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A survey of community college institutional initiatives designed to improve performance on the Florida College-Level Academic Skills Test

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A SURVEY OF COMMUNITY COLLEGE INSTITUTIONAL INITIATIVES DESIGNED TO IMPROVE PERFORMANCE ON THE FLORIDA COLLEGE-LEVEL ACADEMIC SKILLS TEST

by

Glenn Edward Rogers

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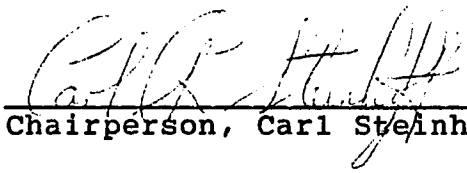
DISSERTATION APPROVAL

The dissertation of Glenn E. Rogers for the degree of Doctor of Education in Higher Education Administration is approved.



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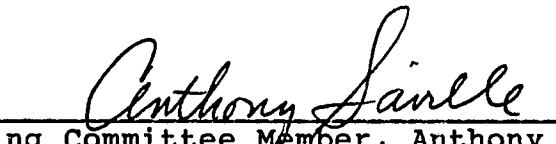

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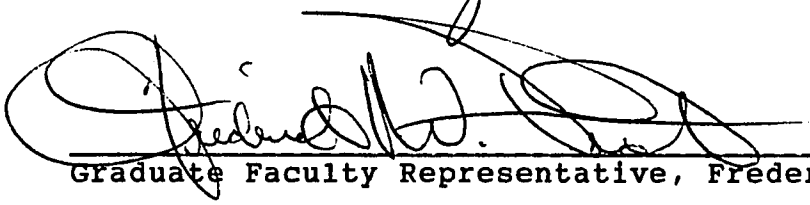

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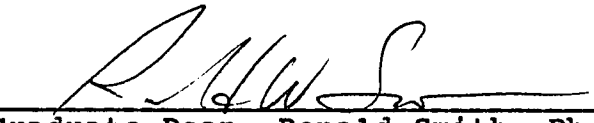

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ABSTRACT

By legislative mandate, Florida publicly-supported college and university students must demonstrate, via acceptable performance on the College-Level Academic Skills Test, that they are eligible for award of associate-in-arts degrees and matriculation in university upper divisions. The CLAST, designed to assess possession of basic academic skills, consists of four subtests: computation, writing, reading and essay. The essays are graded by teams of judges; the other subtests are objective and machine scored.

This study was designed to identify and describe salient features of public community college management, teaching and student support innovations which were instituted in response to the CLAST mandate. Senior academic administrators plus English and mathematics department chairs at each of Florida's 28 public community colleges were surveyed regarding institutional innovations, faculty and administrator attitudes toward the CLAST, uses of aggregate CLAST data and practices which enhance CLAST performance. Nine of the colleges were visited for purposes of observation and follow-up interviews with faculty and staff.

Highlights of the findings include the following:

--Department chairs reported a growing faculty acceptance of the CLAST mandate. Collective community college student performances, on a par with those from universities, have resulted in an enhanced image for two year colleges.

--Senior administrator concern about CLAST performances is perceived as universally high.

--Most, if not all, colleges found it necessary to modify the curriculum to ensure coverage of CLAST competencies. The trend was to modify existing English core courses but create new math courses.

--Pre-CLAST preparatory workshops and review sessions are common measures designed to help prepare students for success on the CLAST.

--Rigorous academic support programs directly linked to developmental basic skills courses appeared to be central features at the more "successful" colleges, i.e., the institutions with records of sustained high passing rates.

Overall, Florida's public community colleges exhibited a high degree of uniformity in responses to the CLAST challenge. The primary implication for further study is to determine, through institutional research offices, how various academic support efforts and student counseling practices contribute to CLAST success.

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CHAPTER 1

THE PROBLEM

Introduction

With the possible exception of national defense during periods of international tension, education has probably been the most pressing public "mega-issue" in modern times. Controversy about curricula and performance standards are commonplace items on local, regional, and national political agendas. In recent years, concern has begun to focus on managerial efficiency, public accountability, and demonstrations of fundamental competencies--both on the parts of students and of teachers.

The watershed year of 1983 signaled an unprecedented governmental examination of the entire American education spectrum. No less than 10 major reports followed publication of A Nation at Risk, all supporting a common conclusion: the imperative for reform. Now, taxpayers increasingly demand evidence of acceptable productivity, evidence that investments in education pay reasonable dividends. Employers echo the demand by pointing out that investments do not end with public funds, that ever-larger

numbers of graduates demonstrate unacceptable literacy levels and require costly remedial training. Parents are dismayed by the prospect that, for the first time in generations, their children may be less well educationally equipped than they were to succeed in the competitive world of work.

Policymakers have begun to heed the call for reform and increasingly translate public concern into mandates for change. Educators' traditional pleas for moderation and patience have become less persistent as daily business reports portend economic gloom and as periodic media surveys characterize the average American student as woefully ignorant of basic skills and fundamental knowledge.

Occasionally, a prominent educator will caution against overgeneralization and point out that the brightest American students are second to no other national group in the world, noting by implication that the educational system does work well for some. But that factor, albeit accurate, is of limited relevance to widespread reservations about the efficacy of the system as a whole. And, there's an additional consideration: superimposed on all other educational issues in America is the fact that a high national cultural heterogeneity combined with egalitarian ideals to place unique demands on the system.

Recognition that educational opportunity is the sine qua non of social justice is such a powerful guiding principal that it will not be sacrificed for efficiency, for image or for any other reason of lesser significance. National leaders are clearly committed to shaping an education system which benefits all socioeconomic levels and subcultures in society irrespective of the cost and difficulty of such a position. But, as clear as the "equity v. excellence" tension may be to professional educators, there is little impetus to openly discuss the dilemma. Thus, "education bashing" by the critical media fuels popular and legislative demands for reform and, occasionally, radical changes are made which fall within the realm of experimentation.

In 1976, the Florida Legislature followed the lead of other states and mandated passage of minimal competency tests as a precondition to the award of high school diplomas. In 1982, the same lawmakers jumped to the leading edge of a developing trend and enacted legislation which now requires completion of competency tests for the award of college degrees. That act heralded the beginning of an educational experiment of significant proportions.

The Florida College-Level Academic Skills Test (CLAST) was administered to all sophomores in the public Colleges during school year 1983-84. The results of that testing

year formed the baseline from which subsequent academic standards were established. Since Fall, 1984, Florida college students have been required by state law to pass all four CLAST subtests as a condition for award of associate degrees or advancement to upper division university study.

Statement of the Problem

The purpose of this study was to identify salient features of instructional and student development programs at Florida community colleges which are designed to improve performance on the College-Level Academic Skills Test. Specific problematic concerns include the following:

1. The identification and description of College-Level Academic Skills Project (CLASP) related management and teaching innovations.
2. Development of information which will lead to an understanding of the organizational context within which specific innovations were conceived and implemented.
3. Identification of faculty and administrator support patterns which developed in response to the CLASP-mandate.
4. Assessment of the degree to which mastery learning principles have been incorporated into those

portions of the curriculum designed to convey CLASP competencies.

5. Identification of how aggregate CLAST results have been used at the institutional level for purposes of formative and summative evaluations.
6. Description of innovations which are compatible features of a college-level basic skills mastery learning model.

Significance of the Study

In a recent working paper on current research needs, student outcomes assessment was identified as the topic of the day in postsecondary education (Vogel, 1986). Two specific areas of inquiry identified in the paper concern (a) how assessments of student learning could be used as management tools and (b) identification of innovation in teaching and student development at institutions where various assessment approaches have been introduced (Vogel, p. 5).

Pointedly addressing the problem of accountability, a 1985 Association of American Colleges (AAC) report held that "one of the most remarkable and scandalous aspects of American higher education is the absence of traditions, practices, and methods of institutional and social accountability" (AAC, 1985). The committee members

responsible for the report, predominantly college presidents and professors, held that evidence of institutional effectiveness must now be forthcoming in an effort to reestablish integrity in the college curriculum.

When Missouri Governor John Ashcroft was elected 1986-1987 Chairman of the Education Commission of the States (ECS), he set assessment and outcomes measurement as one of the three top commission issue priorities. As a result, the ECS staff conducted a nationwide survey in order to determine individual state interests in the issue. It was revealed that, in 1987, two-thirds of the 50 states had explicit statewide assessment programs planned or already in place (ECS, 1987). Of particular significance was the staff observation that two years previously only a handful of states were formally involved in outcomes assessment. When asked their opinion about continuing state interest in assessment of postsecondary outcomes, three-fourths of the respondents predicted an increase in interest; several indicated that their state officials were eager to learn about other experiences, such as the Florida "junior rising" legislative mandate.

In the Fiscal Year 1989 Fund for Improvement of Postsecondary Education (FIPSE) Request for Research Proposals, the U.S. Department of Education reported that the "learning outcomes approach to assessment is gaining

momentum nationally." It was noted that assessment efforts have begun to take student learning outcomes as their primary source of data to assess courses, teachers, programs, and institutions (U.S. Department of Education, 1988, p. 7).

Ted Marchese, Editor of Change magazine, recalls (1988) that the current nationwide interest in postsecondary student outcomes assessment began in about 1984 but notably accelerated in 1987. He observed that U.S. Secretary of Education Bennett reinforced the activist mood by writing all state governors to tell them that "educators' lack of accountability stands as one of the great problems in American education" and that he proposed legislation to compel regional accrediting agencies to take positive steps toward ensuring outcomes assessment.

In the Florida 1987 General Appropriations Act, the Postsecondary Education Planning Commission (PEPC) was directed to conduct a survey of the College-Level Academic Skills Test, including strategies that could be used by postsecondary institutions to increase the passing rate of students (Florida PEPC, 1988). PEPC subsequently commissioned a CLAST review by a team of psychometricians from the New Jersey Department of Higher Education. That study produced evidence that the CLAST is ethnically unbiased, relatively valid and constitutes an important contribution

to the emerging field of college outcomes assessment. Among the 12 recommendations for PEPC consideration was included the following:

> The State Board of Community Colleges and the Board of Regents should take the lead in determining what individual institutions are doing that result in more successful performance on the CLAST.

Assumptions

The following assumptions were made in the design of this study:

1. Although not specifically stated, the Florida Legislature's philosophy in enacting CLASP legislation was predicated on the theory of mastery learning.

2. Institutional publics will informally compare aggregated CLAST scores and calculate relative effectiveness indexes.

3. Institutional faculty members strive to increase student CLAST performance, particularly if aggregate rankings are not at or near the top in periodic rankings.

4. All publicly-supported Florida colleges have experienced changes in policy, instructional priorities, internal resource allocations or accountability structures as a result of the CLASP mandate.

5. The skeletal administrative structures of the 28 public institutions in the Florida community college system are essentially uniform.

6. Inasmuch as the Florida community college system has a 30-year history of centralized state planning, individual service area demographics remain relatively stable from year to consecutive year.

7. School effectiveness research conducted at the K-12 level of education is methodologically compatible with similar research at the postsecondary level.

Delimitations of the Study

The study was delimited in the following ways:

1. Only public, two-year colleges in Florida formed the study population.

2. Aggregate CLAST data from school years 1986-87 and 1987-88 were used as outcome variables for comparison purposes and, consequently, as indicators of institutional effectiveness.

Conceptual Framework

Higher Education Governance

Few observers would seriously question the assertion that a distinctive feature of American education is local control. In political theory, all education, K-12 as well as postsecondary, is the exclusive province of the individual states and, where delegated, of state political subdivisions. In reality, however, the influence which inevitably follows funding is tantamount to shared

governance. Just as state legislatures exercise increasing dominance over local school boards and trustees of publicly-supported colleges, the Federal Government can, and does, exert both regulatory and persuasive influence on state education policy. Notwithstanding that less than 10 percent of national education spending flows from Washington (U.S. Department of Education, 1988), one has only to recall the recent Grove City v. Bell litigation to deduce that there are various avenues to federal involvement in the nation's education enterprise.

McMahan (1986) observes that, traditionally, reports by commissions concerned with higher education have been addressed to institutions, not states or governing bodies; but now the call is to the states, presumably because of funding. In the same vein, Airasian and Madaus (1983) suggest that traditional legislative abstinence from such educational issues as school/program effectiveness and teacher evaluation has now evolved into indirect incursions via legislation concerning minimum competency standards. They posit that standardized tests have become "an administrative mechanism in achieving instructional goals" by legislatures which have discovered a "new coercive device to influence both the curriculum and teaching" (p. 103).

