement test scores derived from tests which measure communication and mathematics skills. Students who score below designated cutoff scores should be enrolled in college preparatory courses. The purpose of Part 1 is to report on the status of students' levels of skills in communication and mathematics upon entry to college and to assess the extent to which entry testing and course placement are being implemented. The data are presented over a three-year period so that current trends may be reviewed.

1.1 How many freshmen students required college preparatory instruction at entry in 1989-90?

Data for first-time-in-college (FTIC) freshmen for academic years 1986-87, 1987-88, 1988-89 and 1989-90 are presented in Tables 1.1 and 1.2. Results are presented by placement test area.

Public Community College Freshmen

As in previous years, mathematics appears to be the area in which community college FTIC students appear to be most deficient. In 1989-90 almost one-half qualified for college preparatory instruction in mathematics as compared to approximately one-fourth in English Language Skills and Reading (see Table 1.1).

Mathematics. According to data reported by the State Board of Community Colleges, approximately 63,012 FTIC students from Florida high schools enrolled in public community colleges. Of that number, 59,614 took one of the required placement tests in mathematics. Of that number 28,923 (or 49%) scored below the cutoff on a state approved mathematics placement test.

English Language Skills. Of the 62,674 FTIC students taking a placement test in English language skills, 16,550 (or 26%) scored below the cutoff on a state approved English language skills placement test.

Reading. The number who scored below the cutoff for reading was 16,399 (or 26%) of the FTIC students from Florida high schools.

Public University Freshmen

First-time-in-college (FTIC) freshman enrolled in SUS universities appear to be relatively well-prepared as 5% or less of them scored below cutoff scores on an approved placement test (see Table 1.2).

Mathematics. According to data report by the SUS Board of Regents, there were 15,383 FTIC students enrolled in state universities. As can be seen in Table 1.2, 813 (or 5%) scored below the cutoff on a state-approved mathematics placement test.

English Language Skills. The number of university FTIC freshmen who scored below the cutoff in English language skills was 409 (or 3%).

Table 1.1

Number and Percent of First-Time-in-College Freshmen Eligible For and Enrolled in College Preparatory Instruction in Florida's Public Community Colleges, 1986-87 through 1989-90

Academic Skill Area	1986-87†	1987-88	1988-89	1989-90
Mathematics				
No. FTIC Students	65,469	62,973	67,873	59,614
Eligible for	33,329	31,416	32,537	28,923
% Eligible for	51%	50%	48%	49%
Enrolled in	15,942	18,756	19,211	No Data
% Enrolled in	48%	60%	59%	--
Eng Lang Skills				
No. FTIC Students	65,608	62,875	68,495	62,674
Eligible for	19,888	17,392	16,669	16,550
% Eligible for	30%	28%	24%	26%
Enrolled in	11,047	11,620	10,448	No Data
% Enrolled in	56%	67%	63%	--
Reading				
No. FTIC Students	68,236	64,183	67,260	63,012
Eligible for	18,631	15,858	17,454	16,399
% Eligible for	27%	25%	26%	26%
Enrolled in	8,689	9,314	9,518	No Data
% Enrolled in	46%	59%	55%	--

† The four entry tests and their associated cutoff scores were approved in 1985.

Reading. The number of university FTIC freshmen who scored below the cutoff in reading was 557 (or 4%).

1.2 How many FTIC students who required preparatory instruction received it in 1989-90?

Public Community College Freshmen

The way in which data are collected and reported may be misleading regarding the number of students who enroll for college preparatory instruction during their first semester. According to 6A-10.0315(6), FAC, only full-time students who registered for at least twelve (12) credits must enroll for college preparatory instruction based on their placement test scores. Part-time students shall enroll prior to completing twelve (12) credits. Therefore, the number of students who were eligible for and eventually enrolled for college preparatory instruction during the school year in compliance with 6A-10.0315(6) would probably be underestimated by the data presented in Table 1.1 because it is unclear how many of them were part-time enrollees.

Table 1.2

Number and Percent of First-Time-in-College Freshmen Eligible For and Enrolled in College Preparatory Instruction in Florida's Public Universities, 1986-87 through 1989-90

Academic Skill Area	1986-87†	1987-88	1988-89	1989-90
Mathematics				
No. FTIC Students	14,611	14,606	16,092	15,383
Eligible for	1,073	789	899	813
% Eligible for	7%	5%	6%	5%
Enrolled in	468	401	670	294
% Enrolled in	44%	51%	63%	36%
Eng Lang Skills				
No. FTIC Students	14,611	14,606	16,092	15,383
Eligible for	690	359	547	409
% Eligible for	5%	2%	3%	3%
Enrolled in	257	180	346	167
% Enrolled in	37%	50%	75%	41%
Reading				
No. FTIC Students	14,611	14,606	16,092	15,383
Eligible for	751	529	624	557
% Eligible for	5%	4%	4%	4%
Enrolled in	290	241	405	233
% Enrolled in	39%	46%	65%	42%

† The four entry tests and their associated cutoff scores were approved in 1985.

Mathematics. Unfortunately, no data were available regarding the number enrolled for college preparatory instruction in mathematics in the community colleges for 1989-90.

English Language Skills. No data were available for 1989-90.

Reading. No data were available for 1989-90.

Public University Freshmen

SUS university data regarding enrollment in college preparatory courses must be interpreted carefully. Many students who initially scored below the cutoff score on an entry level placement test were able to be exempted by passing a retest on another approved placement test or by other means. Therefore, the numbers enrolling for college preparatory instruction in Table 1.2 are those who could not exempt the requirement either through retesting or by other means.

Mathematics. Of the 813 SUS FTIC freshmen who initially scored below the cutoff on an approved mathematics placement test, 400 passed a retest, 119 exempted college preparatory placement by other means, and 294 (or 36%) enrolled in a college preparatory course in mathematics.

English Language Skills. Of the 409 SUS FTIC freshmen who initially scored below the cutoff on an approved English language skills placement test, 153 passed a retest, 89 exempted placement by other means, and 167 (or 41%) enrolled in a college preparatory course in writing.

Reading. Of the 557 SUS FTIC freshmen who initially scored below the cutoff on an approved reading placement test, 212 passed a retest, 112 exempted the requirement by other means, and 233 enrolled in a college preparatory reading course.

1.3 Are entry testing and placement practices working effectively?

This question cannot be answered for lack of relevant data. An earlier study (Florida Community-Junior College Inter-Institutional Research Council, undated) found that students and their instructors had positive attitudes toward the college preparatory courses the students were placed in. While such opinion data are encouraging, there are other problems which need to be addressed.

First, a study done by Department of Education staff found that placement test cutoff scores were not in concordance, i.e., of equivalent meaning. Second, two of the entry level tests, i.e., the SAT and the ACT, were developed to be college admissions tests. Because of this, they are not appropriate for placement testing.

A parsimonious answer to Question 1.3 is that there is insufficient data or information to answer it with any degree of confidence.

1.4 What is the status of entering students' skills in mathematics and communication at entry to postsecondary education?

Evidence to answer this question is indirect because four different entry level tests are used and each has different cutoff scores. However, if we look at how many students score below the approved cutoff scores, we can make inferences about the status of their skills in communication and mathematics at entry to college.

Public Community College Freshmen. The status of entering community college students appears to be on a plateau for the past four years. As can be seen in Table 1.1, slightly less than one-half of FTIC Florida freshmen continue to score below the cutoff on an approved mathematics placement test. Slightly more than 25% score below the cutoff on approved English language skills and reading tests.

Public University Freshmen. SUS university freshmen appear to be better prepared than community college freshmen at entry. As can be seen in Table 1.2, 5% or less scored below a state-approved placement test, the figures being 5% in Mathematics, 3% in English language skills, and 4% in reading.

1.5 Have entering freshmen's skills in communication and mathematics improved?

It appears that the answer to this question is negative: entering freshmen's skills in communication and mathematics do not appear to have improved. The answer must be a qualified one because there are no data based on common measures of communication and mathematics skills.

Public Community College Students. Since no data based on common measures of communication and mathematics skills have been collected, the best that can be done is to make inferences from the number of students who scored below the cutoff scores on placement tests. This would assume that a reduction in the number scoring below the cutoffs implies an improvement in entering skills. Again, the data in Table 1.1 suggest that entering freshmen's skills in communication and mathematics are on a plateau notwithstanding reforms such as the RAISE bill.

Public University Students. As can be seen in Table 1.2, the percentage of SUS freshmen eligible for college preparatory instruction is also on a plateau with the central tendency falling between 4% and 7%.

1.6 How effective are course placement and college preparatory instruction in helping students acquire college-level skills in communication and mathematics?

Carefully designed cohort studies are needed to answer this question. An appropriate indicator of the effectiveness of placement practices would be grades earned in subsequent college level mathematics or English courses. Unfortunately, no such studies have been done.

If passing rates on related CLAST subtests are used as indirect evidence, previous results suggested that college preparatory instruction appeared to work reasonably well in terms of the 1986 standards. However, passing rates of first-time test-takers have dropped since the revised 1989 standards went into effect. It seems clear that the college preparatory instruction experienced by Florida's FTIC public community college students, either in high school or in postsecondary education, has not prepared many first-time test-takers to meet the revised 1989 standards (see Table 7.1). This conclusion holds true for racial and ethnic groups, also (see Table 7.2).

Recent Developments Regarding Placement Testing

In light of the difficulty of establishing the concordance between the four approved placement tests[1] as well as their recently developed versions, the decision was made to recommend development of a single entry level placement test which would be closely related to CLAST skills in communication and mathematics. In June 1991, the State Board of Education amended Rule 6A-10.0315, FAC. The new rule required the DOE to plan for a single entry level test. When this test is available, students should be encouraged to take it in high school. By doing so, high school students would be better able to assess their readiness for college-level instruction in communication and mathematics and to take actions to increase their skills while still in high school.

[1] The four entry level placement tests are the: SAT, ACT, ASSET and MAPS; these tests and their associated cutoff scores were approved in 1985.

Reference

Florida Community-Junior College Inter-Institutional Research Council. (Undated). *A Study to Evaluate Entry Level Placement Based on State Approved Tests in Florida Community Colleges.* Gainesville, FL: Institute of Higher Education.

PART 2. STATEWIDE PERFORMANCE ON CLAST FOR 1990-91

CLAST data for students in public community colleges, state universities and private colleges are presented in separate tables (see Tables 2.1, 2.2 and 2.3). The status of student achievement may be determined by comparing current average CLAST scores with scale score averages established in October 1982, the baseline year in which scale scores were standardized to have an average of 300 for Mathematics, Reading and English Language Skills[1] and 4.7 for the Essay. Data summaries presented in Part 2 are all based on first-time examinees.

2.1 What is the level of student performance of college-level skills in communication and mathematics in 1990-91?

In 1990-91, the level of student CLAST performance appeared to vary according to the specific subtest involved and to the kind of institution in which students were enrolled. Students tended to do best in English Language Skills and Reading followed by Mathematics. Since Essay scores are derived from a different scale, they cannot be compared directly with the other three subtests. SUS university students tended to demonstrate highest levels of performance. Public community college students and private college and university students had similar levels of performance. Results for each kind of institution are given below.

Public Community Colleges. As can be seen in Table 2.1, public community college students performed best in English Language Skills--their scale score average being 315. Their next best area of performance was on the Reading subtest with the scale score average being 310. Their Mathematics performance was 305, an improvement over their 1989-90 performance but still less than their best of 309 in 1987-88. Public community college students did relatively well on the Essay subtest--their scale score average being 4.9. It is interesting to note that all 1990-91 scale score averages were above the baselines established in October 1982 but still short of all-time highs observed in previous years.

SUS Universities. The performance of students in SUS universities is summarized in Table 2.2. As can be seen in this table, SUS students did best in English Language Skills--the scale score average being 326. The next best area was in Reading with that scale score average being 319 followed by Mathematics with a scale score average of 315. The scale score average for Essay was 5.2. The performance of SUS university students was substantially higher than the October 1982 baselines for all four CLAST subtests.

Private Colleges and Universities. Beginning in August 1985, students in Florida's private postsecondary institutions receiving state financial aid had to obtain passing scores on CLAST or enroll in a course to remediate basic skills deficiencies to maintain their eligibility for state financial aid awards (6A-20.005, FAC). Students in Florida's private colleges and universities began taking CLAST in the 1984-85 academic year. Since that time, many private institutions have chosen to require all students to take CLAST. The CLAST results for students in private colleges and universities are presented in Table 2.3.

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[1] After each administration of CLAST, scores for Mathematics, English Language Skills and Reading are adjusted, using a procedure developed by Rasch, so that subtest difficulty is maintained equivalent to the level of difficulty of the October 1982 test.

Table 2.1

Average CLAST Subtest Scores for Public Community College First-Time Examinees, Academic Years 1985-1991

Subject	Oct-82†	85-86	86-87	87-88	88-89	89-90	90-91
Mathematics	300	308	309	309	305	300	305
Reading	300	314	312	309	315	314	310
Eng Lang Skills	300	314	317	317	314	313	315
Essay	4.7	5.0	5.0	4.8	4.8	4.7	4.9
No. of Students		17,458	18,214	24,415	31,467	40,784	31,957

† CLAST Subscales were standardized to have an average of 300 for Mathematics, Reading, and English Skills, and 4.7 for the Essay, these averages were based on 12,393 first-time test-takers representing all racial and ethnic groups.

As can be seen in Table 2.3, the pattern of results for students in the private institutions closely parallels that of their public community college counter parts. Private students did best in English Language Skills with a scale score average of 318 followed by a scale score average of 312 in Reading. Their performance in Mathematics was only 30[illegible] a scant two points about the October 1982 baseline of 300. However, their Essay performance was 5.0 which is higher than the 4.7 baseline establish in 1982.

2.2 Was there improvement in college-level skills achievement in 1990-91?

Whether there has been improvement in CLAST performance can be determined by examining scale score averages over time. The picture here is variable--again depending on the kind of postsecondary institution and the specific subtest involved. In general subtest performance appeared to improve after declines noted in 1988-89 and 1989-90.

Public Community Colleges. As can be seen in Table 2.1, community college students achieved their all-time highs during the years 1986-89. Then their CLAST performance began to decline in 1988-89 and 1989-90. Increases over the previous academic year can be noted in three of the four subtests as the community college Mathematics average scale score increased from 300 to 305, from 313 to 315 in English Language Skills, and from 4.7 to 4.9 in Essay. Community college students declined in Reading with the scale score average dropping from 314 in 1989-90 to 310 in 1990-91.

SUS Universities. While the CLAST performance for SUS university students remains relatively high, surprisingly their performance declined in each of the four subtest areas. As can be seen in Table 2.2, SUS university student Mathematics performance dropped from 316 in the 89-90 to 315 in 1990-91. A one-point decline was also noted in English Language Skills--from 327 to 326. The largest decline was found in Reading--from 329 in 1989-90 to 319 in 1990-91. Essay performance declined from 5.3 to 5.2.

Table 2.2

Average CLAST Subtest Scores for State University System First-Time Examinees, Academic Years 1985-1991

Subject	Oct-82†	85-86	86-87	87-88	88-89	89-90	90-91
Mathematics	300	308	314	317	315	316	315
Reading	300	319	320	318	327	329	319
Eng Lang Skills	300	320	325	328	325	327	326
Essay	4.7	5.1	5.2	5.1	5.2	5.3	5.2
No. of Students		17,264	17,147	19,762	21,264	21,426	16,645

† CLAST Subscales were standardized to have an average of 300 for Mathematics, Reading, and English Skills, and 4.7 for the Essay; these averages were based on 12,393 first-time test-takers representing all racial and ethnic groups.

Private Colleges and Universities. The performance of students in private colleges and universities was mixed as gains were noted in three of the four CLAST subtests. Their performance increased from a scale score average of 296 in Mathematics to one of 302 in 1990-91. Increases were also found for English Language Skills, from 315 to 318 and Essay, from 4.9 to 5.0. The only drop was noted in Reading, from 316 in 1989-90 to 312 in 1990-91.

2.3 What has been the impact of changing the number of credit hours which students must complete before they can take CLAST?

Prior to March 1988 only students with 50 or more credit hours were permitted to take CLAST. Beginning in March 1988, even beginning freshmen could sit for CLAST. This was done to enable students to challenge the test at their convenience. However, in March 1990 the Florida legislature mandated that only students with 18 college-level credits could take CLAST for the first time. The diversity of students in public community colleges and universities raises the question of whether a set number of credits is sufficient evidence to conclude that a student is prepared to take CLAST. Impact of changes on eligibility for the different kinds of institutions are presented below.

Public Community Colleges. There appear to be two kinds of impacts that would occur because of changes in eligibility requirements: changes in the number of students sitting for CLAST; changes in level of performance. As can be seen in Table 2.1, there were dramatic increases in the number of first-time test-takers in public community colleges in 1988-89 (31,467) and again in 1989-90 (40,784) when entering freshmen were eligible. All students were encouraged to take CLAST to be covered by standards that were lower than the original 1989 standards. The number of public community college students taking CLAST dropped to 31,957 in 1990-91 when entering freshmen were no longer eligible. Impacts on CLAST performance can also be observed during this time period although observed changes were not always as expected. For example, performance on CLAST Mathematics dropped from 309 in 1987-88 to 305 in 1988-89 and then to 300 in 1989-90. As might be expected, Mathematics performance increased to 305 in 1990-91 when first

Table 2.3

Average CLAST Subtest Scores for Private College and University First-Time Examinees, Academic Years 1985-1991

Subject	Oct-82†	85-86	86-87	87-88	88-89	89-90	90-91
Mathe-matics	300	303	305	304	300	296	302
Reading	300	319	313	310	315	316	312
Eng Lang Skills	300	317	319	321	316	315	318
Essay	4.7	5.2	5.1	4.9	4.9	4.9	5.0
No. of Students		3,717	3,888	4,362	6,159	5,859	5,543

† CLAST Subscales were standardized to have an average of 300 for Mathematics, Reading, and English Skills, and 4.7 for the Essay; these averages were based on 12,393 first-time test-takers representing all racial and ethnic groups.

semester freshmen were no longer eligible. This pattern of results could be observed for English Language Skills and Essay. However, performance on Reading was surprising as performance increased from 309 in 1987-88 to 315 in 1988-89, remained relatively stable at 314 in 1989-90, and then dropped to 310 in 1990-91 when freshmen were no longer eligible.

SUS Universities. The pattern of results for SUS university first-time examinees was surprising. Performance on CLAST Mathematics showed small decreases. SUS examinees had a Mathematics scale score average of 317 which dropped slightly to 315 in 1988-89 when entering freshmen were allowed to take CLAST (see Table 2.2). Their Mathematics performance increased to 316 in 1989-90 and then back to 315 in 1990-91. A similar pattern was observed in English Language Skills and Essay performance. The results for CLAST Reading were surprising. Relatively large increases were observed in 1988-89 and 1989-90 as university first-time examinees' performance increased when freshmen were allowed to take CLAST. Then when eligibility requirements were increased, their Reading performance dropped to a scale score average of 319. The reason for these inconsistent results is unclear.

Private Colleges and Universities. A mixed pattern of CLAST performance was observed for private colleges and universities. The expected decline and subsequent increase were observed in both Mathematics and English Language Skills results. As can be seen in Table 2.3, private college and university first-time test-takers' Mathematics performance declined from 304 in 1987-88 to 300 in 1988-89 and 296 in 1989-90. Then when eligibility requirements were increased in 1990-91, CLAST Mathematics performance increased to 302. A similar pattern was noted for English Language Skills. An opposite pattern can be observed for CLAST Reading as private college and university first-time examinees increased from 310 in 1987-88 to 316 in 1988-89, remained at 316 in 1989-90 and then dropped to 312 in 1990-91. Performance on the CLAST Essay subtest displayed a different pattern. Performance on the Essay remained stable at 4.9 for the three years 1987-88 through 1989-90 and then increased to 5.0 in 1990-91.

Discussion

While the current CLAST performance of postsecondary first-time test-takers is higher than the baselines established in October 1982, their performance seems to increase and decrease over time rather than maintain a steady increase or steady state at a high level. Some of the fluctuations can be explained by changes in eligibility. In 1988-89 and 1989-90 students were permitted to take CLAST during their first semester on campus. Many chose to do so as can be inferred by the large increases in first-time test-takers during those two years (see Tables 2.1, 2.2 and 2.3) because doing so would allow them to be judged by lower standards than those that were about to be raised in August 1989. However, the CLAST performance for many of these students was relatively low because they had not yet taken all communication and mathematics courses required under the "Gordon Rule."

During its 1990 session the legislature passed a law which required students to have completed at least 18 credit hours before being eligible to take CLAST. As data in Tables 2.1, 2.2 and 2.3 show, the number of students sitting for CLAST dropped substantially in 1990-91 because of the new eligibility requirement. While CLAST performance appeared to improve from 1989-90 to 1990-91 in selected areas, it did not reach the all-time highs noted during 1987-88 and 1988-89. This may be due to the fact that many of the test-takers in 1990-91 had not yet completed all communication and mathematics courses that would have prepared them for the CLAST.

It is becoming apparent that first-time-in-college students arriving on a campus vary in their preparedness in communication and mathematics. As noted in Part 1, almost half of public community college students are eligible for college preparatory instruction in mathematics and about one-fourth lacks competence in English language skills and in reading. SUS university students appear to be better prepared because less than ten percent are judged to need college preparatory instruction upon entry to the university. This finding should not be too surprising since SUS university admission requirements require satisfactory completion of college preparatory courses in high school as well as high performance on traditional indicators such as admission test scores and high school grade point average. It seems clear that FTIC students differ a great deal in their entering levels of communication and mathematics skills. Therefore, a single guideline for eligibility to take CLAST will benefit some students but penalize others. Those being penalized would be students with strong college preparation in high school who would encounter delays in taking CLAST. By waiting to take CLAST, the well prepared students would tend to forget skills in mathematics through lack of use. Students with weak college preparation in high school would need to complete college-level courses in communications and mathematics to do well on CLAST. Flexibility in determining eligibility may be a more effective way of meeting individual student needs in communication and mathematics.

The next section of the report addresses how well students were able to meet the revised 1989 standards in academic year 1990-91.

PART 3. EXTENT TO WHICH THE REVISED 1989 CLAST STANDARDS WERE MET IN 1990-91

For readers who may be unfamiliar with the revised 1989 standards, two subtests are of particular interest: Mathematics and Essay. For Mathematics, the revised standard is 285--ten points less than the original 1989 standard of 295. The standard for Essay remained at 4--the same as for 1986. Standards for Reading and English Language Skills are each 295--in keeping with the original 1989 standards. All results reported in Part 3 are for first-time test-takers.

3.1 In 1990-91, what percentage of first-time examinees in public and private postsecondary institutions passed each CLAST subtest based on the revised 1989 standards?

SUS university students tended to have higher passing rates on each CLAST subtest and in passing all four than students in public community colleges or private colleges and universities (see Table 3.1). The passing rates of community college and private college and university students were almost identical. Detailed results for the different kinds of institutions are presented below.

Table 3.1

Percentage of First-Time Examinees Passing Each CLAST Subtest and All Four Based on Revised 1989 Standards for Public and Private Community Colleges and Universities, for 1990-91

Group	Mathe-matics	Reading	Eng Lang Skills	Essay	Passed All Four
Community Colleges (*n*=31,957)	77	72	75	92	55
State Universities (*n*=16,645)	87	84	86	95	71
Private Colleges (*n*=5,543)	71	74	77	91	56

Public Community Colleges. Public community college students did best on the CLAST Essay subtest as 92% of first-time test-takers passed[1]. Passing rates on the other three subtests were all above 70%. Seventy-seven percent (77%) of the community college students passed the Mathematics subtest on their first attempt followed by 75% pass in English Language Skills and 72% pass in Reading.

SUS Universities. Ninety-five percent (95%) of SUS university students passed the Essay on their first attempt. Their next best performance was 87% pass in Mathematics followed by 86% in English Language Skills. Their lowest area was 84% pass in Reading.

[1] The Essay passing score was 4 and represented no increase from the 1986 standards.

Private Colleges and Universities. Private college and university students did best on the Essay subtest with a passing rate of 91%. Their next best area was 77% pass in English Language Skills followed by 74% in Reading. Their lowest area was 71% pass in Mathematics.

Table 3.2

Number and Percent of First-Time Examinees at Public and Private Universities and Colleges Meeting the 1986 and 1989 Standards, 1985-86 Through 1990-91

	85-86†	86-87	87-88	88-89	89-90	90-91
Community Colleges:						
Percent Meeting '86 Standards	81	82	80	79	--	--
Percent Meeting '89 Standards	--	--	--	--	52	55
Number of Examinees	17,458	18,214	24,464	31,467	40,784	31,957
State Universities:						
Percent Meeting '86 Standards	85	86	87	89	--	--
Percent Meeting '89 Standards	--	--	--	--	76	71
Number of Examinees	17,264	17,008	19,826	21,264	21,426	16,645
Private Colleges & Universities:						
Percent Meeting '86 Standards	--	--	76	73	--	--
Percent Meeting '89 Standards	--	--	--	--	52	56
Number of Examinees	3,717	3,888	4,362	6,159	5,859	5,543

† The 1986 standards went into effect in August 1986. Passing rates for 1985-86 were estimated by applying the 1986 standards to student CLAST scores in 1985-86.

3.2 In 1990-91, what percentage of first-time examinees passed all four subtests based on the revised 1989 standards?

Because CLAST is based on a criterion-referenced approach, examinees must pass all four subtests to meet the minimum standards for the college-level skills in communication and mathematics. Using the criterion-referenced approach is an effective way to ensure that students have acquired an acceptable level of performance on all college-level skills.

Data in Table 3.1 show that first-time test-takers do relatively well as a large majority of them pass the individual subtests with none lower than 71% passing. However, the passing rate for passing four-out-of-four CLAST subtests drops for all three groups. While SUS university students still do best, those passing four-out-of-four on the first attempt drops to 71%. And only a bare majority of community college and private college and university students pass four-out-of-four on their first attempt--their passing rates being 55% and 56%, respectively.

3.3 Has there been improvement in the percentage of first-time examinees meeting the revised 1989 CLAST standards?

Now that the revised 1989 standards have been in effect for two academic years, it is possible to plot trends to answer Question 3.3. As can be seen in Table 3.2, the passing rate for first-time test-takers in public community colleges increased from 52% in 1989-90 to 55% in 1990-91. Surprisingly, the passing rate for SUS university students dropped from 76% in 1989-90 to 71% in 1990-91. Private college and university students showed improvement as they moved from 52% pass in 1989-90 to 56% in 1990-91.

Discussion

Interpreting the extent to which CLAST standards were met has become a complex task during the past three years. CLAST subtest cutoff scores were increased in August 1989. Eligibility requirements for taking CLAST were reduced in 1988-89 and then increased again in 1990-90. In light of this, interpreting changes in statewide performance is hazardous at best. Some tentative conclusions appear to be warranted nonetheless.

The performance of first-time test-takers appears to remain at relatively stable levels. Data presented in Part 2 show statewide CLAST averages varying from one year to the next. These changes appear to be relatively small and do not seem to have much impact on statewide passing rates. As noted in Table 3.2, increased standards in August 1989 resulted in reduced passing rates. One might have expected the change in eligibility to take CLAST would have resulted in improved passing rates in 1990-91. While this was true for public community college and private college and university students, SUS university student passing rates declined from 76% to 71% pass. Why this occurred is unclear from the information available. No doubt such surprises will be in store in subsequent years as CLAST standards continue to be increased gradually in both Mathematics and Essay.

The next part reports on trends in CLAST performance for racial and ethnic groups in public community colleges and SUS universities.

PART 4. TRENDS IN THE PERFORMANCE OF RACIAL AND ETHNIC GROUPS

The performance of minority students has been of concern since the beginning of the College-Level Academic Skills Testing Program. In 1983, the advisory group responsible for recommending CLAST standards found that minorities would be affected disproportionally based on their CLAST performance in October 1982. In light of this finding, the panel recommended implementing the CLAST standards in three gradual increments to give institutions and students time to adjust to the higher standards.

Concern for minority student access to postsecondary education has raised questions about why they tend to display relatively low performance on standardized achievement tests such as CLAST. How well does minority student CLAST performance compare to the performance of majority students? How well have minority first-time examinees done on CLAST? The purpose of Part 4 is to present data to answer these questions.

4.1 What have been the trends in performance on CLAST Mathematics for first-time test-takers from the different racial or ethnic groups in Florida's public postsecondary institutions?

The primary emphasis in Part 4 will be on minority student performance. Trends for White students are displayed in the figures which follow in order to provide a basis for interpreting the performance of minority students.

Public Community Colleges

Trends in performance continue to show that Black and Hispanic first-time test-takers continue to have difficulty in CLAST Mathematics. After declines in 1988-89 and 1989-90, Mathematics performance appears to be improving.

White Students. As can be seen in Figure 4.1, White students in public community colleges have maintained relatively stable performance on the Mathematics subtest with their scale score average remaining above the October 1982 baseline of 300 during the entire four-year period covered. Their Mathematics scale score averages ranged from a low of 309 to a high of 312. There appeared to be little improvement in community college White students' performance in Mathematics.

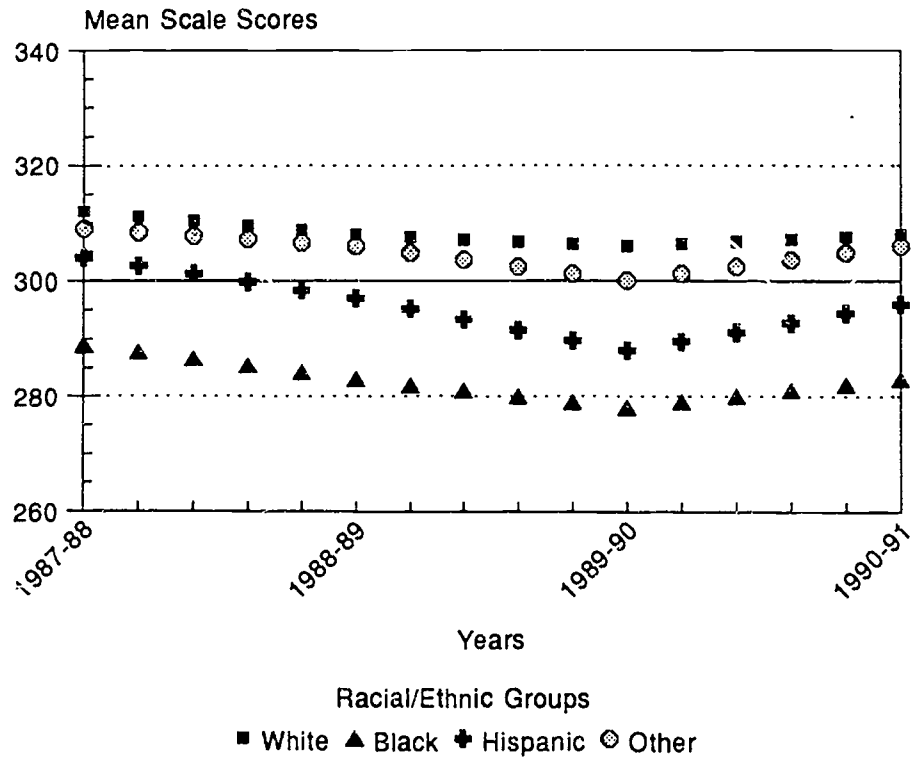
Black Students: The Mathematics scale score averages for Black students, on the other hand, have consistently fallen below the baseline of 300 (see Figure 4.1). Their best performance, a scale score average of 289, was in 1987-88. This was followed by a gradual decline to a low of 279 in 1989-90. This was followed by a gradual improvement to 282 in 1990-91--still substantially below the October 1982 baseline of 300.

Hispanic Students. Hispanic students' Mathematics performance is higher than Black student performance, but is still below that of Whites and Others. As shown in Figure 4.1, their Mathematics performance declined below the baseline of 300 in 1988-89 and 1989-90. An improvement can be seen in 1990-91, the scale score average being 296.

Other[1] Students. The Mathematics performance of Other students closely parallels the performance of Whites. Beginning with a scale score average of 309 in 1987-88, their performance declined to 300 in 1989-90 and then improved to 305 in 1990-91.

Figure 4.1

Racial/Ethnic Group Trends in CLAST Mathematics Subtest
Public Community Colleges 1987-88 through 1990-91



SUS Universities

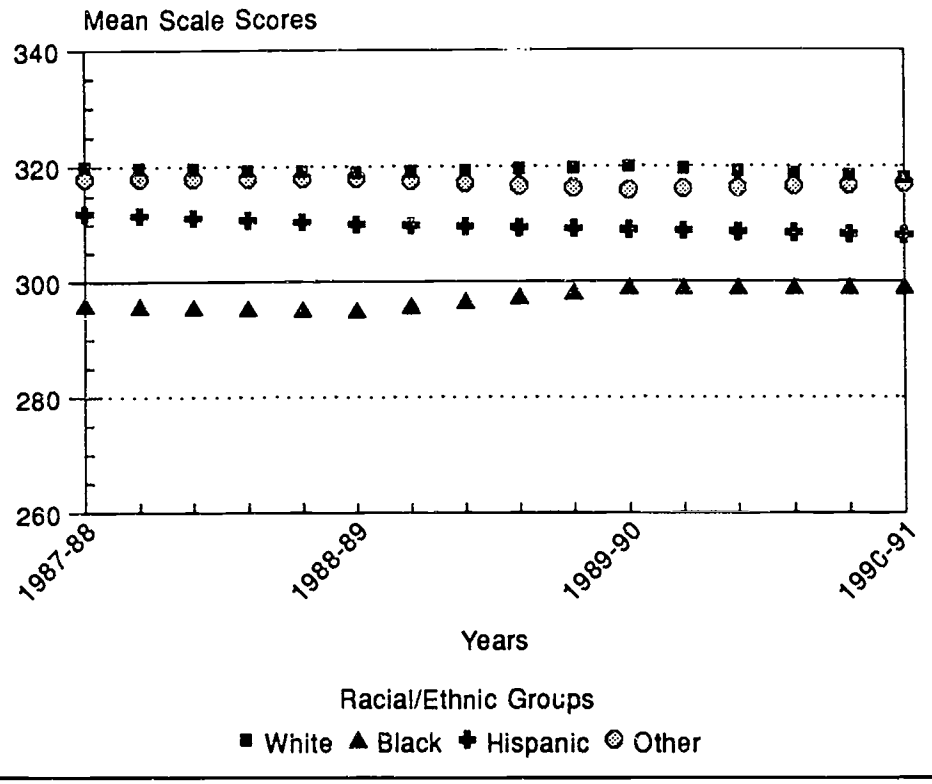
The CLAST Mathematics performance of first-time test-takers in SUS universities is substantially higher than that of students in public community colleges. The position of each racial/ethnic group, however, remains the same. Whites scored highest, closely followed by Others. The performance of Hispanics is somewhat lower than that of Whites while the Mathematics performance of Blacks is substantially lower than the other three groups. All racial/ethnic groups were above the October 1982 baseline of 300 except for Blacks who performed just below that level.

White Students. As can be seen in Figure 4.2, SUS university White students demonstrated stable performance over the four years covered. Their Mathematics performance clustered around a scale score average of 320. There was no improvement in White students' Mathematics performance.

[1] The category of Other includes: American Indians, Asians, aliens and those with racial/ethnic identity unknown.

Figure 4.2

Racial/Ethnic Group Trends in CLAST Mathematics Subtest
Public SUS Universities 1987-88 through 1990-91



Black Students. Black student Mathematics performance also remained relatively stable and may have shown a slight increase--from a scale score average of 295 in a 1987-88 to 299 in 1990-91. Thus, there appeared to be little improvement in Blacks' CLAST Mathematics performance.

Hispanic Students. The Mathematics performance of SUS Hispanic students was relatively stable over the four academic years studied. Beginning with a scale score average of 312 in 1987-88, they appeared to decline slightly to 310 in 1990-91.

Other Students. The Mathematics performance of Other students closely paralleled that of White students. Others' Mathematics performance was very stable beginning with a scale score average of 318 in 1987-88 and finishing with a scale score average of 317 in 1990-91. As with all groups, Others showed little, or no, improvement in their Mathematics performance during the time period studied.

4.2 What have been the trends in performance on CLAST English Language Skills for first-time test-takers from the different racial and ethnic groups in Florida's public postsecondary institutions?

Language and cultural differences emerge when CLAST English Language Skills performance is analyzed. Differences can be seen among public community college racial/ethnic groups as well

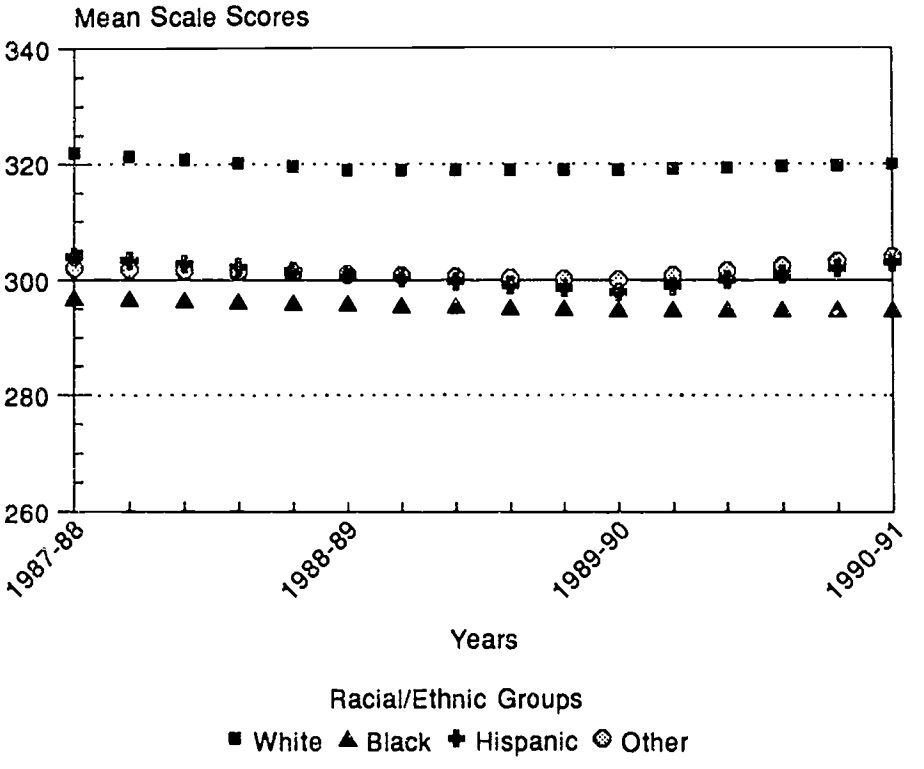
as differences when public community college student performance is compared with the performance of SUS university students. These differences are described below.

Public Community Colleges

The performance of community college students was very stable during the four years studied as trend lines for each racial/ethnic group were almost flat and straight. However, substantial differences in English Language Skills could be observed when the performance of White students is compared with that of the other three racial/ethnic groups. Performance levels of Blacks, Hispanics and Others was similar--hovering at or below the October 1982 baseline of 300.

Figure 4.3

Racial/Ethnic Group Trends in CLAST English Language Skills Subtest
Public Community Colleges 1987-88 through 1990-91



White Students. As can be seen in Figure 4.3, White first-time test-takers in public community colleges do very well on the CLAST English Skills subtest. They consistently maintained a scale score average at or near 320. However, their performance profile is flat as no improvement in performance was noted during the four years studied.