Darling-Hammond and Wise (1985) take a similar view in asserting that legislative standards directed at students are actually "intended to influence the actions of teachers." They argue that standard setting thus has become the "means for rationalizing teaching by defining goals, methods for reaching the goals and means for evaluating whether the goals have been achieved" (p. 317). Ewell (1985b) recognizes that, whereas it may not be valid to judge an individual student on the sole basis of standardized test results, aggregate scores, over time, may reveal significant patterns concerning the effectiveness of a particular program. Explaining why testing reforms are popular and how they are changing education, Salganik (1985) reports that minimum competency testing mandates, ostensibly designed to ensure individual academic achievement, invariably produce data which, in the aggregate, become "output controls which legislators and governing boards use to pressure educators to improve schools" (p. 607).

The trend in American higher education governance is clearly shifting toward ever-increasing legislative intervention. Furthermore, calls for accountability are focusing on "outcomes" as evidence of performance. The pressure is mounting for college administrators and faculty alike to facilitate higher student performance on

standardized tests--thereby hoping to satisfy the increasingly skeptical public.

Institutional Management

To the casual observer, educational management differs little from that found in organizations of similar size and scope in both private enterprise and in other areas of public service. A career military officer would, for example, admire the typical college organizational chart for its depiction of line and staff functions. Similarly, the average citizen would, more than likely, assume that college and university presidents exercise complete control over their respective managerial domains. But to those who closely study education management, a different picture emerges. Inasmuch as this study will examine how educational institutions respond to an external challenge, a clear conceptualization of existing administrative structures is an essential point of departure.

Parsons (1958) conceived of three distinct levels within formal organizations. The technical level, or sub-system, is comprised of those personnel who perform the primary functions for which the organization was formed. In the case of education, the technical sub-system is the cadre of teaching faculty. The institutional sub-system is comprised of all the agencies and other organizations in

society with which the organization interacts and has any degree of reciprocal influence. In the case of higher education, this level would include all the various audiences or constituencies which must be considered in major decision-making, i.e., the legislature, governing board, unions, accrediting agencies, and student body. The managerial sub-system is composed of those functionaries who mediate between the organization and the external environment. In education, this level is represented by those senior administrators who are most directly involved in resource acquisition--typically superintendents and college presidents.

Weick (1976) pursued Parson's open systems conceptualization of organizations and observed that "loose coupling" between sub-systems is a common phenomenon in education. Meyer and Rowan (1978) explain that Weick's conception of loose coupling means that the structure of educational organizations is "disconnected" from technical activity (teaching) and that technical activity is in turn disconnected from its effects (outcomes). They note that substantial evidence exists suggesting that American educational organizations lack close internal coordination. Instruction tends to be removed from control of the managerial structure in both bureaucratic and collegial aspects.

Meyer and Rowan contend that educational bureaucracies emerge as personnel-certifying agencies and therefore consistently leave instructional activities and outcomes uncontrolled and uninspected. "Ritual classifications," e.g., English teacher and Business undergraduate are, conversely, tightly controlled. Meyer and Rowan hold that educational administrators avoid control of instruction and outputs because to do otherwise would uncover inconsistencies and inefficiencies which could produce uncertainty in the eyes of important constituents.

The "decoupling" which Weick observed is therefore considered to be intentional. Meyer and Rowan describe a "logic of confidence" which develops in organizations when myths become institutionalized to the point that internal coordination and control must necessarily be reduced. For example, coordination, inspection, and evaluation, typical management functions, usually fall by the wayside when organizational elements are "decoupled" after acceptance of the myth that people predominantly act in good faith. That myth produces a logic of confidence which, in turn, seemingly obviates the managerial need for control and evaluation. Educational organizations, which usually operate on the "myth of professionalism," are therefore prime examples of loosely-coupled systems.

A strikingly similar perception of American educational management is held by Roueche and Baker, outspoken advocates of more assertive leadership in community colleges. They write (1984) that "historically, in full-fledged professional organizations, such as colleges and universities, power structures turn upside down." Staff-professional and line-administrator relationships are reversed because administrators are only in charge of secondary activities. They assert that "to the extent that line-staff relationships exist at all, it is the professional that holds the major authority" (p. 65). Under such conditions, they claim, "there is virtually no control of the work outside of the profession, no way to correct the deficiencies that professionals themselves choose to overlook" (p. 66). Given such critical appraisals of the state of academic management, it's perhaps not surprising that governors and legislators are increasingly prone to mandate external means of evaluating institutional and program effectiveness.

In a recent commentary on higher education reform, a former academic vice-chancellor of the California State University System remarked that change "can never be realized until academic governance is understood and made part of specific plans" (Vandament, 1988, p. A52). He explained that three "distinct but related" levels exist in

internal academic administration: First, there is the obvious administrative hierarchy which shows the relationship from individual faculty members to the president. Second, there is the faculty senate/council, which bypasses mid-level administrators and actually goes from individual faculty members to the president. Finally, there is the "shadow government" of academic disciplines, which tie faculty members to mentors or other leaders in narrow disciplines and controls the day-to-day operations of teaching. As a result of this peculiar division of actual responsibility and power, "most faculty members do not clearly see and understand major reform issues from their narrow perspectives. Because they see ambiguity, they tend to avoid rather than confront them" (p. A52).

Learning Theories

Mastery Learning. Carroll's seminal 1963 article, "A Model for School Learning," directly challenged conventional notions about human aptitude. Traditionally conceived of as the level at which an individual could learn a given subject, aptitude, according to Carroll, is actually the rate at which a person learns. Specifically, he defined the "degree of learning" as a function of time spent learning compared to time needed to learn a given subject.

Bloom was influenced by Carroll's reconceptualization of aptitude and theorized that the typical teacher's strict adherence to time schedules doomed a disproportionate number of students to failure. He noted (1968) that traditional allocations of specific time periods to teach and learn subject matter is particularly ineffective where "sequencing" is important, i.e., when comprehension of a concept is dependent upon mastery or comprehension of a previously covered concept. Bloom postulated that most variation in formal school learning was dependent upon the interaction of three primary variables: First, learning depends upon the extent of prior learned prerequisites necessary to understanding of the new subject matter. Second, student motivation to learn is a crucial moderating variable. Third, the extent of "appropriate" instruction bears directly on the learning outcome.

The essential conditions of mastery learning, according to Bloom are: (a) the establishment of absolute standards of performance or mastery at the beginning, i.e., standards must not be curved or normed; (b) clear lesson objectives, consistent with preparation to meet the previously established standards, must be formulated; (c) "tables of specifications" should be devised which divide lessons into logical sub-units or manageable segments, and, (d) there must be frequent formative quizzes to recognize

when mastery has been achieved or the necessity for remediation exists.

Competency-Based Education. CBE emphasizes results. It calls for agreed-upon performance indicators for functions in life roles. Parnell (1978) described the five major characteristics of CBE: First, it is a learner-centered philosophy. The students' needs are paramount, not the convenience of teachers and staff. Second, OUTCOMES are all-important; the process is secondary. Third, there exists a clear policy demand. Goal-based planning is essential for congruence in the curriculum. Fourth, there should be a "real-life" orientation in the overall educational goals. Last, there should be less emphasis on the time of instruction and greater emphasis on results. The rate of learning is the key difference between learners; CBE is primarily interested in mastery, not in time spent learning.

Clearly, CBE is essentially a new term for mastery learning. The one unique facet, however, is that CBE tends to focus on "real life skills." Grant (1979) describes CBE as "a form of education that derives a curriculum from a specified set of desired outcomes." As such, he observes, "CBE may be said to be the first tertiary education reform."

Outcomes-Based Education. Spady (1982) acknowledges that outcomes-based practice has its roots in the psychological learning theories of Carroll and Bloom. He contrasts OBE with "vague-referenced" education, asserting that the former is based on specific learning criteria whereas the latter lacks precision. He notes (1988) that "our educational systems tend to be organized more for administrative convenience than for results." He agrees with Bloom that the traditional teaching paradigm is defined by and organized around the calendar.

Dyck (1982) views higher education as a clash of two competing paradigms. The dominant paradigm he terms "prediction-selection" and characterizes it as the "cross country" instruction model. The emerging paradigm, "outcome-based," is based on the mastery learning instruction model. As such, the underlying guiding principle is that nearly all students can succeed if given the opportunity and time. As opposed to the prediction-selection paradigm, OBE uses criterion referenced testing to determine when students have achieved mastery.

Minimum Competency Testing. MCT, while not based on a specific theory of learning, is founded on the notion of "facilitative competencies." Minimum competencies typically include reading, writing, and calculation skills. MCT is generally discussed within a context of educational

reform. Ellwein (1988) observes that "rhetoric about lax standards is almost ageless, but today is being translated into action. Across the nation, educational agencies are beginning to use competency tests for critical decisions, i.e., promotions and certification" (p. 4). Riegel and Lovell (1980) explain that there are three basic models or approaches to MCT. Florida, for example, has established state-wide standards and has a mandatory state-wide test. Oregon is representative of another group which has statewide standards but permits local educational entities to devise and administer their own tests. The third model has local standards and a local test. Denver, Colorado, has had MCT for high school graduation since 1961. After establishing MCT, the Denver school district recognized its obligation to facilitate the necessary learning and adopted mastery learning principles. Currently, only about one and one half percent of the Denver students fail to graduate after remediation.

Florida's minimum competency exam program began with a 1968 legislative mandate to the Commissioner of Education that henceforth the emphasis in secondary teaching would be placed on behavioral objectives. In the 1971 Educational Accountability Act, the requirement of a "test for attainment of educational objectives" was formulated. The Florida MCT approach was established in two phases. In

1976, achievement tests were required for students in grades three, five, eight, and eleven. The second phase included a "functional literacy (life skills)" test which must be passed in either the eleventh or twelfth grade as a condition to receipt of the high school diploma.

In 1979, the Florida Legislature initiated formal steps to develop a statewide competency-based education and testing program in higher education. Based on the widespread concern that college students were obtaining degrees without first achieving minimal literacy and computation skills, the legislature directed the State Board of Education to develop minimum college-level standards. The State Board established the Essential Academic Skills Project with two goals: to assure that entering freshmen were properly evaluated in basic skills as a condition for course placement and, secondly, to ensure that students completing their sophomore year of study had acquired the basic skills essential to success in upper division study. A state-wide task force, composed primarily of college English and mathematics professors, was formed to establish the minimum competencies. In 1981, the EASP was redesignated the College-Level Academic Skills Project and charged with monitoring the MCT program on a continuing basis. CLASP committees compiled a list of 117 basic reading, writing, and computation competencies which

were approved by the state board and incorporated into the Florida Administrative Code in the fall of 1981. Minimum "cut" scores were established in 1984 and it was decreed by the legislature that all students matriculating in public colleges and universities must pass all four CLAST sub-tests prior to award of an associate degree or advancement to the upper division level. The Postsecondary Education Planning Commission also recommended increases in cut scores in 1986 and 1989. Between fall, 1984, and the end of the 1987-88 school year, 148,875 students sat for the CLAST.

Research Questions

In order to address the study problem and subproblems, the below-listed research questions served as organizing guides:

1. What institutional initiatives have been undertaken to enhance student performance on the CLAST?

2. In what forms and at what administrative levels did the CLASP initiatives originate?

3. What supplemental resources were allocated to support CLASP programs?

4. At what points and to what extent have teaching faculties provided innovative inputs to CLASP programs?

5. To what degree have faculties accepted and supported the CLASP mandate?

6. What evaluative measures have been used to assess effectiveness of institutional CLASP performance programs?

7. To what extent have mastery learning principles been incorporated into courses which address CLAST competencies?

8. How have aggregate CLAST scores been used at the institutional level in formative and summative evaluations?

9. Which institutional CLASP-induced innovations are compatible features of a higher education basic skills mastery learning model?

Research Design

This study primarily employed qualitative methodologies to gather data about teaching and management initiatives designed to improve student performance on the CLAST. Selected personnel at each of Florida's public community colleges were surveyed by mail and telephone by way of semi-structured questionnaires and interview protocols.

The initial research phase involved a written survey of all English and mathematics chairpersons at the 28 colleges (see Appendices III and IV). Questions were

designed to elicit information and perceptions pertaining to research questions 1, 2, 4, 5, 7, and 8.