Black Students. Black student English Language Skills performance also appeared to be relative stable with scale score averages hovering in the range of 295 to 297 (see Figure 4.3). If anything, there appeared to be a very slight decline from 1987-88 to 1990-91. As a group, Black students continued to perform below the October 1982 baseline of 300.

Hispanic Students. The English Language Skills performance of Hispanic students was slightly higher than that of Black students and slightly more variable. Beginning with a scale score average of 304, Hispanics' English Language Skills performance declined to 301 in 1988-89 and 298 in 1989-90. Their performance then increased to 304 in 1990-91.

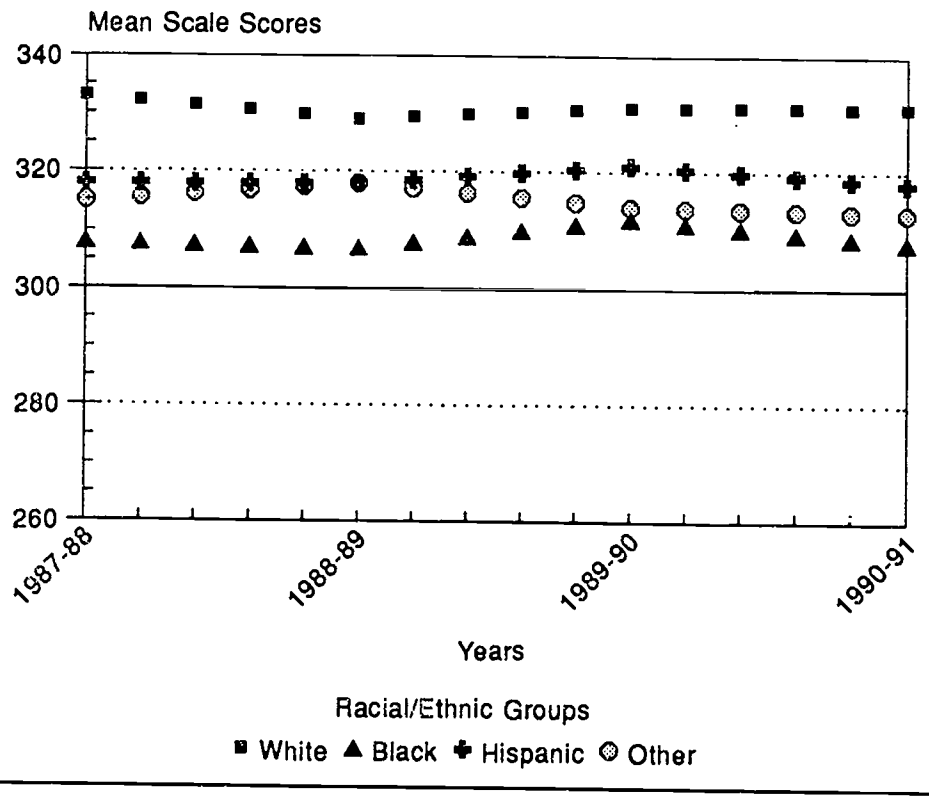
Other Students. The English Language Skills CLAST performance of Others was almost identical to the performance of Hispanic students. Others displayed virtually the same declines and increases as Hispanics.

SUS Universities

Racial/ethnic groups in SUS universities tended to perform higher on the English Language Skills subtest than their community college counterparts. Relatively large differences were found among SUS racial/ethnic groups. Again, English Language Skill performance remained very stable over the four years studied.

Figure 4.4

Racial/Ethnic Group Trends in CLAST English Language Skills Subtest
Public SUS Universities 1987-88 through 1990-91



White Students. As can be seen in Figure 4.4, White students performed higher than the other racial/ethnic groups on the English Language Skills subtest. Their performance was also stable with very little change noted. Their English Language Skills scale score averages were at or above 330.

Black Students. SUS university Black students maintained levels of English Language Skill performance above the October 1982 baseline of 300. Beginning with a scale score average of 307, they increased slightly in 1989-90 but declined to 307 again in 1990-91 (see Figure 4.4).

Hispanic Students. The English Language Skills performance of SUS Hispanic students closely paralleled that of SUS Black students--but at a higher level. In fact, the SUS Hispanic students demonstrated the second highest level of performance among the four racial/ethnic groups studied. In 1987-88 they had a scale score average of 318, which increased to 321 in 1989-90. Their performance then declined slightly to 318 again in 1990-91.

Other Students. SUS students in the Other group performed relatively well. Beginning with an English Language Skills scale score of 315 in 1987-88, their performance remained consistent concluding with 315 in 1990-91.

4.3 What have been the trends in performance on CLAST Reading for first-time test-takers from different racial and ethnic groups in Florida's postsecondary institutions?

Interesting performance patterns are found in CLAST Reading subtest performance. The Reading performance of White community college students stands out by itself while the performance of the other three racial/ethnic groups tends to be lower and relatively alike. While the racial/ethnic groups in SUS universities maintain their positions relative to each other, the levels of Reading performance of SUS university Blacks, Hispanics and Others is higher than their public community college counterparts. There is also more spread in performance between these three groups.

Public Community Colleges

The Reading performance of White community college students stands out by itself while the performance of the other three racial/ethnic groups tends to be lower and relatively alike.

White Students. As can be seen in Figure 4.5, community college White students began with a Reading scale score average of approximately 315 in 1987-88. Reading performance for White students then increased to 322 in 1988-89 and 1989-90 before dropping back to 315 in 1990-91.

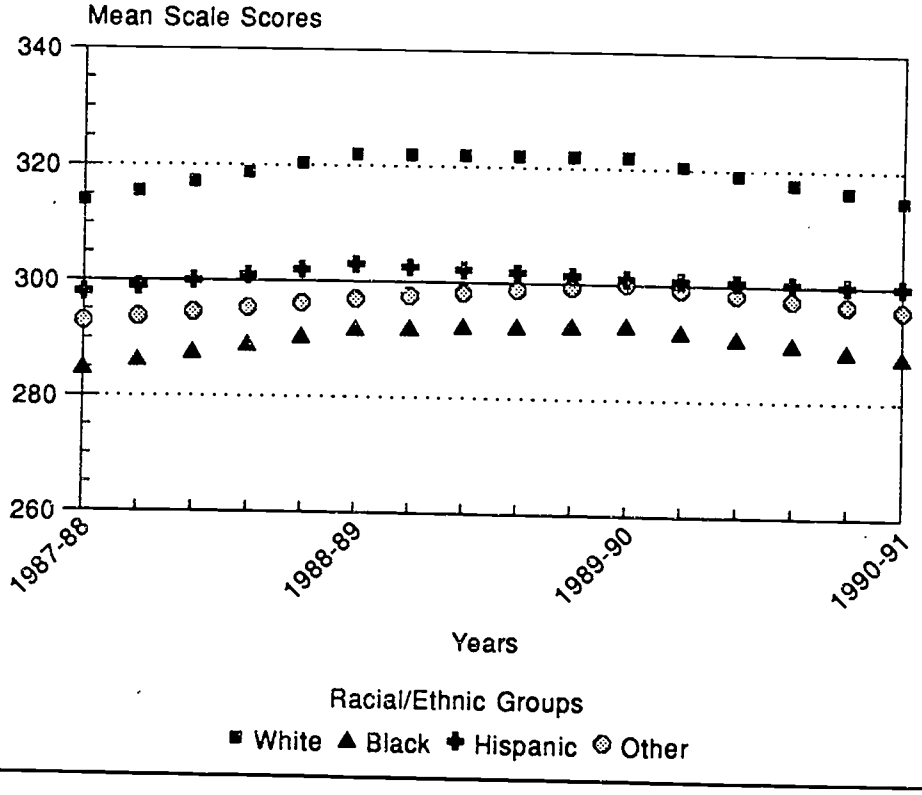
Black Students. The Reading performance of public community college Black students was relatively stable at a level below the October 1982 baseline of 300 (see Figure 4.5). Beginning with a Reading scale score of 285 in 1987-88, their performance increased to 290 in 1988-89 and 1989-90, but then tapered off again to 287 in 1990-91.

Hispanic Students. The Reading performance of Hispanic public community college students hovered around the October 1982 baseline of 300. Beginning with a Reading scale score average of 297 in 1987-88, their performance increased to a high of 303 in 1988-89 and then tapered off to 300 in 1990-91.

Other Students. The CLAST Reading performance of Other students fell between that of Black and Hispanic students. Beginning with a Reading scale score average of 293 in 1987-88, their Reading performance increased to a high of 300 in 1989-90 and then decreased to 295 in 1990-91.

Figure 4.5

Racial/Ethnic Group Trends in CLAST Reading Subtest
Public Community Colleges 1987-88 through 1990-91



SUS Universities

The CLAST Reading performance of SUS students displayed a pattern similar to their public community college counterparts, but at a higher level.

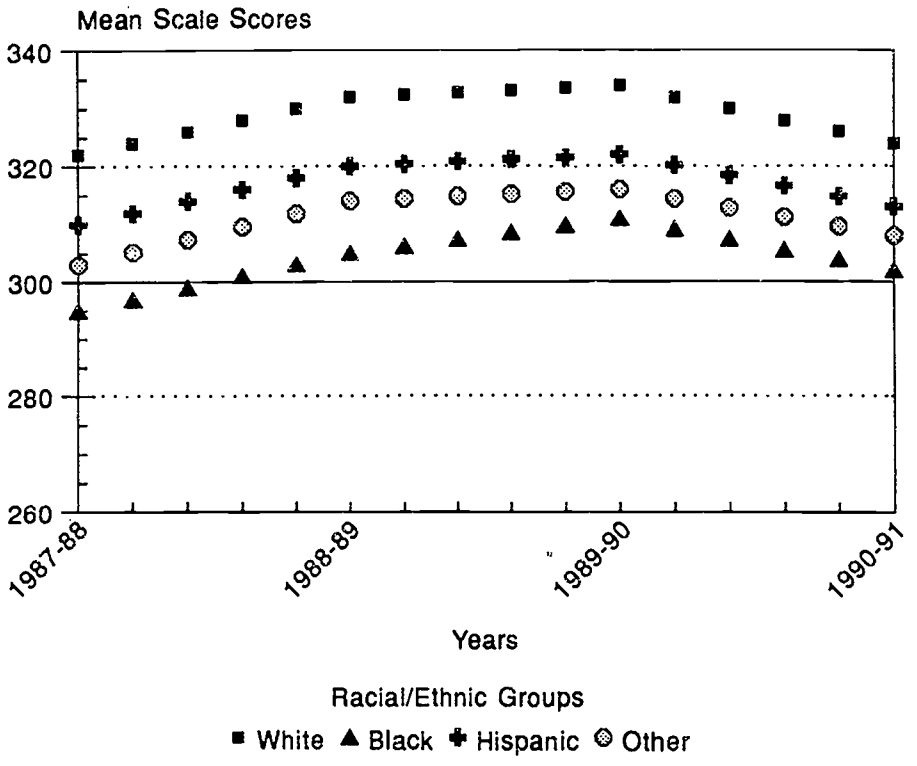
White Students. As can be seen in Figure 4.6, SUS university White students performed at a relatively high level with their scale score averages being above 320 for all four academic years studied.

Black Students. It was interesting to note a steady increase in CLAST Reading scores for Black students in SUS universities. Beginning with a Reading scale score average of 295 in 1987-88, their performance increased to 305 in 1988-89 and to 310 in 1989-90. Surprisingly, their Reading scale score averages decreased to 302 in 1990-91 (see Figure 4.6).

Hispanic Students. The Reading performance of SUS university Hispanic students appeared to fall midway between White and Black students. Beginning with a Reading scale score average of 310 in 1987-88, their performance increased to a high of 322 in 1989-90 before dropping off to 314 in 1990-91.

Figure 4.6

Racial/Ethnic Group Trends in CLAST Reading Subtest
Public SUS Universities 1987-88 through 1990-91



Other Students. Again, Other SUS university students' Reading performance appeared to fall midway between levels of performance of Blacks and Hispanics. Beginning with a scale score average in Reading of 304 in 1987-88, their performance increased to 315 in 1989-90 before dropping off to approximately 310 in 1990-91.

4.4 What have been the trends in performance on CLAST Essay for first-time test-takers from different racial and ethnic groups in Florida's postsecondary institutions?

There is a great deal of variability in CLAST Essay performance among the racial/ethnic groups in both the public community colleges and universities. The CLAST Essay appears to be one of the most challenging CLAST subtests--especially for minority students.

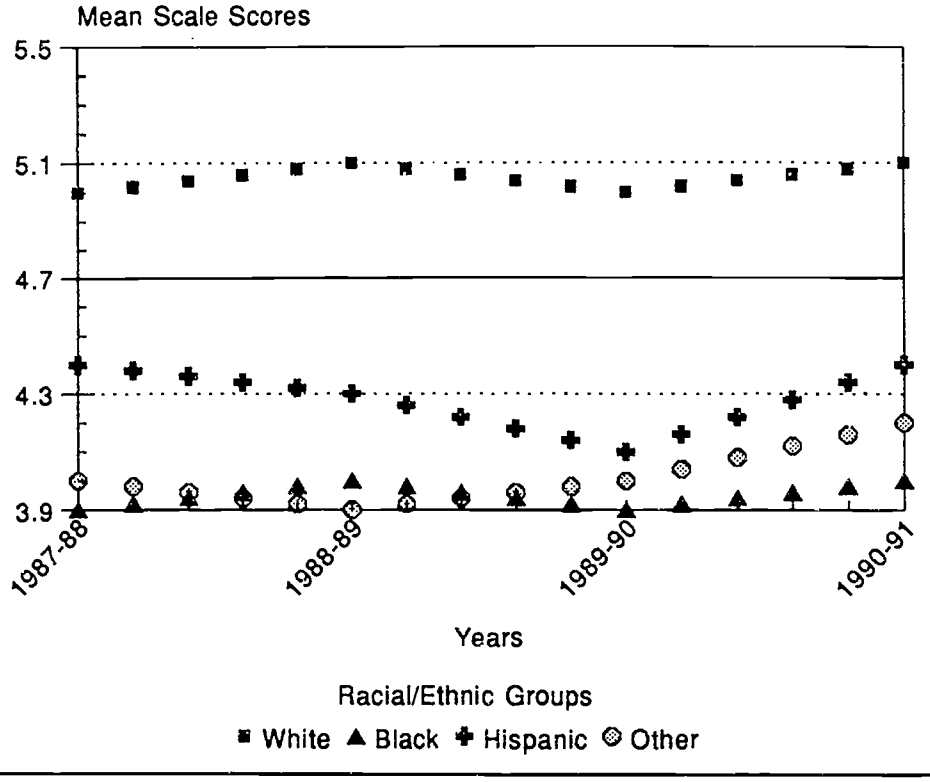
Public Community Colleges

While White public community college students did relatively well and demonstrated an Essay scale score average above the October 1982 baseline of 4.7, their minority group counterparts all fell below the baseline.

White Students. As can be seen in Figure 4.7, White public community college students have done relatively well on the CLAST Essay subtest. Their Essay subtest averages have been consistently above the baseline of 4.7 in each of the four academic years studied. Beginning with a scale score average of 5.0 in 1987-88, their performance

Figure 4.7

Racial/Ethnic Group Trends in CLAST Essay Subtest
Public Community Colleges 1987-88 through 1990-91



increased to 5.1 in 1988-89, decreased to 5.0 in 1989-90, and then returned to 5.1 in 1990-91.

Black Students. Black students in public community colleges appear to be having difficulty in essay writing. Their Essay scale score averages were substantially below the October 1982 baseline of 4.7 in each of the four years studied. Their Essay performance has hovered around a scale score average of 3.9, and increased to 4.0 in 1990-91 (see Figure 4.7).

Hispanic Students. Hispanic students in public community colleges also tended to score below the October 1982 baseline of 4.7. As can be seen in Figure 4.7, they had an Essay scale score average of 4.4 in 1987-88. Their performance declined to an Essay scale score average of 4.1 in 1989-90, and then increased to 4.4 in 1990-91.

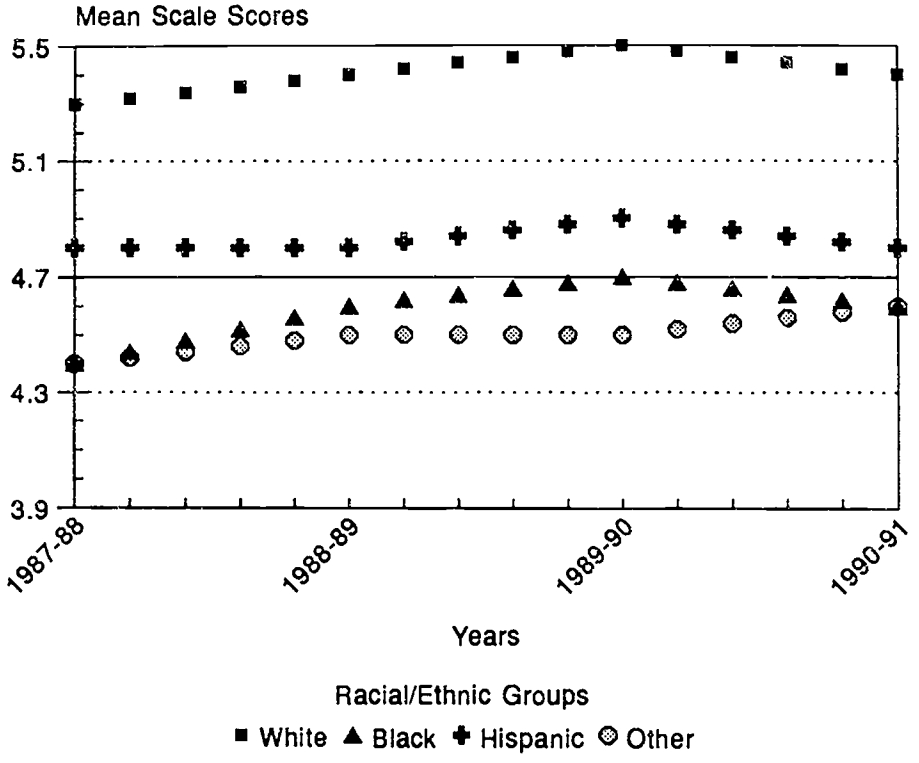
Other Students. The Essay performance of Other students in public community colleges initially tended to be low. Beginning with an Essay scale score average of 4.0 in 1987-88, their performance remained relatively stable until 1989-90 when it began it increase, ending up with a scale score average of 4.2 in 1990-91.

SUS Universities

While Essay performance of SUS university students tended to be higher than their counterparts in public community colleges, only two racial/ethnic groups were able to maintain a level of performance consistently above the October 1982 baseline of 4.7 on Essay.

Figure 4.8

Racial/Ethnic Group Trends in CLAST Essay Subtest
Public SUS Universities 1987-88 through 1990-91



White Students. White SUS university students tended to perform at a high level on the CLAST Essay subtest (see Figure 4.8). They began the four year period at a scale score average of 5.3 and then increased to a high of 5.5 in 1989-90. Then for some unknown reason, they declined to an Essay scale score average of 5.4 in 1990-91.

Black Students. As can be seen in Figure 4.8, there is a substantial difference between the Essay performance of Black and White SUS university students. Blacks had an Essay scale score average of 4.4 in 1987-88. Their performance increased to 4.7 in 1989-90 and then dropped off to 4.6 in 1990-91.

Hispanic Students. Hispanic SUS university students do relatively well when compared to the October 1982 Essay baseline of 4.7. They performed consistently above the baseline in each of the four years studied (see Figure 4.8). Beginning with an Essay scale score average of 4.8 in 1987-88, Hispanic students increased to 4.8 in 1989-90 before dropping back to 4.8 in 1990-91.

Other Students. Other students in SUS universities did slightly less well than the other three racial/ethnic groups. They were consistently either at the bottom or even with Black SUS university students. Other students began at 4.4 in 1987-88 and then displayed a gradual increase to 4.6 in 1990-91. They were the only racial/ethnic group that showed a steady increase over the four years studied.

4.5 Are the college-preparatory instructional needs of minority students being met by Florida's public community colleges and universities?

There are two ways to answer this question. The first would be to look at the first-time test-taking performance of minority students. The second would be to examine the performance of minority students who prepare for and retake failed subtests. Data in Figures 4.1 through 4.8 shows the performance of minority first-time examinees following the first approach. The primary statistic in these figures was the group average and it served as a useful indicator regarding trends for first-time examinees. When statewide minority performance on CLAST subtests is considered, the results in this report support the conclusion that first-time Black and Hispanic test-takers do not do nearly as well as their White counterparts. Furthermore, there appears to be little, if any, improvement in the level of performance of the first-time test-takers during the four years observed. And, as noted in Part 3, as standards are increased, the percent passing decreases.

However, since students may retake failed subtests as many times as they choose, trends based on first-time test-takers say nothing about what happens to them after failing a CLAST subtest. Therefore, one other way to answer Question 4.5 is to see how well minority students do when they prepare for and retake failed subtests. Results presented in Part 5 describe how members of racial or ethnic groups performed upon retaking CLAST. As Part 5 will show, students who prepare for and retake failed subtests do pass. Whether the instructional or advising processes are as effective or efficient as they should be remains open to question, however. There is no way to answer this question with the data at hand.

Discussion

The primary concern of Part 4 was whether there are disproportional impacts on minority first-time examinees. Analysis of results suggests that, in general, SUS university students do better than their community college counterparts. And White SUS university students consistently perform highest. This can be best explained by differences in admission standards. SUS universities have specific entrance requirements in communications, mathematics, science and foreign language. Meeting RAISE requirements for high school graduation may not be sufficient since course work in communications, mathematics, science and foreign language must be at or above a specified level for admission to an SUS university. Public community colleges, on the other hand, tend to require only completion of a high school diploma.

That there are disproportional impacts on minorities are supported by the data in Figures 4.1 through 4.8. Black students in public community colleges tend to do least well of all groups. While Black students in SUS universities do better than their community college counterparts, Blacks tend to do least well among university students.

Even though CLAST standards were raised in 1986 and again in 1989, these increases do not seem to have had much impact on the performance of first-time test-takers. Data presented in Figures 4.1 through Figure 4.8 show that there are few, if any, increases. Any increases that were observed were offset by subsequent decreases.

While it may be tempting to conclude that the curriculum and instruction at the postsecondary level has little impact, it should be noted that we have been looking at first-time test-takers only. As will be shown in Part 5, students from all racial/ethnic groups show significant improvement when they prepare for and retake failed subtests.

PART 5. RESULTS OF COHORT FOLLOW-UP STUDIES

While previous sections of this report have emphasized results based on first-time test-takers, this part will report on the results of followup studies of students who retook failed subtests. There are at least two reasons for doing so. First, many of the students in these cohorts had been allowed to take the CLAST as soon as they enrolled[1]. Because of this many were not well prepared and therefore failed one or more subtests. Second, emphasizing longitudinal cohort results makes student welfare more salient. While the performance of first-time test-takers may be interesting, the more critical issue is whether college students who lack skills in communication and mathematics acquire them during their college career. Monitoring students who fail CLAST is one way of determining how effective institutions are in providing academic support for students who have been admitted with deficiencies in one or more of the college-level skills in communication or mathematics.

5.1 Do students who fail CLAST retake it? If so, are they successful?

An on-going cohort study was done to determine what happens to students who have failed one or more CLAST subtests. In October 1989, 18,814 students sat for the CLAST. These students have been followed on each administration of CLAST through June 1991. As can be seen in Table 5.1, students retake and pass failed subtests.

Table 5.1

Cumulative Percent Passing after Indicated Administration
Revised 1989 Standards October 1989 Cohort
All Examinees†

Subtest	Oct 89	Mar 90	Jun 90	Oct 90	Feb 91	Jun 91	% Pt Increase
Essay	91.0	93.9	94.8	95.6	96.0	96.0	5.0
English Language Skills	80.2	85.7	88.2	90.1	91.3	92.2	12.0
Reading	85.9	90.4	91.5	92.5	93.3	93.6	7.7
Mathematics	80.8	85.8	87.9	89.8	90.6	91.3	10.5
Three of Four Subtests	83.3	87.3	88.9	90.6	91.5	92.1	8.8
All Four Subtests	65.2	75.3	79.3	82.6	84.5	85.8	20.6

† The number in the All Examinees cohort was 18,814.

Progress on Essay. The standard in effect for the Essay was a scale score of 4. This standard remanined in effect in 1989 and represented no increase. It was retained at 4

[1] In 1988 the Florida legislature passed a law allowing entering freshmen to take CLAST. However, taking CLAST at entry is no longer allowed. The 1990 Florida legislature enacted a law which requires students to complete 18 credit hours of college level work before they can sit for CLAST.

by the State Board of Education because raising it to 5 would have resulted in high rates of failure. As can be seen in Table 5.1, all examinees do very well on their first attempt as 91% passed it on their first try. Five administrations later, almost all examinees (96%) of the October 1989 cohort had passed the Essay--for a gain of five percentage points.

Progress on English Language Skills. In October 1989 the standard for passing English Language Skills was a scale score of 295--a substantial increase over the 1986 standards. A large majority (80.2%) of all examinees in the October 1989 cohort passed on their first attempt (see Table 5.1). Many of those who initially failed continued to retake the English Language Skills subtest so that by June 1991 92.2% had passed. This represented a gain of 12 percentage points.

Progress on Reading. In October 1989 the standard for passing Reading was increased to a scale score of 295. Here again we see a large majority (85.9%) of all examinees passing on the first try. By June 1991 the proportion of the October 1989 cohort who passed increased to 93.6%--for a gain of 7.7 percentage points.

Progress on Mathematics. In October 1989 the standard for passing Mathematics was raised to a scale score of 285--ten points less than the standard originally set for 1989. Again, a large majority (80.8%) of all examinees in October 1989 passed on their first try. By June 1991, 91.3% had passed the Mathematics subtest for a gain of 10.5 percentage points.

Passing Three Subtests. So far we have observed that examinees in the October 1989 cohort have done very well as over 90% of those examinees had passed at least one CLAST subtest. However, to meet CLAST requirements, a student must pass four-our-of-four. In light of this, passing rates were calculated to see how successful students were in meeting all CLAST requirements.

As can be seen in Table 5.1, 83.3% of all examinees passed three of four CLAST subtests on their first attempt. By June 1991 92.1% had passed three of four of the subtests for a gain of 8.8 percentage points. Thus, the pattern of performance in passing three subtests appears to parallel performance in each of the individual subtests. As will be noted below, a substantially larger percentage of in the cohort ended up passing four-out-of-four after six administrations of the test.

Passing All Four Subtests. Data in Table 5.1 suggest that students sitting for CLAST had gaps in either their communication or mathematics skills as only 65.2% successfully passed four-out-of-four on their first attempt. Substantial gains were made on subsequent retests as 85.8% of all examinees in the October 1989 cohort had passed four-out-of-four subtests by June 1991; this represented a gain of 20.6 percentage points.

5.2 Given the opportunity to retake failed subtests, are any racial or ethnic groups disproportionally affected by the revised 1989 CLAST standards?

As analysis of the data will show, there are disproportional impacts on racial/ethnic groups as compared to White test-takers. However, the opportunity to retake failed subtests helps to ameliorate these disproportional impacts as minority students retake and pass subtests which they failed on their first attempt. The passing rates of White students are presented to provide baselines to determine impacts are disproportional.

White Examinees. As can be seen in Table 5.2, White students in the October 1989 cohort performed very well on their first attempt. Almost all (96.3%) passed the Essay on the first try; by June 1991 99% had met the Essay requirement. Reading was another

Table 5.2

Cumulative Percent Passing after Indicated Administration
Revised 1989 Standards October 1989 Cohort
White Examinees†

Subtest	Oct 89	Mar 90	Jun 90	Oct 90	Feb 91	Jun 91	% Pt Increase
Essay	96.3	98.2	98.5	98.8	98.9	99.0	2.7
English Language Skills	86.7	91.2	93.2	94.7	95.5	95.9	9.2
Reading	92.2	95.6	96.3	96.9	97.3	97.5	5.3
Mathematics	86.7	91.0	92.6	94.0	94.6	95.0	8.3
Three of Four Subtests	90.9	94.0	95.0	96.1	96.5	96.7	5.8
All Four Subtests	74.5	83.7	87.1	89.6	91.1	91.9	17.4

† The number in the White examinees cohort was 13,330.

area in which White students did well as 92.2% passed on the first try; by June 1991 97.5% had passed. Their lowest areas of performance were in English Language Skills and Mathematics as initial passing rates were 86.7% for both subtests. By June 1991 their passing rates were 95.9% for English Language Skills and 95.0% for Mathematics. Even though White examinees do relatively well in each subtest area on their first try. They did very well in passing three-of-four subtests--from 90.9% in October 1989 to 96.7% in June 1991. However, only 74.5% passed four-out-of-four in October 1989, suggesting that they still had gaps in either communication or mathematics. But substantial improvement was noted as 91.9% of White examinees had passed four-out-of-four subtests by June 1991.

Black Examinees. Disproportional impacts on CLAST performance can be seen by comparing results in Table 5.2 with Table 5.3. While 74.5% of White examinees were able to pass all four subtests on their first attempt, only 41.3% of the Black examinees passed all four on their first try. Black examinees best area of performance was on the CLAST Essay as 81.5% passed on their first try. By June 1991 91.8% had passed Essay for a gain of 10.3 percentage points.

There was a significant drop off in initial passing rates for the other three subtests as only 61.5% of Black examinees were able to pass the Mathematics subtest in October 1989; by June 1991, their passing rate in Mathematics had increased to 78.4%. Similar patterns were found for English Language Skills and Reading. Sixty-four percent (64%) of the Black examinees passed English Language Skills in October 1989; by June 1991, 81.5% had passed for a gain of 17.5% percentage points. Sixty-eight percent (68%) passed Reading in October 1989; by June 1991, 81.9% had passed Reading for a gain of 13.9 percentage points.

Black performance in passing three-out-of-four subtests was 63.1% in October 1989; by June 1991 79.8% had passed three-out-of-four. Disproportional impact is most evident in Black passing rates for four-out-of-four as less than half (41.3%) passed on the first attempt; by June 1991 68.5% had passed four-out-of-four--a gain of 27.2 percentage points. While this is a substantial improvement, the 68.5% passing rate for Black examinees suggests that the revised 1989 standards represent a substantial challenge for them.

Table 5.3

Cumulative Percent Passing after Indicated Administration
Revised 1989 Standards October 1989 Cohort
Black Examinees†

Subtest	Oct 89	Mar 90	Jun 90	Oct 90	Feb 91	Jun 91	% Pt Increase
Essay	81.5	87.0	88.6	90.5	91.2	91.8	10.3
English Language Skills	64.0	71.3	74.7	77.6	79.4	81.5	17.5
Reading	68.0	76.1	77.8	79.4	81.3	81.9	13.9
Mathematics	61.7	68.6	71.3	75.1	76.8	78.4	16.7
Three of Four Subtests	63.1	70.9	73.6	76.6	78.1	79.8	16.7
All Four Subtests	41.3	53.2	57.6	62.9	66.0	68.5	27.2

† The number in the Black examinees cohort was 2,076.

Hispanic Examinees. Hispanic examinees did slightly better than their Black counterparts in some areas in October 1989. However, disproportional impacts are still evident when results in Table 5.2 are compared with results in Table 5.4. While 74.5% of White examinees were able to pass all four subtests on their first attempt, only 41.8% of the Hispanic examinees passed all four on their first try. Hispanic examinees best area of performance was on the CLAST Essay as 78.1% passed on their first try. By June 1991 88.6% had passed Essay for a gain of 10.5 percentage points.

The revised 1989 standards for English Language Skills, Reading and Mathematics resulted in relatively low passing rates for Hispanic examinees. After Essay, the next best area of performance for Hispanics was in Reading as 72.6% passed in October 1989; percent passing Reading increased to 84.8% by June 1991. Their two lowest areas in October 1989 were English Language Skills (63.9% pass) and Mathematics (64.9% pass). However, passing rates increased significantly as 82% passed English Language Skills and 81% passed Mathematics by June 1991.

The disproportional impact of the revised 1989 standards is most evident for Hispanic examinees when their performance in passing four-out-of-four subtests is considered. Only 41.8% passed in October 1989. However, the percent passing increased to 70.1% in June 1991--a gain of 28.3 percentage points. While this is a substantial gain, approximately 30% of them still had gaps in either their communication or mathematics skills almost two years after they initially took the CLAST.

Discussion

Results in previous chapters show that the performance of first-time test-takers is on a plateau and has been for several years. Presidents and faculty in Florida's community colleges and universities were made aware that CLAST standards would be raised when the standards were adopted in 1983. While efforts are being made to provide students with opportunities to master the communication and mathematics skills measured by CLAST, these efforts seem to have little, if any, effect on the performance of first-time test-takers.

Table 5.4

Cumulative Percent Passing after Indicated Administration
1989 Standards October 1989 Cohort
Hispanic Examinees†

Subtest	Oct 89	Mar 90	Jun 90	Oct 90	Feb 91	Jun 91	% Pt Increase
Essay	78.1	83.8	84.7	86.5	87.7	88.6	10.5
English Language Skills	63.9	71.9	75.2	78.2	80.4	82.0	18.1
Reading	72.6	78.5	80.6	82.8	84.1	84.8	12.2
Mathematics	64.9	71.3	75.0	78.2	79.5	81.0	16.1
Three of Four Subtests	65.2	70.2	73.3	76.8	78.7	80.2	15.0
All Four Subtests	41.8	53.9	59.5	64.8	67.8	70.1	28.3

† The number in the Hispanic examinees cohort was 2,346.

It seems clear that the revised 1989 CLAST standards have had disproportional impacts on minority first-time test-takers. As the results presented have shown, Black and Hispanic first-time examinees tend to pass CLAST subtests at significantly lower rates than White examinees. However, the results of cohort followup studies shows that these disproportional impacts are being ameliorated as Black and Hispanic students prepare for and retake failed subtests.

It seems appropriate to conclude that results based on cohort studies are a far better indicator of institutional effectiveness. Postsecondary institutions should be held accountable for student results when they have completed their first two years of college-level course work. Students fail CLAST on their first attempt for a number of reasons. The earlier a student takes CLAST after entry into college, the less influence college-level courses are likely to have. They may do poorly on CLAST because they may not have had the appropriate college preparatory instruction in high school. They may also have been given passing grades in communication or mathematics courses for substandard work. However, this is less true as time goes by and students take required courses in college-level communication and mathematics. This is not to imply that students should wait until the end of their sophomore to take CLAST for the first time. It should be emphasized that students should take CLAST as early as possible to receive feedback so that corrective actions can be taken. If both students and college-level faculty have seriously addressed learning the skills in communication and mathematics, then it is reasonable to expect students to complete all CLAST requirements by the end of their sophomore year in college regardless of the number of times they have to take CLAST to pass it.

The next part reports on analysis of institutional performance as related to the percentage of minority students taking CLAST. This analysis was done in light of varied distribution of minority students among the institutions and the disproportional impacts which minority students tend to experience as first-time examinees.

PART 6. VARIABILITY IN CLAST INSTITUTIONAL PERFORMANCE RELATED TO MINORITY PARTICIPATION

The previous sections of this report emphasized statewide summaries. While this is useful for understanding aggregated results, statewide summaries fail to illuminate issues at the institutional or racial/ethnic group levels. Questions which come to mind at these levels include: Has there been improvement in performance at each institution? How well have racial/ethnic groups at each institution done when they retook failed subtests? These questions can be answered by examining individual institutional profiles which can be found in Appendix C.

There are two profiles for each institution. The first profile presents longitudinal trends for each CLAST subtest from 1986-87 through 1990-91. The second profile presents progress made by racial/ethnic cohorts who were initially tested in October 1989 and then retook failed subtests. There are striking differences when these displays are compared. On the one hand, longitudinal trends for first-time test-takers show little, if any, improvement over time. On the other hand, institutional cohort data show significant percentages of students retaking and passing subtests which they had initially failed (see Appendix C).

Part 6 has two main purposes. The first is to determine how institutional performance correlates with minority participation. This purpose evolved from statewide results presented in Parts 4 and 5 where disproportional impacts were found for Black and Hispanic first-time test-takers. The second purpose of Part 6 is to determine whether institutional cohorts have improved after retaking failed CLAST subtests.

To do the descriptive analyses for Part 6 it was necessary to prepare scatter plots. To construct a scatter plot, an institution's location in the plot was determined by: (a) the percentage of first-time minority examinees[1] who took CLAST in October 1989 and (b) the percentage of all students at the given institution passing a particular subtest in October 1989. To project central tendencies of percent passing across levels of percent minority, the best fitting line was calculated using least squares regression. The purpose of the regression line was to depict average CLAST performance across the full range of percentage of minority test-takers (see Figure 6.1). A second scatter plot was prepared showing each institution in June 1991 after students in its October 1989 cohort had had an opportunity to retake failed subtests. An institution's improvement can be determined by comparing its position on the first scatter plot with its position on the second. The Pearson product-moment correlation between percent minority taking CLAST and percent passing a subtest was also computed.

6.1 Is an institution's passing rate on CLAST Mathematics related to its percentage of minority test-takers?

Figure 6.1 shows percent passing CLAST Mathematics on the first try regressed on the percentage of minority first-time examinees at an institution in October 1989. As can be seen in this figure, only three institutions have minority first-time examinee percentages of 30% or larger; two of the institutions are SUS universities and one is a community college. Most of the public institutions have from 5% to 22% minority students. The number of institutions in this restricted range suggests that most public community colleges and universities in Florida have relatively small percentages of minority students. The three institutions with relatively large percentages of minority test-takers appeared to contribute most to the correlation of -.49 that was found between percent

[1] The percentage of minority participation in CLAST was estimated by the percentage of Black plus Hispanic students who were first-time test-takers in October 1989.