Phase two of the study revolved around telephone interviews of senior academic administrators at the colleges (usually deans of instruction or vice-presidents for instructional services). The open-ended protocol reflected in Appendix VI served as the instrument to primarily collect information pertinent to research questions 3, 6, and 8 and secondarily to provide validating information for the written department chair surveys. Additional telephone interviews were conducted on an ad hoc basis in those instances wherein additional CLASP-responsible individuals were identified through the scheduled interviews.

Concurrent with phase two, data were requested from the Florida Division of Community Colleges which pertained to CLAST performances during school years 1986-87 and 1987-88. Quantitative analysis of the aggregate data was used as secondary selection criteria for determination of colleges to be personally visited during research phase four. Specifically, colleges were compared based on consistent placement in upper quartiles on the variables (1) percent passing subtests on first attempts and (2) mean scores of first time test-takers.

The final phase of data collection entailed personal visits to selected colleges with followup interviews, acquisition of available documentation pertinent to CLASP-related management and teaching innovations and interviews of identified persons in positions to contribute to the study. The primary selection criterion was information about the existence of new CLASP initiatives. Other factors for consideration were quantitative indicators of relative CLAST performance and geographical representation (i.e., at least one institution in each of the five state reporting regions).

Analysis of the collected data was primarily for purposes of description of trends, similarities, and differences in institutional responses to the CLASP mandate. Compatible features of innovations were combined in a response model for community colleges faced with MCT mandates.

Definition of Terms

Aggregation: The process of combining test score data from the individual student to a group level of analysis. In the CLASP system, data is aggregated and reported at the institutional, system (either community college or university) and state levels. The most commonly reported forms are mean scores by subtests and percent passing of cohorts taking tests.

CLASP: The College-Level Academic Skills Project is Florida's legislatively-mandated minimum competency attainment program at the postsecondary level. Major components of the program include (1) practitioner-oriented working groups which establish, review, and periodically modify standards, (2) advisory groups which recommend levels of competence, and (3) centrally controlled administrative offices responsible for test construction, security, scoring, and feedback reports to state institutions.

CLAST: The College-Level Academic Skills Test is comprised of four sub-tests: computation, objective writing, reading, and essay (subjective writing). All but the essay are machine scored, criterion referenced multiple-choice instruments. The essay sub-tests are scored by panels of judges which convene three times annually. Current cut scores were established in August 1989. State law requires passing scores on all four sub-tests prior to award of the AA degree or matriculation in upper-division studies. Students have multiple opportunities to take the test.

College preparatory testing and placement: Florida administrative rules require that all applicants for admission to college and university undergraduate degree programs test for basic competencies in reading, writing,

and mathematics. Only four test series are approved for this requirement: ACT Assessment, by American College Testing Program; ASSET, by American College Testing Program; MAPS, by College Entrance Examination Board; and SAT, by College Entrance Examination Board. Cut scores are established for mandatory placement in preparatory (remedial) communication and/or computation courses.

Competency-based education: A form of education that derives a curriculum from a specific set of desired outcomes (Grant, 1979).

Criterion-referenced tests: Test instruments which are designed to be interpreted in terms of given levels of achievement on pre-specified competencies. Typically, the tests cover relatively narrow topic areas. Individual test scores are independent of achievement scores of other test-takers.

Cut scores: In criterion-referenced testing, cut scores represent the minimum proportion of test items an individual must answer correctly to "pass" the test. Conversely, cut scores in norm-referenced testing refers to numerical scores which serve as thresholds for decision-making, e.g., for admission purposes in selective colleges.

Educational accountability: Typically, educational accountability refers to the means by which a system, institution or individual teacher is held responsible for

certification of specified student competencies. Occasionally, the term is used with reference to students themselves providing positive evidence that they can achieve at certain academic levels or standards.

Educational innovation: For the purposes of this study, an educational innovation is any new procedure, teaching technique, out-of-class tutoring system, supplementary instruction, curriculum management practice or personnel management initiative which is designed to improve student performance on the CLAST.

Formative evaluation: Program or personnel evaluation which is designed to provide information relative to improvement needs such as staff development and systems modification.

Functional literacy: A fundamental principle of competency-based education in which "life skills" are emphasized as a necessary component of common education. Florida's minimum competency testing program for high school graduation includes a life skills-functional literacy component.

Gordon rule: Rule 6A-10.30 of the Florida Administrative Code, crafted after proposals made by State Senator Jack Gordon, which requires that students in public colleges and universities complete specified composition and mathematics coursework prior to award of either

associate in arts or bachelor of arts degrees. Effective in January, 1983, the rule requires a minimum of 12 semester hours in composition courses in which at least 24,000 words are written in graded essays. Students must also complete at least six semester hours in college-level mathematics. All "Gordon rule" coursework must be passed with grades of "C" or higher.

Loose-coupling: An administrative science concept which describes a state of separation between organizational subsystems. Medical and educational organizations, in particular, are viewed as loosely coupled in that the practitioners are, by default, accorded the right to make all meaningful professional decisions and administrators are primarily concerned with support functions.

Mastery Learning: A psychological theory of human aptitude which holds that the rate of learning rather than the level of learning should be the central variable of concern to educators. As such, it provides the philosophical base for competency-based and outcome-based approaches to formal education.

Minimum competency testing: MCT, when mandated as a public policy instrument, is designed to provide evidence that affected individuals possess required skills and knowledge. It is both a certification tool designed to

provide consumer protection and an accountability indicator which influences assessments of educational program effectiveness.

Norm-referenced tests: Test instruments, the results of which are designed to be interpreted with reference to average scores attained by specific groups of test takers. An individual's score therefore does not connote mastery or minimum competency of a given subject. Rather, it is only an indication of relative achievement.

Outcome-based education: Education programs which are designed and evaluated based on specific learning criteria. Spady (1982) contrasts OBE with "vague-referenced" education, the dominant paradigm in the American system.

Qualitative Research: The paradigm wherein "researchers view themselves as primary instruments for collecting data" (Borg and Gall, 1989, p. 23). Qualitative researchers rely principally on their own interpretations in understanding data. Findings therefore are reported in the form of verbal descriptions.

Quantitative research: The paradigm wherein "researchers attempt to keep themselves from influencing the collection of data" by using standardized instruments and techniques (Borg and Gall, 1989, p. 23). Statistical methods are then typically used to analyze and interpret the collected data. This general conception, together with that of qualitative research, supra, is used to

define the overall methodology of the instant study.

Standardized tests: The system of test administration wherein time limits, procedures, grading criteria, interpretation and reporting are rigidly uniform. Although most standardized test elements are "objective type" and therefore amenable to machine recording and scoring, "subjective type" questions and answers may be administered in the standardized mode.

Summative evaluation: Performance assessment, the results of which are designed for personnel or program decision-making. Summative evaluations are based on a merit principle and are therefore judgemental.

Value-added: Originally an economics concept which has been adopted by education theorists. Essentially, value-added assessment takes into consideration "input factors" when appraising the output attainment levels of students. It is based on an equity principle and essentially is an attempt to control for the impact of preschooling variables.

CHAPTER 2

REVIEW OF THE LITERATURE

Outcomes Assessment in Higher Education

Holding public trusts accountable is a recurring theme in American political life. In education as in other service sectors, calls for accountability occur in fairly regular cycles, usually following perceived social maladies or economic declines. One of the more recent accountability movements aimed at public education began in the late 1960s. As momentum gained national attention, the Educational Testing Service held a conference in Washington, D.C., at which Secretary of Education Terrel Bell remarked in his keynote address:

> Although some goals in education will be difficult to quantify and respected authorities will differ on some priorities, there exists. . . a general consensus about many desired outcomes. The management of instruction in most school systems and on most campuses is very weak and will remain feeble and ineffective until we can more accurately quantify input and outputs (Bell, 1971, pp. C-3, C-7).

A similar sentiment was expressed in In Pursuit of Degrees with Integrity, a recent publication of the American Association of State Colleges and Universities:

> Who should guarantee the competence of college students, the academy or the public at large?. . . Faculties of colleges and universities have traditionally established and maintained the standards for their own educational programs. In the coming years of public scrutiny, institutions wishing to retain control of the evaluation process will have to give greater attention to the relationship between student performance and institutional accountability (AASCU, 1984, p. 3).

Excerpts of Harvard President Derek Bok's new book on higher education were reported in Change magazine:

> The time faculties and administrators spend working together on education is devoted almost entirely to considering what their students should study rather than how they can learn more effectively or whether they are learning as much as they should (Bok, 1986, p. 20).
>
> At present, universities have no adequate way of measuring the effects of undergraduate education or assessing the methods of instruction they employ. This is a serious defect. No human endeavor can progress, except by chance, without some way of evaluating its performance. Only with assessment of this kind can faculties proceed by an intelligent process of trial and error to improve their educational programs (p. 23).
>
> What explains the failure to carry on an effective evaluation of undergraduate education? The most likely answer is that such research can seem so threatening. It may question teaching methods that professors have used for many years and thus discount classes that can never be reclaimed and done over. It may signal a need for new techniques of instruction or new types of courses that will require long hours of effort (p. 26).

Professor Alexander Astin, UCLA Director of the Higher Education Research Institute, observes that "excellence" of an educational institution can mean different things to different people. The common view, he notes, is that

"reputation" is most important. That, in effect, merely means that the schools' selectivity of incoming freshmen is a primary criterion of excellence. An alternative view is that a school's "resources" determine excellence. In that equation, schools with the largest endowments and best facilities are the most excellent. But Astin suggests that the reputational and resources views "are not necessarily consistent" with the purposes of higher education (Astin, 1985, p. 60). He further explains,

> If talent development is the raison d'etre of our system of higher education, why not define the excellence of an institution in terms of its ability to develop the talents of its students and faculty members?. . .An increasingly popular approach to assessing the quality of undergraduate institutions is to focus on outcomes (p. 43).

Although the fervor of the educational accountability movement appeared to abate in the late 1970s, renewed interest was sparked by the 1983 National Commission on Excellence report entitled A Nation at Risk. The often-quoted admonition that America's educational foundations are being eroded by "a rising tide of mediocrity" was offered as justification for the Commission's recommended reforms. The "excellence" movement formally introduced by A Nation at Risk applied to all levels of American education but emphasis was initially concentrated on secondary schooling. In recognition of the need to report

more fully on higher education, the Commission appointed a study group to, in effect, expand on the "nation at risk" theme. In October 1984 the group reported its findings in Involvement in Learning: Realizing the Potential of American Higher Education. Included in the reported summary of "warning signals" was the fact that "student performance on 11 of the 15 major subject area tests of the Graduate Record Examination (GRE) declined between 1964 and 1982, with the sharpest declines in subtests requiring high verbal skills" (p. 9). The previously reported decline in SAT scores, which was linked to secondary school learning, was now paralleled by indicators of similar problems in academe.

Pertinent excerpts of the report, published by the National Institute of Education, are outlined below:

> Most American colleges and universities award their degrees when students have accumulated a given number of credits. . .and have achieved a minimum grade point average. Credits are measures of time and performance, but they do not indicate academic worth. Quality control in the assignment of credits is problematic (p. 13).
>
> Some educators may fear assessment because it smacks of quantitative management of the learning experience, or may believe it is too costly for the results it achieves. But we are not interested in the measurement for measurement's sake, rather in the potential of measurement of individual students, programs, or entire institutions--to improve learning (p. 54).

Three of the recommendations made by the study group pertained to assessment:

> Number 12: Colleges. . .should supplement the credit system with proficiency assessments both in liberal education and in the subject's major as a condition of awarding degrees (p. 46).
>
> Number 16: Faculty and academic deans should design and implement a systematic program to assess the knowledge, capacities, and skills developed in students by academic and curricular programs (p. 55).
>
> Number 24: Accrediting agencies should hold colleges. . .accountable for clear statements of expectations of student learning, appropriate assessment programs to determine whether those expectations are being met, and systematic efforts to improve learning as result of those assessments (p. 69).

Whereas the average citizen may not be inclined to read government reports on educational issues, the popularity of three recent books indicates there is widespread concern about educational quality. During 1987, Professors Allen Bloom, E.D. Hirsch, Jr., and Diane Ravitch (with Chester Finn) saw their books, respectively, Closing of the American Mind, Cultural Literacy, and What do our 17-year-olds Know?, on the best-seller list. All three books contain examples of student surveys which indicate woeful ignorance of basic literary, historical and civic facts.

Syndicated columnists such as James Kilpatrick and Ellen Goodman occasionally stoke the fire by writing editorials with titles such as "Raising a Crop of Befuddled

Teens" (Las Vegas Review Journal, 22 September 1987) and "Let the Buyer of Higher Education Beware" (Review Journal 14 September 1987), in typical reviews of the professors' books. Clearly, what students are learning, both in secondary and postsecondary schooling, is a concern of increasingly sharper focus.

In a review of educational studies conducted between the mid-1920s and the mid-1960s, Feldman and Newcomb found no reference to "learning" in American higher education (Warren, 1982). When researchers looked at college "outcomes" during that period they invariably focused on values, goals, attitudes, and personality traits. Typically, references to "academic achievement" referred to attitudes toward achievement. Similarly, Warren observes, a Carnegie Commission on Higher Education produced a series of reports between 1967 and 1973. Again, the substance of learning was ignored. He concludes that what generally has been considered "measurements" of higher education outcomes, i.e., data concerning the affective domain, are of little value in assessing educational effectiveness.

In a similar vein, Peter Ewell observes that student assessment can be categorized according to Benjamin Bloom's Taxonomy of Educational Objectives, i.e., as either cognitive or affective. Traditional American assessment

programs in higher education have been in the affective domain wherein students are asked to evaluate their college experience and possible changes in their value systems. He notes that other dichotomies useful for discussion of assessment dimensions are psychological v. behavioral and within college v. after college (Ewell, 1985c).

In a 1985 paper presented to the National Conference on Assessment in Higher Education, Terry Hartle described six distinct "activities" which generally fall within the rubric of assessment:

1. Multiple measures to track students' intellectual and personal growth over an extended period of time.

2. State-mandated requirements for evaluating students and/or academic programs.

3. Focus on the "value-added" whereby students undergo pre- and post-testing and the gains in general education and skills are measured.

4. General standardized testing.

5. Making decisions about funding by rewarding institutions for performance on established criteria.

6. Measuring changes in student attitudes and values.

Hartle recognized the fact that the activities overlap and proceeded to summarize the three basic purposes for "testing." Admission/placement, achievement for

accountability and testing for graduation are the prominent rationales for standardized testing in higher education.

An Historical Overview of Standardized Testing

On September 23, 1642, Governor John Winthrop of Massachusetts personally presided over final examinations administered to Harvard's first group of seniors (Marcus, et. al., p. 8). Inasmuch as the nine young men taking the test constituted the entire cohort of American college seniors, it could be argued that they participated in the first standardization testing in this country.

In the parlance of Twentieth Century psychometry, a standardized test goes beyond Harvard's first final exams. Ebel and Frisbie (1986, p. 267) define a standardized test as one which,

> 1. has been methodically and expertly constructed, usually with tryout, analysis and revision;
>
> 2. includes explicit instructions for uniform administration and scoring (irrespective of time and place); and
>
> 3. provides tables of norms for score-interpretation purposes, derived from administering the test in uniform fashion to a defined sample of students.

In a background report for the 1982 National Commission on Excellence, Lauren and Daniel Resnick made an interesting distinction between tests and examinations. They explain that tests monitor achievement but do not

motivate or guide study; examinations are used by schools to prepare students. They note that "American school children are the most tested and least examined in the world. . .however, the fact that the tests are standardized and not keyed to any individual school's curriculum means that students are never expected to prepare themselves for a major external exam" (1982, p. 42). As a result, the Resnicks suggest, our present testing programs do not improve or maintain standards.

In a 1985 interview with Ralph Tyler, Phi Delta Kappan Editor Robert Cole explored "the changing roles of testing and evaluation." Tyler, perhaps the oldest living American evaluation and testing guru, explained that testing for purposes of selection is an ancient practice, dating at least from China of 5000 years ago. In more modern times, in the educational arena, testing has been used to "sort" students and to help make decisions about who would be allowed to continue in schooling and who should be diverted. This purpose for testing is still widely accepted in Europe but has been modified, at least in name, in North America. In order to accommodate our egalitarian ideal, students are no longer "diverted" on the basis of test results. Now, testing primarily serves to "sort and evaluate" for purposes of tracking and remediation.

From an historical standpoint, Tyler observed that public demands for educational reform typically follow economic upheavals. A recession in 1893, for example, prompted formation of the famous "Committee of 10" to revise high school curricula. Similar concerns were evident following the depressions of 1912 and 1929. Currently, Tyler notes, the United States appears to be losing world economic preeminence and the pattern is holding true. Commissions and study groups abound in the 1980s and much attention is being focused on the educational process. The exaggerated concern over recent declines in SAT score averages is, according to Tyler, merely "preconceived notions looking for indicators." But in spite of what might be interpreted as a jaded view of educational reform movements, Tyler appreciates the value of properly used testing programs as a vehicle for improvinig the educational process. He recalled that when he was hired in 1929 as Director of the Ohio State University Bureau of Educational Research, part of the job was to help academic departments improve teaching of lower division courses. At the time, 50 percent of the freshmen and sophomores were failing or dropping out before the end of their second year on campus. Tyler found through research a likely contributing factor: what was taught was not consistent with what was tested.

Although "mental testing" did not gain widespread use in diverse sectors of American society until after Alfred Binet's intelligence test was imported from France, achievement testing of a somewhat standardized nature was employed at least a half century earlier. Wigdor and Garner report that the Boston School Trustees adopted an objective test in 1845 which was administered to eighth graders citywide. The results of the test were viewed "with glee" by the Massachusetts Superintendent of Instruction because it helped him "keep the schools within his jurisdiction accountable to common standards of student and teacher performance" (Wigdor, 1982, part II, p. 179).

Writing on quality control in higher education, Joseph O'Neill notes that "the potential for the corruption of standards and the negative impact that a system based on faculty self-verification can have on the value and significance of a college degree was recognized more than a century ago by Charles Eliot" (p. 72). In his inaugural address as President of Harvard in 1869, he recommended the creation of an external examining body, stating that "when a teacher examines his class, there is no effective examination of the teacher" (p. 72).

Resnick and Resnick report that standardized tests were "introduced into American schools in the period 1880-1920 when education adopted the cult of efficiency

from industry and attempted to justify performance to taxpayers" (p. 21). By 1917, according to Resnick (1981, p. 623), 200 standardized tests were available to schools, mostly sold by schoolbook publishers.

Peter Ewell observes (1985, p. 32) that "assessment in higher education is not new." He cites by way of example a large scale "general college test program" in Pennsylvania during the period 1928 to 1932. He also notes that Hutchins College of the University of Chicago, the General College of the University of Minnesota and "several dozen small liberal arts colleges maintained such programs 30 years ago."

C. Robert Pace, Professor of Psychology at UCLA, recently summarized early Twentieth Century higher education assessment initiatives:

- 1920s: The committee on Educational Research at the University of Minnesota devised tests to measure General College student achievement. "Mean scores showed significant and substantial improvements."
- 1930s: Ralph Tyler (followed by Benjamin Bloom in the 1950s) created the Office of Examiner at the University of Chicago to measure attainment of goals of the university general education program.
- 1940s: The Graduate Record Office of the Carnegie Foundation formed the Cooperative Testing Service (which became the Educational Testing Service in 1948).
- 1950s: The American Council on Education initiated the cooperative study of evaluation in General Education which produced tests of "critical thinking" in social science, reading, and writing, science and the humanities (Pace, 1984, p. 11-12).

In 1969, the Education Commission of the States in Denver, Colorado, assumed responsibility for a nationwide assessment program known as the National Assessment of Educational Progress. At that point NAEP had evolved from an initiative begun in 1963 by the Carnegie Corporation. Since that time, NAEP (currently administered by the Educational Testing Service) has measured educational progress by testing large samples of citizens between the ages of nine years and thirty-five years. The scope of the assessment is broad, covering such subject areas as music and citizenship in addition to the traditional basics of writing, reading, mathematics, and social studies. The abovementioned book by Diane Ravitch and Chester Finn is a product of the NAEP test results.

School/Institutional Effectiveness Research

The Equality of Educational Opportunity Survey (Coleman, et. al., 1966) was commissioned with funding appropriated for the 1964 Civil Rights Act. The congressional mandate addressed four primary issues. First, the central question focused on the extent of racial segregation in the nation's public schools. Secondly, Coleman and his colleagues were to assess, by region, the educational resources available to schools in districts where racial segregation existed. Third, "effectiveness of

schools" was to be compared. The "outcome" measure central to the survey was measured student achievement on standardized tests. Lastly, the researchers analyzed acquired data in an effort to find relationships between educational resources and student achievement on an aggregated basis.

The Coleman research was, at the time, the largest educational research project ever undertaken. Sixty thousand teachers and 645,000 students from 4,000 schools participated in the survey. The students, at both elementary and secondary levels, provided the "output" or dependent variable data by their performances on standardized achievement tests. Data collected from the teachers concerning education levels, attitudes, and salaries, were combined with information about school physical resources to constitute the "input" or independent variable information.

The final report contained the following major conclusions:

1. Racial segregation in the nation's schools was still widespread.

2. Within most regions of the country there was little variation in educational resources allocated to white as opposed to minority schools.

3. White students, on average, performed at higher levels than minority students on the achievement tests.

4. Relatively little of the variation on the tests could be statistically attributed to variation in school resources. When controlled on such variables as students' home background factors and socioeconomic status, the "school characteristics" accounted for no more than 10 percent of the outcome variation.

Although Coleman and his colleagues were cautious in reporting their analysis of the data, the press generally characterized their findings as proof that "schools don't make much difference." Consequently, a number of scholarly reports criticized the Coleman methodology on grounds of invalidity (Airasian, 1979).

But Airasian made an interesting observation which goes beyond mere criticism of methodology and addresses the Coleman researchers' "conceptualization of schooling." Based on the way the data were aggregated, the assumption evidently was made that the primary "effect" of schools on student achievement is at the school level, as opposed to the classroom, district or state levels. The most significant school variables, described as "static" by Airasian, were presumed by researchers to be teacher experience levels, textbook age, available equipment and facilities. Finally, the dependent variable--performance

on available standardized tests--was assumed to be sufficient as an indicator of "effect" or outcome. Simplified and "stripped of statistical analyses, procedures, and tables," Airasian's representation of the original Coleman research thesis is that "the school as a whole, by virtue of its static resources and facilities, influences pupils' general cognitive outcomes as measured by commercially available standardized tests" (p. 10).

In a higher education study with a methodological approach similar to Coleman's, Astin (1968) compared aggregated results on GRE scores with "traditional indices of institutional quality (student-teacher ratios, library and financial resources, and mean intelligence scores of student bodies)." He found that institutional characteristics accounted for relatively little of the test score variation when "student entry characteristics (high school achievement, educational aspirations and family background)" were controlled.

Lezotte, a current advocate of effective schools research, reports (1985, 1986) that a "grass roots" movement began in 1966 which gained rapid interest, particularly in large urban school districts which were becoming increasingly desperate to find the means to improve school effectiveness. Lezotte notes that proponents of the Effective Schools Movement (ESM) approach

begin with an important philosophical view of the quality v. opportunity issue. Whereas conventional wisdom holds that excellence and equity constitute a tension or compromise, the ESM position is that the two qualities are not only compatible, but mutually essential. A second major premise of ESM is that meaningful change and improvement properly resides at the individual school level at which "ownership" and true commitment resides.

The methodical assessment of learning outcomes, Lezotte explained, is essential to the evaluation of effectiveness but the evidence must be derived from criterion-referenced rather than the traditional norm-referenced standardized testing.

In research conducted for the National Center for Higher Education Management Systems, Krakowar (1985) notes that there is no universally accepted method for assessing organizational effectiveness, primarily because competing interpretations of the concept flow from opposing perspectives. Goal centered views, for example, are based on the assumption that rational managers pursue clearly understood objectives by way of strategies such as "management by objectives" and cost-benefit analyses. Conversely, other organizational theorists distain the centrality of goals and pursue the assessment of effectiveness via a natural system viewpoint. The

underlying assumption of natural systems researchers is that administrators in organizations are driven primarily by desires to survive, remain competitive, and flexibly respond to changing environmental demands.

The NCHEMS study, undertaken primarily to produce a compendium of effectiveness criteria and indicators, focused on recently reported syntheses of approaches to the assessment of organizational effectiveness in higher education. Cameron (1978), for example, in an exhaustive review of literature pertaining to organizational effectiveness, reported difficulty in comparing studies because of a lack of consensus about effectiveness criteria. He concluded that,

> organizational effectiveness may be typified as mutable (composed of different criteria at different life stages), comprehensive (including a multiplicity of dimensions), divergent (relating to different constituencies), transposive (altering relevant criteria when different levels of analysis are used), and complex (having parsimonious relationships among dimensions) (p. 604).