Figure 6.1

Scatter Plot of October 1989 Institutional Cohorts after Initial Test Administration: CLAST Math Subtest

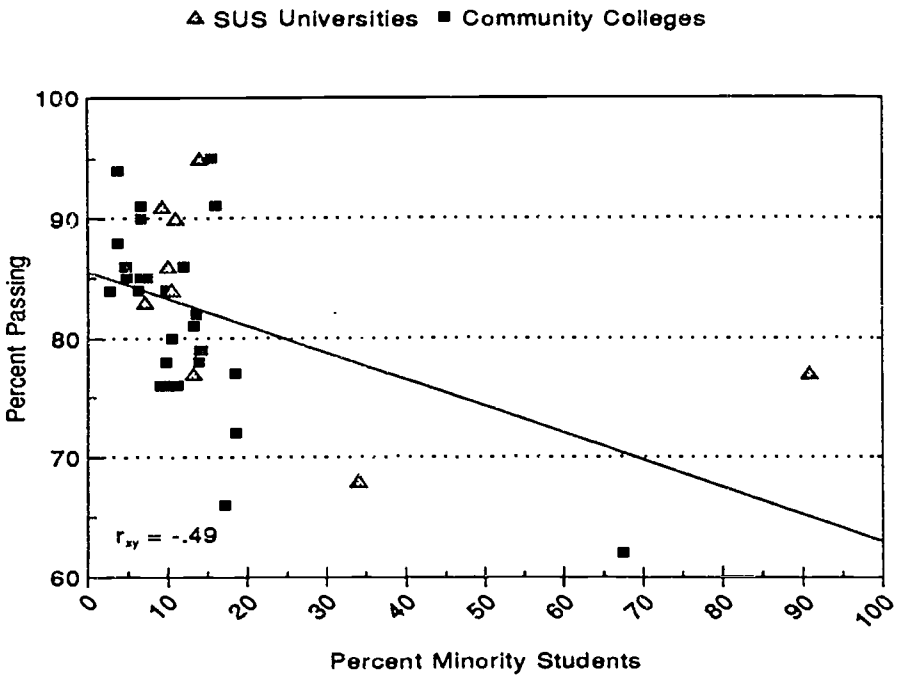
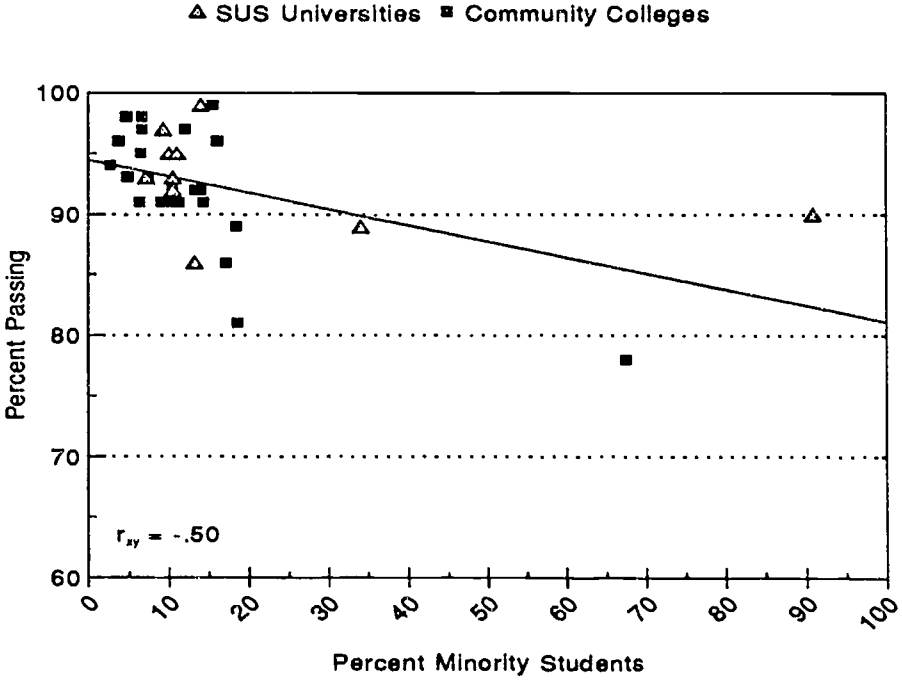


Figure 6.2

Scatter Plot of October 1989 Institutional Cohorts after Six Test Opportunities: CLAST Math Subtest



minority and passing rate on CLAST Mathematics in October 1989. The correlation of -.49 provides evidence that there is a relationship between the performance of first-time test-takers at an institution and the percentage of minority students taking CLAST. The correlation is a moderate one as only 24% of the variability in Mathematics passing rate can be accounted for by the percentage of minority students taking CLAST. That left the majority (76%) of the variability to be explained by other, unidentified variables.

Seventy percent (70%) passing was arbitrarily selected as a criterion of performance to make judgments about quality of institutional performance. Based on this criterion, there were three institutions whose students' Mathematics performance in 1991 was 70% or less. Of these three, one was 67.5% minority, one was 34.1% minority, and the final one was 18.6% minority. Close examination of the scatter plot in Figure 6.1 reveals that community colleges and universities are relatively indistinguishable in percent passing since there are institutions of both kinds in the upper, middle and lower parts of the distribution of institutional percentages passing on the first attempt.

Figure 6.2 is a related scatter plot showing institutional performance in June 1991, after six testing opportunities, versus percent minority test-takers for each institution's October 1989 cohort. Even though the correlation between percent passing and percent minority remains stable (a correlation of -.50). all institutions improved substantially in percent passing. There were no institutions below 70% passing on CLAST Mathematics; only one high minority institution was below 80% passing. Students in the vast majority of institutions (31 of 37) had passing rates of 90% or higher. Two universities with relatively high minority percentages were at or near 90% passing after five additional opportunities to take failed subtests.

6.2 Is an institution's passing rate on CLAST English Language Skills related to its percentage of minority test-takers?

Figure 6.3 shows percent passing CLAST English Language Skills on the first try in October 1989 regressed on percent minority first-time examinees at each institution. Since institutions have the same percentage of minority first-time test-takers in each scatter plot, no comments will be made beyond those already given above.

As before, the three institutions with relatively large percentages of minority test-takers appeared to contribute most to the correlation (-.56) between percent passing English Language Skills and percentage of minority first-time examinees. Again, there appeared to be a correlation between the English Language Skills passing rate of first-time test-takers at an institution and the percentage of minority students taking CLAST. The relationship was a moderate one as only 31% of the variability in English Language Skills passing rate can be accounted for by the percentage of minority students taking CLAST. That left the majority of the variability (69%) to be explained by other, unidentified variables.

Using the seventy percent (70%) passing criterion to make judgments about quality of institutional performance, we found only one institution whose students' English Language Skills performance in October 1989 was at a passing rate of less than 70%. Not surprisingly, it was a high minority institution (67.5%).

Figure 6.4 is the scatter plot showing institutional performance in English Language Skills versus percent minority test-takers for each institution's 1989 cohort in June 1991. The correlation between percent passing English Language Skills and percent minority increases slightly (from -.56 to -.64). Moreover, all institutions improved in percent passing English Language Skills. There were no institutions below 70% passing for English Language Skills; only one high minority institution was below 80% passing. Students in the vast majority of institutions (35 of 37) had passing rates of 90% or higher. Two universities with relatively high minority percentages were at or near 90% passing.

Figure 6.3

Scatter Plot of October 1989 Institutional Cohorts after Initial Test Administration: CLAST English Language Skills Subtest

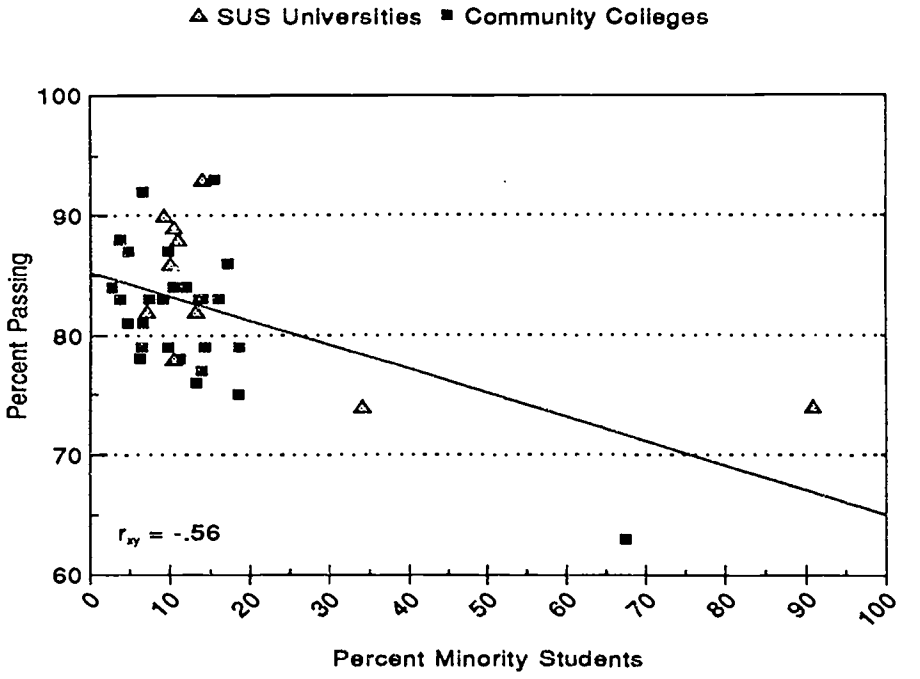
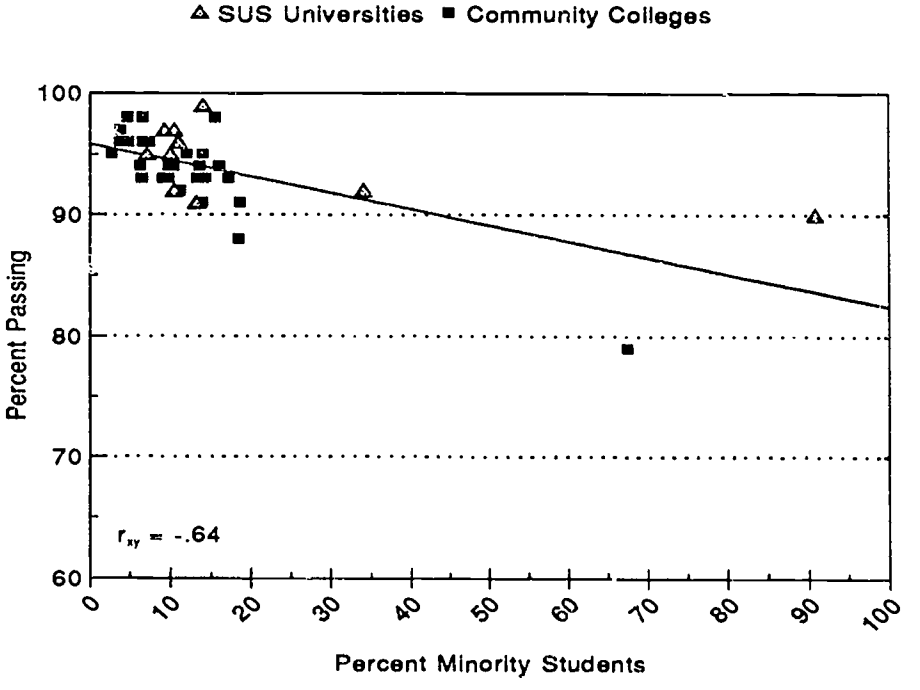


Figure 6.4

Scatter Plot of October 1989 Institutional Cohorts after Six Test Opportunities: CLAST English Language Skills Subtest



6.3 Is an institution's passing rate on CLAST Reading related to its percentage of minority test-takers?

Figure 6.5 shows percent passing CLAST Reading on the first try in October 1989 regressed on percent minority first-time examinees at each institution in October 1989. As before, the three institutions with relatively large percentages of minority test-takers appeared to contribute most to the correlation of -.70. Again, there appeared to be a relationship between the performance of first-time test-takers at an institution and the percentage of minority students taking CLAST. The relationship is a sizeable one as 49% of the variability in Reading passing rate can be accounted for by the percentage of minority students taking CLAST. That left a slight majority of the variability (51%) to be explained by other, unidentified variables.

Using the seventy percent (70%) passing criterion to make judgments about quality of institutional performance, we found only one institution whose students' Reading passing rate in October 1989 was 70% or less. Not surprisingly, it was a high minority institution (67.5%).
Figure 6.6 is the scatter plot showing institutional performance versus percent minority test-takers for each institution's October 1989 cohort in June 1991. The correlation between percent passing Reading and percent minority decreased slightly (from -.70 to -.68). Moreover, all institutions' passing rates improved substantially. There were no institutions below 80% passing for CLAST Reading; only one high minority institution was below 90% passing. Students in the vast majority of institutions (36 of 37) had passing rates of 90% or higher. Two universities with relatively high minority percentages were at or above 90% passing.

6.4 Is an institution's passing rate on CLAST Essay related to its percentage of minority test-takers?

Figure 6.7 shows percent passing CLAST Essay on the first try in October 1989 regressed on percent minority at each institution. As before, the three institutions with relatively large percentages of minority test-takers appear to contribute substantially to the correlation of -.66. Again, there appears to be a relationship between the performance of first-time test-takers at an institution and the percentage of minority students taking CLAST. The relationship was moderate as only 44% of the variability in Essay passing rate could be accounted for by the percentage of minority students taking CLAST. That left the majority of the variability (56%) to be explained by other, unidentified variables.

Using the seventy percent (70%) passing criterion to make judgments about quality of institutional performance, we found no institutions whose students' Essay performance in October 1989 was less than 70%, and only one whose passing rate was just below 80%. Not surprisingly, it was a high minority institution (67.5%). As can be seen in Figure 6.7, a large majority (32 of 37) of the institutions had an Essay passing rate of 90% or higher on the students' first attempt.

Figure 6.8 is the scatter plot showing institutional passing rate on Essay versus percent minority for each institution's October 1989 cohort in June 1991. The correlation between percent passing Essay and percent minority decreased slightly (from -.66 to -.58). Moreover, all institutions' passing rates improved substantially. There were no institutions below 80% passing for CLAST Essay; only one high minority institution is below 90% passing. Students in the vast majority of institutions (36 of 37) had passing rates of 90% or higher. Two universities with relatively high minority percentages were at or near 95% passing.

Figure 6.5

Scatter Plot of October 1989 Institutional Cohorts after Initial Test Administration: CLAST Reading Subtest

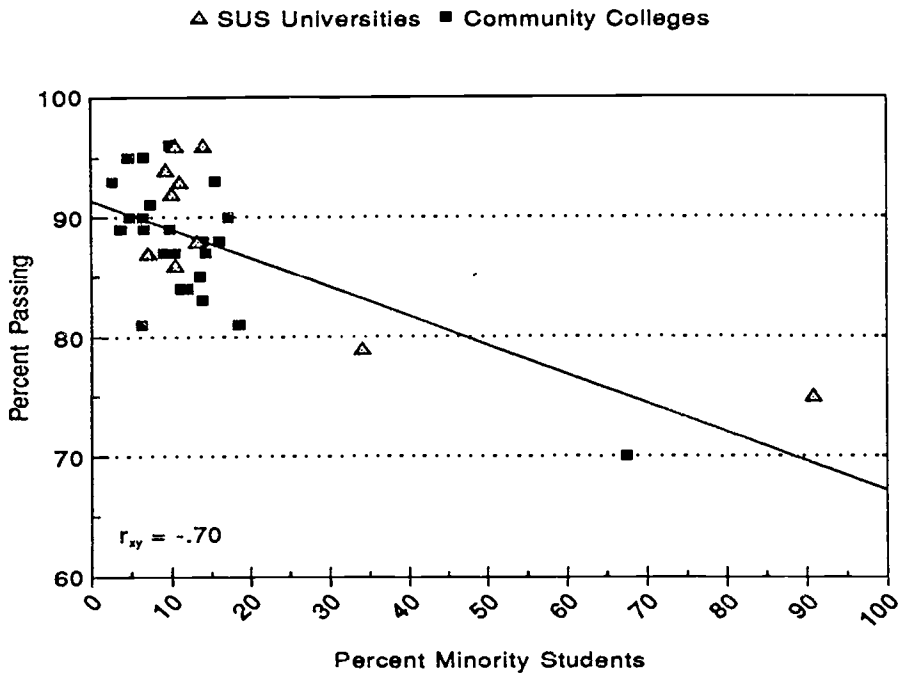


Figure 6.6

Scatter Plot of October 1989 Institutional Cohorts after Six Test Opportunities: CLAST Reading Subtest

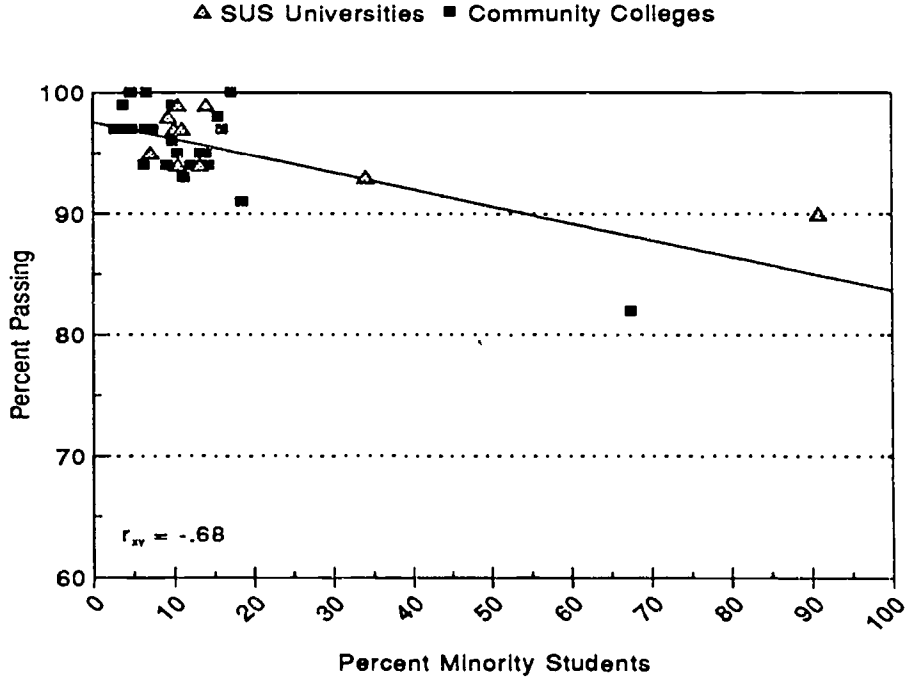


Figure 6.7

Scatter Plot of October 1989 Institutional Cohorts after Initial Test Administration: CLAST Essay Subtest

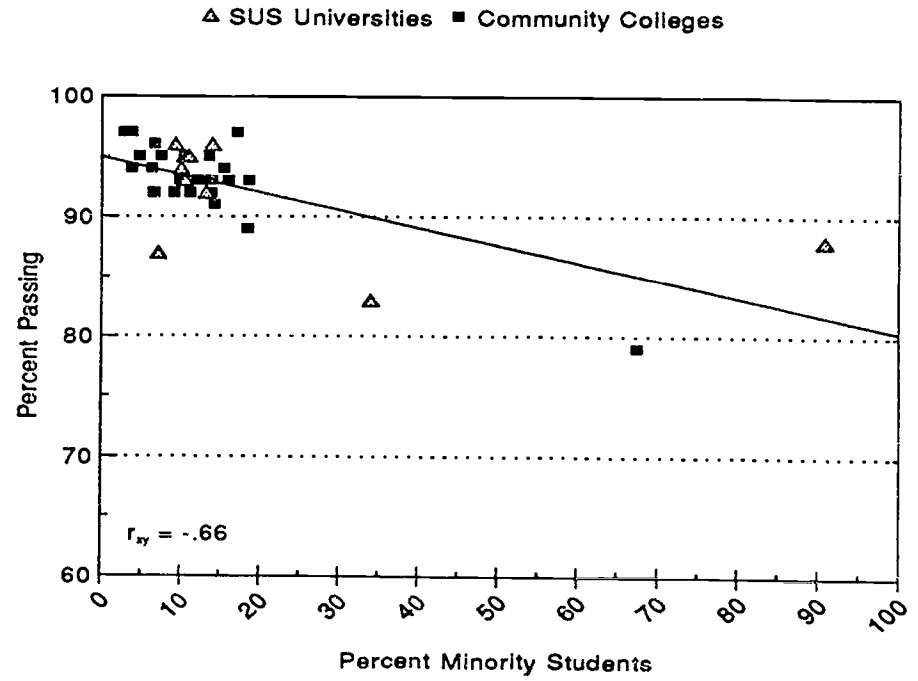
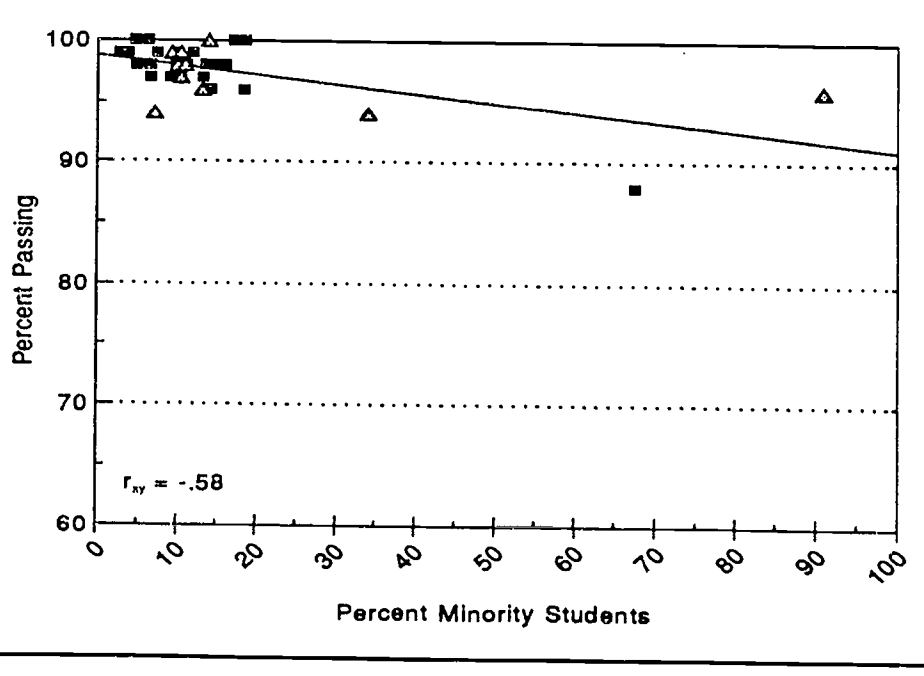


Figure 6.8

Scatter Plot of October 1989 Institutional Cohorts after Six Test Opportunities: CLAST Essay Subtest



Discussion

The scatter plots presented in Part 6 lend additional credence to the conclusion that first-time test-takers who are minority are affected disproportionally. Institutions with substantial proportions of minority students (i.e., greater than 30% minority) tend to do least well on their first try. It may well be that minority students are less prepared when they enter college. Why this would be the case could be traced back to the kind of guidance and academic counseling they receive in high school.

Results presented in the followup scatter plots are encouraging because institutional efforts appear to have an impact on performance as students retake failed subtests. The vast majority of institutions (35 to 36 of 37) had passing rates of 90% or greater on each of the CLAST subtest areas five administrations after the initial attempt. It seems clear from the results of the cohort followup studies that taking appropriate college preparatory and college-level course work has had a positive impact on ameliorating the disproportional impacts of CLAST on minority students.

Disproportional impacts on minority first-time test-takers are likely to continue unless they receive appropriate academic guidance and are urged to take college preparatory courses in high school. But simply taking college preparatory courses is not enough: Students must also do well in them. Academic guidance would also be appropriate for the relatively large number of majority students who also fail CLAST on their first attempt. Effective academic guidance in high school will be more essential in the future since CLAST standards in Mathematics and Essay are scheduled to increase in October 1991 and again in October 1992.

The next part of the report discusses implications of current student performance for curriculum and instruction.

PART 7. IMPLICATIONS OF CURRENT STUDENT PERFORMANCE REGARDING CURRICULUM AND INSTRUCTION

CLAST printouts and data tapes are routinely provided to all postsecondary institutions participating. One of the ongoing challenges for institutional personnel is how to use CLAST data as a tool to improve student learning. While some institutions have made good use of CLAST data to identify gaps in student performance, others have not. The purpose of Part 7 is to discuss the implications of current student data in light of the revised 1989 standards, and then suggest approaches that might be used to improve student performance.

7.1 How were public and private postsecondary institutions affected by the revised 1989 standards?

Table 7.1

Percent of 1989-90 First-Time Examinees Meeting the Revised 1989 Standards and Number Who Will Need to Retake One or More Subtests
All Examinees for Public and Private Community Colleges and Universities

Institutional Group	Number Tested (All Subtests)	Percent Meeting 1989 Standards	Approximate No. of Retakers†
Public Community College Students	31,957	55	14,381
SUS University Students	16,645	71	4,827
Private College Students	5,543	56	2,439

† These totals are approximate due to the use of rounded percentages during calculation.

The revised 1989 standards had the greatest impact on public community colleges and private colleges and universities (see Table 7.1). Not only do the public community college have the largest number of students taking CLAST in 1990-91, they also had the lowest passing rate (55%). This means that approximately 14,381 students in Florida's public community colleges will need to retake one or more CLAST subtests if they wish to earn an Associate of Arts degree.

SUS universities had approximately 50% fewer students (16,645 versus 31,957) than the community colleges. The university student passing rate was 71% which means that approximately 4,827 of them will need to retake a failed subtest.

Private college and university students had a passing rate of 56%. Approximately 2,439 of the 5,543 students who took CLAST in 1990-91 will need to retake one or more failed subtests.

7.2 How were racial or ethnic groups affected by the revised 1989 standards when they took CLAST for the first time?

Table 7.2

Percent of 1990-91 First-Time Examinees Meeting the Revised 1989 Standards and Number Who Will Need to Retake CLAST, All Examinees and by Racial or Ethnic Group
Public Colleges and Universities

Racial/Ethnic Group	Number Tested (All Subtests)	Percent Meeting 1989 Standards	Approximate No. of Retakers†
All Examinees	48,602	60%	19,441
Whites	35,992	68%	11,517
Blacks	4,597	31%	3,172
Hispanics	5,284	42%	3,065
American Indian	128	67%	42
Other, Including Foreign Nationals	2,601	41%	1,535

† These totals are approximate due to the use of rounded percentages during calculation.

Disproportional impacts are clearly evident in Table 7.2 as students from racial/ethnic minority groups tended to do less well than their majority counterparts. However, the largest number of students who will need to retake failed subtests are White. Even though the White passing rate is higher, a larger absolute number (11,517) will have to retake a failed subtest. This is true because there are so many more White than minority test-takers.

Whites. As can be seen in Table 7.2, the largest number of first-time test-takers who will have to retake a failed subtest are White. Even though the White passing rate is highest (68%), 11,517 will have to retake one or more failed subtests.

Blacks. Black first-time test-takers had the lowest passing rate (31%). Of the 4,597 Black students who took CLAST in 1990-91, approximately 3,172 of them will have to retake failed subtests.

Hispanics. Hispanic first-time test-takers had a passing rate of 42%. Of the 5,284 Hispanics who took CLAST in 1990-91, approximately 3,065 will need to retake failed subtests.

American Indians. American Indian first-time test-takers performed as well as their White counterparts as their passing rate was 67%. However, there were only 128 American Indians who took CLAST in 1990-91. Only approximately 42 will need to retake failed subtests.

Other, including Foreign Nationals. Others have a difficulty time with CLAST. Their first-time passing rate was only 41%. Approximately 1,535 of 2,601 Other students will have to retake failed subtests.

7.3 For which CLAST subtests are first-time test-takers likely to encounter difficulties.

Data presented in Tables 5.2 through 5.3 suggest that level of difficulty appears to be related to racial/ethnic group and the standard which is in effect. As higher standards go into effect for Essay and Mathematics in October 1991, we would expect to see larger numbers of first-time test-takers failing these subtests.

Whites. As can be seen in Table 5.2, Whites first-time test-takers did very well on Essay (96.3% pass). Their lowest areas of performance were in English Language Skills (86.7% pass) and Mathematics (86.7% pass).

Blacks. As can be seen in Table 5.3, Black first-time test-takers did their best on Essay (81.5% pass). Their lowest first-time passing rate was in Mathematics (61.7%). Their performance was slightly better in English Language Skills (64% pass) and Reading (68% pass).

Hispanics. As can be seen in Table 5.4, Hispanic first-time test-takers had difficulty in communication skills as only 78.1% passed the CLAST Essay. Their next best area of performance was in Reading (72.6% pass). Their two lowest areas were in Mathematics (64.9% pass) and English Language Skills (63.9% pass).

A study by Nickens (1989) helps to understand why students have difficulty with college-level communication and mathematics. He analyzed transcripts of students who had failed CLAST after repeated attempts. What Nickens found was that students who continued to fail CLAST after repeated attempts either did not take college preparatory courses in high school or if they did take such courses they received Cs and Ds.

7.4 What is the impact of the revised 1989 standards on postsecondary institutions' academic support resources?

Because students fail CLAST for a variety of reasons, it is difficult to estimate the magnitude of impact on each of the kinds of academic support services offered by institutions. Making good decisions will depend on effective diagnosis and academic advisement. Faculty in postsecondary institutions will need to figure out effective ways to diagnose and assist failing students to acquire the college-level skills in communication and mathematics.

It would be preferable to avoid having to provide remedial instruction by having students acquire the CLAST skills either in high school or in their mathematics and writing courses in college. It must also be acknowledged that students fail to acquire skills for a variety of reasons. These reasons could include: (a) lack of access to appropriate curriculum or instruction, (b) lack of ability, (c) lack of motivation, (d) lack of prior knowledge, or (e) lack of study skills. It should be clear that different kinds of approaches will be required because of differences among the learners involved. Given the results of research on increasing the achievement of at-risk students, it would be a mistake to assume that traditional remedial programs will be the most effective solution to student failure on CLAST (cf. Kulik, Kulik & Shwalb, 1983).

7.5 Are the revised 1989 standards too high?

CLAST standards were raised gradually to give institutions more time to adjust curriculum and instruction. While the revised 1989 standards are higher than the 1986 standards, the revised 1989 standards are by no means elitist. A careful examination of CLAST item content will show that most of it is based on subject matter that is typically taught in college preparatory classes in high school. Those items not taught in high school, e.g., statistics and logic, are clearly appropriate for lower division instruction in mathematics. Why students fail to master CLAST skills is hard to comprehend--unless they have not had an opportunity to learn them.

7.6 What will improve the performance of first-time test-takers and minority students?

Since CLAST measures skills typically learned in college preparatory courses, the most effective and efficient time for students to learn these skills is in high school. Students need to know that if they plan to go to college, they will need to take college preparatory courses in communication and mathematics and do well in them if they are to thrive academically. It may be that high school students are not receiving appropriate guidance and counseling about the kind of preparation they need to go to college. The students also need to know that they will be expected to do well in communications and mathematics if they are to pass CLAST.

A study done by the Bureau of Program Support Services of the State Board of Community Colleges (1988) identified institutional characteristics associated with high CLAST performance. These characteristics included:

- Key administrators accept the purpose of CLAST and take responsibility for their institution to assure that students acquire the skills needed to pass.
- Key administrators are willing to make and enforce local decisions necessary to assure that students will receive support services on a timely basis.
- Key administrators make accurate interpretations of state policy and urge college personnel to advise students personally about their level of preparedness to take the test and about support services available.
- There is a high level of college-wide collaboration and coordination between all appropriate resources to identify problem areas, to eradicate program weaknesses, to maintain a cohesive front in order to direct and monitor students' use of available support services, and to work collectively to meet other common college-wide goals for improvement.

Several institutional practices associated with high CLAST performance were also identified in the community college study. These practices included:

- Enhanced advisement and tracking systems
- Early diagnosis to identify deficiencies in communication and mathematics
- Enhanced review courses in communication and mathematics
- Opportunities to be tested on CLAST-like tests
- Enhanced student accountability
- Enhanced accountability for teaching CLAST skills

- Faculty role models for minority students
- Increased student and faculty awareness of CLAST requirements and resources for meeting them
- Local faculty development and rewards
- Enhanced articulation regarding CLAST between high schools and colleges

While it would be desirable for all students to pass CLAST on their first try, this may not be realistic. Therefore, students who take and fail CLAST subtests should have access to courses and other kinds of learning opportunities that will help them acquire required skills in communication and mathematics. Acquiring these skills should help students in their college-level courses as well as prepare them to satisfy CLAST requirements.

There is sufficient evidence presented in this report to conclude that minority students are affected disproportionally by CLAST and the increased standards. Evidence obtained from the cohort studies also shows that minority students who failed subtests can be successful if they make the effort to prepare themselves to retake the ones they failed. Therefore, resources need to be made available so that minority students, and others failing CLAST, have access to the kind of guidance and instruction they need to do well on CLAST. Remediating minority students may require additional resources to overcome past educational inequities.

Teaching essay writing and tutoring in mathematics are labor intensive processes. Community colleges, private colleges and state universities need to determine effective ways to deploy their faculty to meet the challenge of the standard of 5 in Essay and 290 in Mathematics.

References

Bureau of Program Support Services. (December, 1988). "A Study of College-Level Academic Skills Remediation in Florida's Community Colleges. Tallahassee, FL: Division of Community Colleges.

Kulik, C-L, Kulik, J. A. & Shwalb, B. J. (1983). College Programs for High-risk and Disadvantaged Students: A Meta-Analysis of Findings. *Review of Educational Research*, 53(3), 397-414.

Nickens, J. (1989). *Profile of College Students Who Repeatedly Fail a CLAST Subtest.* Gainesville, FL: Institute of Higher Education, University of Florida.

PART 8. RECOMMENDATIONS

The purpose of the recommendations which follow is to suggest what institutions and policy makers can do to help students acquire effective levels of skill in communication and mathematics. These recommendations address components of Florida's system of education including its state educational agencies, secondary schools, community colleges and universities.

Data presented in Part 1 showed that almost half of the students who enter public community colleges are underprepared in mathematics and one-fourth are underprepared in reading and English language skills. Evidence presented in Part 2 showed that the performance of first-time examinees is relatively stable and has been on a plateau for several years. However, evidence based on cohort followup studies presented in Part 5 showed significant improvement in institutional passing rates as students prepared, retook failed subtests and passed them. Evidence derived from the cohort followup studies can serve as an important indicator of an institution's effectiveness in helping its students no matter what their entry level performance may have been. Therefore, improvement based on cohort followup studies is a far better measure of institutional accountability than the performance of first-time test-takers. With the foregoing discussion in mind, the Standing Committee on Student Achievement recommends that:

1. In its reporting of CLAST results, the Department of Education should place emphasis on the results of cohort followup studies for students with 60 or more hours of college-level credit.

Rationale. Basing institutional accountability on the results of first-time test-takers can be misleading since these students may be taking CLAST after differing numbers of college courses. The passing rate which should be considered most important in terms of accountability is the one which applies to students who have completed all curriculum requirements presumably by the time they have successfully completed 60 hours of college-level credit. This should not be interpreted to mean that students wait to take CLAST until their 60th credit hour. Summarizing institutional results based on students with 60 credit hours will be more readily interpretable because the comparisons will be based on students who have had the same amount of college-level instruction.

2. The State Board of Community Colleges and State University System Board of Regents should add CLAST scores as standard data elements in their student-level databases, and private colleges and universities should be encouraged to do the same.

Rationale. Adding CLAST scores to the student-level databases would facilitate doing analyses of students with 60 hours of college-level credit at all institutions. Presently, only institutions with sophisticated data transfer capabilities can do such analyses.

3. Institutions should be given flexibility to allow selected students to take CLAST earlier or later than 18 credits based on the institution's determination that the student has attained the skills needed to pass each subtest.

Rationale. There is evidence to show that some students are well prepared to pass CLAST when they enter college because they have successfully completed required college preparatory courses in high school. Other students are not well prepared and will need several courses in communication and mathematics before they are ready to pass CLAST. Providing institutions with flexibility based on an objective determination of student readiness will be more responsive to student needs.

4. The number of waivers issued by each institution and reasons for granting them should be monitored by the State Board of Community Colleges and the SUS Board of Regents and reported to all institutions participating in the CLAST testing program; private institutions participating in the CLAST testing program should be encouraged to do the same.

Rationale. The number of waivers and reasons for them should be monitored to preserve the integrity of the CLAST testing program. This may require ongoing scrutiny of institutions that appear to grant excessive numbers of waivers.

5. The Department of Education should inform school superintendents, high school principals, and middle school principals about the importance of articulating high school courses of study with college entrance requirements and exit requirements related to CLAST and urge them to share this information with teachers, parents and all students.

Rationale. Research has shown that students who have difficulty passing CLAST have either not taken college preparatory courses in high school or have done poorly if they had taken them. Therefore, it is essential to articulate the courses of study of college bound students with college preparatory instruction in communication and mathematics. Lack of articulation seems to occur for many minority students who tend to decide late in high school that they want to go to college. Special efforts need to be made to identify minority students with college potential or college aspirations to be sure they receive guidance on preparation for college as soon as possible.

6. Community college and university leaders and faculty should initiate efforts to involve parents, community groups such as churches, and the news media to encourage parents to become more involved in helping their children to seek information and guidance regarding college entrance and CLAST exit requirements.

Rationale. Reach-out programs targeted toward both parents and students with college potential are needed. Students with college potential need to become aware of college admissions requirements in the eighth and ninth grades so that they can enroll in appropriate college preparatory courses in high school. Early awareness is especially important for minority parents and students because many of them make decisions to go to college in the eleventh or twelfth grade and therefore lose the opportunity to take courses required for admission to a university.

7. The feasibility of requiring Associate of Science students to demonstrate skills in communication and mathematics should be explored.

Rationale. Students majoring in technical fields in community colleges need to master skills in communication and mathematics to perform well in those occupations. Assessing college-level skills in communication and mathematics would also be consistent with the recent initiatives to integrate academic and vocational training.

Appendix A

THE STANDING COMMITTEE ON STUDENT ACHIEVEMENT:

THE MEMBERS AND THEIR AFFILIATION

STANDING COMMITTEE ON STUDENT ACHIEVEMENT FOR 1989-90

Roster

Students

Mr. Eric Stanfield, Student
Tallahassee Community College

Public Schools

Dr. Jane Chaney, Palm Bay High School

Ms. Ruth Handley, Highlands County Schools

Mr. Lee Rowell, Orange County Schools

Private Colleges and Universities

Dr. R. Scott Baldwin, University of Miami

Dr. Richard Burnette, Florida Southern College

Ms. Maura Freeberg, Ft. Lauderdale College

Community Colleges

Dr. Linda B. Adair, Gulf Coast Community College

Dr. Robert W. Judson, Jr., Pasco-Hernando Community College

Dr. Theodore Wright, Broward Community College

Universities

Dr. Lola Kerlin, Florida Atlantic University

Dr. Stuart Lilly, University of Central Florida

Dr. Robert G. Stakenas,[1] Florida State University

[1] Dr. Stakenas served as Committee Chairperson.