Based on Cameron's observations about the amorphous quality of organizational effectiveness criteria, Krakowar suggests a paradigm based on six fundamental questions:

1) Whose perspective is of primary concern?

2) What are the criteria of assessment?

3) What are the standards or referents for assessment?

4) What is the unit of analysis?

5) What is the appropriate time frame?

6) What are the types and sources of data?

He notes that, in theory, question 3 would typically be raised first but, in reality, the issue of perspective is of paramount importance. The audiences or constituency to be satisfied with any given assessment of effectiveness actually shapes everything that follows. Hence, it is difficult if not impossible to try to find universally-accepted criteria which may be used in a variety of contexts.

Faerman and Quinn (1985) formulated an intriguing heuristic model for considering the various dimensions of organizational effectiveness. Their "competing values approach" blends the seemingly competing theoretical perspectives of a variety of behavioral scientists into a model which facilitates both understanding of similarities and differences in effectiveness criteria. The model contains two primary axes, one reflecting degrees of existing organizational control (centralization v. decentralization) and one which depicts dominating environmental focus (internal v. external). A third dimension concerns the interaction between processes, which are short-term, and organizational outcomes, which tend to be long-term. In explaining the competing values approach, Krakowar observes that the continua represented in the

three dimensions only seem to be in conflict. In actuality, they reflect the ambivalence we tend to hold about organizational life. He notes that,

> we want our organizations to be adaptable and flexible, but we also want them to be stable and controlled. We want growth, resource acquisition and external support, but we also want tight information management and communication. We want an emphasis on human resources, but we also want an emphasis on planning and goal setting. (p. 106).

In terms of a global view of the development of administrative science, the competing values conceptual model also facilitates an understanding of how scholarly emphasis shifted from scientific management to human relations and how conceptualization of organizational functioning evolved from a closed system to an open system perspective.

Most research on higher education CBE programs has been limited to the institutional or program level. In the early 1970s, the Fund for the Improvement of Postsecondary Education (U.S. Department of Health, Education and Welfare) supported a variety of competence-based programs within American colleges and universities. Later, an academic task force was formed and funded by FIPSE to evaluate the programs and provide analyses of factors contributing to successes and failures. Between 1974 and 1977, sociology professor Gerald Grant of Syracuse

University coordinated the fieldwork of seven colleagues as they visited selected campuses and collected data on a variety of discipline-specific initiatives. Their findings, published in 1979 (Grant, et. al.) comprise the most comprehensive critical analysis of competence-based reforms in higher education.

On a global level, Grant and his colleagues made several observations, some philosophically abstract and some program-specific and concrete. Perhaps as an afterthought, they note in the epilogue of On Competence that the most significant contribution of their three-year study is in the multi-disciplinary contribution to methods of social research. From the standpoint of social policy, they note that competency-based education is much more than a body of techniques which facilitates more efficient learning. On the institutional level it constitutes a significant shift of resources from the "best" to average and below-average students.

CBE also impacts on faculty workloads in that more time and effort must be devoted to teaching basic skills. Furthermore, CBE tends to increase "bureaucratization" in that new staff positions are inevitably created to assist students with special problems. That in turn leads to a "Parkinson's Law" effect in that new positions with new constituencies tend to find an impetus for continuance and

growth. CBE also has the strong potential for changing approaches to faculty evaluation and, therefore, probably constitutes the primary source of resistance. Grant observes that, the discomfort of new evaluation initiatives notwithstanding, CBE can have a powerful impact on how the faculty members view themselves. CBE requires that,

> they do more than pass on the often outdated knowledge they learned at the esoteric fringes of their discipline in graduate school and become instead mentors, models, and in some measure quasi-parental figures--a new kind of teacher with a different timetable of work, since the personal relationship involved in the mentor role is no easier to interrupt despite the pressures of the regular academic calendar than are other close ties. And for the curriculum--even the effective and the individualized--it insists that outcomes be agreed on in advance by faculty and that students be assessed on the outcome (p. 62).

In 1988, the Florida Division of Community Colleges conducted a study to determine what student development programs existed within the state to specifically assist students who fail one or more of the CLAST subtests. In the initial phase of the study, all 28 public community colleges were surveyed to ascertain the enrollment status of students who had experienced CLAST failures during the 1986-87 school year. Responses to the survey formed the basis of selecting eight colleges which appeared to have sufficient numbers of "persisting" students still in the system and with specific programs to assist in remediation. Division staff members visited the eight selected colleges

and interviewed both administrators and support staff regarding CLAST-related student services. Although the initial purpose of the study was to focus on remediation and "at risk" students who had experienced difficulty with the CLAST, the personal interviews were conducted in terms of the entire institutional CLAST effort. The researchers concluded that, although common elements were found in all of the visited colleges' student development programs, the degree of emphasis varied considerably. At the "more successful" institutions, for example (based on total aggregated CLAST scores for the school year), interviewers noted the below-listed conditions:

1. "CLAST-sensitivity" on the parts of institutional leaders.

2. Effective tracking systems and plans for consistent identification of students who require intensified CLAST assistance.

3. Standardized departmental assessment instruments which measure CLAST competence.

4. Active working relations between institutional research personnel and faculty members who teach Math/ English.

5. Clear identification and ready documentation of where and by whom all CLAST competencies are taught.

6. Existence of internal accountability systems to facilitate increased faculty involvement in CLAST commitment.

7. Well-staffed and equipped learning laboratories and tutoring systems to assist "at risk" students.

A review of ERIC databases and dissertation abstracts revealed a paucity of research initiatives which focus on Florida's CLAST. Other than the abovementioned study conducted by the State Division of Community Colleges, CLAST studies appear to thus far have been limited to the institutional level, most notably at Miami-Dade Community College. Unpublished reports generated by institutional researchers basically address questions pertaining to peripheral issues such as the effects of providing additional time for administration of CLAST-like tests and the specific language difficulties of foreign exchange students. Informal discussions with graduate university students in Florida, however, indicate that the rich research potentialities related to the CLASP mandate have not been overlooked and will probably bloom in the relatively near future.

Summary

Chapter 2 contains an overview of accountability in American education and a summary of common conceptions of

institutional effectiveness in higher education. It was noted that the traditional "resources" and "reputation" criteria are giving way to demands for concrete evidence of "outcomes."

Relative economic decline and mounting evidence of major deficiencies in public schooling have prompted a general scepticism about the validity of effectiveness reports generated within the academic community. Publication of A Nation at Risk in 1983 and Involvement in Learning the following year set the stage for renewed emphasis on educational reform. Government officials and bureaucrats increasingly demand hard evidence that students can demonstrate competencies for which certified and that educators perform as expected. At this juncture it appears that standardized testing is the only economical and valid way to provide the needed academic outcome data. Concluding remarks in the chapter focus on institutional effectiveness research in approximately the past 20 years. Beginning with the Coleman Report in 1966, a small but growing school of education research is now on the threshold of maturity.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

Overview

This study combined elements of both quantitative and qualitative methodologies. Initially, mail surveys of all mathematics and English department chairs at Florida's public community colleges were undertaken to develop information concerning the faculty perspective of the CLAST and perceived academic impact. A concurrent telephone survey of senior academic administrators at the colleges was undertaken to define areas of concordant and diverse views from the management perspective. The telephone interviews also provided opportunities to elicit administrator opinions about colleges which have been distinctively successful in preparing students to meet CLAST requirements.

Quantitative data, specifically the results of all six CLAST administrations during school years 1986-87 and 1987-88, were obtained from the Support Services Branch of the Florida Division of Community Colleges. The data, aggregated by institution, were used as the primary selection criteria for identification of

exceptionally effective CLAST performance records. The primary criterion used was sustained upper-quartile institutional CLAST placements over the two school years from Fall, 1986, through Summer, 1988.

The final phase of the study involved personal visits to nine of the 28 state community colleges. Selection of the nine colleges was based on three factors in addition to the quantitative data analysis: geographic representation, institutional size and reported academic support programs which appeared potentially significant with respect to basic academic skills development.

The Research Population

Florida's network of public postsecondary education consists of the nine campuses of the State University System and the 28 institutions of the Community College System. The state has a 20-year history of strong "articulation" agreements between publicly supported universities and colleges, agreements which are manifested in a common course numbering system. The basic principle of the statewide articulation is that all nine universities are legally obligated to admit for upper division study all students who hold associate of arts degrees from any of the state community colleges. Conversely, students who desire to study at universities

at the entry level are only admitted on competitive bases. Although the actual population of this study was the community college component of the state postsecondary system of education, it is important that one be cognizant of the fact that upper and lower divisions cannot practically be studied in total isolation. CLASP historians, for example, would note that initial college-level minimum competency testing legislative initiatives were aimed only at the two-year colleges. However, it was pointed out to policymakers that singling out only the community colleges would be inconsistent with the philosophy of equality which underlay the extremely important articulation agreement. Thus, the focus of accountability was broadly maintained on the universities as well as the community colleges.

Community colleges in Florida date back to the 1920s but did not form part of a system until the 1950s. In 1957, a master plan was developed with the goal of providing college availability within commuting distance of the entire state population. That goal was realized in 1972 when the last of the planned 28 community colleges were opened for business. In terms of associate degrees conferred, the Florida Community College System ranks third in the nation (FACC, 1988, p. 2). During the 1987-88 school year, 23,043 students

received degrees, 16,996 of whom were eligible for transfer to state universities (associate in arts degrees). During that same year, the student head count for all enrollments was 866,168, which equated to full-time equivalents of 151,755. FTE instructional positions within the system for the year totaled 7,176 (Fact Book, 1989, pp. 7,42).

Governance of Florida community colleges, as with the university system, is a mixture of centralized direction with a degree of local control. With the exception of relatively modest foundation contributions, virtually all community college funding derives from state coffers. Since 1968, when community college boards of trustees were created to replace school board governance, the state two-year system has achieved a high degree of homogeneity. In 1983, the State Board of Community Colleges was created to provide overall coordination for the 28 colleges. That Board supervises the activities of the Division of Community Colleges, one of five divisions within the State Department of Education. The Division, working under the direction of the Board, devises rules for operation, budgeting and reporting. The State Board of Education, consisting of the Governor and Cabinet, which includes the Commissioner of Education, has veto power over rules

promulgated by the Community College Board but does not itself make such rules.

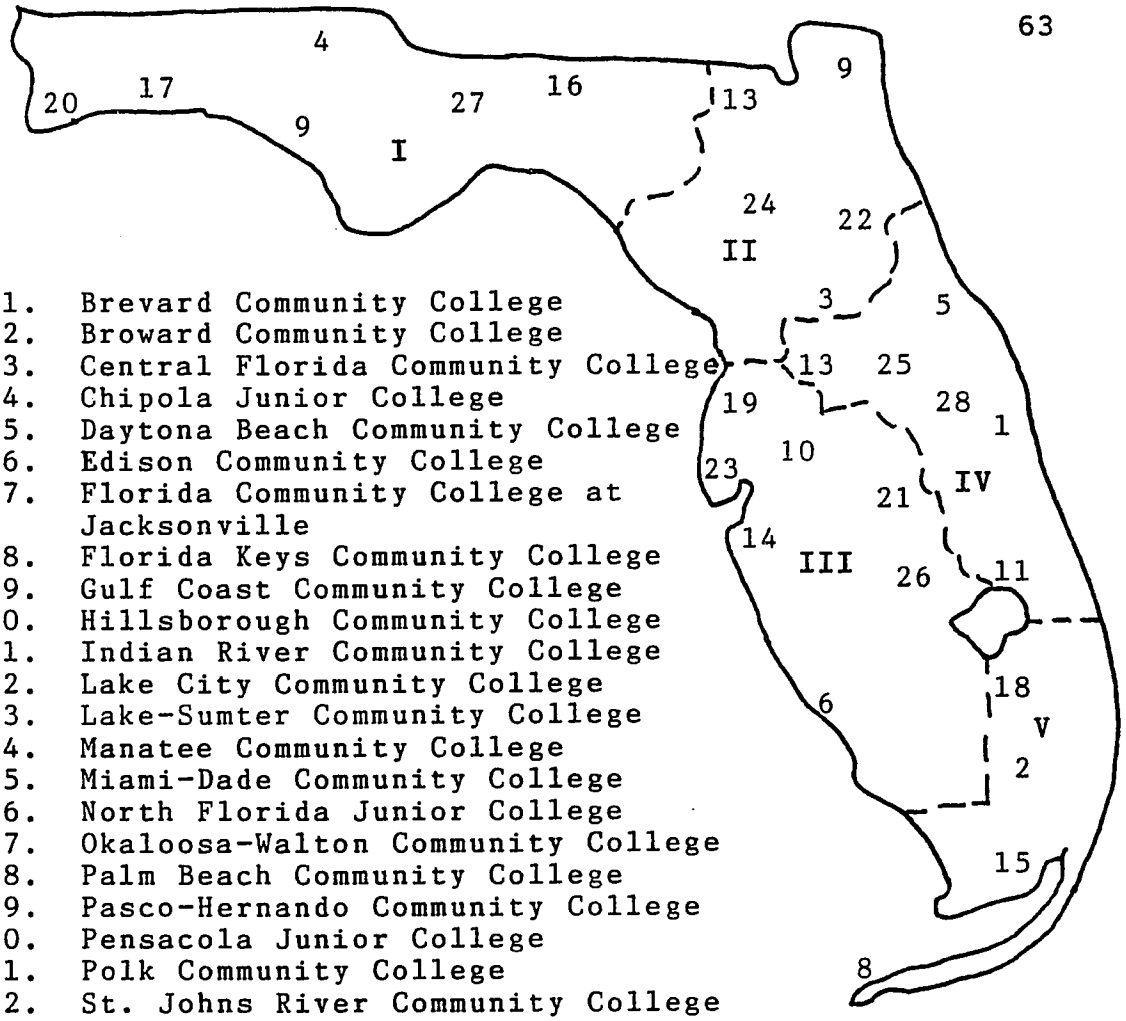
The Institutions

A complete list of institutional abbreviations is included in Appendix II. From a financial standpoint, Florida's 28 public community colleges range in size from NFLA's 1988 budget of just under $4,000,000 to MDCC's nearly $119,000,000. The average annual advanced and professional FTE enrollments (essentially transferable credit course FTEs) ranged from 640 students at FKEY to 16,466 at MDCC. Grouping colleges according to relative student body size is best represented by average annual A&P enrollments, separated into four quartiles. The top quartile, consisting of institutions with more than 8,100 A&P FTE students, includes MDCC, PETE, PBCC, BROW, VALE, HILL and FJAX. The second quartile includes those colleges with between 4,000 and 8,100 A&P FTE and consists of PENS, BREV, MANT, SANT, TALL, and EDIS. The third size quartile, those serving between 1,500 and 4,000 A&P enrollees, contains OWCC, POLK, DAYT, IRCC, GCCC, CENT and LCCC. The fourth quartile, with A&P annual averages below 1,500, are represented by PHCC, CHIP, NFLA, SFLA, LSUM, SJCC and FKEY (Cummings, 1987, p. 14).

For purposes of Department of Education Reporting, such as CLAST scores, Florida is divided into five regions. The Panhandle region includes three universities plus six community colleges: CHIP, GCCC, OWCC, NFLA, PENS and TALL. The Crown Region has two universities and five community colleges: CENT, FJAX, LCCC, SJCC and SANT. The East Central Region includes one university and six community colleges: BREV, DAYT, IRCC, LSUM, SEMI and VALE. The West Central Region consists of one university and seven community colleges: EDIS, HILL, MANT, PHCC, POLK, PETE and SFLA. The South Region includes two universities and four community colleges: BROW, PBCC, MDCC and FKEY. Figure 3-1 reflects a graphic representation of the state postsecondary reporting regions and locations of the 28 public community colleges.

The Faculty Chairs

Reviews of 1987-88 and 1988-89 Florida community college catalogs revealed the identities of 82 individuals who were determined to be mathematics or English chairpersons. The math chair designators were relatively straightforward, with the only variations listed as "math-science" or "technology-math-science." English chairs, on the other hand, were often identified as liberal arts, communications, language arts,



1. Brevard Community College
2. Broward Community College
3. Central Florida Community College
4. Chipola Junior College
5. Daytona Beach Community College
6. Edison Community College
7. Florida Community College at Jacksonville
8. Florida Keys Community College
9. Gulf Coast Community College
10. Hillsborough Community College
11. Indian River Community College
12. Lake City Community College
13. Lake-Sumter Community College
14. Manatee Community College
15. Miami-Dade Community College
16. North Florida Junior College
17. Okaloosa-Walton Community College
18. Palm Beach Community College
19. Pasco-Hernando Community College
20. Pensacola Junior College
21. Polk Community College
22. St. Johns River Community College
23. St. Petersburg Junior College
24. Santa Fe Community College
25. Seminole Community College
26. South Florida Community College
27. Tallahassee Community College
28. Valencia Community College

Reporting Regions

I	Panhandle
II	Crown
III	West Central
IV	East Central
V	South

Figure 3-1. Florida Public Community Colleges

humanities, communicating arts, arts & letters, fine arts & communications or arts & humanities. Some of the larger colleges listed chairs at branch campuses, hence the figure of 41 designees for each discipline employed by the 28 colleges in the system.

Senior Academic Administrators

Given that most college presidents are concerned with the broad spectrum of business affairs, public relations, marketing, board policy implementation and overall management, a conscious research decision was made to interview only senior academic administrators who have primary responsibility for CLAST-related matters. Forty-one individuals were identified from catalog reviews as potential survey subjects. Ultimately, 29 were telephonically interviewed regarding their management perspectives of the CLASP and how their institutions have responded to the legislative mandate. Of the 29, three were vice-presidents, six were vice-presidents of academic affairs, one was vice-president of college operations, three were vice-presidents of instructional services, three were vice-presidents of academic programs, one was vice-president for planning, research & development, two were provosts, four were deans of academic affairs and six were deans of instruction.

Identification of Superior CLAST-performing Institutions

CLAST data from school years 1986-87 and 1987-88 are depicted in Appendices X through XV. As reflected in Appendix X and Appendix XI, the upper quartile colleges, in terms of student passing rates, were as outlined below:

1986-87	1987-88
IRCC	IRCC
LSUM	LSUM
GCCC	GCCC
LCCC	PHCC
PHCC	SJCC
SJCC	SEMI
HILL	CHIP

All state reporting regions except the South were represented in the upper quartile during the two year period of analysis. Five colleges--IRCC, GCCC, LSUM, PHCC and SJCC--achieved top quartile status in terms of the total CLAST for the two consecutive years. A review of Appendices XII, XIII and XV reveals that, in addition to the overall top performers, SEMI had notable math performance while OWCC achieved that status on both the writing and essay subtests.

Telephone interviews of senior academic administrators were begun with two questions: (1) Which of the Florida community colleges are doing the most to help students prepare for success on the CLAST?, and (2) On what basis do you specifically cite that (those) college(s)? Although the answers to these

questions are data derived from the study and normally would be presented in Chapter Four, identification of colleges to be visited is part of the study methodology and will briefly be presented here.

The majority of interviewed administrators unhesitatingly singled out IRCC as the most successful college. All such respondents referred to passing percentage records as the basis for their recognition of IRCC. In addition, three administrators identified PETE as a particularly innovative institution based principally on the reputation and known "CLAST-activism" of a recent academic dean. HILL was twice mentioned as an institution of merit with respect to CLAST, both for innovative approaches to math instruction and for aggressively assessing basic capabilities of students.

Selection of a college to visit within the South Region posed a methodological problem, particularly since none of the four colleges placed in the upper quartile passing range during 1986-87 and 1987-88. Two of the interviewed administrators had cited MDCC as an exemplary institution in "every important respect," i.e., community involvement, assisting academically-deprived students and meeting the peculiar challenges of large urban populations. It was noted, in fact, that MDCC had been selected by a panel of college

presidents in 1987 as the most outstanding community college in the nation. Promoters of the MDCC success story invariably were advocates of the "value added" school of outcomes assessment. They therefore were not detracted by such factors as aggregate CLAST performances, which typically have been the lowest passing percentages of all 28 community colleges. In that context, it must also be pointed out that MDCC is unique among all community colleges in the nation--as well as the state. It has, for instance, nearly 6,000 foreign students, more than any other college or university in the country. In sheer student body size, it had a 1989 head count enrollment of 42,663, seventh in the country in a ranking of universities and colleges. MDCC has a minority student population substantially larger than any other college in the state, currently estimated at 66 percent. MDCC is believed to be the only community college in the country with endowed teaching chairs (Chronicle of Higher Education, 6 September 1989, pp. A19, A38). Notwithstanding its reputation in areas of national acclaim, the narrow parameters of this study precluded further consideration of MDCC as a CLAST-exemplary institution.

Similarly, FKEY was eliminated from further consideration as a potential visitation site because of its small size in relation to necessary travel distances. Of the two remaining South Region colleges, BROW was selected for a site visit because of its slightly better CLAST passing record and its relatively larger size.

Data Collection and Instrumentation

In order to obtain information pertaining to faculty support, the origins of CLAST-related innovations, possible applications of mastery learning principles and use of aggregate test results, a 15-item questionnaire was designed to survey college chairs of English and mathematics departments. Two of the questionnaire items were designed to elicit tenure and experience-level data, with the remaining 13 items specifically addressing research questions previously formulated. Copies of the questionnaire (depicted in Appendix IV) were mailed to all 82 of the previously identified chairs at the 28 colleges which comprise the study population. Individually addressed and personalized coverletters (see Appendix III for an example) were included with the questionnaires in an effort to generate interest and increase response rates. The departmental chair survey phase of the study was

initiated in the Spring of 1989. Most responses were returned by mid-Summer, however some were not received until faculties return to work in August for beginning of the 1989-90 school year.

The second line of inquiry in collection of qualitative data centered on interviews of senior academic administrators at each of the 28 colleges. Inasmuch as the interview of a single knowledgeable individual at each college was deemed sufficient to obtain the necessary insights, telephone inquiries were considered to be the most economical means. Consequently, a semi-structured interview protocol was designed to guide questioning and elicit the desired information. A copy of the Senior Administrator Interview Guide is included as Appendix VI. Two weeks prior to initiation of the telephone interviews, letters of introduction from the researcher's Examining Committee Chairman were mailed to prospective senior college administrators (an example letter is included as Appendix V).

The final phase of data collection involved personal visits to nine of the 28 community college campuses. During July and August, 1989, contacts were made with senior and intermediate-level academic administrators, math and English faculty members,

counselors, institutional researchers and a variety of academic support staff members who were in positions to provide information concerning institutional responses to the CLASP mandate. Figure 3-2 graphically depicts the geographic service areas of the colleges visited.

Treatment of Data

Data obtained from all sources during the course of the study were organized around the research questions outlined in Chapter One. Given that the major methodological orientation of the study was qualitative and involved surveys of an entire population, inferential statistics were unnecessary. Where appropriate to describe patterns or trends of observations, basic descriptive statistics were employed.

For ease of reference, the research questions and major data collection sources are outlined below:

---RQ (research question) 1: What institutional initiatives have been undertaken to enhance student performance on the CLAST?

+++SQ (survey question) 6: Have curricular changes been made in your department because of the CLASP mandate?

+++SQ 12: What is your most notable innovation designed to increase student mastery of CLAST competencies?

+++TI (telephone interview item) 3: What is the most significant instructional innovation you have implemented which is designed to improve performance on the CLAST?

+++TI 7: What other CLASP-related program initiatives have you implemented?

---RQ 2: In what forms and at what administrative levels did CLAST initiatives originate?

+++SQ 3: What level of impact has the CLASP had on your department?

+++SQ 4: Did the CLASP induce teaching reassignments in your department, i.e., were teachers with certain attributes designated to teach courses which address CLAST competencies?

+++SQ 10: Which group in the college has primary responsibility for ensuring the greatest possible number of students master CLAST competencies?

+++TI 4: How did the innovations develop?

---RQ 3: What supplemental resources were allocated?

+++SQ 5: At what priority level do senior administrators at your college view student performances on the CLAST?

+++SQ 9: In what context do you typically become aware of senior administrator views regarding institutional responses to the CLASP mandate?

+++TI 5: What resource allocations were necessitated by the innovation?

---RQ 4: At what points and to what extent have teaching faculties provided innovative inputs to CLASP?

+++SQ 12: What is your most notable innovation designed to increase student mastery of CLAST competencies?

+++TI 4: How did (the instructional innovations) develop?