Appendix B

CLAST PERFORMANCE BY INSTITUTION AND BY SUBTEST

FOR 1990-91

CLAST RESULTS FOR ANNUAL 1990-91

MEAN SCALE SCORES AND PERCENT OF EXAMINEES MEETING 1989 STANDARDS

FIRST-TIME EXAMINEES IN EACH INDEPENDENT INSTITUTION

INSTITUTION	ESSAY			ENG LANG SKILLS			READING			MATHEMATICS			ALL SUBTESTS	
	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS
BARRY UNIVERSITY	201	93	5.1	201	74	316	201	78	310	201	74	300	201	51
BETHUNE-COOKMAN COLLEGE	426	75	3.9	426	46	293	426	31	285	425	38	277	424	15
CLEARWATER CHRISTIAN COLLEGE	115	97	5.2	116	84	326	116	84	314	116	72	302	114	57
COLLEGE OF BOCA RATON	56	88	4.5	55	67	304	55	58	302	55	55	292	55	36
ECKERD COLLEGE	130	96	5.6	131	89	327	131	82	320	130	76	309	128	66
EDWARD WATERS COLLEGE	60	62	3.7	60	35	284	60	23	277	59	24	268	58	10
EMBRY-RIDDLE AERONAUTICAL UNIV.	146	86	4.5	146	82	318	146	85	319	146	91	317	146	68
FLAGLER COLLEGE	237	98	5.5	237	85	322	237	84	317	237	82	305	237	65
FLORIDA BAPTIST THEOL. COLLEGE	88	95	5.1	88	81	314	88	70	314	88	59	292	88	51
FLORIDA CHRISTIAN COLLEGE	8	100	5.3	8	100	330	8	100	332	8	63	300	8	63
FLORIDA COLLEGE	100	98	5.3	100	92	332	100	86	320	101	74	307	100	70
FLORIDA INSTITUTE OF TECHNOLOGY	132	96	5.2	132	89	325	132	86	321	132	95	326	132	74
FLORIDA MEMORIAL COLLEGE	75	57	3.5	76	29	281	76	14	274	77	16	263	75	1
FLORIDA SOUTHERN COLLEGE	573	96	5.1	574	88	326	574	84	319	574	89	312	573	71
FT. LAUDERDALE COLLEGE	1	100	4.0	1	100	325	1	0	283	1	0	274	1	0
HERITAGE COLLEGE	5	100	5.2	5	80	333	5	100	339	5	80	336	5	60
INTERNATIONAL FINE ARTS COLLEGE	20	70	3.8	21	38	288	21	33	288	21	24	272	20	10
JACKSONVILLE UNIVERSITY	247	96	5.3	248	85	327	247	83	319	248	76	305	247	64
JONES COLLEGE	17	71	4.0	17	47	289	17	35	287	17	35	278	17	24
MIAMI CHRISTIAN COLLEGE	18	67	3.8	18	56	302	18	50	298	18	39	276	18	39
NEC - TECHNICAL INST. (TAMPA)	19	68	3.8	19	47	296	19	37	288	19	53	287	19	26
NOVA UNIVERSITY	245	88	4.7	244	72	312	244	63	306	244	59	293	244	45
PALM BEACH ATLANTIC COLLEGE	301	95	5.1	301	80	319	301	74	312	301	71	300	301	55
RINGLING SCHOOL OF ART	86	85	4.6	87	70	310	87	76	309	87	46	284	86	37
ROLLINS COLLEGE	141	99	5.8	141	91	333	142	92	325	141	86	315	141	77
S.E. COLLEGE ASSEMBLIES OF GOD	185	96	5.1	185	78	319	185	78	312	185	59	295	185	50
ST. JOHN VIANNY MINOR SEMINARY	1	100	6.0	1	100	316	1	100	340	1	100	300	1	100
ST. LEO COLLEGE	310	89	4.6	312	68	310	309	67	305	315	57	291	292	39
ST. THOMAS UNIVERSITY	150	71	3.8	150	43	292	150	43	290	150	35	277	149	19
STETSON UNIVERSITY	329	99	5.5	328	93	332	328	91	324	328	88	315	328	79
UNIVERSITY OF MIAMI	813	97	5.5	813	89	330	813	87	322	813	89	318	813	75
UNIVERSITY OF TAMPA	167	96	5.2	167	77	319	167	76	312	166	73	302	166	55
WARNER SOUTHERN COLLEGE	114	91	5.0	115	81	319	115	71	312	114	59	289	114	53
WEBBER COLLEGE	58	86	4.5	58	62	310	58	60	305	57	51	289	57	33
TOTAL	5,574	91	5.0	5,581	77	318	5,578	74	312	5,580	71	302	5,543	56

BY GENDER AND RACIAL/ETHNIC CATEGORY

FIRST-TIME EXAMINEES IN ALL INDEPENDENT INSTITUTIONS

EXAMINEE CATEGORY	ESSAY			ENG LANG SKILLS			READING			MATHEMATICS			ALL SUBTESTS	
	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS
ALL	5,574	91	5.0	5,581	77	318	5,578	74	312	5,580	71	302	5,543	56
MALE	2,356	90	4.8	2,363	76	316	2,362	76	313	2,362	77	307	2,344	58
FEMALE	3,218	92	5.1	3,218	78	320	3,216	72	311	3,218	67	298	3,199	54
WHITE, NON-HISPANIC	3,857	96	5.2	3,865	86	325	3,861	83	318	3,863	79	307	3,836	66
BLACK, NON-HISPANIC	859	76	4.1	860	47	294	860	36	287	862	36	277	855	17
HISPANIC	618	87	4.8	618	71	314	619	71	310	617	69	300	615	50
AMERICAN INDIAN/ALASKAN NATIVE	15	100	5.5	15	73	316	15	73	314	15	60	297	15	47
ASIAN/PACIFIC ISLANDER	104	83	5.0	104	80	321	104	76	311	104	89	323	104	64
NON-RESIDENT ALIEN	78	82	4.4	76	50	298	76	49	294	76	49	291	75	27
UNKNOWN RACE	43	84	4.8	43	70	307	43	74	306	43	63	293	43	47

CLAST RESULTS FOR ANNUAL 1990-91

MEAN SCALE SCORES AND PERCENT OF EXAMINEES MEETING 1989 STANDARDS
BY GENDER AND RACIAL/ETHNIC CATEGORY

FIRST-TIME EXAMINEES IN ALL PUBLIC INSTITUTIONS

EXAMINEE CATEGORY	ESSAY			ENG LANG SKILLS			READING			MATHEMATICS			ALL SUBTESTS	
	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS
ALL	48,748	93	5.0	48,806	79	319	48,801	76	313	48,770	81	308	48,602	60
MALE	20,641	91	4.8	20,662	77	316	20,660	78	314	20,634	86	314	20,568	62
FEMALE	28,107	94	5.1	28,144	81	321	28,141	75	312	28,136	77	304	28,034	59
WHITE, NON-HISPANIC	36,093	97	5.2	36,121	85	324	36,121	83	318	36,091	85	312	35,992	68
BLACK, NON-HISPANIC	4,612	82	4.3	4,624	58	301	4,624	48	294	4,620	56	290	4,597	31
HISPANIC	5,304	85	4.5	5,310	65	307	5,307	63	303	5,309	70	299	5,284	42
AMERICAN INDIAN/ALASKAN NATIVE	128	92	5.2	128	82	321	128	80	317	128	84	311	128	67
ASIAN/PACIFIC ISLANDER	1,405	76	4.3	1,412	67	310	1,410	57	301	1,413	85	314	1,404	44
NON-RESIDENT ALIEN	922	76	4.3	927	58	302	927	55	299	926	81	309	915	35
UNKNOWN RACE	284	85	4.8	284	67	311	284	68	307	283	66	301	282	48

FIRST-TIME EXAMINEES IN ALL PUBLIC UNIVERSITIES

EXAMINEE CATEGORY	ESSAY			ENG LANG SKILLS			READING			MATHEMATICS			ALL SUBTESTS	
	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS
ALL	16,693	95	5.2	16,715	86	326	16,711	84	319	16,714	87	315	16,645	71
MALE	7,493	93	5.0	7,503	84	323	7,501	85	320	7,496	90	320	7,464	72
FEMALE	9,200	96	5.3	9,212	88	328	9,210	83	319	9,218	84	310	9,181	70
WHITE, NON-HISPANIC	12,054	98	5.4	12,066	92	331	12,064	90	324	12,063	90	318	12,023	79
BLACK, NON-HISPANIC	2,081	89	4.6	2,083	69	308	2,083	60	302	2,084	69	299	2,073	42
HISPANIC	1,312	87	4.8	1,313	78	318	1,313	76	313	1,315	81	308	1,309	60
AMERICAN INDIAN/ALASKAN NATIVE	40	93	5.4	40	93	333	40	95	328	40	93	325	40	83
ASIAN/PACIFIC ISLANDER	660	81	4.7	664	77	318	662	70	309	665	91	322	659	58
NON-RESIDENT ALIEN	431	73	4.3	434	59	302	434	56	300	433	82	311	427	36
UNKNOWN RACE	115	93	5.2	115	80	324	115	85	321	114	82	311	114	67

FIRST-TIME EXAMINEES IN ALL COMMUNITY COLLEGES

EXAMINEE CATEGORY	ESSAY			ENG LANG SKILLS			READING			MATHEMATICS			ALL SUBTESTS	
	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS
ALL	32,055	92	4.9	32,091	75	315	32,090	72	310	32,056	77	305	31,957	55
MALE	13,148	90	4.7	13,159	73	312	13,159	73	311	13,136	83	310	13,104	56
FEMALE	18,907	93	5.0	18,932	77	317	18,931	71	309	18,918	73	301	18,853	54
WHITE, NON-HISPANIC	24,039	96	5.1	24,055	82	320	24,057	79	315	24,028	83	308	23,969	62
BLACK, NON-HISPANIC	2,531	76	4.0	2,541	49	295	2,541	37	288	2,536	45	283	2,524	21
HISPANIC	3,992	84	4.4	3,997	61	303	3,994	59	300	3,994	66	296	3,975	36
AMERICAN INDIAN/ALASKAN NATIVE	88	92	5.2	88	77	316	88	74	312	88	80	305	88	60
ASIAN/PACIFIC ISLANDER	745	71	4.0	748	59	303	748	45	293	748	79	307	745	31
NON-RESIDENT ALIEN	491	79	4.3	493	58	303	493	54	297	493	79	308	488	34
UNKNOWN RACE	169	79	4.4	169	57	302	169	56	297	169	56	294	168	35

CLAST RESULTS FOR ANNUAL 1990-91

MEAN SCALE SCORES AND PERCENT OF EXAMINEES MEETING 1989 STANDARDS

FIRST-TIME EXAMINEES IN EACH INDEPENDENT INSTITUTION

INSTITUTION	ESSAY			ENG LANG SKILLS			READING			MATHEMATICS			ALL SUBTESTS	
	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS
BARRY UNIVERSITY	201	93	5.1	201	74	316	201	78	310	201	74	300	201	51
BETHUNE-COOKMAN COLLEGE	426	75	3.9	426	46	293	426	31	285	425	38	277	424	15
CLEARWATER CHRISTIAN COLLEGE	115	97	5.2	116	84	326	116	84	314	116	72	302	114	57
COLLEGE OF BOCA RATON	56	88	4.5	55	67	304	55	58	302	55	55	292	55	36
ECKERD COLLEGE	130	96	5.6	131	89	327	131	82	320	130	76	309	128	66
EDWARD WATERS COLLEGE	60	62	3.7	60	35	284	60	23	277	59	24	268	58	10
EMBRY-RIDDLE AERONAUTICAL UNIV.	146	86	4.5	146	82	318	146	85	319	146	91	317	146	68
FLAGLER COLLEGE	237	98	5.5	237	85	322	237	84	317	237	82	305	237	65
FLORIDA BAPTIST THEOL. COLLEGE	88	95	5.1	88	81	314	88	70	314	88	59	292	88	51
FLORIDA CHRISTIAN COLLEGE	8	100	5.3	8	100	330	8	100	332	8	63	300	8	63
FLORIDA COLLEGE	100	98	5.3	100	92	332	100	86	320	101	74	307	100	70
FLORIDA INSTITUTE OF TECHNOLOGY	132	96	5.2	132	89	325	132	86	321	132	95	326	132	74
FLORIDA MEMORIAL COLLEGE	75	57	3.5	76	29	281	76	14	274	77	16	263	75	1
FLORIDA SOUTHERN COLLEGE	573	96	5.1	574	88	326	574	84	319	574	89	312	573	71
FT. LAUDERDALE COLLEGE	1	100	4.0	1	100	325	1	0	283	1	0	274	1	0
HERITAGE COLLEGE	5	100	5.2	5	80	333	5	100	339	5	80	336	5	60
INTERNATIONAL FINE ARTS COLLEGE	20	70	3.8	21	38	288	21	33	288	21	24	272	20	10
JACKSONVILLE UNIVERSITY	247	96	5.3	248	85	327	247	83	319	248	76	305	247	64
JONES COLLEGE	17	71	4.0	17	47	289	17	35	287	17	35	278	17	24
MIAMI CHRISTIAN COLLEGE	18	67	3.8	18	56	302	18	50	298	18	39	276	18	39
NEC - TECHNICAL INST. (TAMPA)	19	68	3.8	19	47	296	19	37	288	19	53	287	19	26
NOVA UNIVERSITY	245	88	4.7	244	72	312	244	63	306	244	59	293	244	45
PALM BEACH ATLANTIC COLLEGE	301	95	5.1	301	80	319	301	74	312	301	71	300	301	55
RINGLING SCHOOL OF ART	86	85	4.6	87	70	310	87	76	309	87	46	284	86	37
ROLLINS COLLEGE	141	99	5.8	141	91	333	142	92	325	141	86	315	141	77
S.E. COLLEGE ASSEMBLIES OF GOD	185	96	5.1	185	78	319	185	78	312	185	59	295	185	50
ST. JOHN VIANNY MINOR SEMINARY	1	100	6.0	1	100	316	1	100	340	1	100	300	1	100
ST. LEO COLLEGE	310	89	4.6	312	68	310	309	67	305	315	57	291	292	39
ST. THOMAS UNIVERSITY	150	71	3.8	150	43	292	150	43	290	150	35	277	149	19
STETSON UNIVERSITY	329	99	5.5	328	93	332	328	91	324	328	88	315	328	79
UNIVERSITY OF MIAMI	813	97	5.5	813	89	330	813	87	322	813	89	318	813	75
UNIVERSITY OF TAMPA	167	96	5.2	167	77	319	167	76	312	166	73	302	166	55
WARNER SOUTHERN COLLEGE	114	91	5.0	115	81	319	115	71	312	114	59	289	114	53
WEBBER COLLEGE	58	86	4.5	58	62	310	58	60	305	57	51	289	57	33
TOTAL	5,574	91	5.0	5,581	77	318	5,578	74	312	5,580	71	302	5,543	56

BY GENDER AND RACIAL/ETHNIC CATEGORY

FIRST-TIME EXAMINEES IN ALL INDEPENDENT INSTITUTIONS

EXAMINEE CATEGORY	ESSAY			ENG LANG SKILLS			READING			MATHEMATICS			ALL SUBTESTS	
	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS	MEAN	NUMBER TESTED	% PASS
ALL	5,574	91	5.0	5,581	77	318	5,578	74	312	5,580	71	302	5,543	56
MALE	2,356	90	4.8	2,363	76	316	2,362	76	313	2,362	77	307	2,340	58
FEMALE	3,218	92	5.1	3,218	78	320	3,216	72	311	3,218	67	298	3,199	54
WHITE, NON-HISPANIC	3,857	96	5.2	3,865	86	325	3,861	83	318	3,863	79	307	3,836	66
BLACK, NON-HISPANIC	859	76	4.1	860	47	294	860	36	287	862	36	277	855	17
HISPANIC	618	87	4.8	618	71	314	619	71	310	617	69	300	615	50
AMERICAN INDIAN/ALASKAN NATIVE	15	100	5.5	15	73	316	15	73	314	15	60	297	15	47
ASIAN/PACIFIC ISLANDER	104	83	5.0	104	80	321	104	76	311	104	89	323	104	64
NON-RESIDENT ALIEN	78	82	4.4	76	50	298	76	49	294	76	49	291	75	27
UNKNOWN RACE	43	84	4.8	43	70	307	43	74	306	43	63	293	43	47

Appendix C

CLAST Annual Mean Subtest Scale Scores 1986-87 through 1990-91 and Cohort Performance after Six Administrations, by Institution

CLAST Annual Mean Subtest Scale Scores 1986-97 through 1990-91 and Cohort Performance after Six Administrations, by Institution

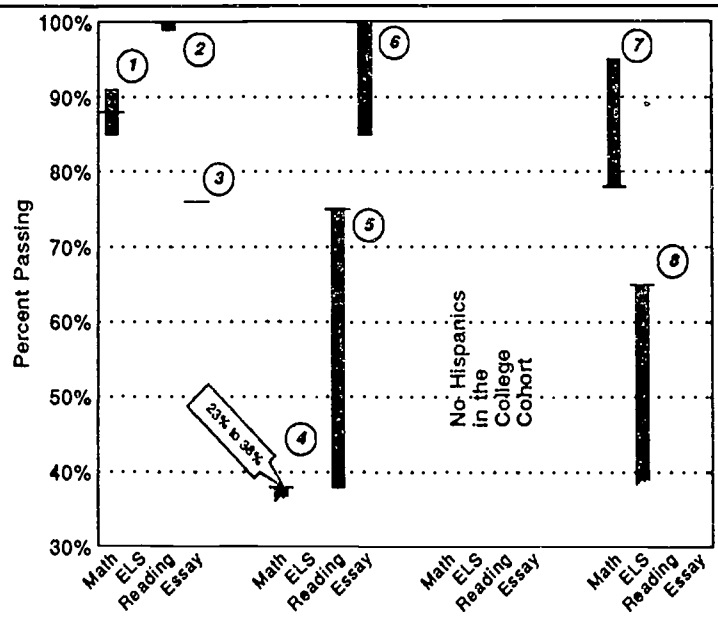
Comments made at the 1990 CLAST conference in Tampa suggested that statewide results were not particularly helpful for decision-making at the institutional level. In light of these comments, profiles were prepared for each institution to aid in analysis and decision-making.

Profile 1

The first institutional profile presents longitudinal trends in each of the CLAST subtest areas. The time period covered is 1986-87 through 1990-91. The results are for first-time test-takers.

Profile 2

The second institutional profile shows the results for that institution's racial/ethnic cohorts beginning in October 1989. Interpretation of the bars in the cohort followup is explained below.



Interpreting Vertical Bars

Each bar is for one subtest
- Bottom of Bar: initial passing rate for cohort (first-time test-takers in October 1989).
- Horizontal Line Through Bar: June 1990 passing rate for cohort.
- Top of Bar: June 1991 passing rate for cohort.

(1) Typical Bar: the bar labeled 1, above, indicates an initial passing rate of approximately 85%, a June 1990 passing rate of 88%, and a June 1991 passing rate of 92%.

(2) No Retakes (all passing): All students passed on the first attempt (October 1989). The bar is extended down to 99% only to emphasize it.

(3) No Improvement: The cohort passing rate was static. There was no benefit gained from subsequent retakes (if any).

(4) Description Required: The cohort bar can not be interpreted without the attatched text.

(5) No Improvement After June 1990: There was no benefit gained from subsequent retakes (if any) after June 1990.

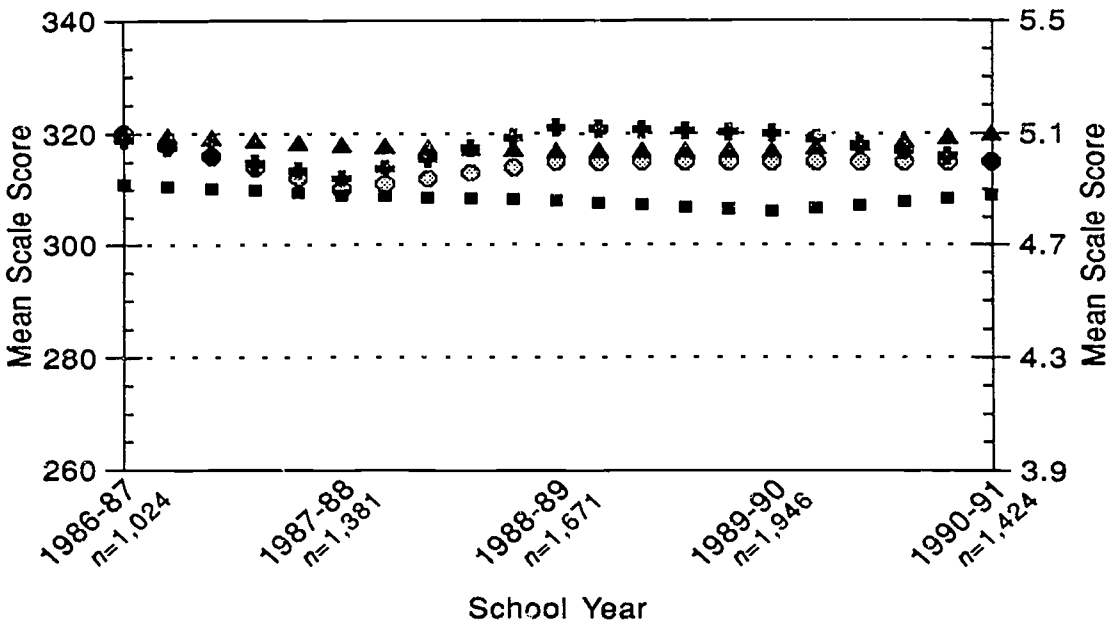
(6) No Retakes After June 1990. All students had passed by June 1990.

(7) No Improvement Until After June 1990: The first improvement in the passing rate occured in retakes after June 1990.

(8) All Failed on Initial Attempt: The jagged line indicates that the initial passing rate was 0.

Brevard Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

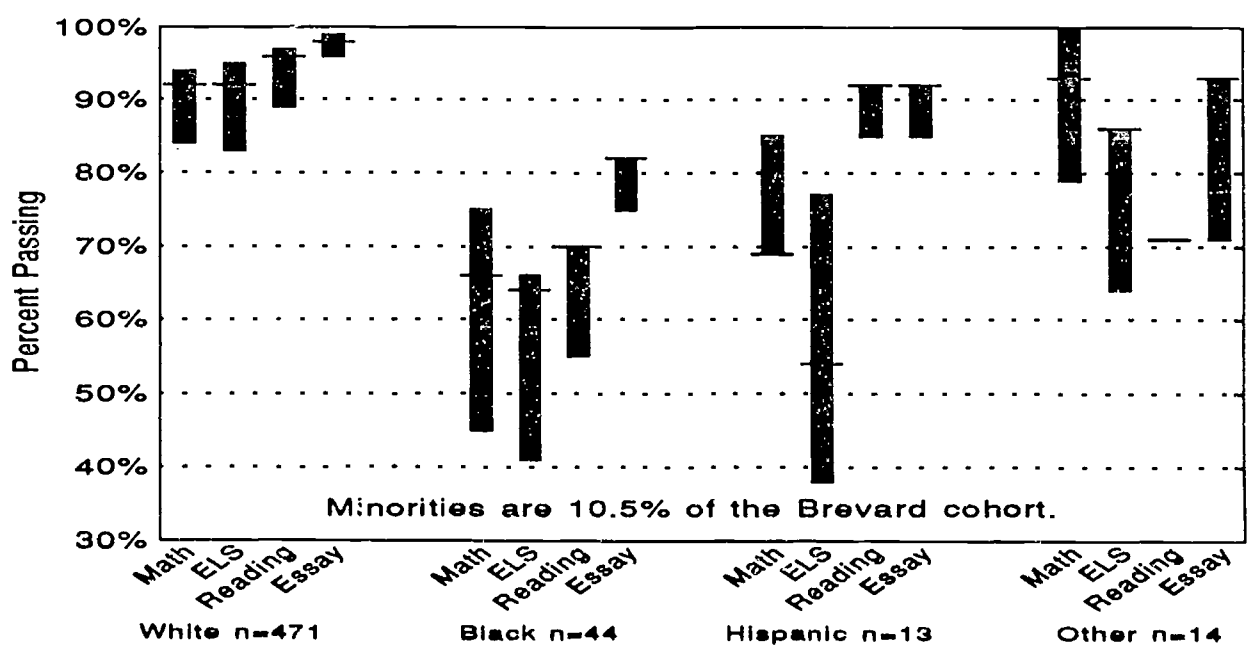


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

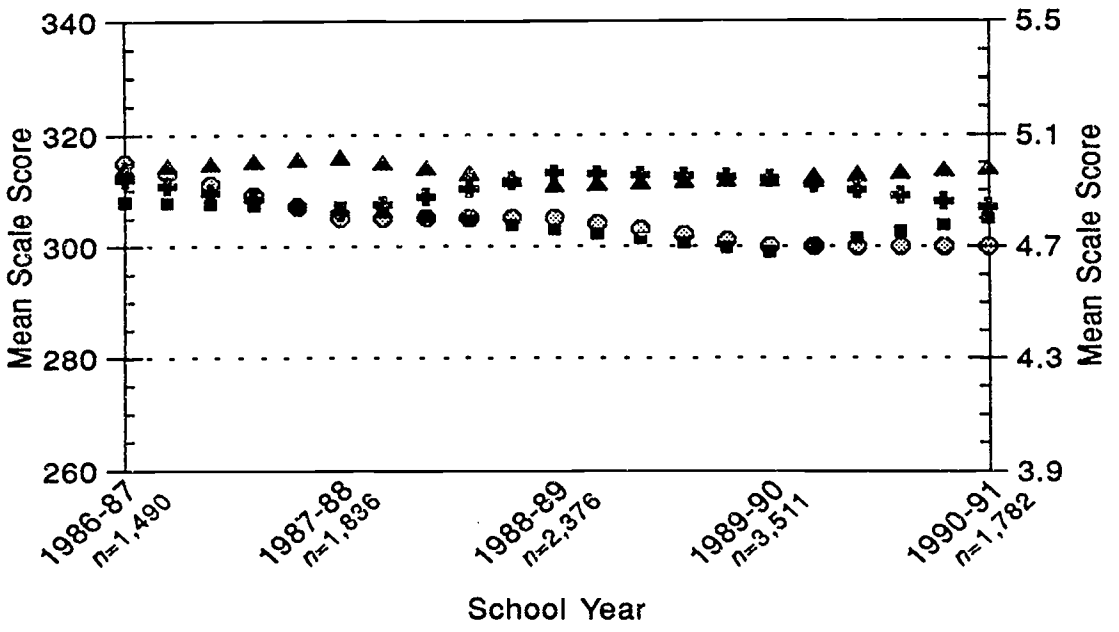
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Broward Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

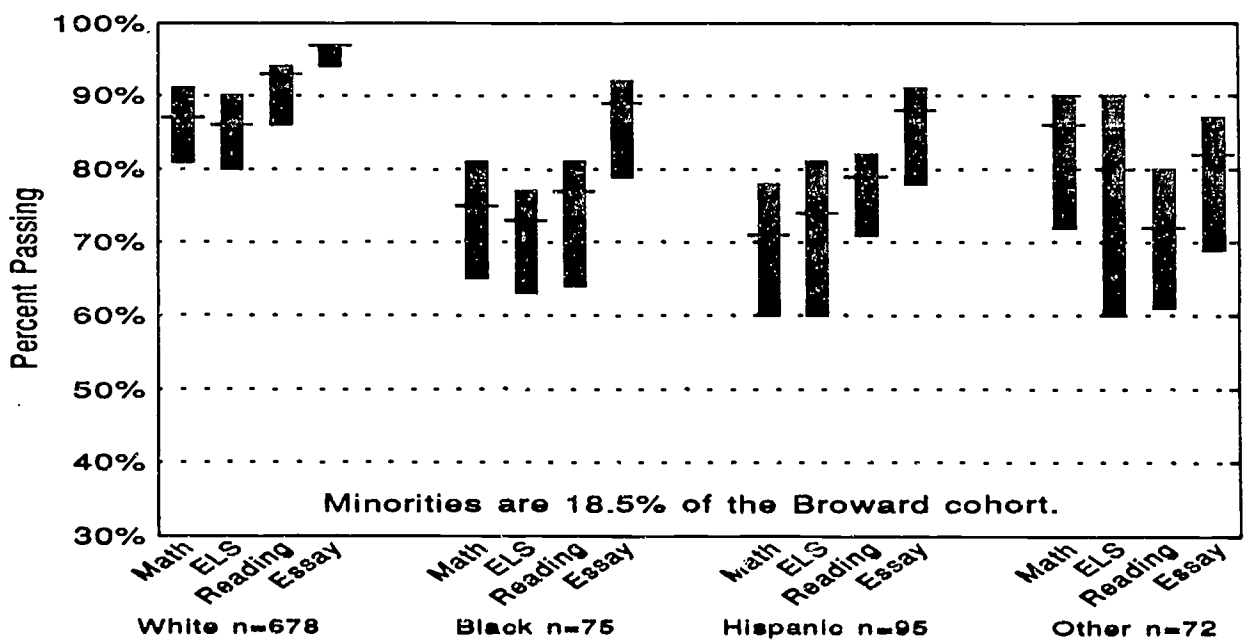


Subtest Symbols

■ Math ▲ Eng Lang Skills ✤ Reading ⊗ Essay

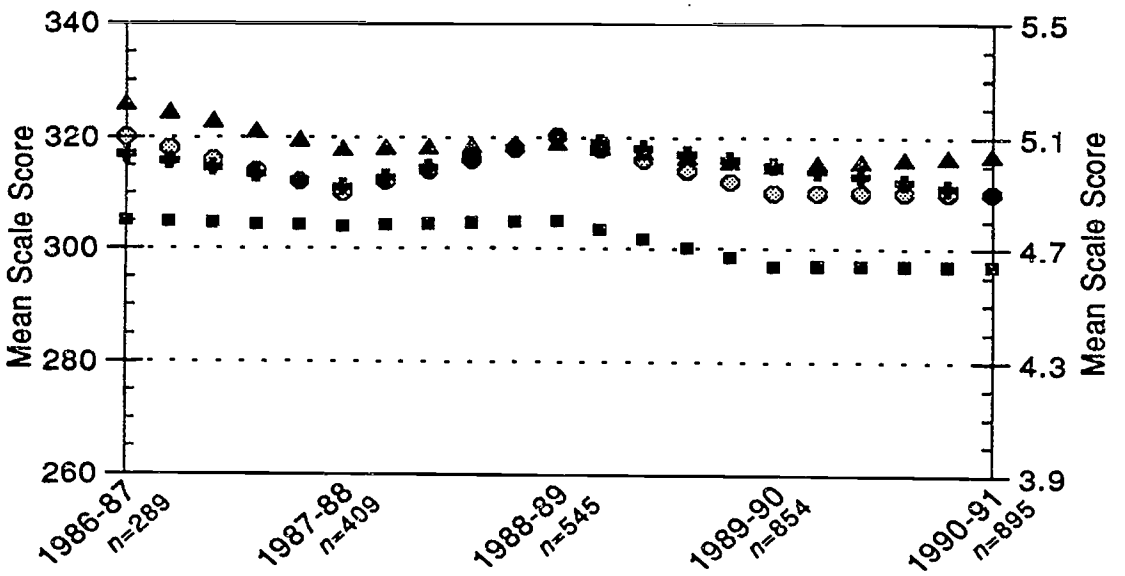
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Central Florida Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

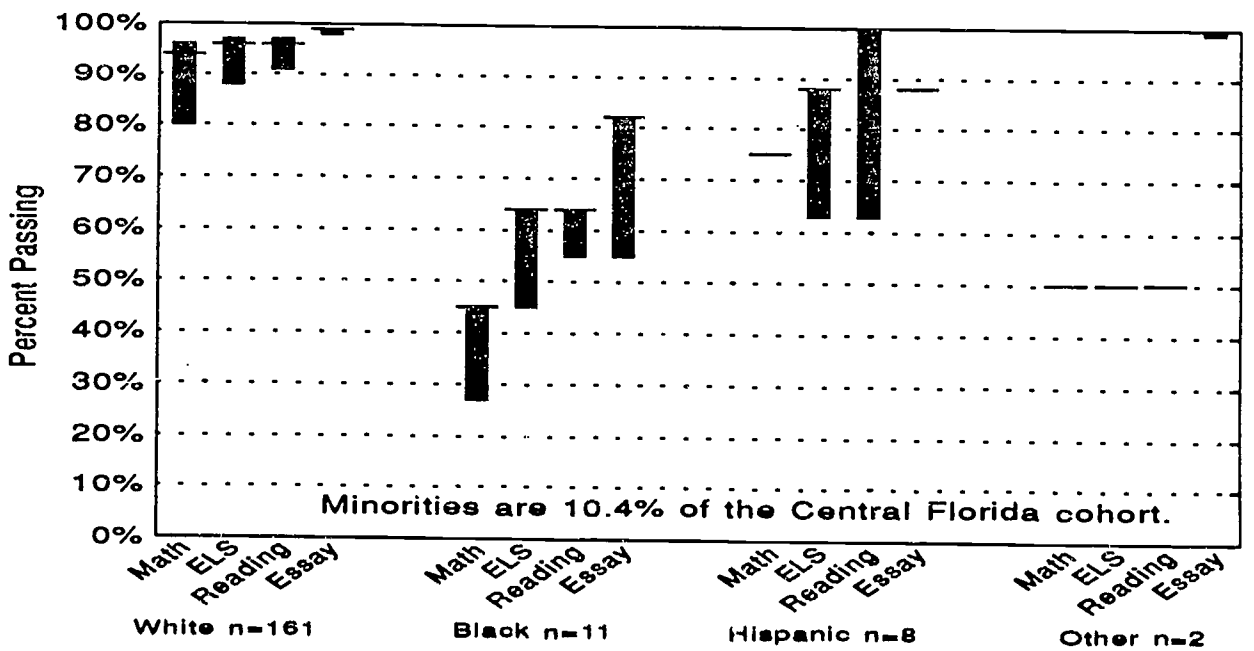


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

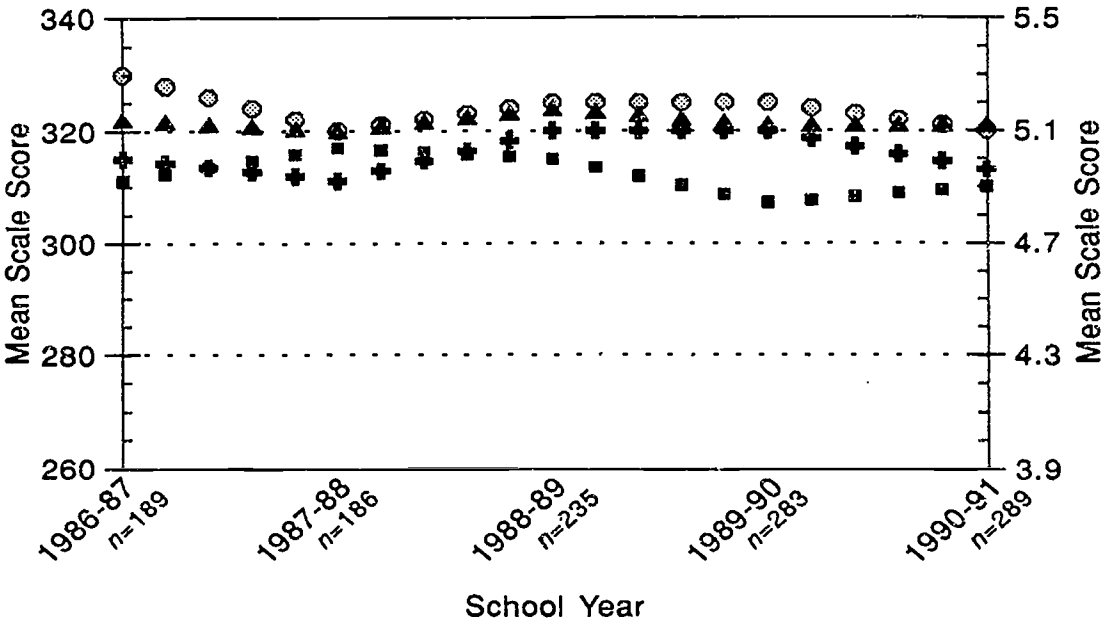
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Chipola Junior College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

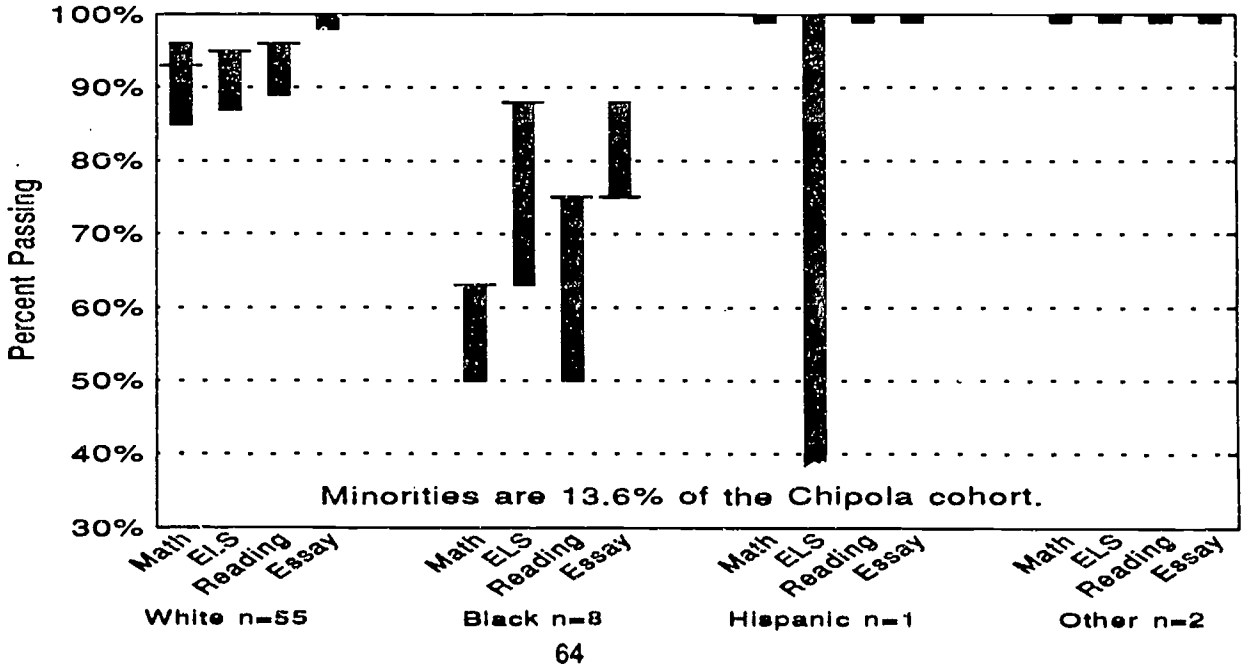


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



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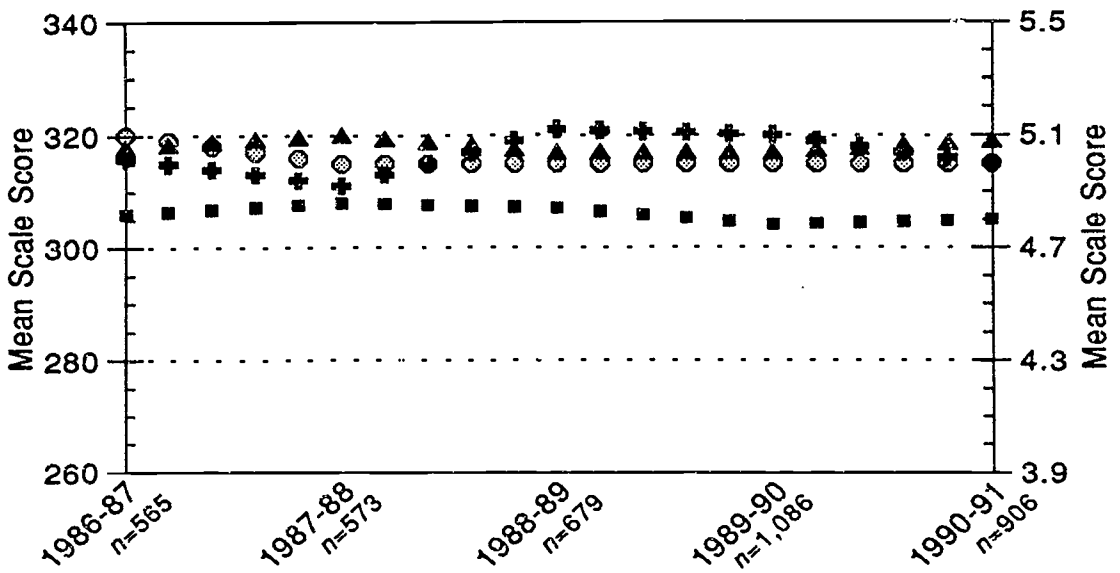
Daytona Beach Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