---RQ 5: To what degree have faculties accepted and supported the CLASP mandate?

+++SQ 1: Is minimum competency testing of basic skills appropriate at the college level?

+++SQ 2: Is the CLASP mandate necessary primarily because minimum competency certification at the secondary level has failed?

+++SQ 7: Which of the below statements best characterizes the collective view of your department's faculty when CLASP was introduced?

+++SQ 8: How would you describe the current collective faculty attitude toward the CLASP?

---RQ 6: What evaluative measures have been used to assess effectiveness of institutional CLASP performance programs?

+++TI 6: How successful has (the innovation) been?

+++TI 9: Do you conduct CLASP-related research at the institutional level?

---RQ 7: To what extent have mastery learning principles been incorporated into courses which address CLAST competencies?

+++SQ 13: Has your faculty incorporated mastery learning principles into courses which emphasize CLAST competencies?

+++TI 10: Have mastery learning principles been incorporated into courses which concentrate on CLASP competencies?

---RQ 8: How have aggregate CLAST scores been used at the institutional level in formative and summative evaluations?

+++SQ 11: In what ways have senior administrators used aggregate CLAST results as management tools, either explicitly or implicitly?

+++TI 8: How have CLAST results been used as management tools?

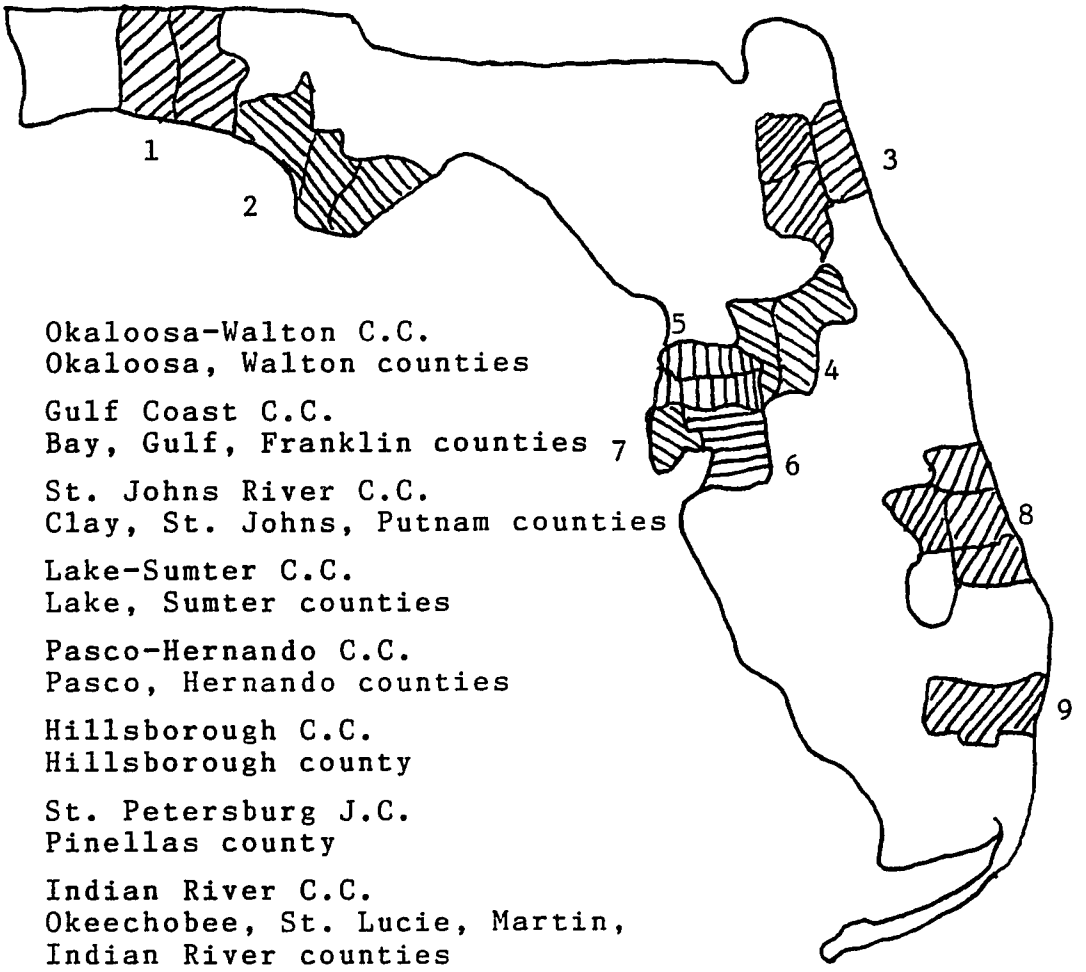
---RQ 9: Which institutional CLASP-induced innovations are compatible features of a

higher education basic skills mastery learning model?

+++This question was addressed primarily via on-site visits.

Issues of Credibility

Given that the potential value of research hinges on evidence of credibility, factors which bear on reliability and validity are hereby addressed. Denzin, writing from the symbolic-interactionist perspective, observes that, inasmuch as every research method "leads to different features of empirical reality, then no single method can ever completely capture...that reality" (Denzin, 1978, p. 15). Therefore, he concludes, it is incumbent upon social scientists to employ multiple methods, the process known as "triangulation." In Denzin's view, four basic types of triangulation are accepted by the research community as appropriate means of strengthening validity. Data triangulation, which involves variations in time, space or person, may be employed to either refine conceptual ambiguity or as confirmatory support for findings which otherwise would stand alone. Investigator triangulation involves multiple observers of the same object. The integration of diverse aspects of different theories constitutes theory triangulation. Finally, methodological triangulation, perhaps the most common



1. Okaloosa-Walton C.C.
   Okaloosa, Walton counties
2. Gulf Coast C.C.
   Bay, Gulf, Franklin counties
3. St. Johns River C.C.
   Clay, St. Johns, Putnam counties
4. Lake-Sumter C.C.
   Lake, Sumter counties
5. Pasco-Hernando C.C.
   Pasco, Hernando counties
6. Hillsborough C.C.
   Hillsborough county
7. St. Petersburg J.C.
   Pinellas county
8. Indian River C.C.
   Okeechobee, St. Lucie, Martin,
   Indian River counties
9. Broward C.C.
   Broward county

Figure 3-2. Colleges Visited and County Service Areas

type, may be either within-method or between-method.

The research plan for the instant study involved triangulation of data and methods. Individuals who work within a variety of community college role groups were asked both unique and overlapping questions in order to cross-validate factual information and "institutional" or collective perceptions. Varying methods included written surveys of quasi-administrators, semi-structured telephone interviews of senior administrators, content analyses of selected written artifacts, personal observations of college operations and interviews of key-informants at several instructional and staff levels.

Lincoln and Guba, in specifically addressing the value of naturalistic inquiry, subsume questions of validity and reliability under the rubric of "establishing trustworthiness." They write about "truth value," "applicability," "consistency," and "neutrality" (1985, p. 290). These four concepts, within the conventional quantitative research paradigm, respectively equate to internal validity, external validity, reliability and objectivity.

On the question of reliability in ethnographic research, Goetz and LeCompte identify five problematic areas of concern: Researcher status position, informant

choices, social situations and conditions, analytic constructs and premises, and method of data collection and analysis (Goetz and Lecompte, 1984, p. 214). Researcher Status position, which concerns variations in the flow of information based on perceived researcher social role, should not pose a challenge to reliability in this study. In every interview encounter, sources were apprised of the fact that the researcher was a university student from Nevada, but formerly a Florida community college faculty member who was familiar with CLAST requirements. Since the typical educator's workaday world involves frequent description and explanation of procedures--often for the benefit of other educators--researcher status effect is considered to be minimal.

Informant choice initially appeared to pose the most formidable challenge to reliability in that knowledge bases are always unique and information obtained tends to be idiosyncratic. As it developed, however, a high degree of viewpoint consistency was recorded in information obtained from sources within each institution. At a college with a particularly comprehensive learning lab, for example, most sources, from academic dean to student services counselor, typically made appropriate remarks to that effect.

Also, key-informants at each college generally knew each others' roles and areas of expertise and they therefore made productive "referrals" to additional informants.

The element of social context is not considered to represent a threat to this study in that all interviews were conducted in key-informant offices or work areas. With three exceptions--in the learning labs at LSUM, IRCC and BROW--interviews were private, one-on-one, and conducted during normal business hours. The descriptions of lab operations at the three aforementioned locales were obtained during congested "group" activities, however those employees are generally accustomed to such conditions and did not appear to have been distracted.

Assuring clarity of constructs and definitions is an essential ingredient in ethnographic research involving multiple interviewers because inter-observer agreement is essential to establishing reliability. Inasmuch as this study involved only one observer, however, that reliability challenge was of no concern.

Descriptions of data collection strategies and methods are essential for replicability--the one true measure of reliability. The following commentary is intended to satisfy that requirement: The first step taken at each college visited was acquisition of a

current catalog from the registrar's office. Reviews of the catalogs revealed preliminary information about student advising, core course curricula, CLAST and Gordon Rule publicity, campus layouts and identification of potential key-informants. Then, casual inquiries were made at library circulation and reference desks to determine if CLAST study materials were readily identifiable and available. Personal interviews at each location typically began with either follow-up leads from previous telephone interviews or inquiries at institutional executive offices to identify CLAST-knowledgeable individuals. Copies of the research questions set forth in Chapter one were used to guide semi-structured interviews. Field notes were transcribed on a daily basis for subsequent analysis and extraction of relevant data.

Susan and William Stainback succinctly summarize the issue of validity in their monograph on understanding qualitative research. They note that "findings can be considered valid if there is a fit between what is intended to be studied and what actually is studied" (Stainback, 1988, p. 97). Borrowing from Bolster (1983), they observe that qualitative research is validated "referentially"--when explanations are consistent between multiple sources--and

"situationally"--when the explanatory framework is consistent with the meanings which sources use to define situations. Reliability is redefined as the fit between what actually occurs in the setting under study and what is recorded as data. Evidence of that fit is usually provided by methodical and detailed recording in field notes or by verification audits.

The survey questionnaire reflected in Appendix IV and telephone interview schedule outlined in Appendix VI were submitted to a panel of experts for affirmation of face validity. The panel, which consisted of two Florida community college academic department chairs, two community college deans and two institutional researchers, unanimously reported that the data collection instruments devised for this study were technically appropriate. Their responses are included in Appendix VII.

Summary

Purely quantitative data derived from CLAST administrations during school years 1986-87 and 1987-88 yielded the identification of five colleges which sustained upper quartile passing rates. IRCC, LSUM, GCCC, PHCC and SJCC were initially selected for personal visits based on their overall passing records. Another college, OWCC, placed in the upper quartile for the two

years on two of the four subtests of the composite CLAST. Based on performance in the related areas of writing and essay, OWCC was slated for further inquiry. Information developed during telephonic interviews of senior administrators resulted in identification of PETE and HILL as colleges with institutional approaches to the CLASP that warranted additional investigation. BROW was selected from the four colleges in the South Region for follow-up personal interviews.

Aside from the primary selection criterion of demonstrated quantifiable institutional CLAST effectiveness--sustained upper quartile performance--additional consideration was given to representative geographical location, relative student body sizes and information gleaned from interviews of knowledgeable educational administrators about institutional initiatives. Outlined below are selected demographic data concerning colleges selected for site visits.

College	Region	A&P FTE Enrollment Quartile	FTE Quartile (Rank Order)
IRCC	East Central	3	2 (13)
LSUM	East Central	4	4 (26)
GCCC	Panhandle	3	3 (19)
PHCC	West Central	4	4 (22)
SJCC	Crown	4	4 (25)
OWCC	Panhandle	3	3 (20)
PETE	West Central	1	1 (4)
HILL	West Central	1	2 (9)
BROW	South	1	1 (3)

CHAPTER 4

FINDINGS OF THE STUDY

Written Surveys of Math and English Chairs

Of the 82 questionnaires mailed to math and English chairs at Florida public community colleges, 68 (35 math; 33 English) were completed and returned. Thus, the overall return rate was 83 per cent. Institutional representation, by discipline, was 96 per cent, i.e., at least one response each from math and English departments were received from 27 of the 28 colleges. Only math at PENS and English at MDCC were not represented in the response pool.

Based on responses to survey questions 14 and 15, pertaining to duration of chairmanship and departmental experience, it appears that the ranges were quite wide. The most senior chair had been in his position for 30 years; the most junior, one year. The modal period as chair was two years; the median, five years; and the mean was seven and one-half years. The same individuals, however, had worked within their current departments an average of nearly 15 years.