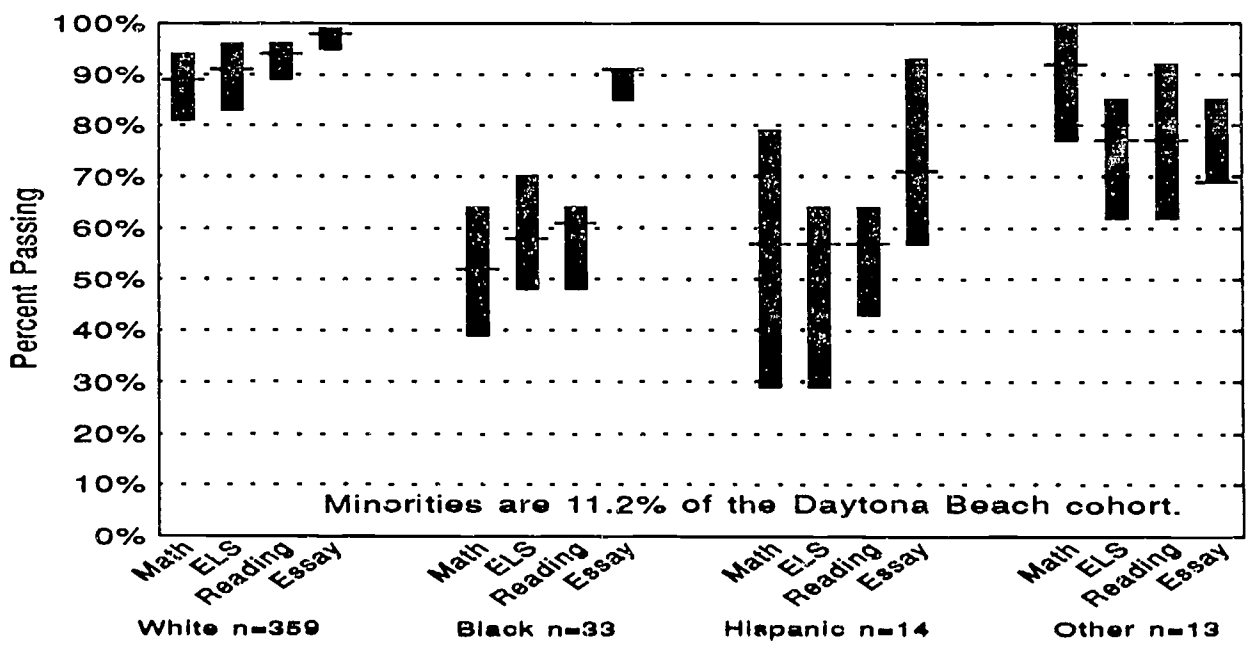


Subtest Symbols

■ Math ▲ Eng Lang Skills ✤ Reading ◎ Essay

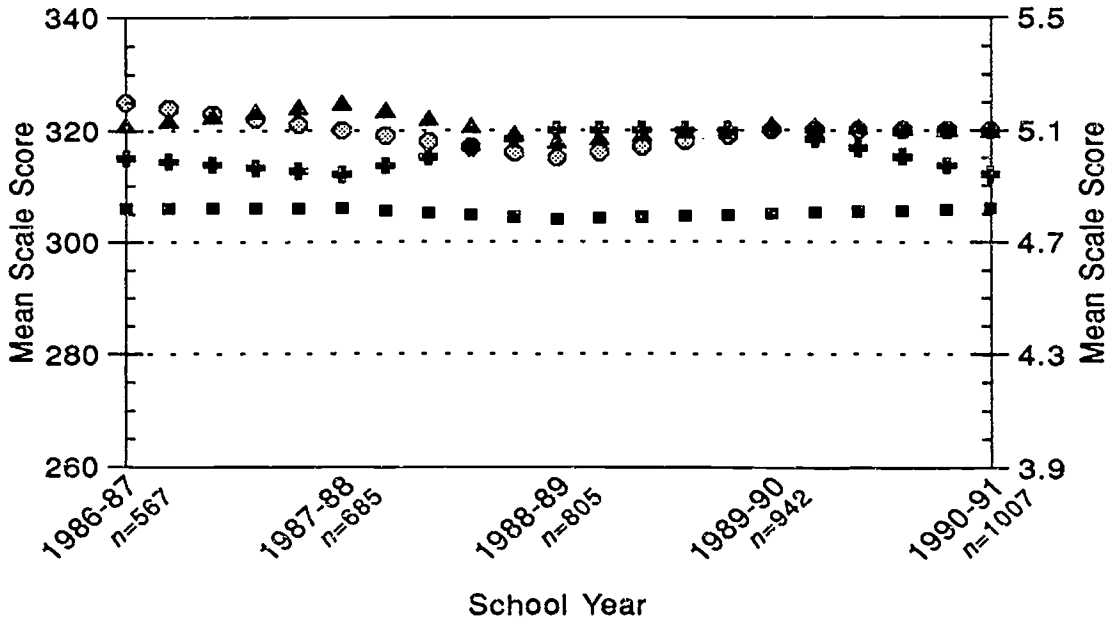
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Edison Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

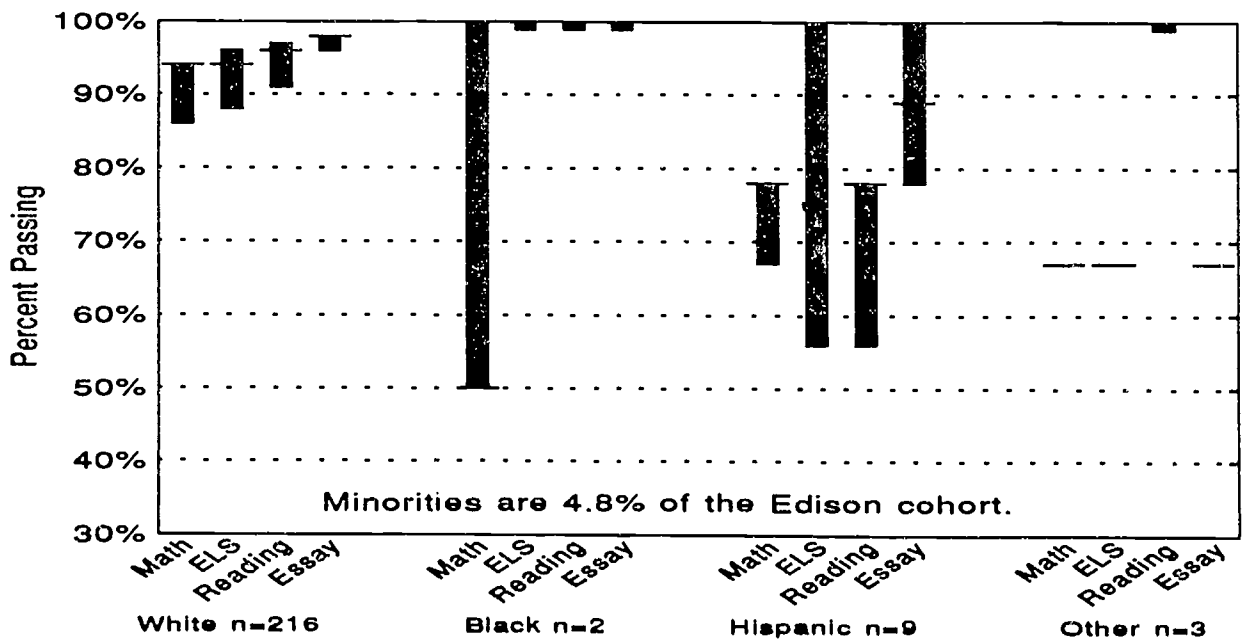


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

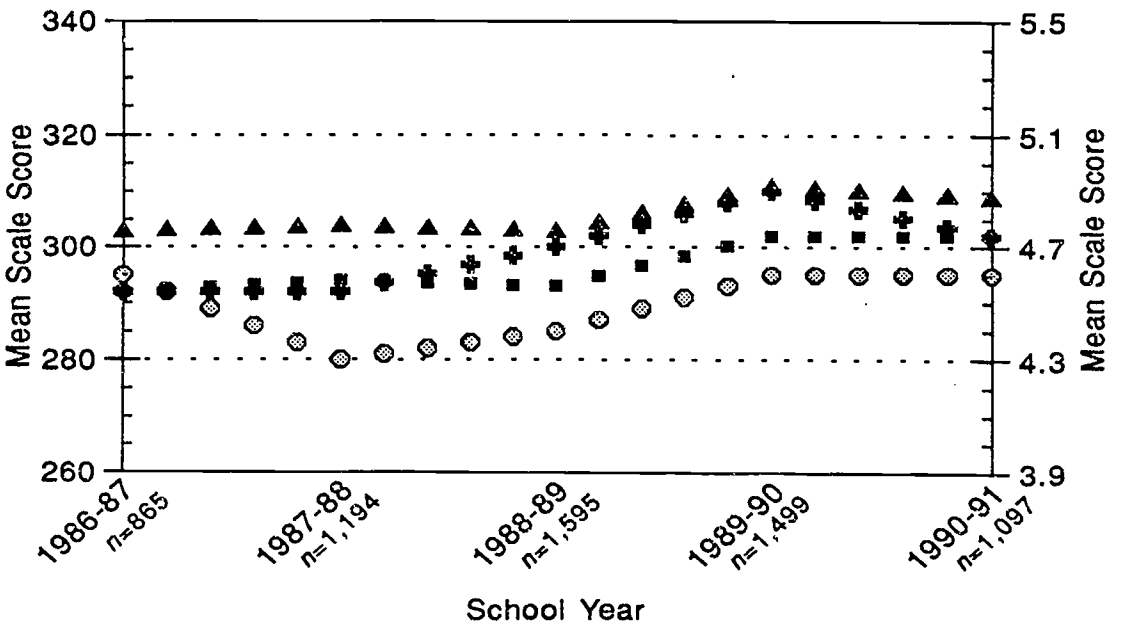
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Florida Agricultural & Mechanical University

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

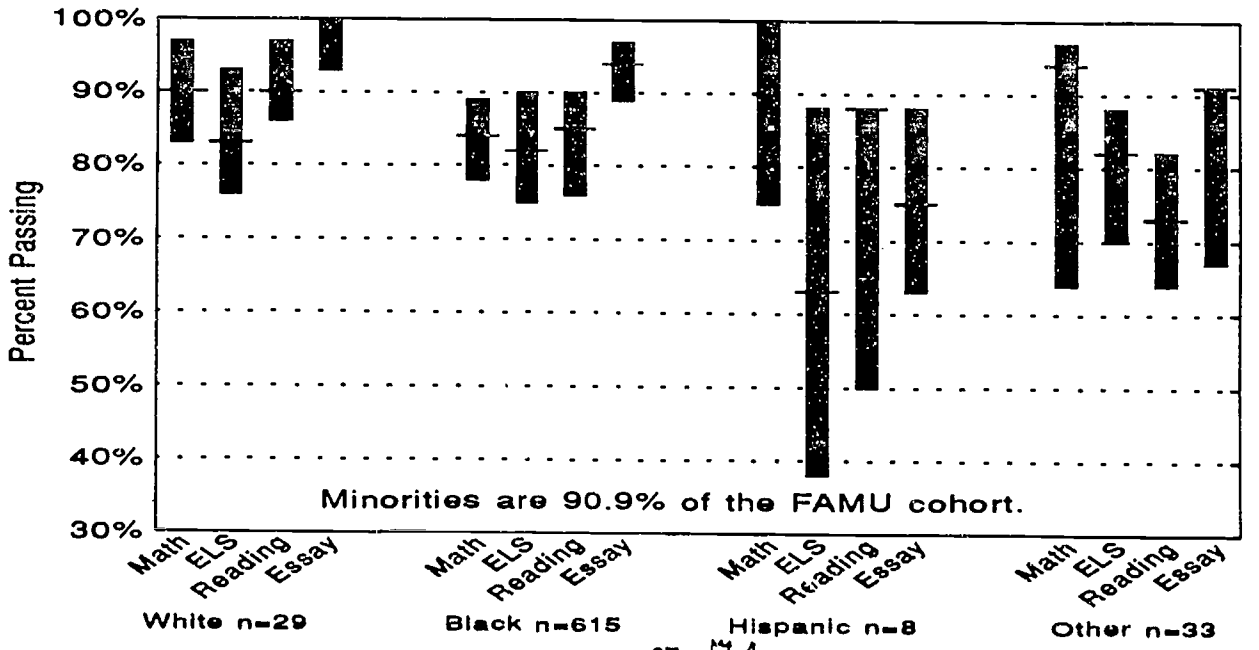


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

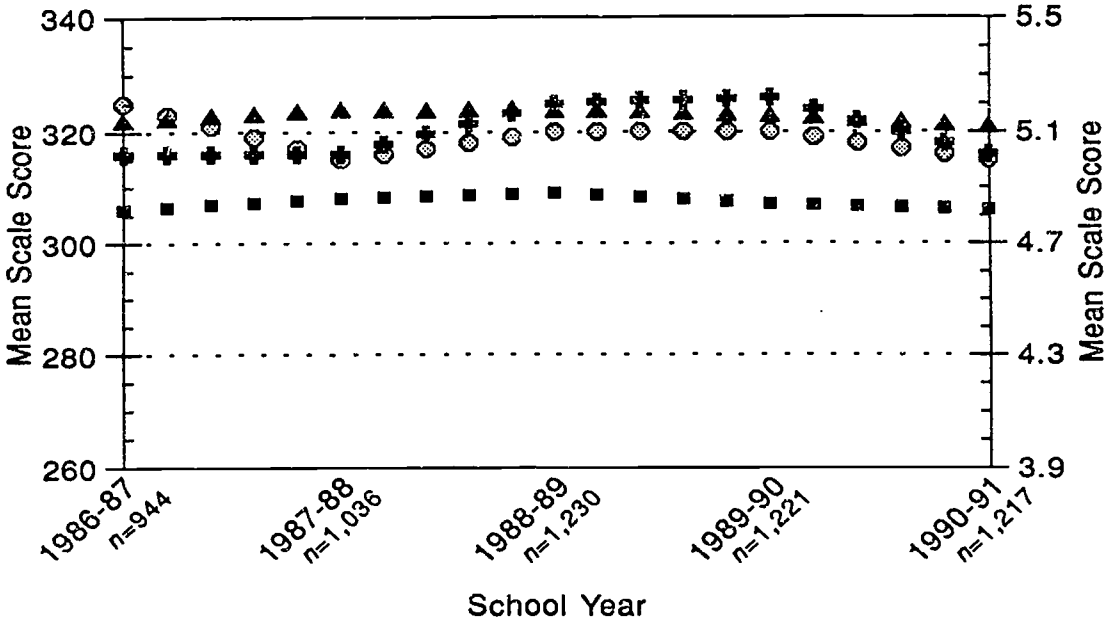
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Florida Atlantic University

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

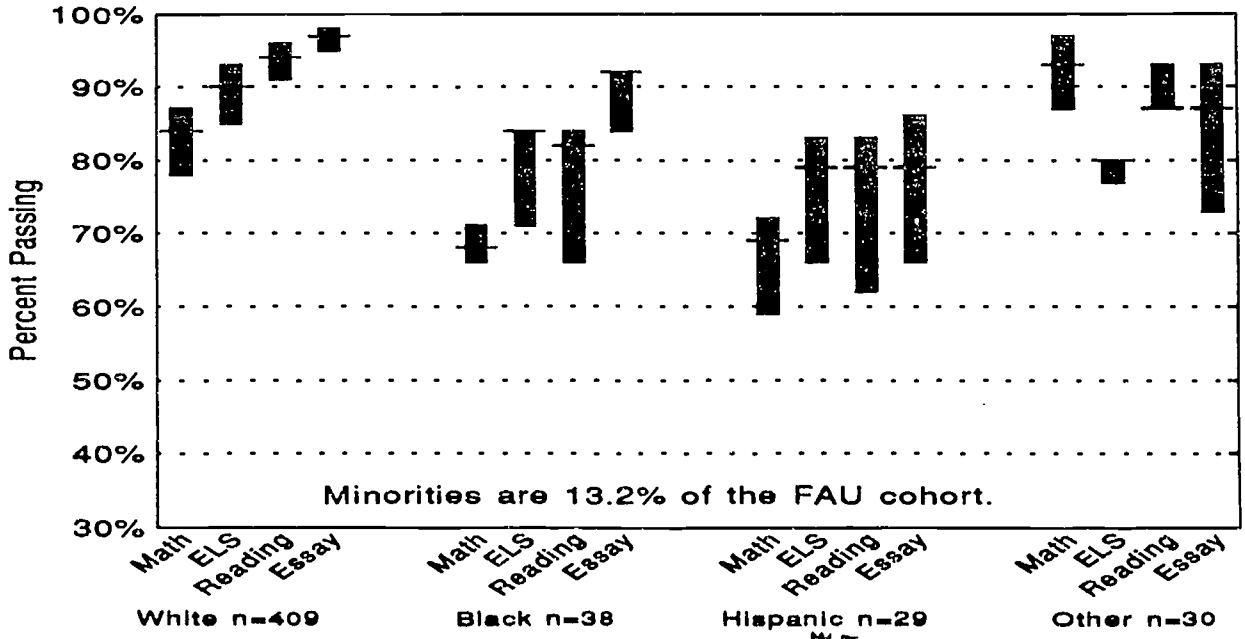


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

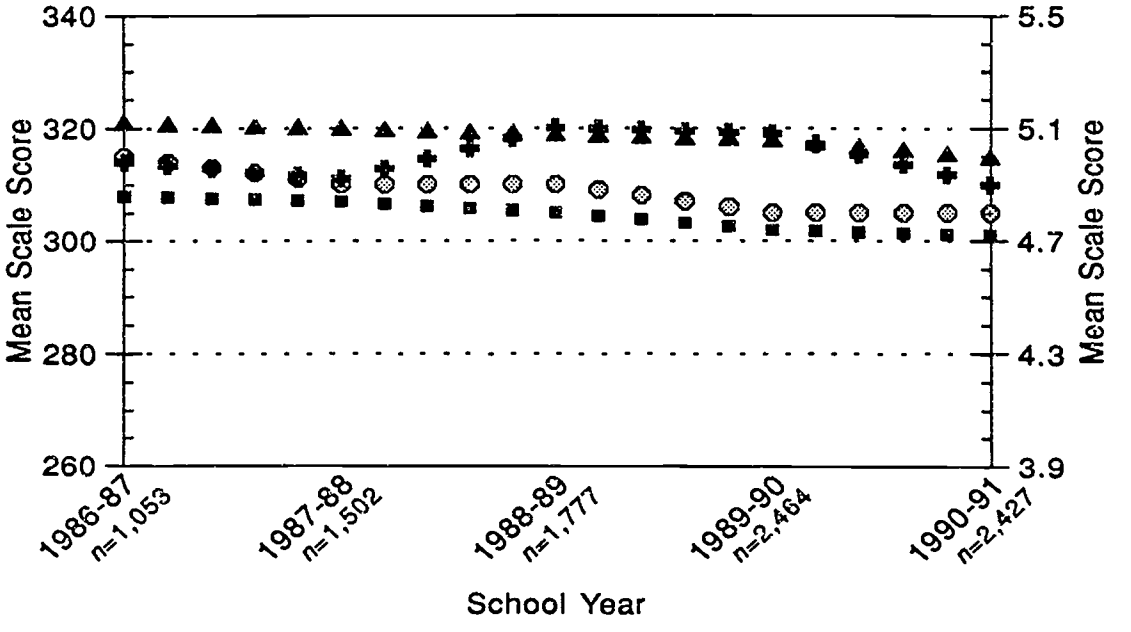
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Florida Community College at Jacksonville

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

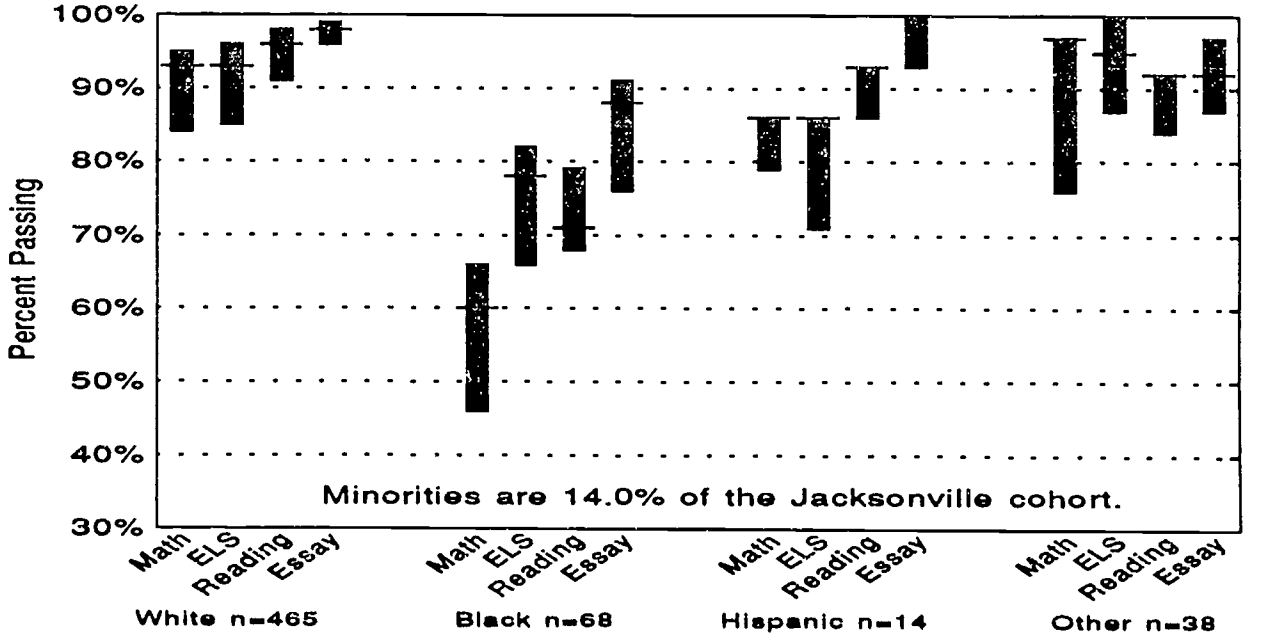


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

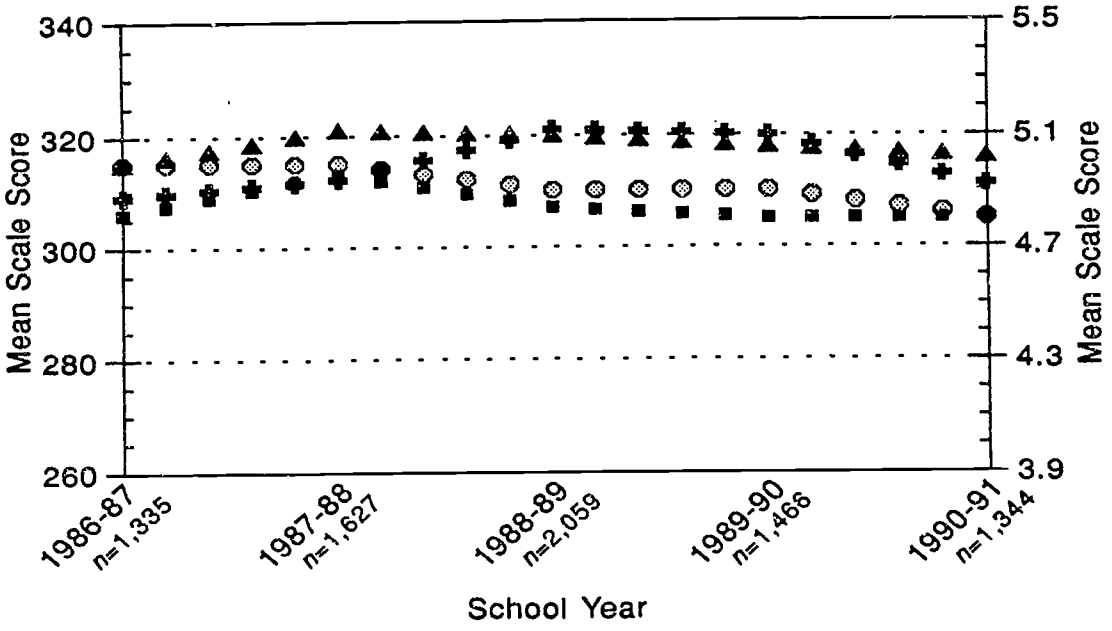
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Florida International University

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

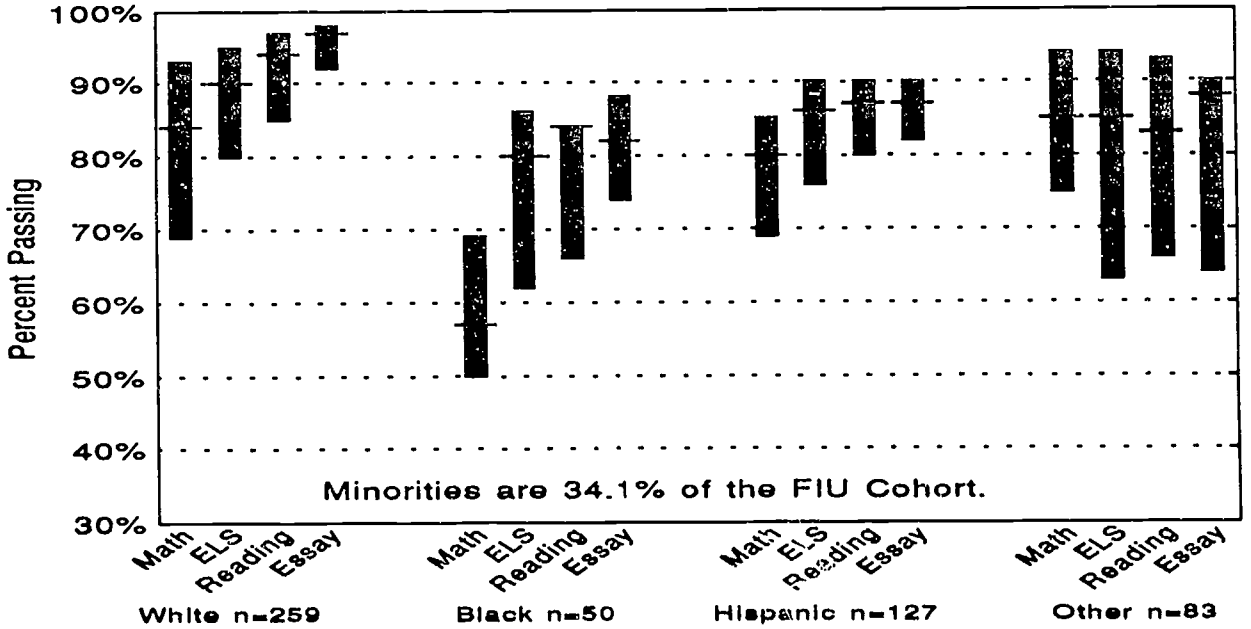


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

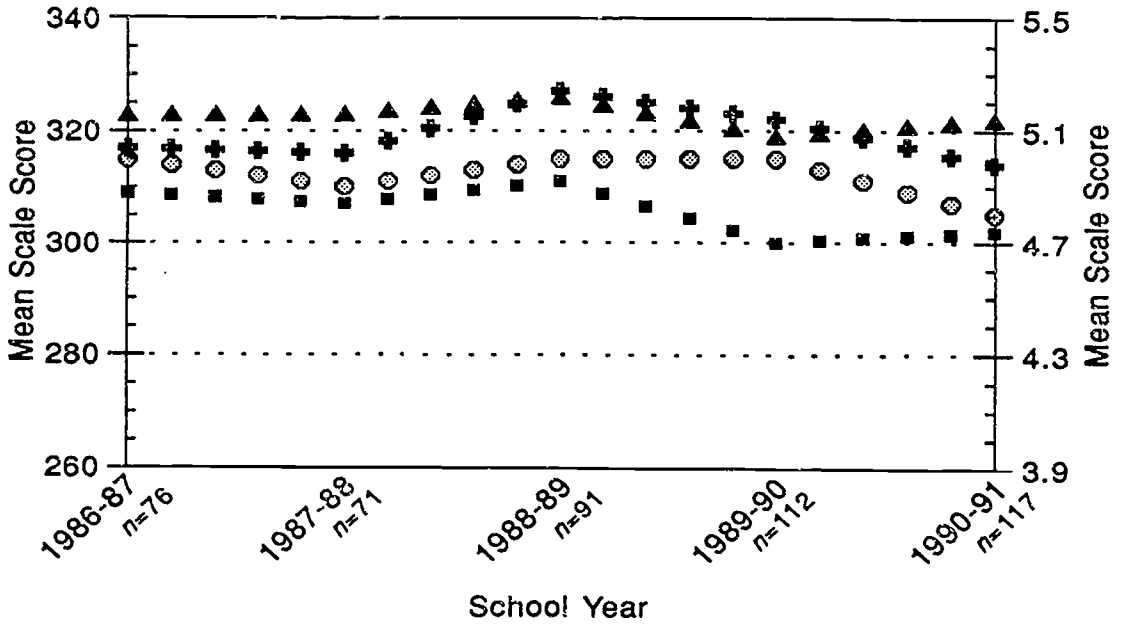
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Florida Keys Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

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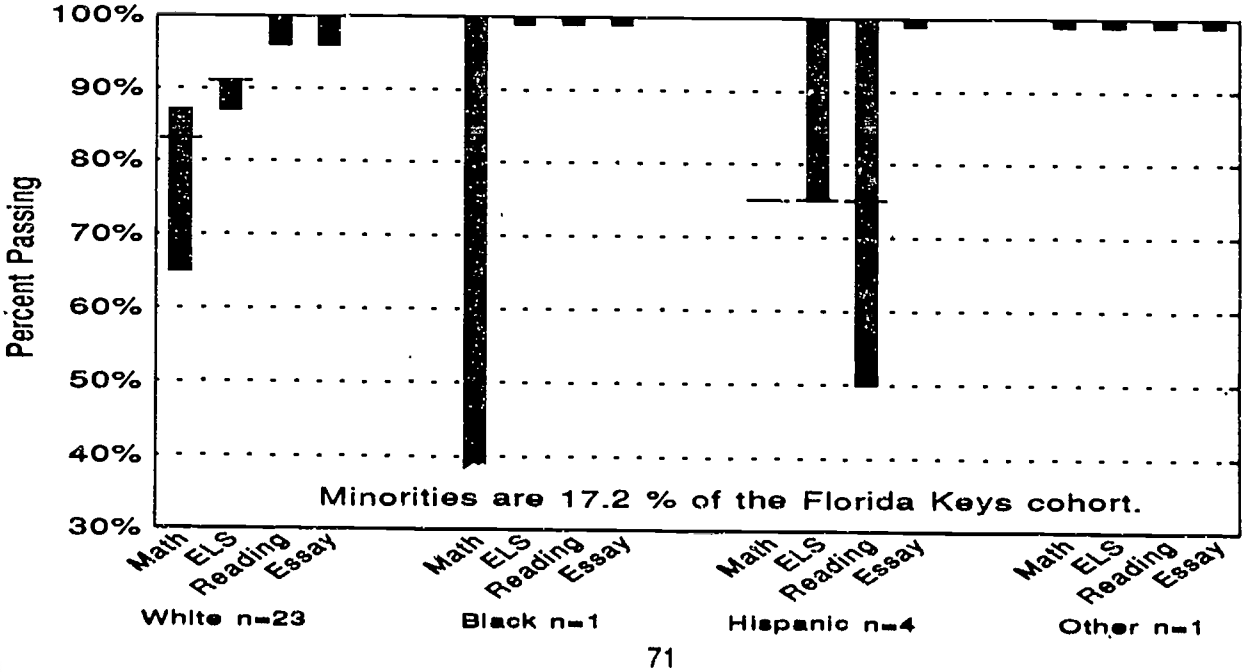
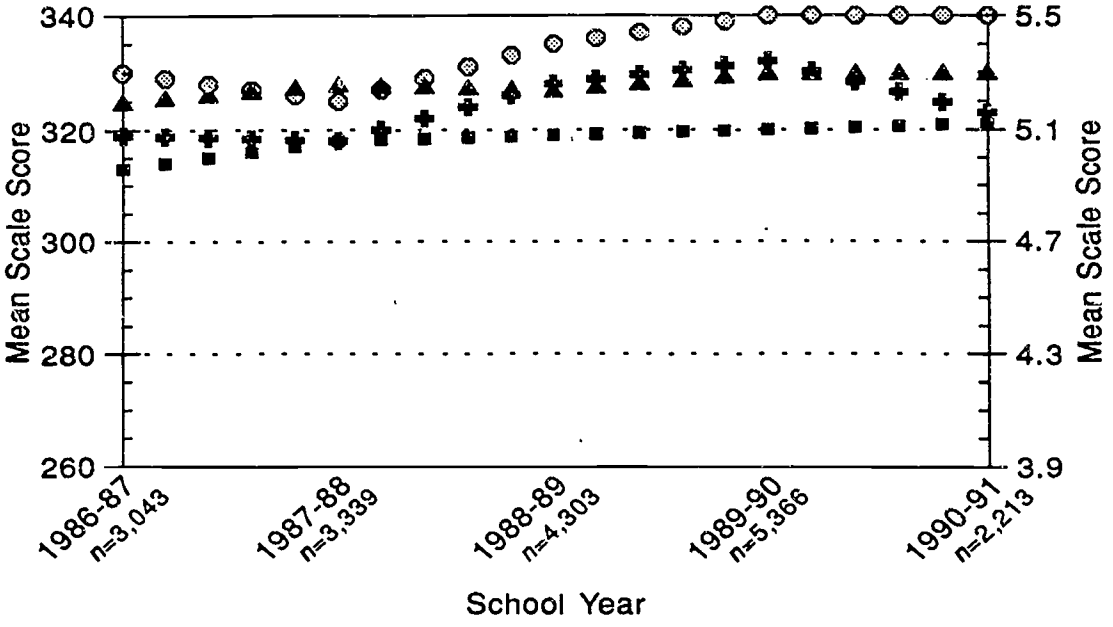
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

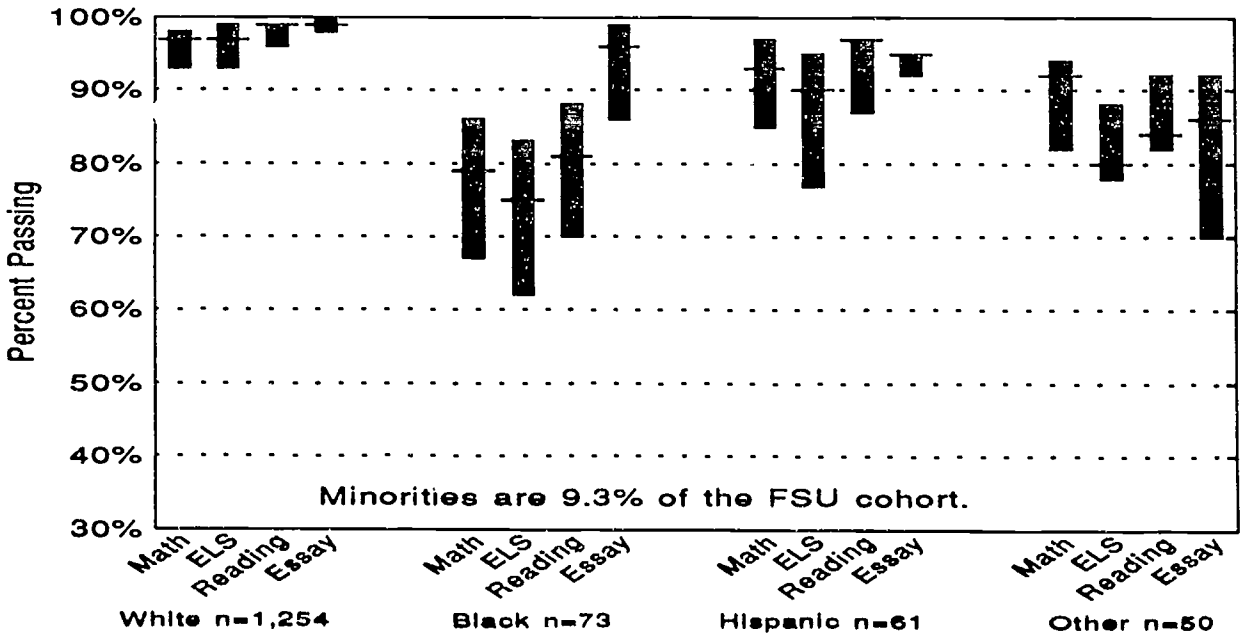


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

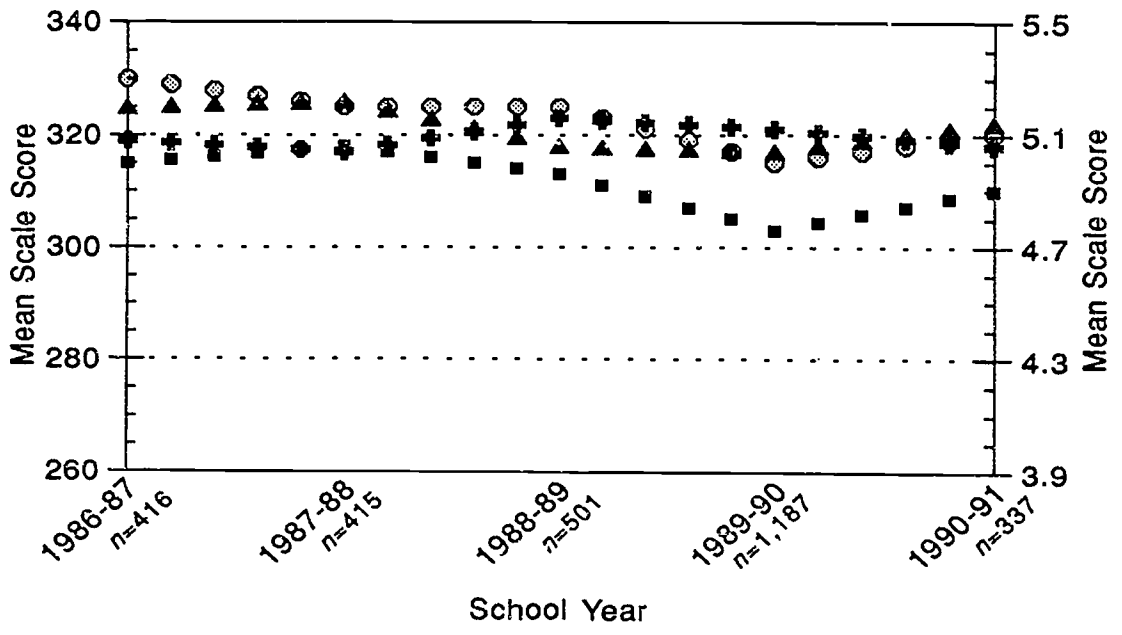
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Gulf Coast Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

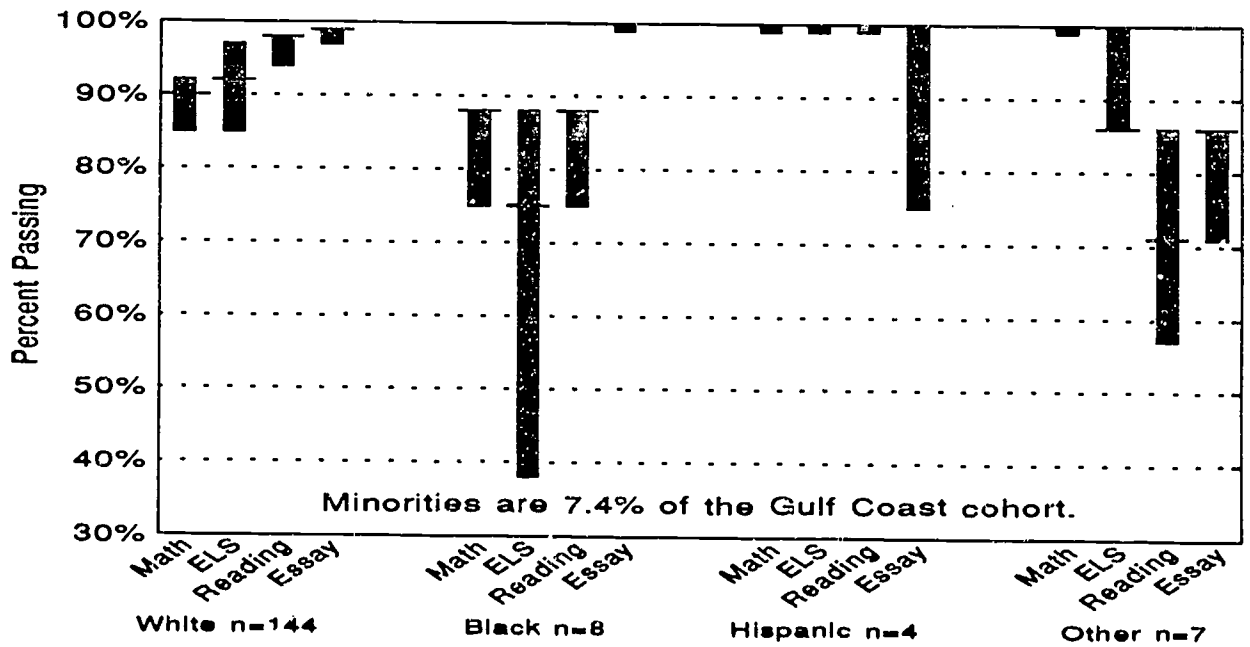


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◈ Essay

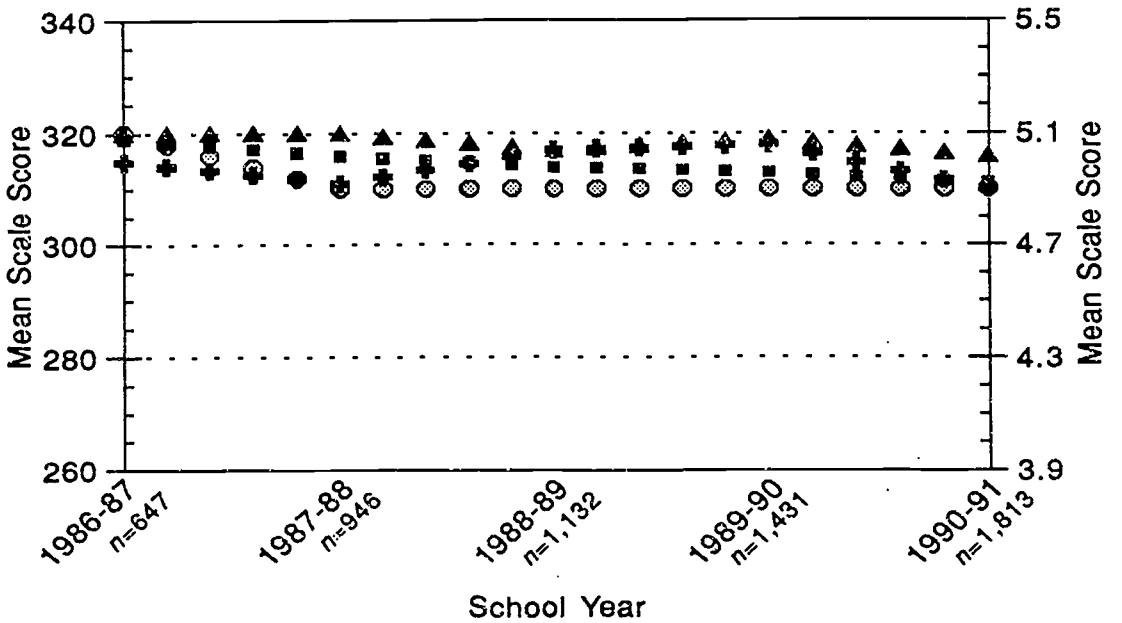
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Hillsborough Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

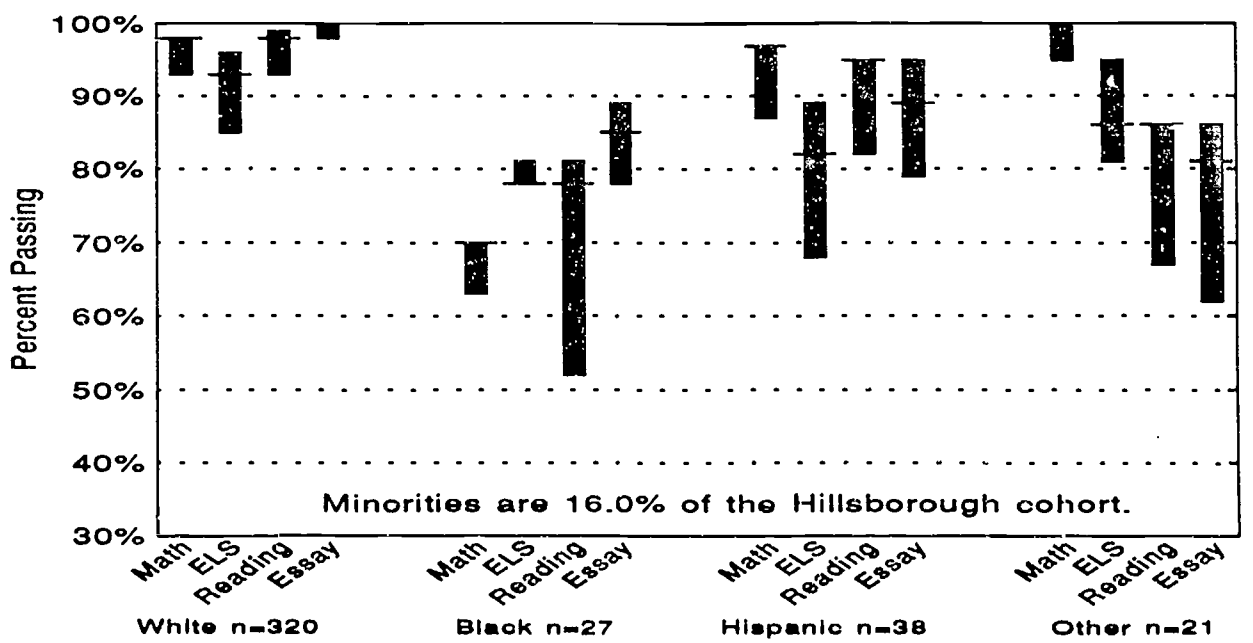


Subtest Symbols

■ Math ▲ Eng Lang Skills ✤ Reading ⊗ Essay

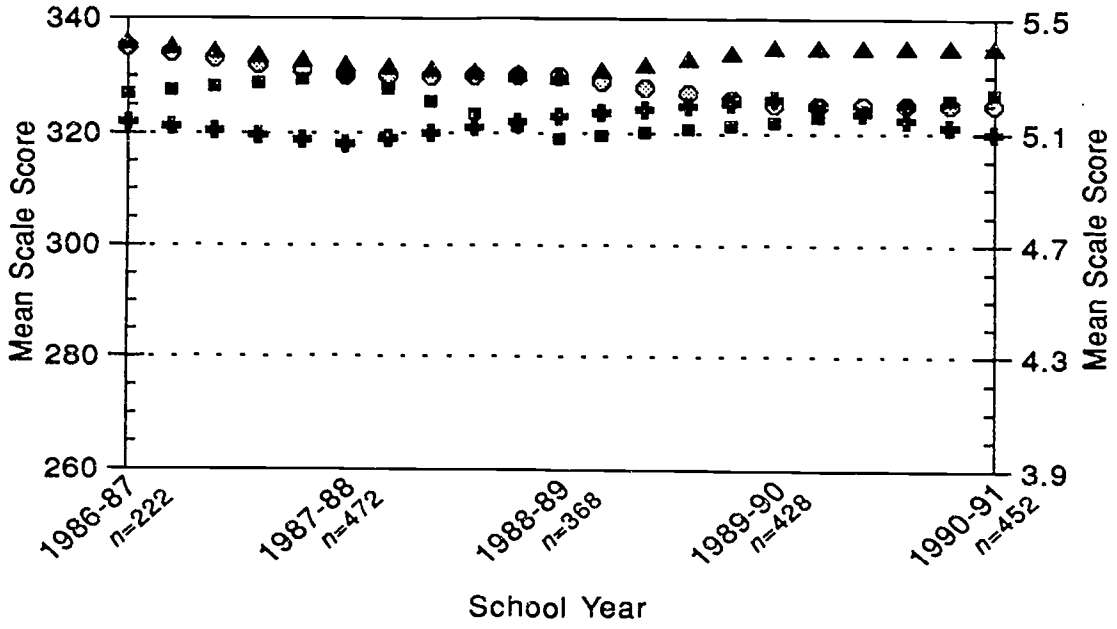
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Indian River Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

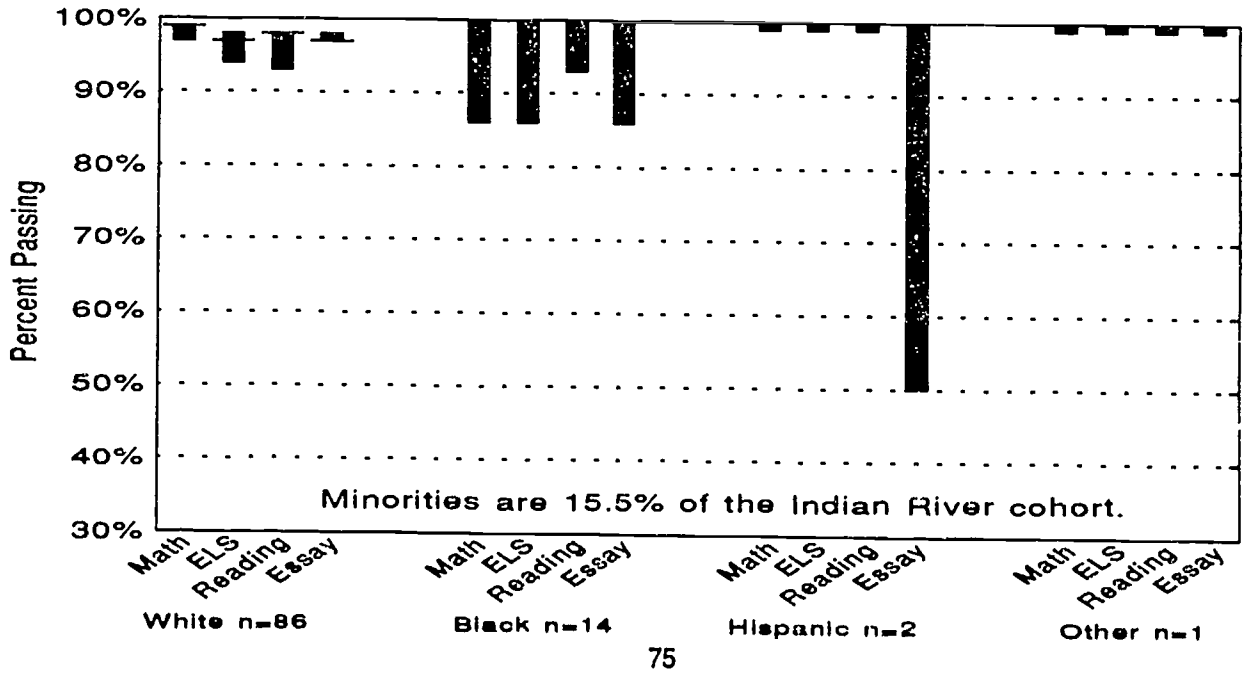


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◈ Essay

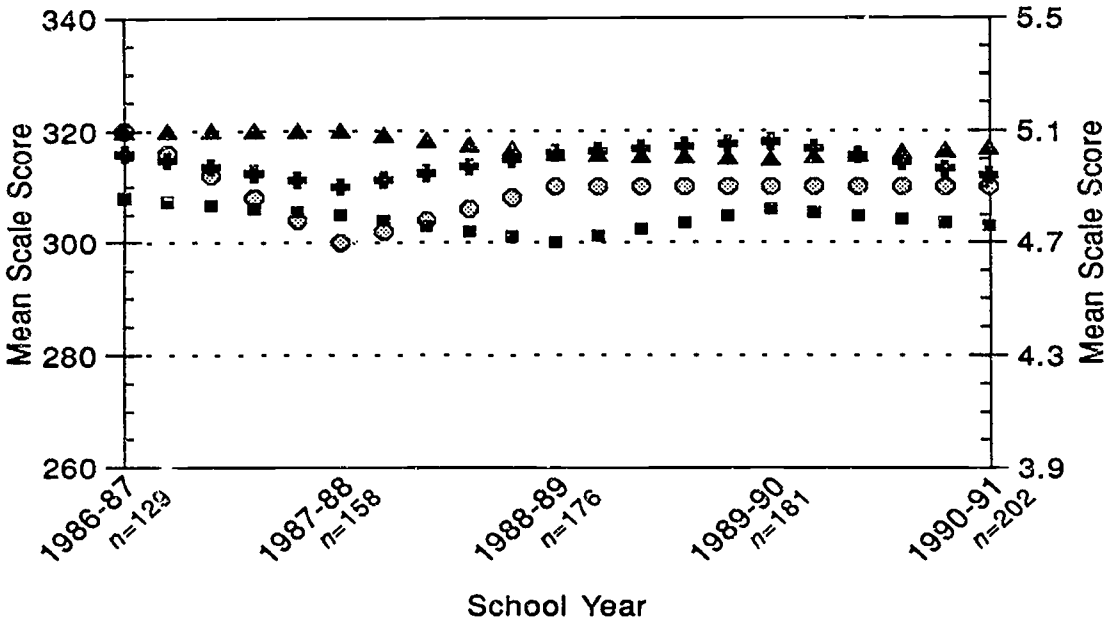
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Lake City Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

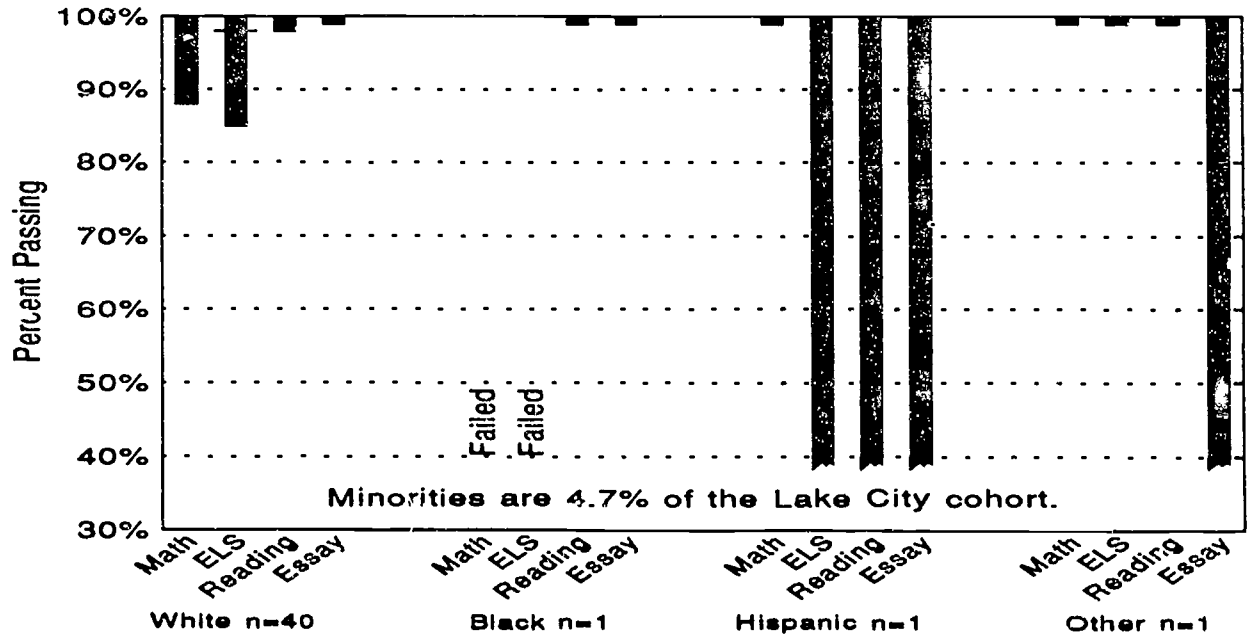


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

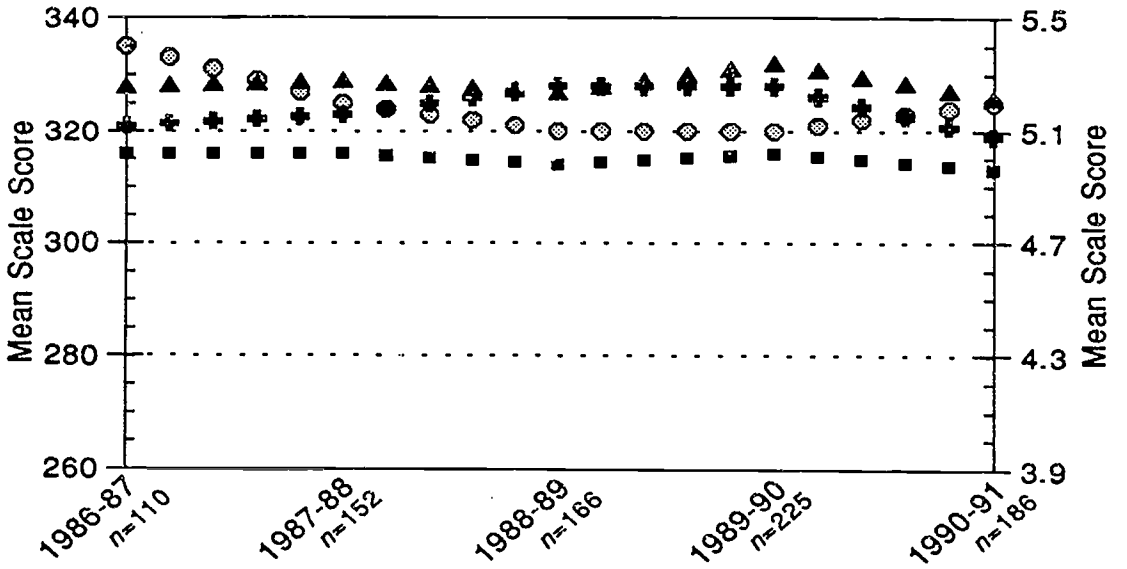
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Lake-Sumter Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

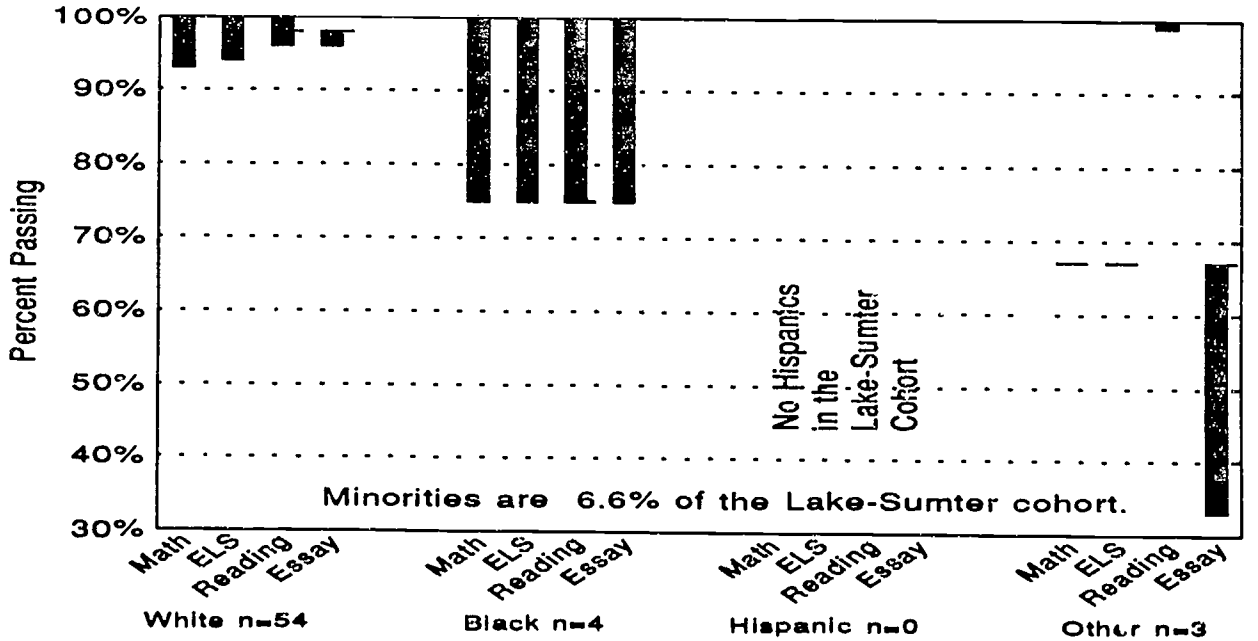


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

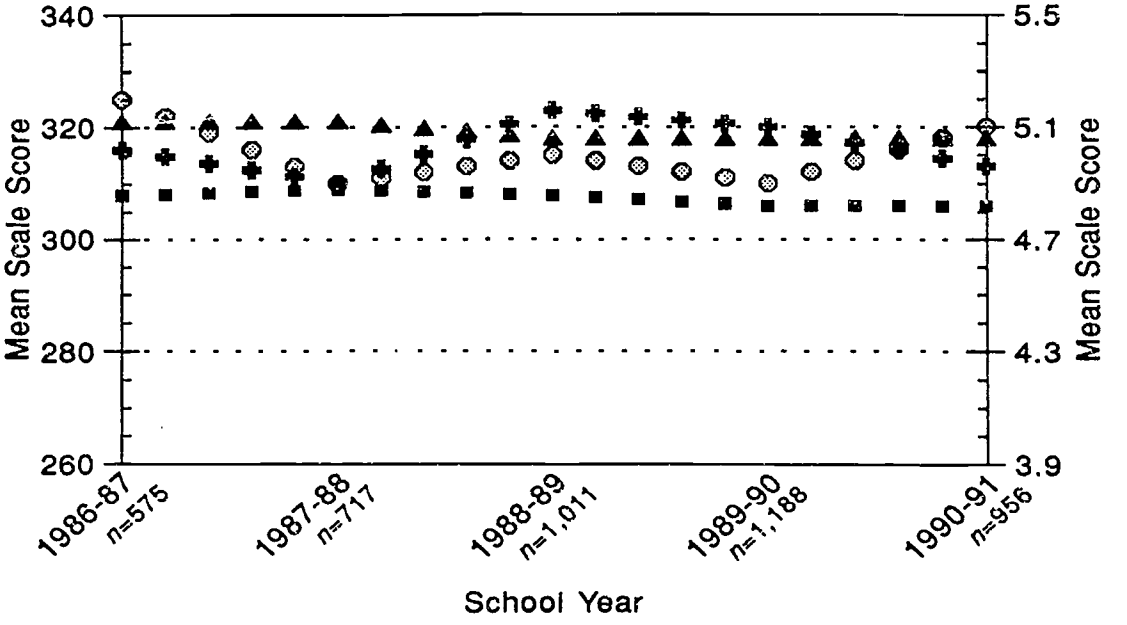
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Manatee Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

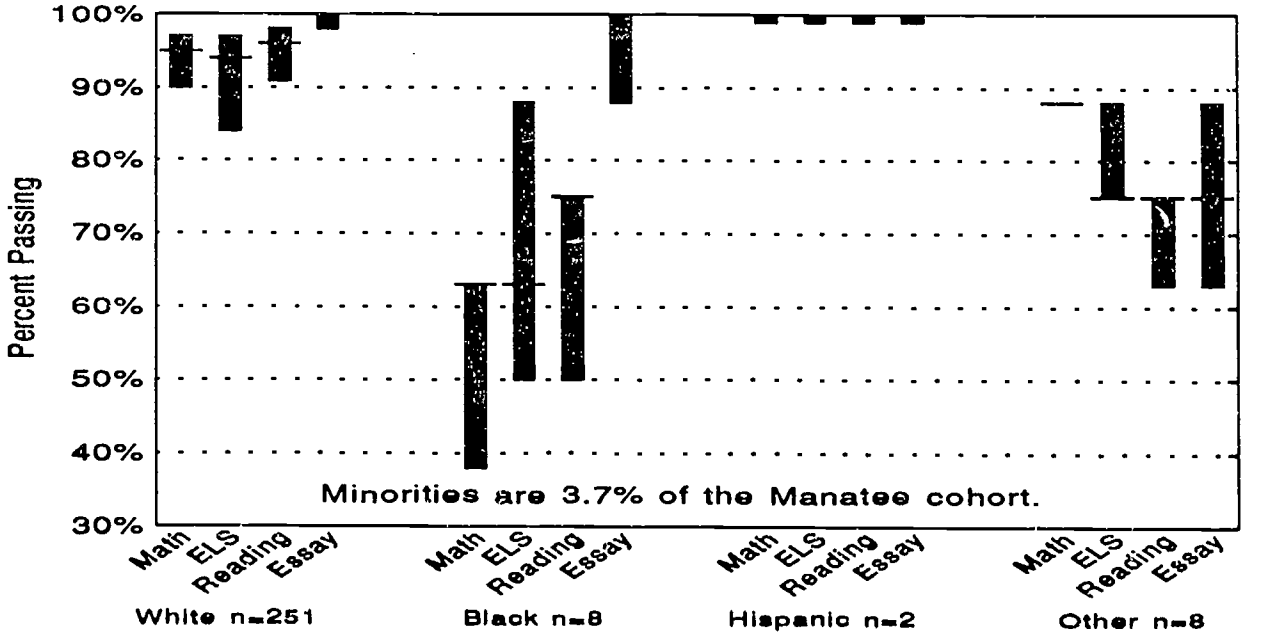


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

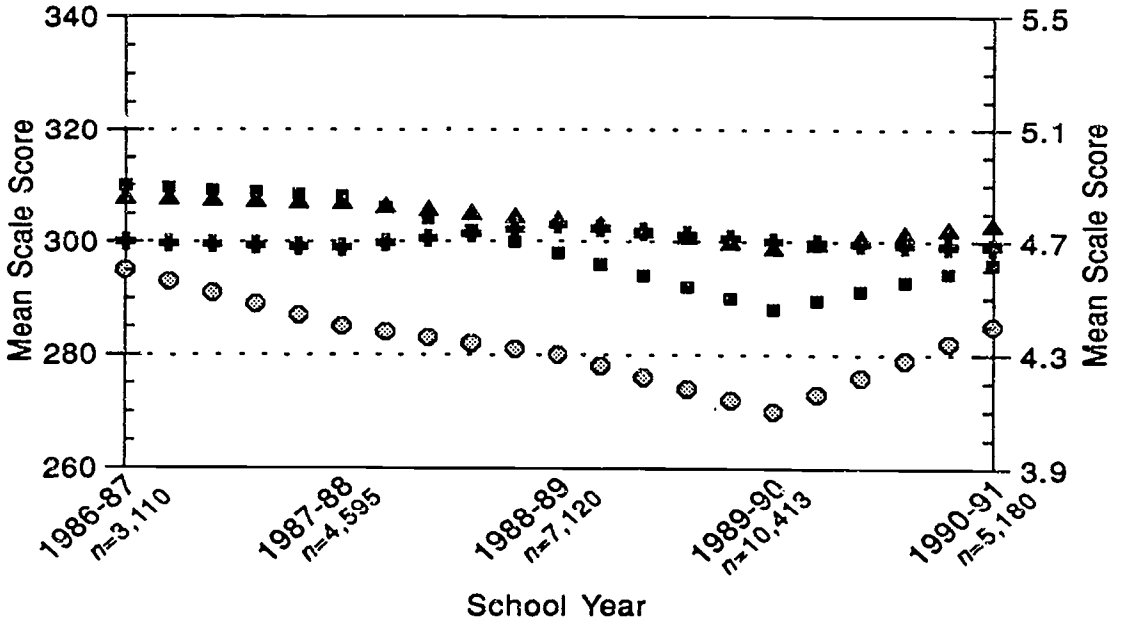
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



78

Miami-Dade Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

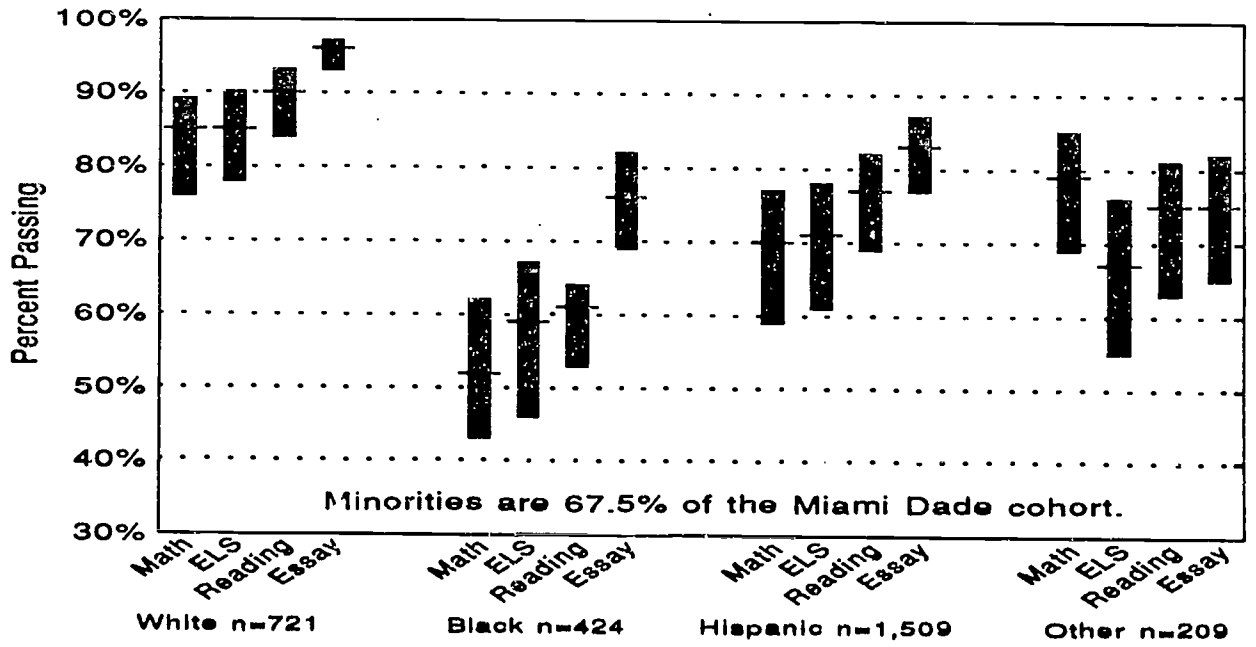


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

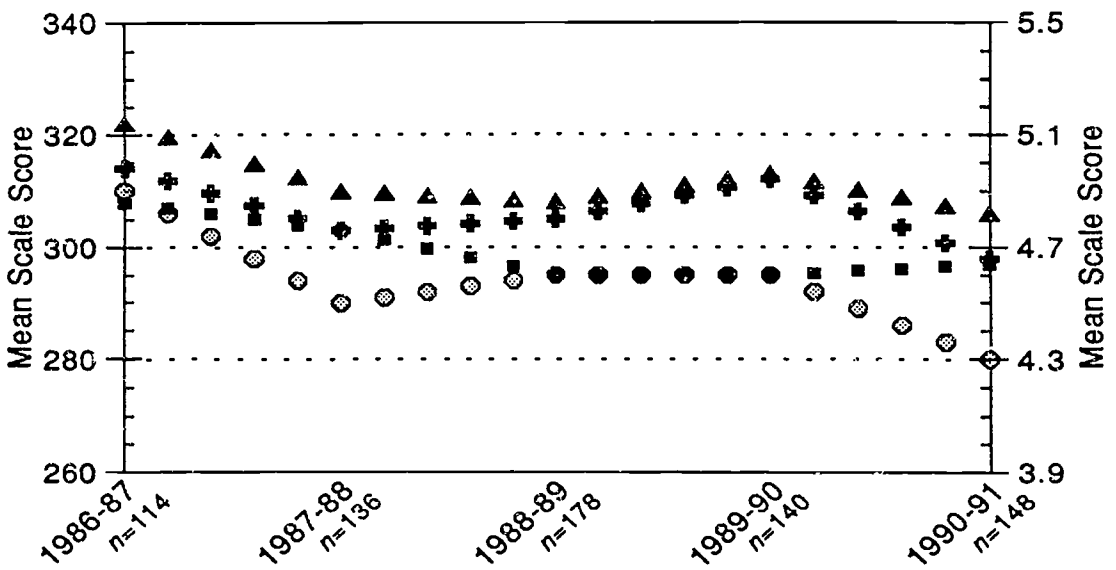
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



North Florida Junior College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✤ Reading ⊗ Essay

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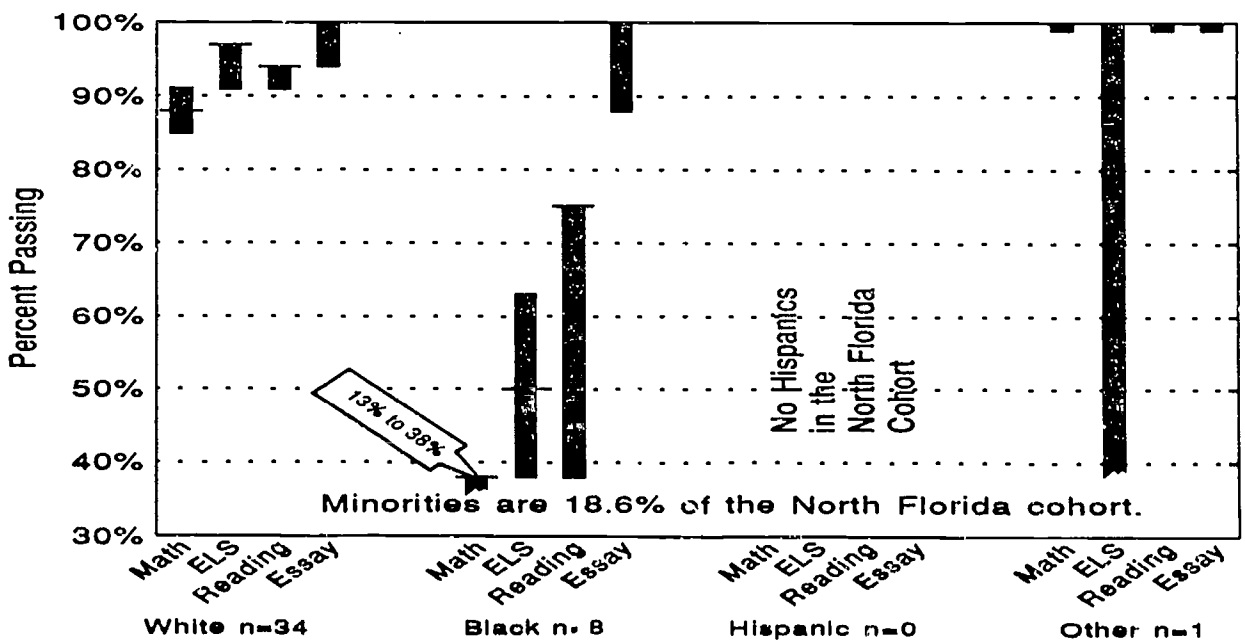
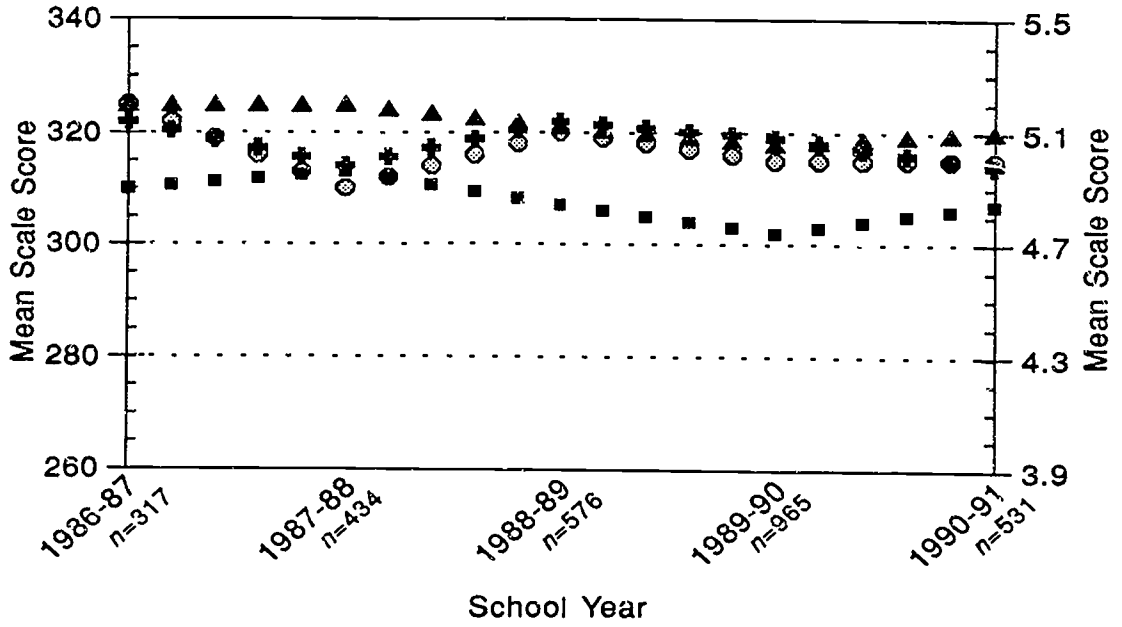
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Okaloosa-Walton Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◈ Essay

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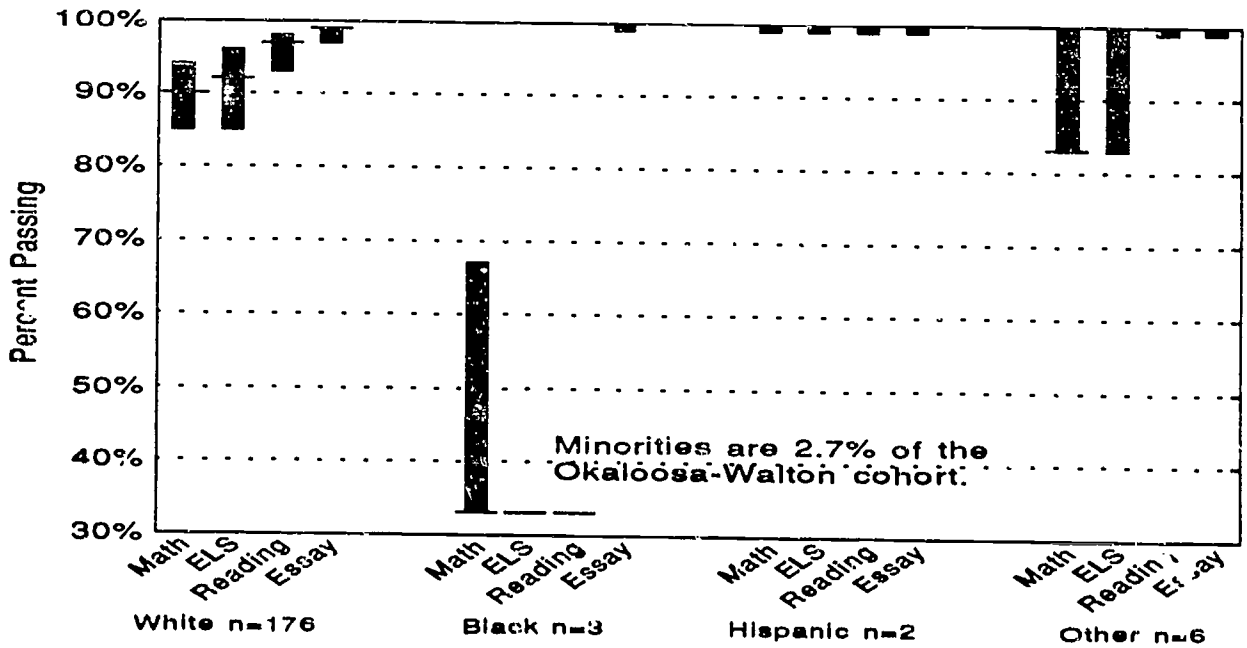
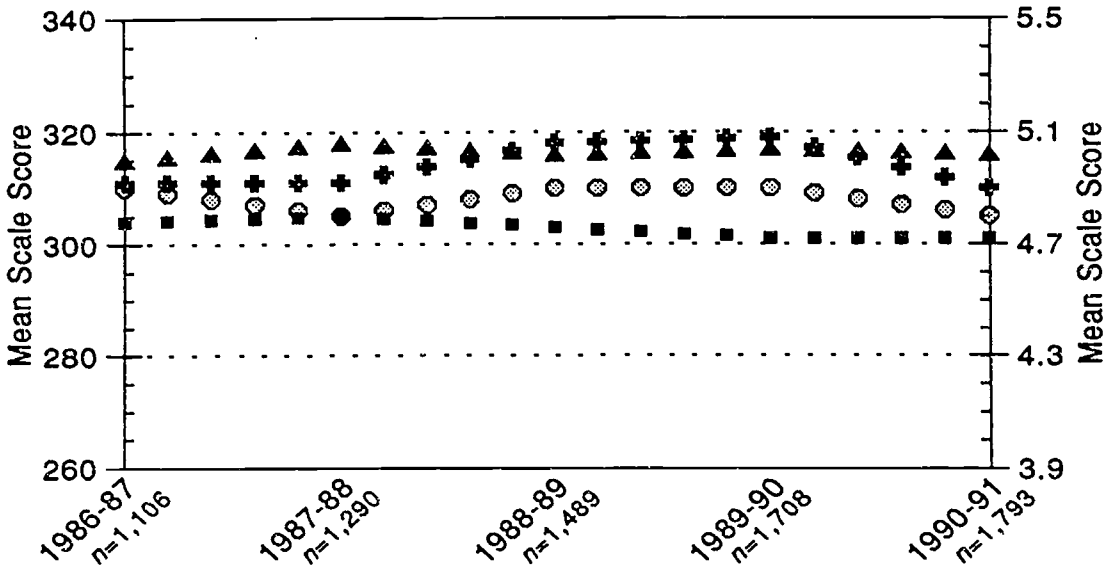
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Palm Beach Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

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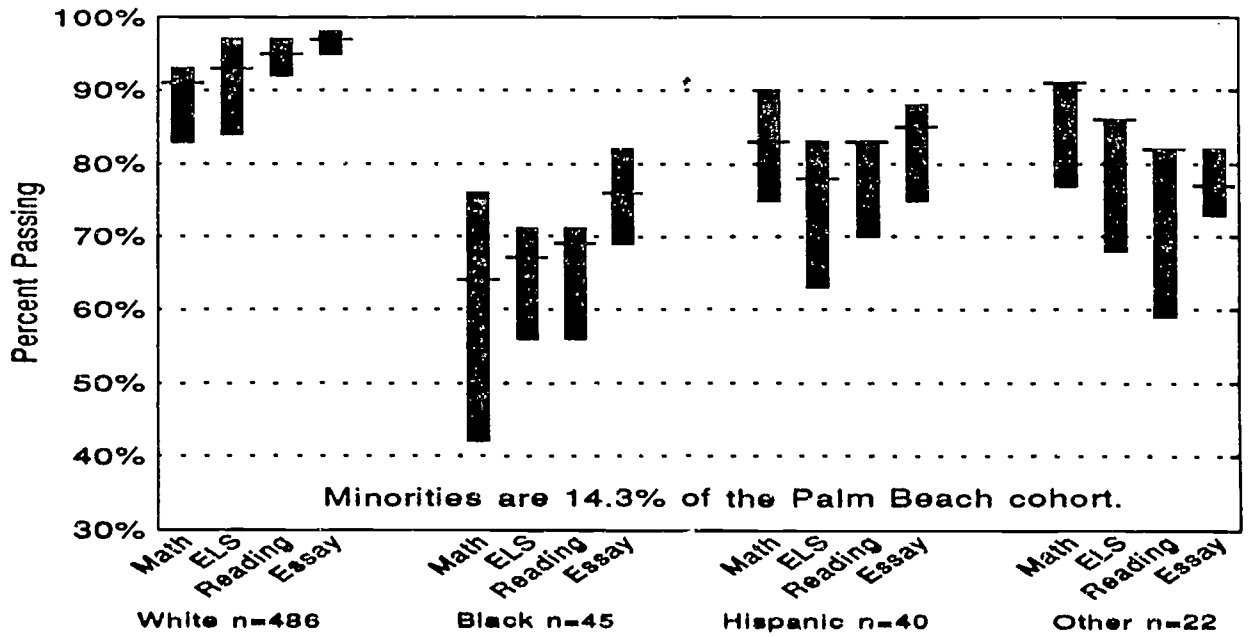
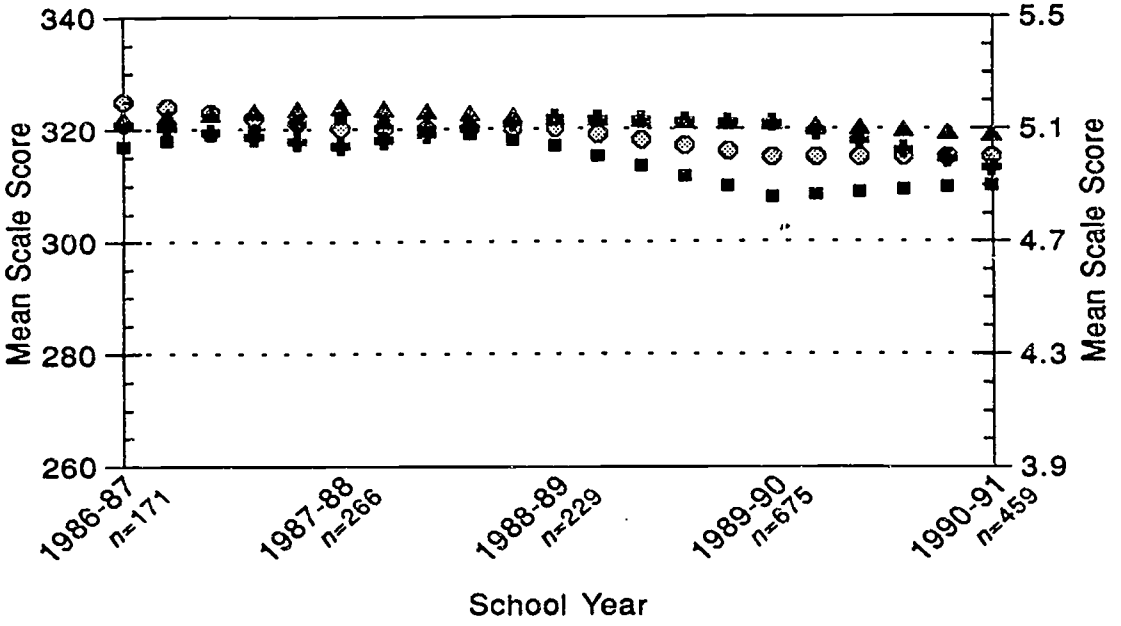
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Pasco-Hernando Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

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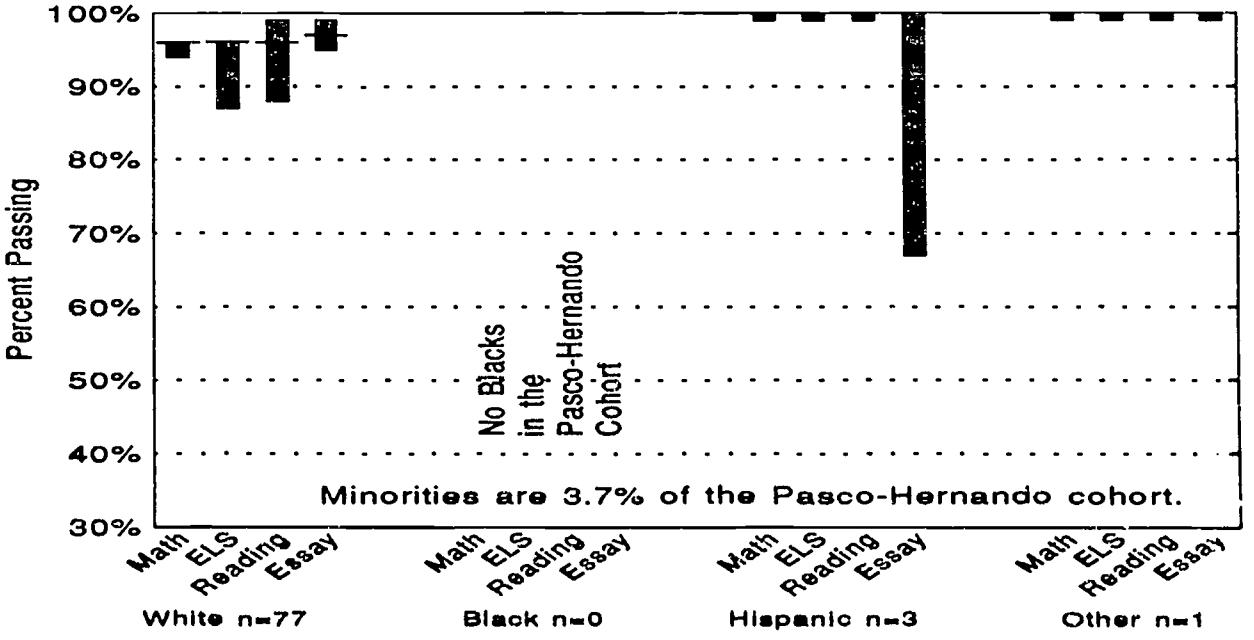
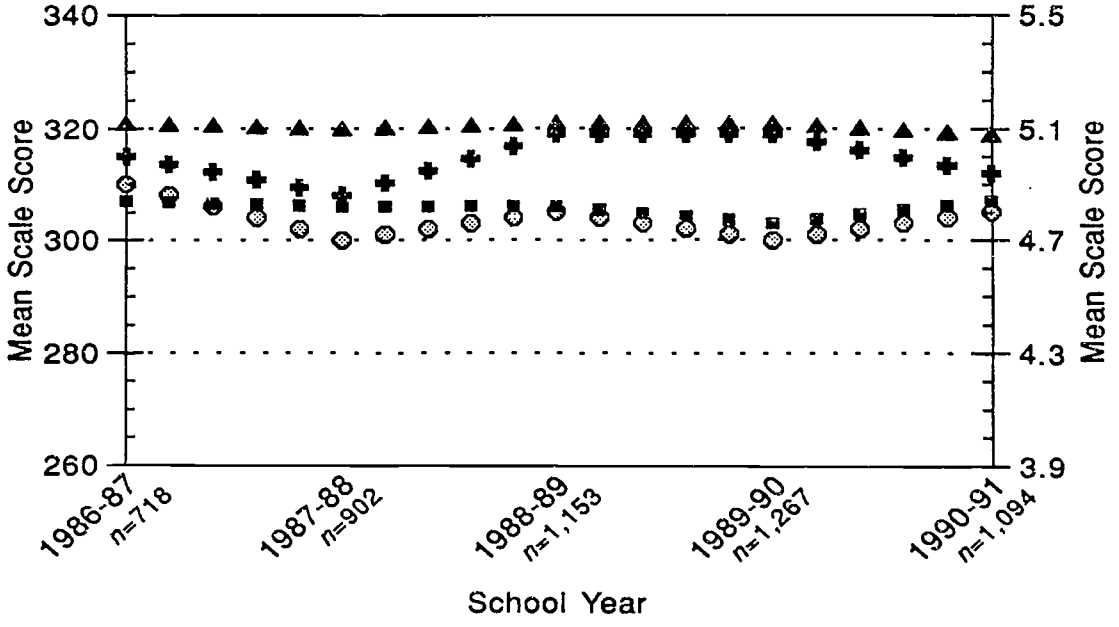
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Pensacola Junior College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

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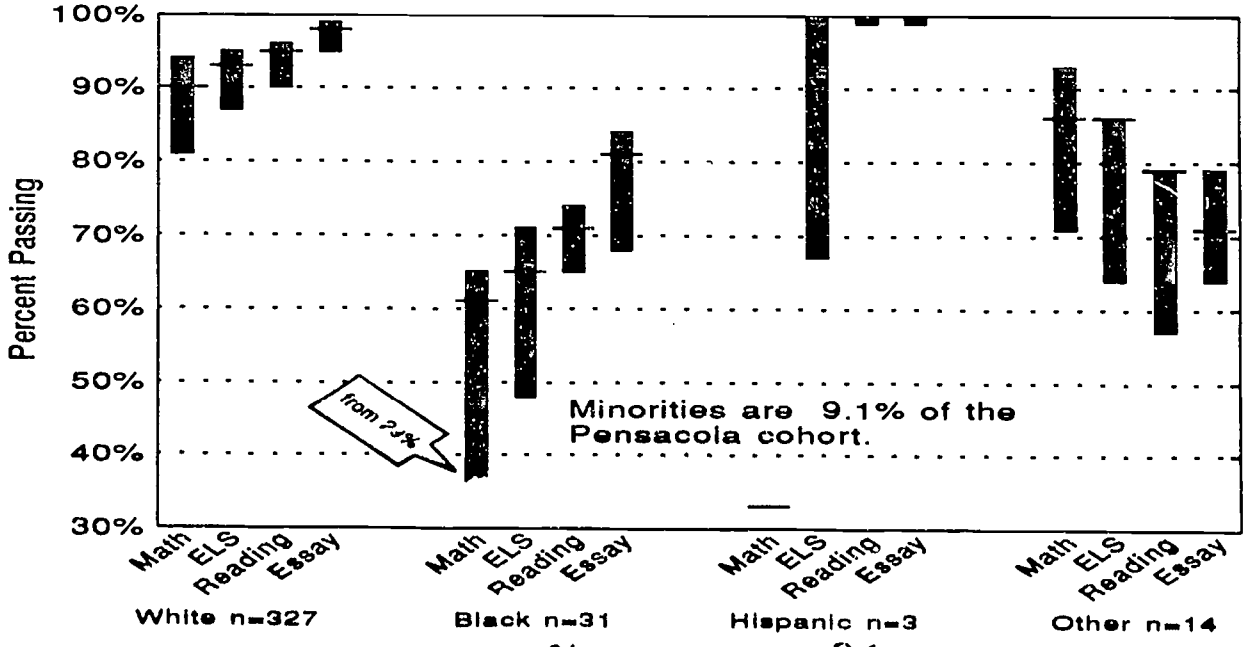
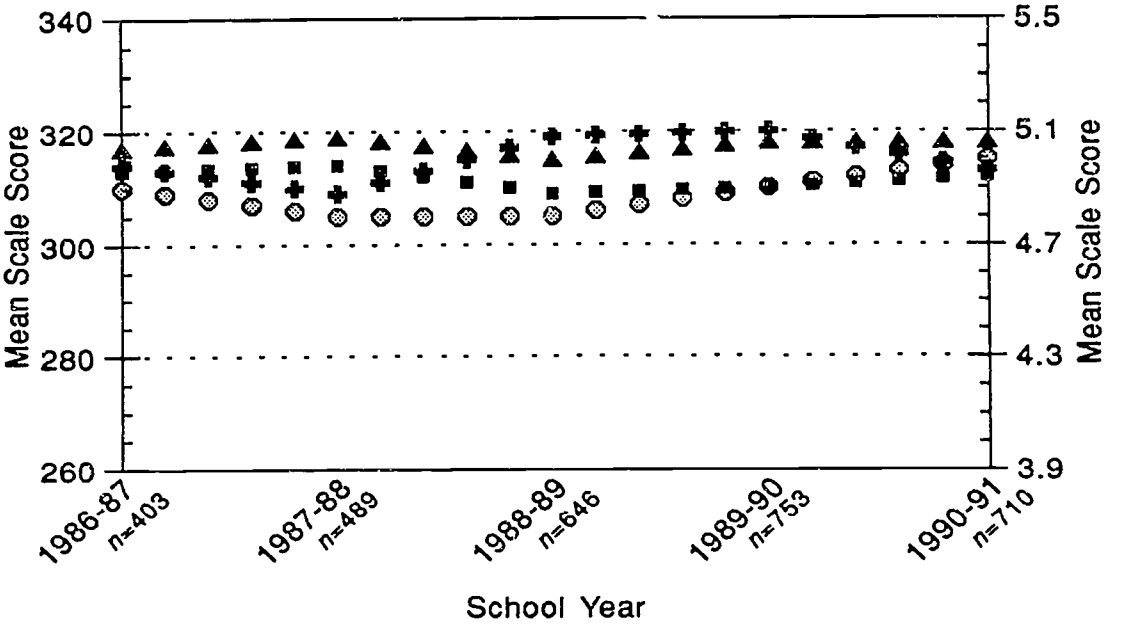
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Polk Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

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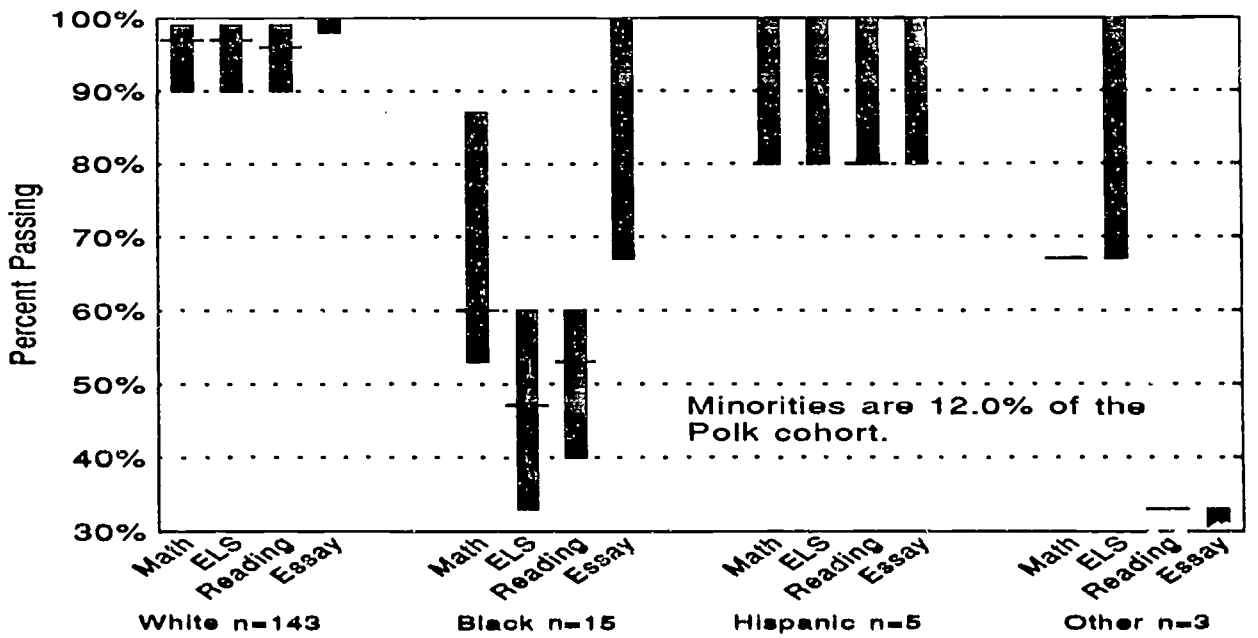
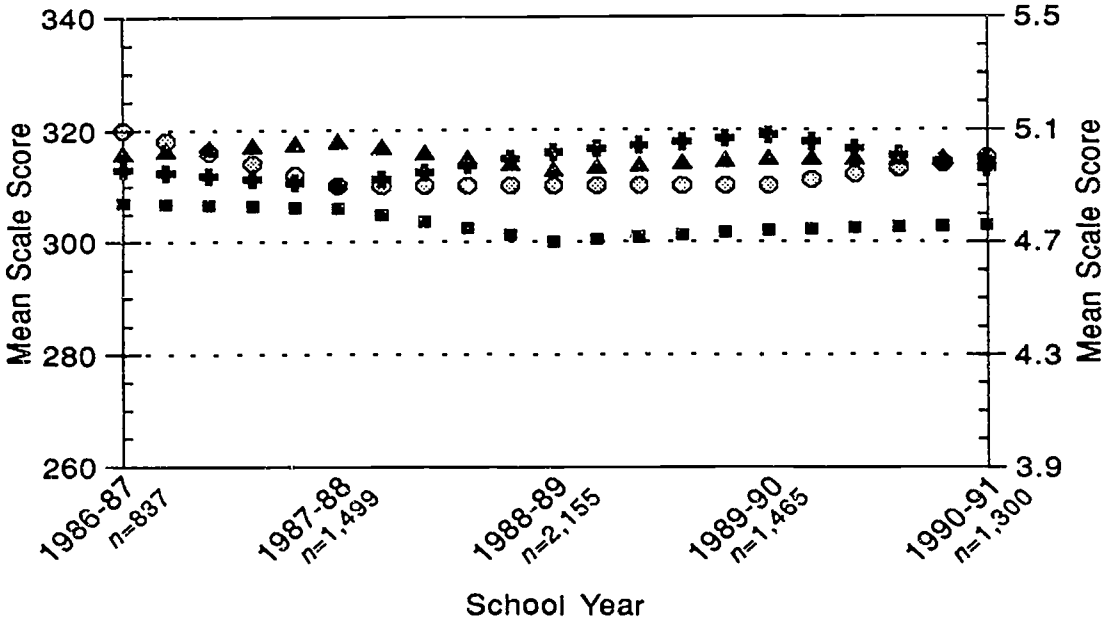
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Santa Fe Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

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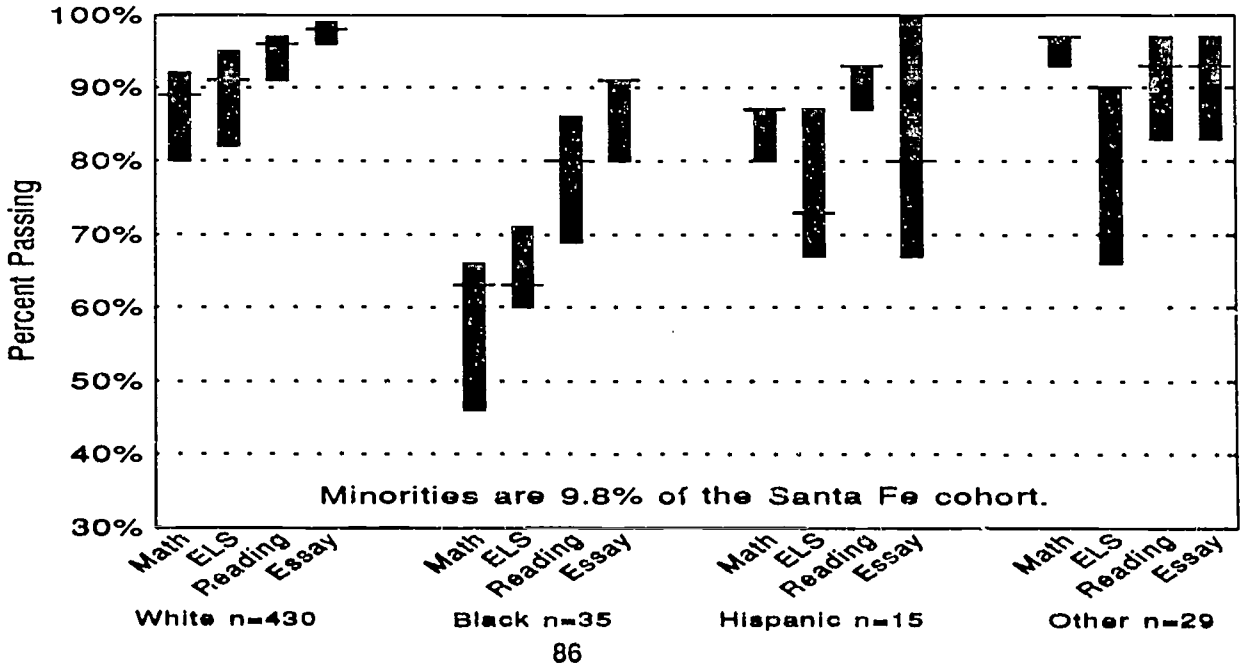
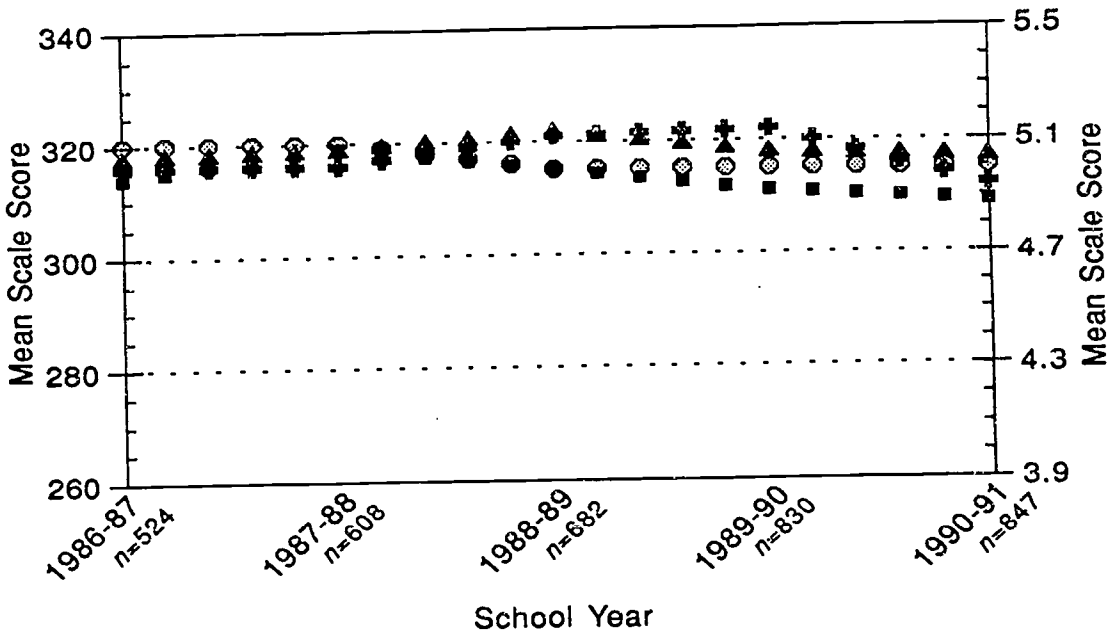
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Seminole Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

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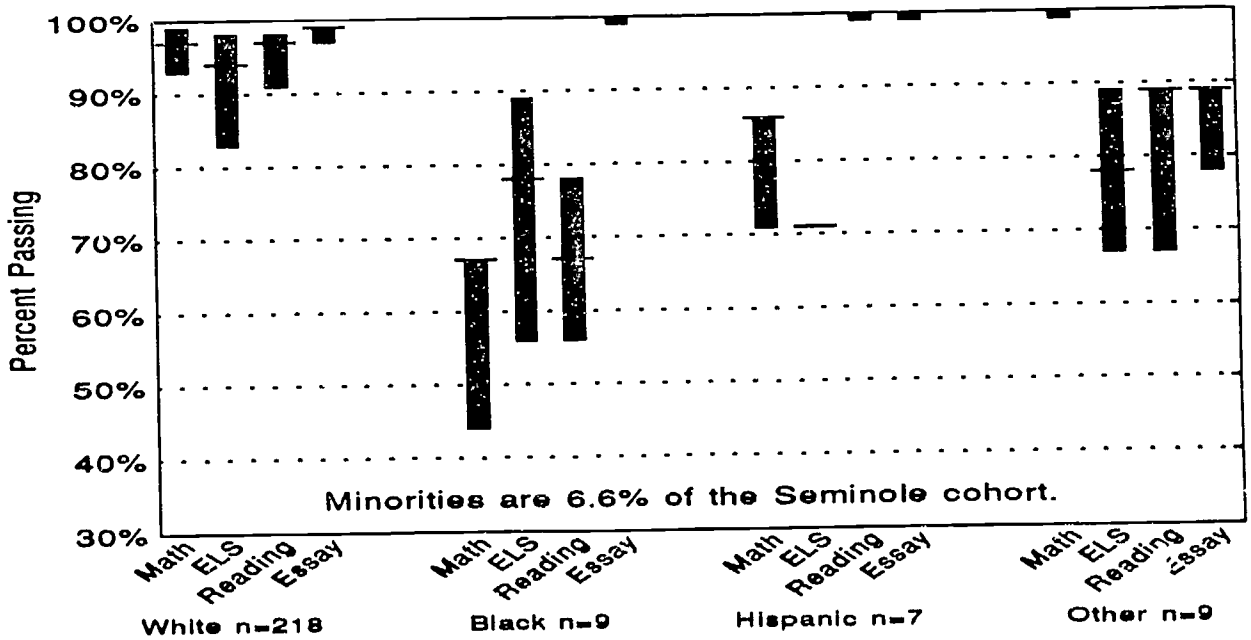
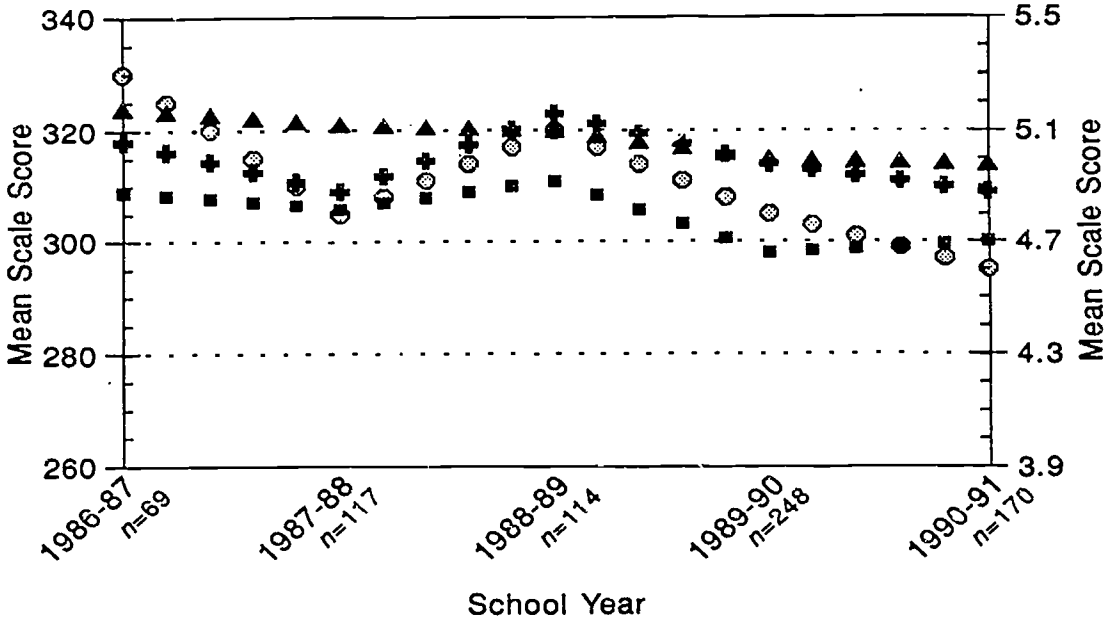
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



South Florida Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

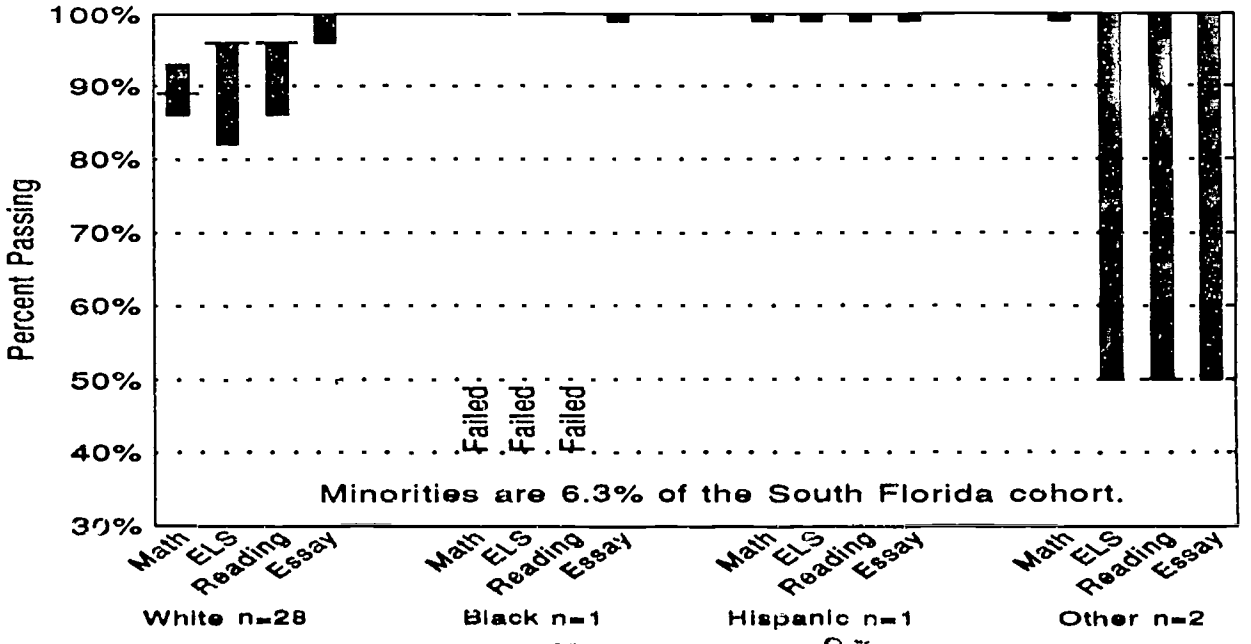


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

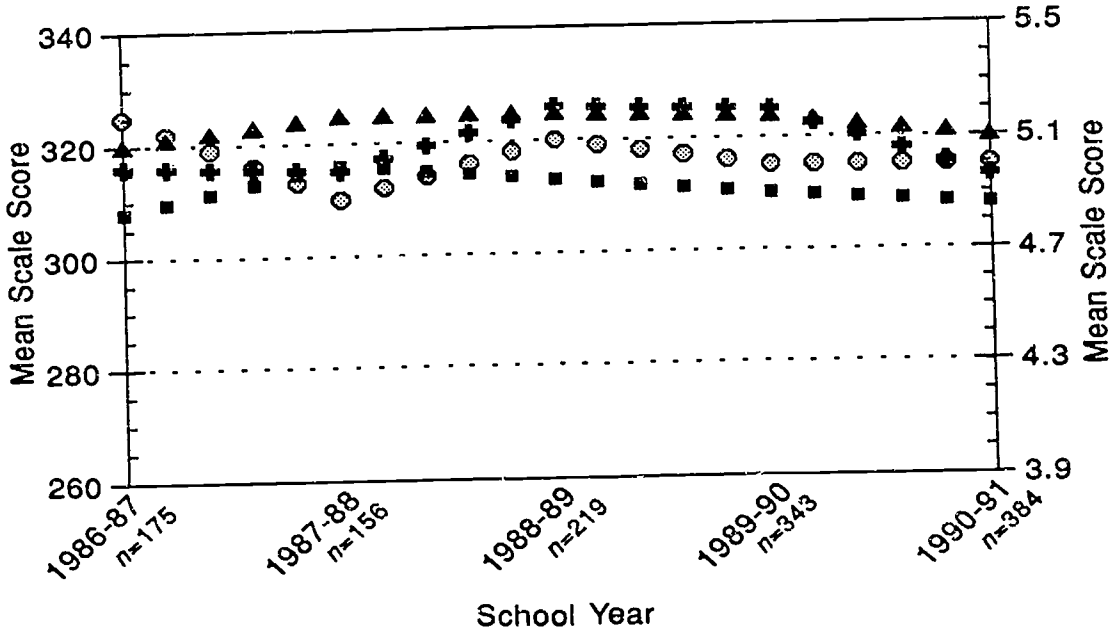
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



St. Johns River Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

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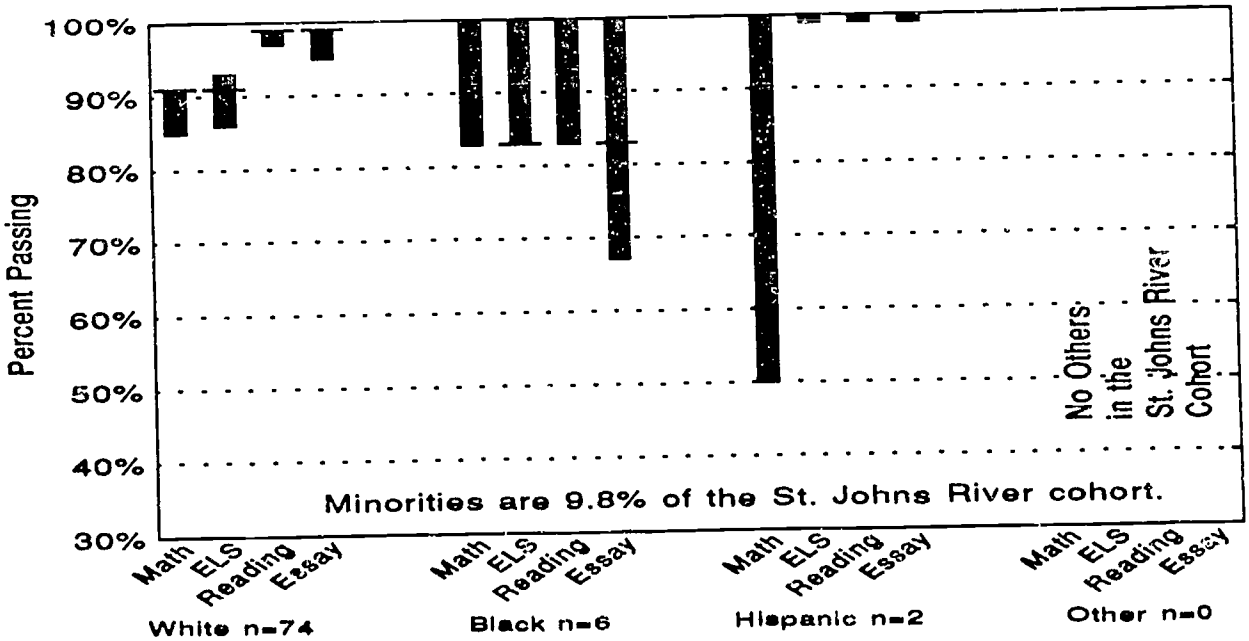
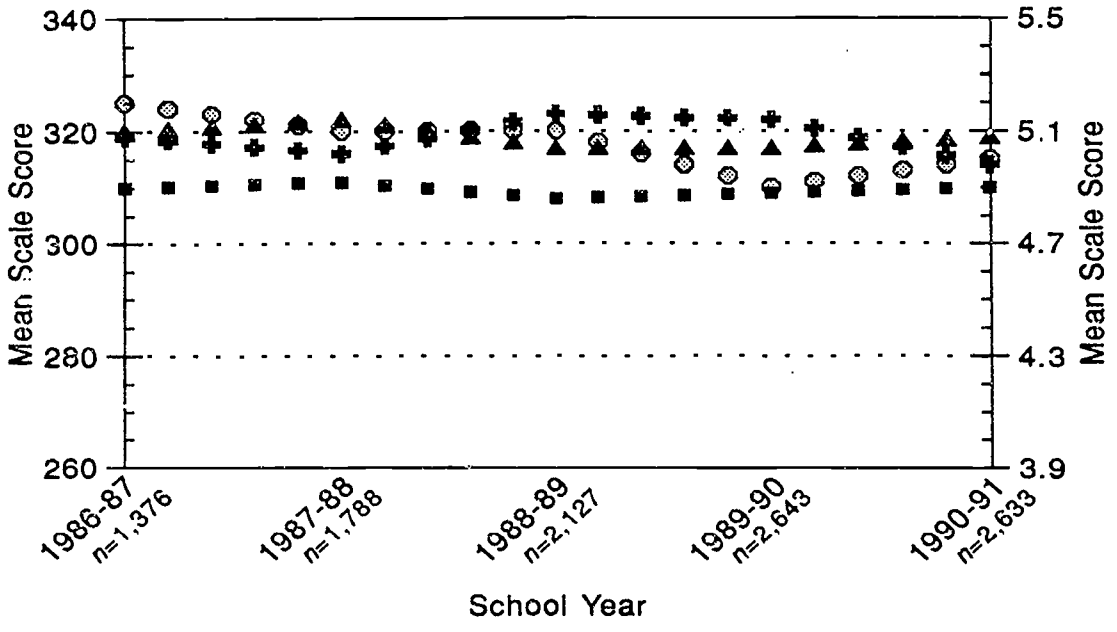
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



St. Petersburg Junior College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

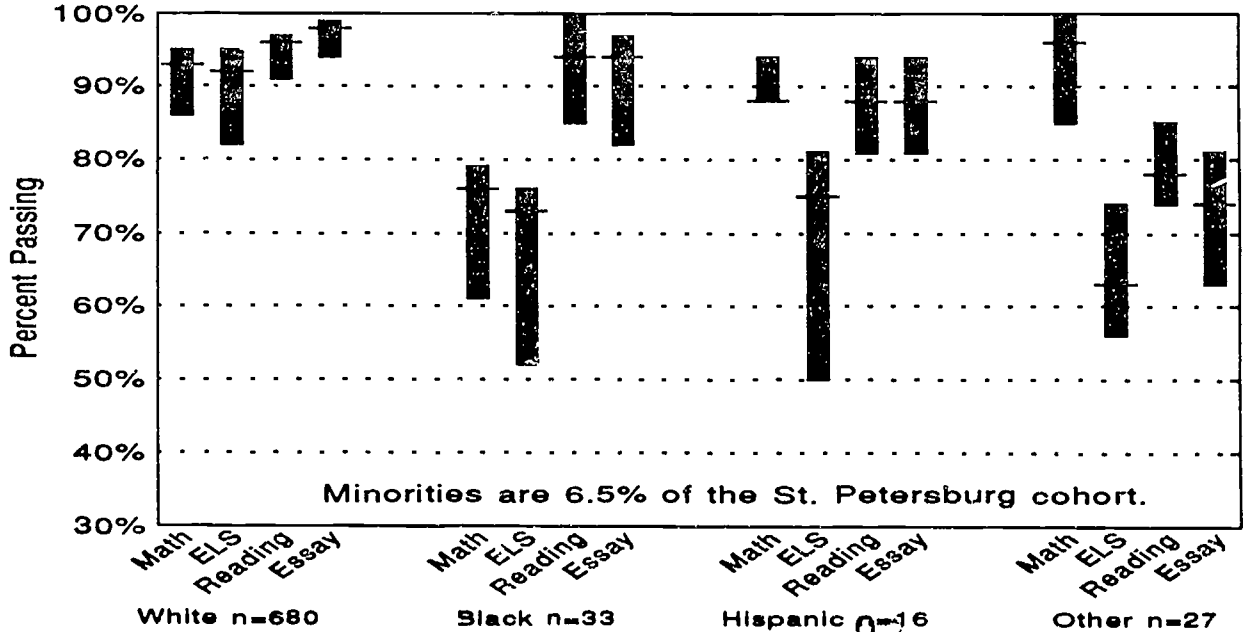


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

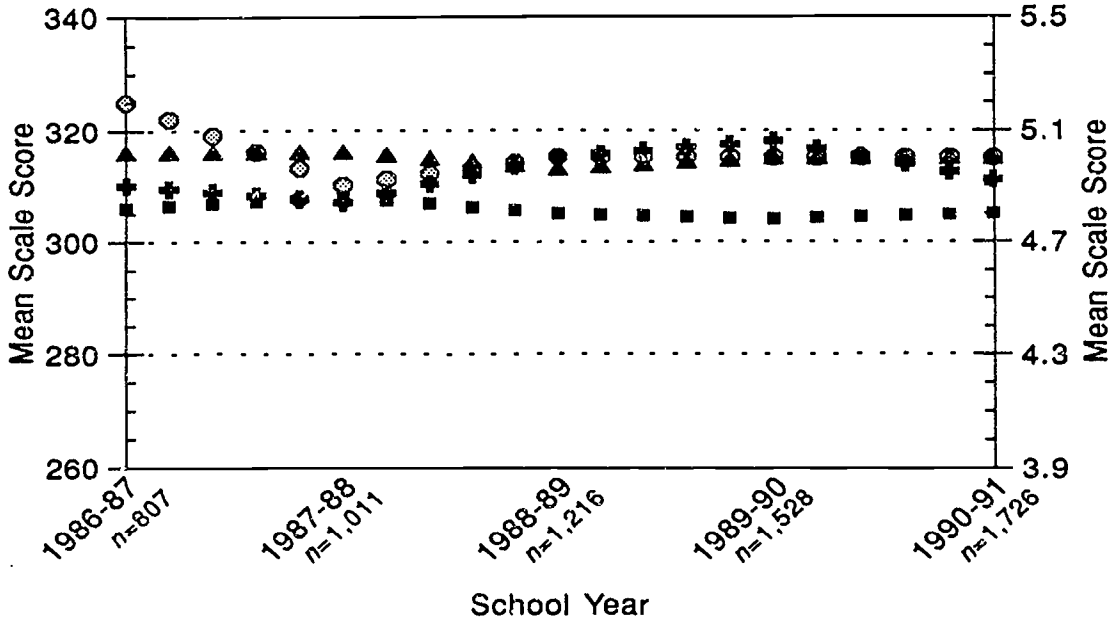
Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Tallahassee Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

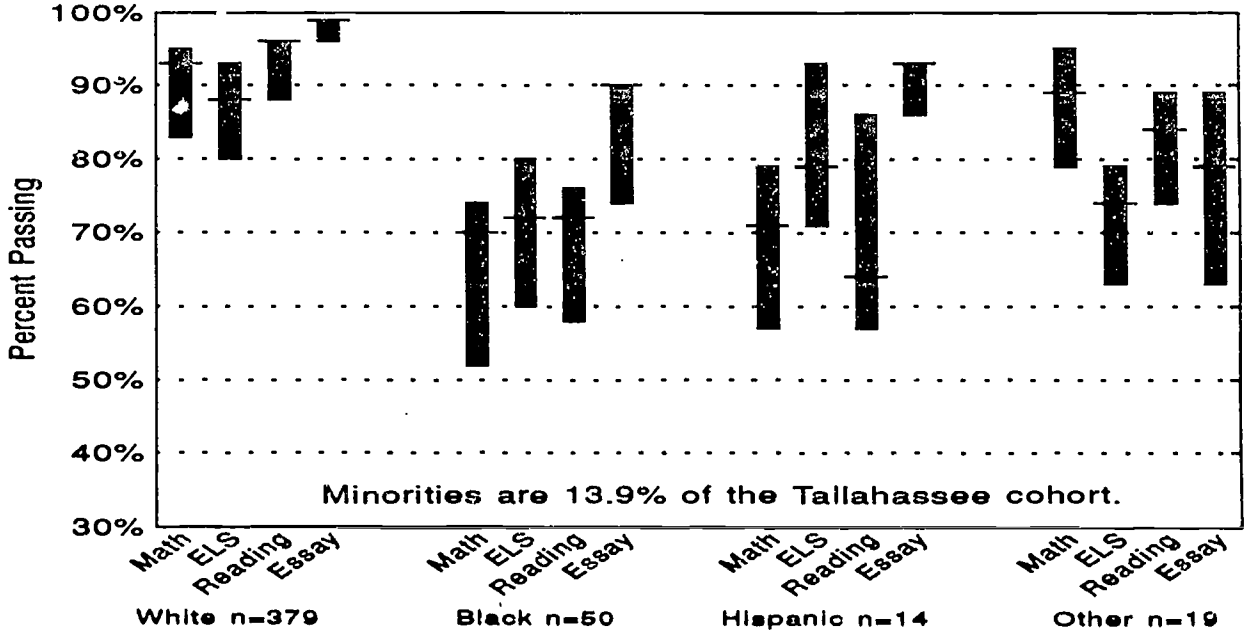


Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



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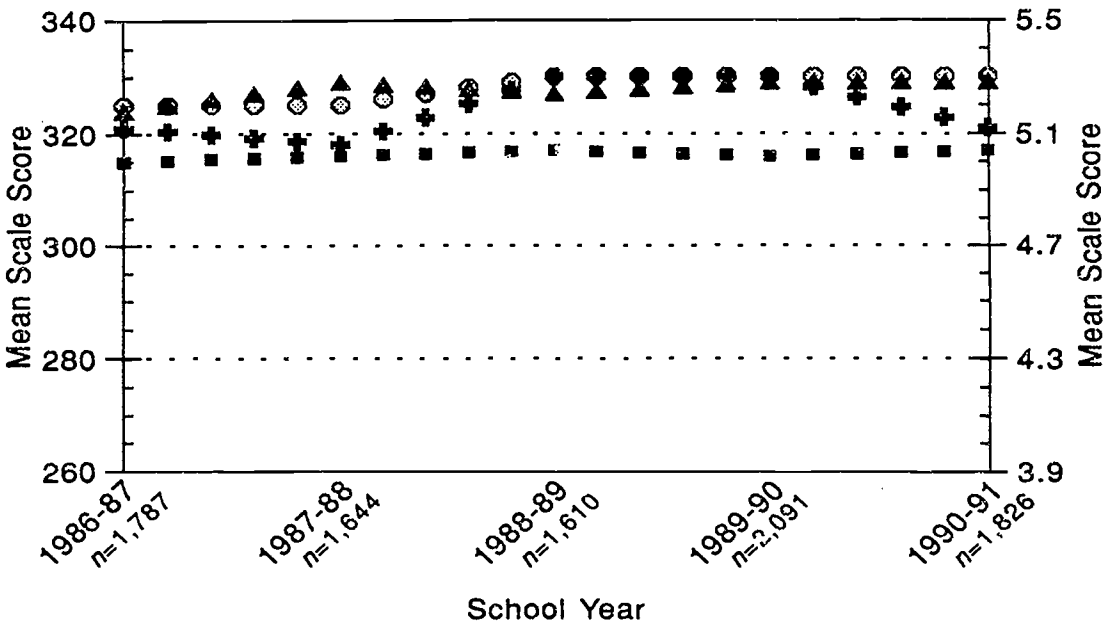
University of Central Florida

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers

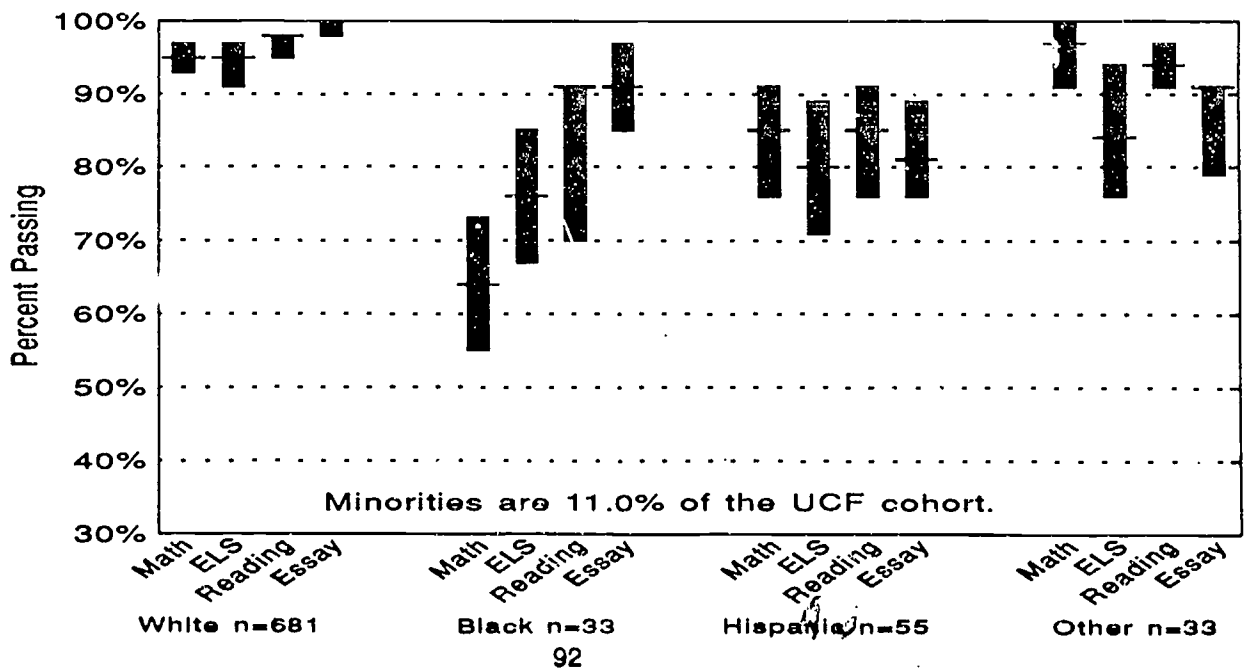


Subtest Symbols

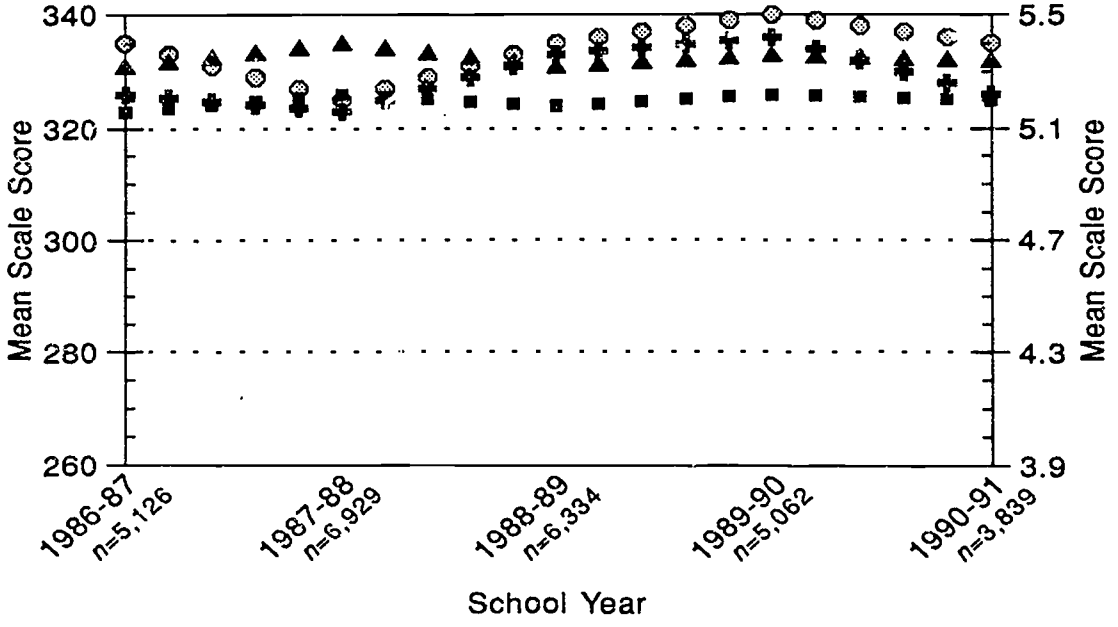
■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

Math, ELS and Reading baselines are 300; Essay baseline is 4.7. Baselines set October 1982.

Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ⊗ Essay

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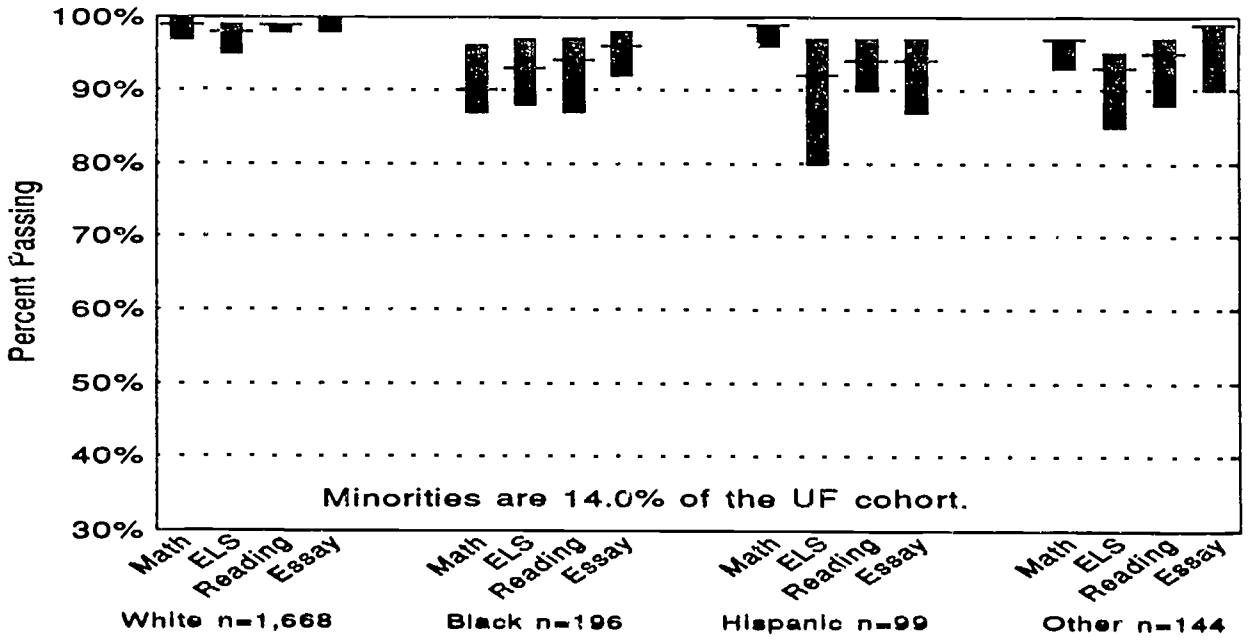
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



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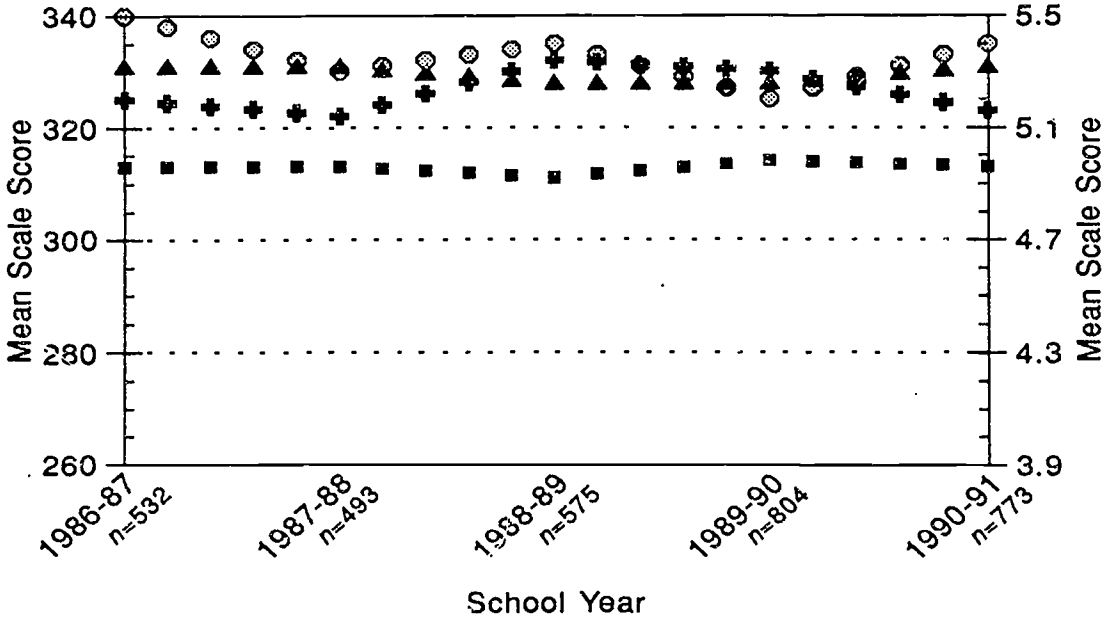
University of North Florida

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

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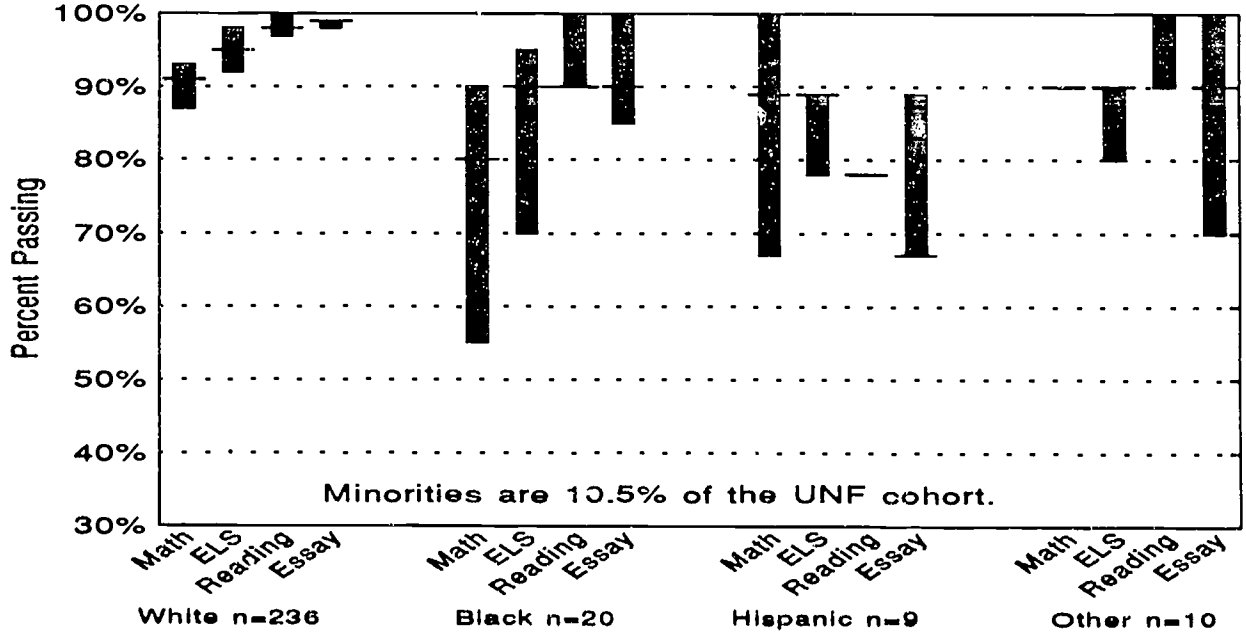
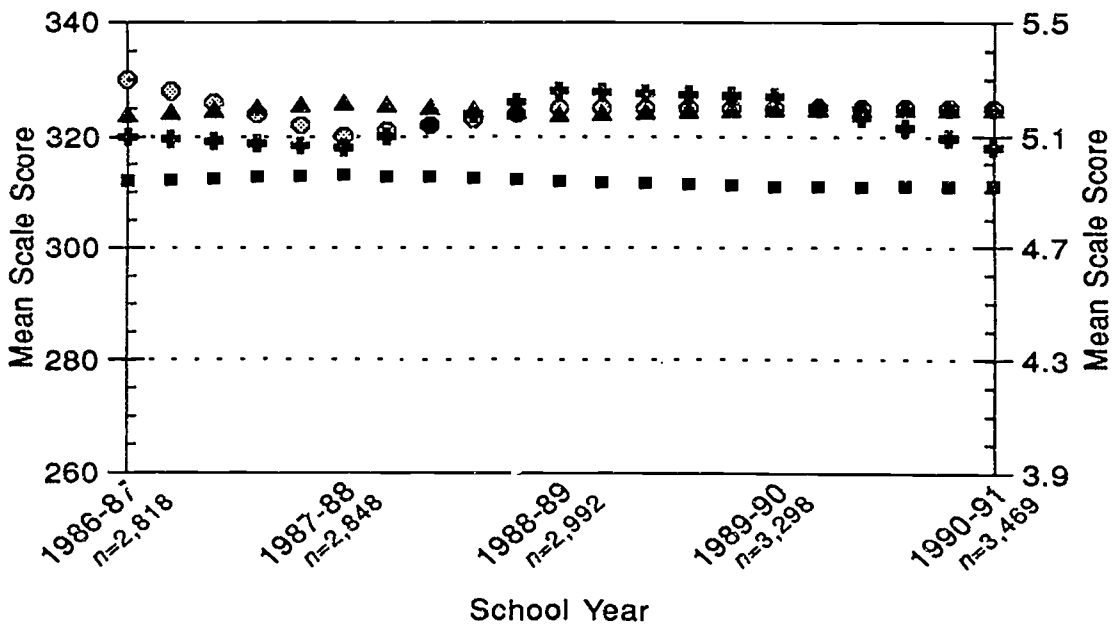
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



94

University of South Florida

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

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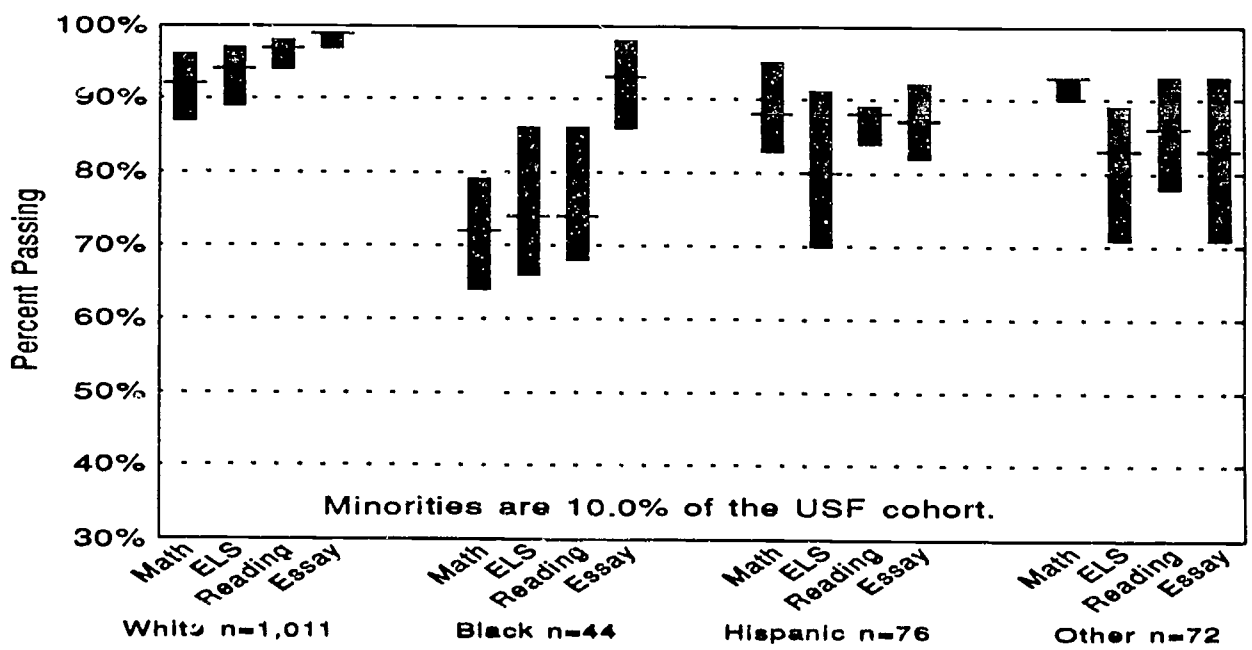
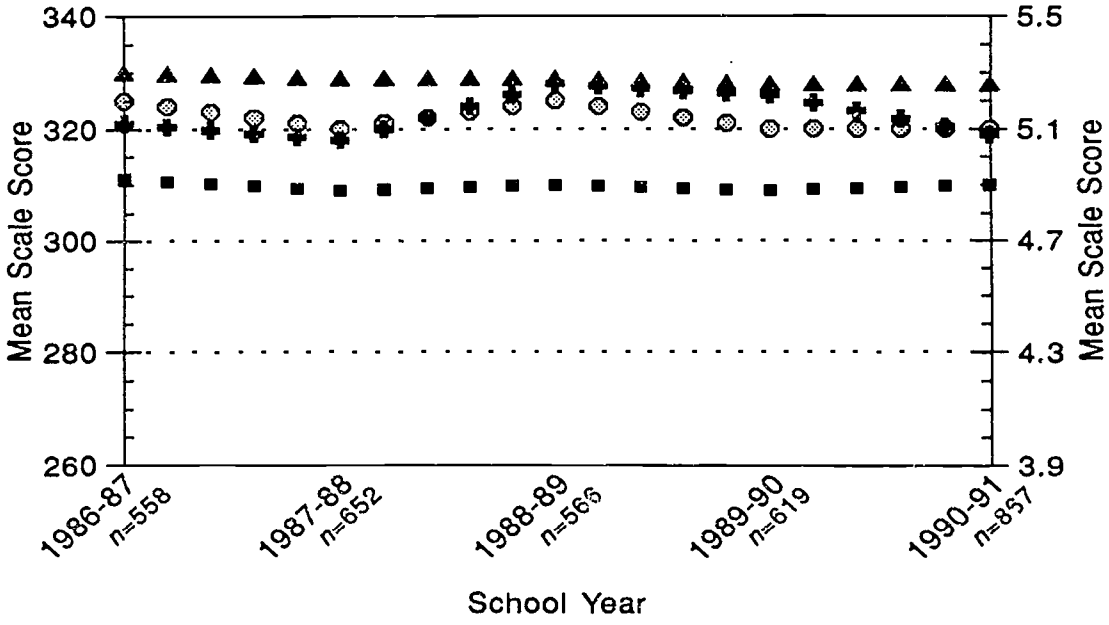


University of West Florida

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◎ Essay

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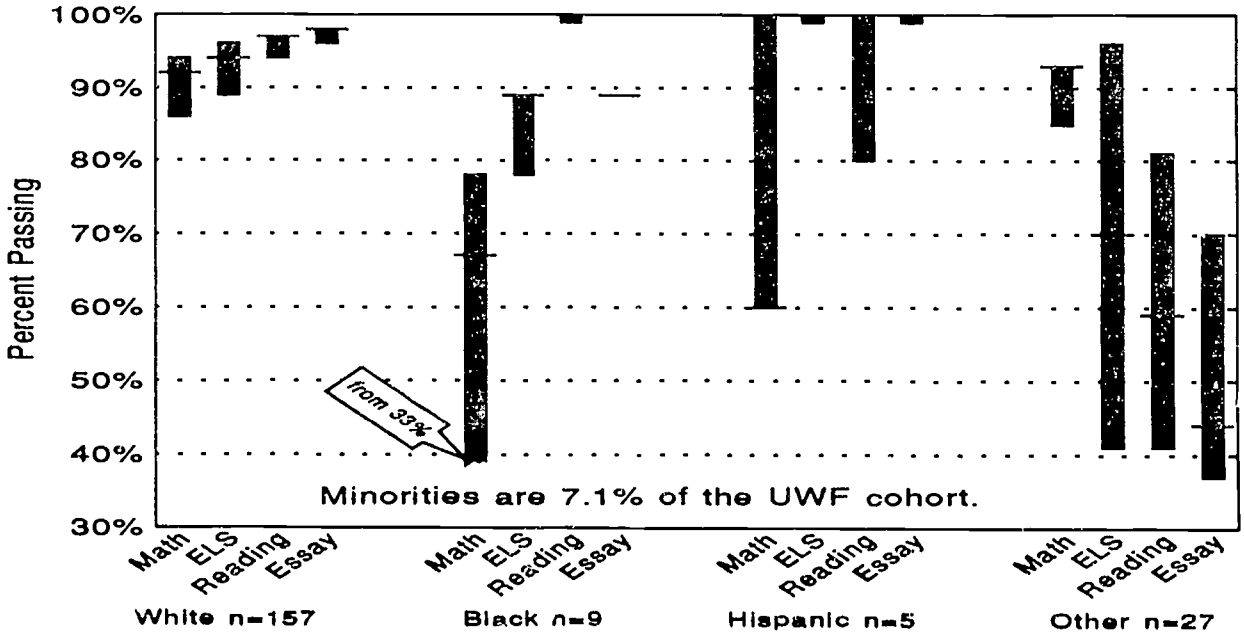
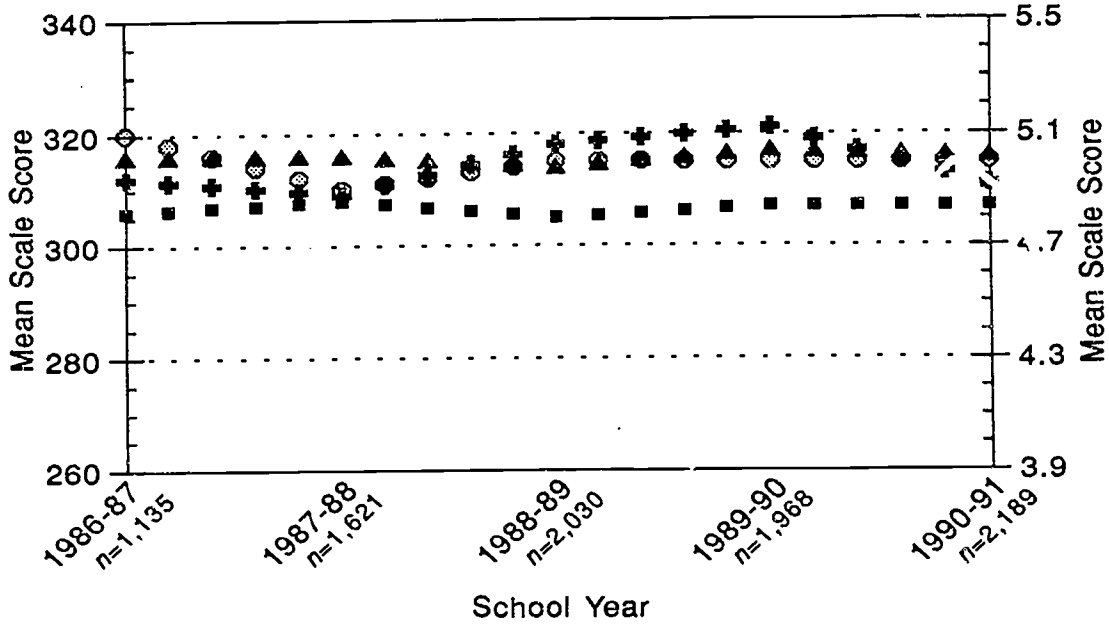
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



Valencia Community College

CLAST Annual Mean Subtest Scale Scores
1986-87 through 1990-91
First-Time Test-Takers



Subtest Symbols

■ Math ▲ Eng Lang Skills ✚ Reading ◈ Essay

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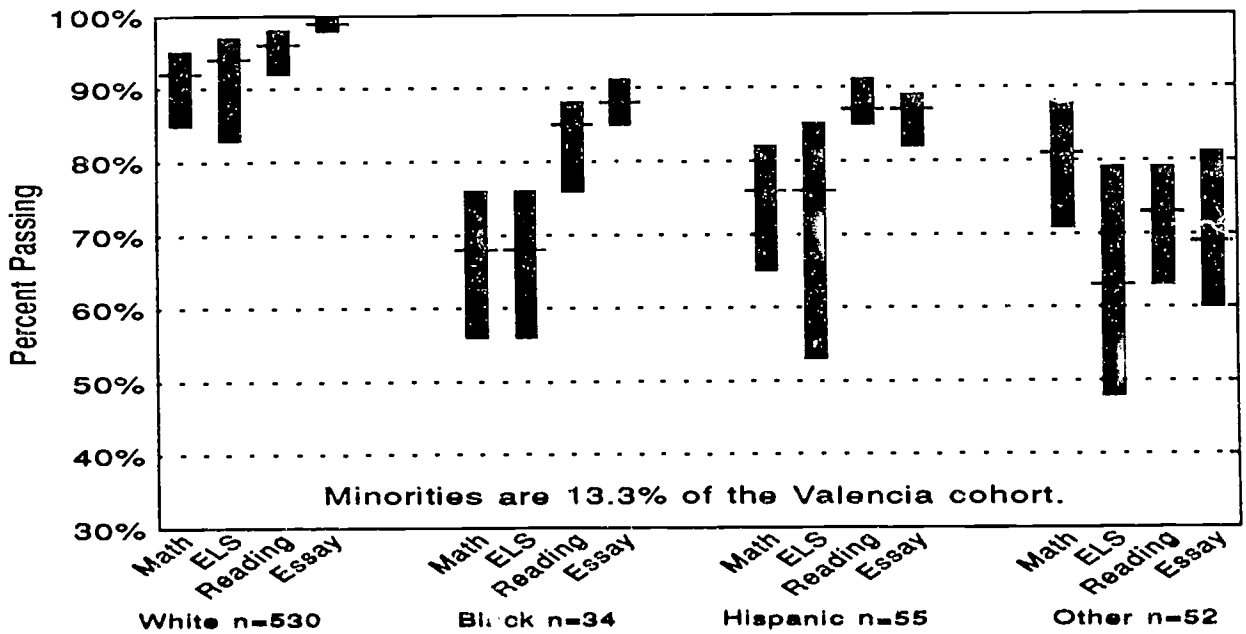
Racial/Ethnic Group Passing Rates on CLAST Subtests for October 1989, June 1990, and June 1991: October 1989 Cohort



State of Florida
Department of Education
Tallahassee, Florida
Betty Castor, Commissioner
Affirmative action/equal opportunity employer

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