Telephone Interviews of Senior Academic Administrators

Senior administrators with primary institutional responsibility for the CLASP were predominantly vice-presidents or deans of instruction. As with the departmental chair survey, the concluding interview questions pertained to length of service in their current positions and at their respective institutions. The range of reported time in their current positions was relatively narrow: from one to seven years. On average, the administrators had been in their current positions about four and one-half years. Employment at their respective colleges was substantially longer. The mean duration of current employment was 13 years, with a range of from one to 26 years. Of interest is that nine of the 29 interviewed administrators reported having been hired directly into their current positions from outside the institutions.

Site Visits and Follow-up Interviews

Between 28 July and 21 August, 1989, the following colleges were visited for purposes of personal interviews and observations concerning institutional responses to the CLASP mandate: BROW, SJCC, PHCC, HILL, PETE, IRCC, GCCC, LSUM and OWCC.

Other than college libraries and learning laboratories, neither specific offices nor personages were routinely visited at the nine colleges. Leads previously developed during telephonic interviews of senior administrators plus casual inquires at presidents' offices provided the identities of individuals knowledgeable of institutional CLAST programs. Excluding casual staff inquiries and non-productive contacts, 32 individuals were ultimately interviewed who were able to furnish insights to institutional CLAST initiatives. Guidance counselors, professors of math and English, deans of student services, institutional researchers and academic support coordinators comprised the bulk of the interview population. Information gathered during the site visits has been distilled and arranged according to the previously outlined research questions and is presented on the following pages with results of the survey and interviews.

Summary of Findings

Research Question 1:

What institutional initiatives have been undertaken to enhance student performance on the CLAST?

In response to survey question six (Have curricular changes been made in your department because of the

CLASP mandate?), 56 (82 per cent) of the department chairs answered yes; 11 (16 per cent) answered no; one (two per cent) offered no opinion. Of the 56 respondents who indicated curricular changes had been made, 48 specified the nature of the changes. Their comments are summarized in Table 4-1.

Table 4-1. Summary of English and Math Chair Responses to Inquiries Concerning Curricular Changes due to the CLASP Mandate.

Number of Responses	Category of Curricular Change
20	Core course skills inventory
7	Creation of non-credit prep courses
6	New essential skills credit courses
5	Timed in-class essay requirements
5	Development of new core math courses
4	English course exit exams
4	Cross-curriculum writing plans
2	Creation of practice CLASTs

Note: Responses total 53 because some of the 48 respondents listed multiple changes.

Core course skills inventory, the most commonly indicated curricular change, refers to the logical first response which all colleges almost certainly underwent during the 1981-1984 time frame. After the statewide faculty task forces identified composition and

computation competencies which the CLAST would cover, that information was widely disseminated to all affected institutions. It then became prudent to inventory existing mandatory general education courses to identify where in the curriculum specific competencies would, with assurance, be taught.

The development of new math courses, mentioned by five respondents, was a corollary to the curriculum inventory because such subjects as logic, probability, statistics and geometry were usually not included in the standard college algebra and general math core courses.

On the composition side, curricular changes most often mentioned were the implementation of timed, in-class essay requirements (five responses), the addition of core course exit exams (four responses) and cross-curriculum writing mandates (four responses). The requirement that students write essays under CLAST conditions, i.e., supervised, timed, forced-topic-choice and holistically graded, was obviously designed to help them prepare for the actual CLAST. Standardized, department-wide exit exams in core English courses could serve a variety of purposes, including diagnoses of curriculum coverage, checks on grade inflation and screening for advancement. Cross-curriculum writing plans, mentioned by four survey respondents, may have

been initiated for multiple purposes. Ideally, increased emphasis on writing by a larger segment of the faculty would serve as both reinforcement of the importance of writing and to afford additional opportunities for practice. Also, in view of Florida's "Gordon Rule," cross-curriculum writing plans help spread the assessment burden to faculty members outside English departments.

After the inventory process, the next most often mentioned changes were the creation of supplemental non-credit preparatory courses (seven responses) and development of CLAST practice tests (two responses). These appear to be related to the prep course initiative in that they all are essentially outside the mandatory core curriculum and, therefore, not required for all degree-seeking students.

Survey question 12 ("What is your most notable innovation designed to increase student mastery of CLAST competencies?") evoked 54 replies from departmental chairs, 12 with dual comments (for a total of 66). Table 4-2 contains a summary of the responses.

The high proportion of responses which identified pre-CLAST review sessions, creation of common core course exit tests, the mandate of in-class structured essay requirements and completion of core course

curriculum inventories, dovetails with the results of question six. Significant additions to the list of CLAST-related innovations were the establishment of learning labs (11 responses), the preparation of CLAST review packets with practice tests (eight responses) and concerted campus-wide efforts to involve all faculty in meeting the CLAST challenge (four responses).

Table 4-2. Summary of CLAST Innovations as Identified by English and Math Chairs.

Number of Responses	CLAST-related Innovation
23	Creation of pre-CLAST review sessions
11	New learning labs to supplement classroom instruction
8	Preparation of CLAST-review packets with practice tests
7	Standardization of core course exit tests
4	In-class essay writing requirements
4	Core curriculum inventory
4	Concerted administrative efforts to mobilize campus-wide faculty
2	Creation of progress assessment tests
1	Reduced composition class sizes
1	Individual counseling of high-risk students
1	Creation of new credit course

Senior administrator responses to interview question three ("What is the most significant instructional innovation you have implemented which is designed to improve performance on the CLAST?"), are summarized in Table 4-3.

Table 4-3. Categories of CLAST-related Instructional Innovations as Reported by Senior Administrators.

Number and Percentages of Responses	Innovations
8 (28%)	Creation of pre-CLAST workshops and review sessions
4 (14%)	Required pre-CLAST diagnostic testing
4 (14%)	Core course curriculum review and reform
3 (10%)	Development of new math courses to cover CLAST competencies
2 (7%)	Executive emphasis on faculty - staff teamwork in meeting CLASP challenges
1 (3%)	Establishment of common exit exams in English composition core courses
1 (3%)	Required English composition computer lab attendance
1 (3%)	Creation of individual study course for selected at-risk students
1 (3%)	Availability of a faculty mentoring program for at-risk students
1 (3%)	Existence of a continual campus-wide awareness program to ensure students are cognizant of CLASP requirements and consequences of failure

As noted in Table 4-3, over half of the senior administrators provided information which indicated that curriculum reform or pre-CLAST extra-curricular preparation were the most significant institutional innovations. Specific instructional changes, such as the creation of new courses and common exams, were also noted, as were instructional support programs designed to help at-risk students. Of particular interest, three interviewees described as innovations their executive efforts to motivate employees and students. Two administrators claimed their colleges had taken no particular action in response to the CLAST mandate.

Interview question seven ("What other CLASP-related program initiatives have you implemented?"), supplemented question three in that it, in effect, prompted administrators to identify innovations of significant but secondary importance. Of the 18 responses, 11 pertained to either pre-CLAST review sessions or CLAST diagnostic testing. New initiatives mentioned were the implementation of cross-curriculum writing requirements (twice mentioned), increased emphasis on the value of learning labs (mentioned three times) and the establishment of faculty task forces (mentioned twice).

Analysis of the collective comments of the 32 college staff personally interviewed during the final

phase of the study revealed seven basic but distinct categories of CLAST-related practices.

New Courses. As indicated from the previous written and telephone surveys, a common initial institutional response to CLASP was the examination of core general education courses to assess the need for curricular modification. Several college staffs thereupon elected to create new courses to ensure competency coverage rather than expand existing courses.

Probably the most common course addition was Finite Math, MGF.202, which was designed to cover topics not traditionally included in college algebra or general math courses. (See Appendix VIII for a description of Florida's common course numbering system.) All nine of the visited colleges were found to offer the Finite Math course--also designated "College Math"--and, although not universally a required course, they clearly defined it as covering specific CLAST competencies.

The only noted English composition courses created specifically in response to the CLAST were ENC2003, Modes of Communication, required at PHCC, and ENC2321, Composition III, required at SJCC. Thus, as a generalization, it appears that CLAST competencies in reading and writing were essentially covered in the existing curriculum. Conversely, CLAST mathematics

skill areas required shoring and most, if not all, colleges developed new courses as a consequence.

Apart from the new courses which were designed to cover specific areas of the math or English curricula, additional courses were developed to serve as generic refreshers for the entire range of CLAST skills. IRCC, for example, created MGF2118, Essential Skills in Math, ENC2090, Essential Skills in English, and REA1125, Reading CLAST Review, with the three course sequence totaling five semester hours. Inquiry at IRCC revealed that, with the advent of CLAST, the courses were required as part of the associate in arts general education curriculum. Although the CLAST Prep sequence was changed to the elective category in 1987, approximately two-thirds of the students--principally the ones most in need of remediation--continue to enroll in the courses.

A similar approach was noted at OWCC, wherein three courses, one semester hour each, were developed to provide general refreshers in reading, writing and "quantitative" skills. At that locale, however, the CLAST courses were electives from inception.

Alternatives to credit courses serving as basic skill refreshers were the more popular pre-CLAST workshops, "seminars" and review courses, typically

offered during the weeks preceding CLAST administrations. The consensus, however, at least among most people interviewed, is that non-credit review sessions generally have been poorly attended, and then attended predominantly by those students least in need of help.

Preliminary Testing. The use of CLAST "look-alike" tests for both student familiarization and diagnostic purposes has been a dominant institutional response to the legislative mandate since 1985. All of the colleges visited used such tests either as part of organized review sessions, as handouts for CLAST registrants or as separate tools for screening. In 1987, possibly in recognition of the widespread use of the tests, the Florida Department of Education copyrighted and published a booklet entitled CLAST Sample Test Items, with the caveat that Florida colleges and universities may freely make duplicates "for instructional and assessment purposes."

Pre-testing at three of the visited colleges was part of a diagnostic process to determine if students could demonstrate possession of the skills assessed by the CLAST. HILL and PETE reportedly employ "Progress Assessment Tests" (PAT) during the first semester of sophomore years in order to determine if remediation is

required prior to registration for the CLAST. Similarly, IRCC uses a "Skills Readiness Test" for essentially the same purpose. Although all interviewed faculty and staff clearly were cognizant of the fact that, since 1987, students have been unconditionally entitled to register for the CLAST without institutional approval, that information is not widely disseminated. In that regard, one senior administrator at a large institution observed that only two students in the past two years have insisted on sitting for the CLAST without first passing the PAT.

A relatively new direction in the use of pre-CLAST testing is the implementation of common course exams within English and math departments. PETE, for example, reportedly intends to drop the PAT during the 1989-90 school year and, alternatively, introduce common core course exit tests. A similar procedure was introduced during the previous year within the English Departments at GCCC and LSUM. At LSUM, students must receive satisfactory scores on end-of-course CLAST-like essay exams in order to earn at least a "C" in English composition courses. That stipulation is enforced irrespective of other performance in the course. For example, a student who had otherwise earned an "A" but failed to write an acceptable exit essay, would receive

a course grade of "D." That inevitably would necessitate repeat of the course inasmuch as all "Gordon Rule" courses must be passed with at least a "C" grade.

Advising and Academic counseling. Most Florida community colleges utilize the traditional combination of initial "professional" guidance counseling followed by assigned faculty counselors after students declare major areas of concentration. However, two of the top CLAST-performing institutions, IRCC and PHCC, depend upon continuing professional counseling to closely monitor student progress through the general education curriculum--and eventually through the final challenge: the CLAST. Even at certain colleges which enlist the academic faculty as advisors there was noted strong emphasis on centralized control of the advising process. The advising handbook at GCCC was so detailed that virtually no subject was relegated to chance. Similarly, at HILL and BROW the advising system was variously described by senior administrators as "aggressive," "pervasive," "rigid" and "tightly controlled." Advising tools also provide insights to the degree of control exercised: A computer program at IRCC facilitates retention of detailed counseling comments; formal checklists at PHCC require staff "sign offs" prior to CLAST registrations.

College Preparatory Innovations. Faculty advisors and student development staff personnel frequently observed that admissions placement scores clearly indicate which students are likely to experience difficulties with the CLAST two years hence. Interviews of senior administrators revealed that college prep programs, at least within the community college setting, are generally considered to be integral parts of regular academic departments. The pervasive view is that continuity is stronger in both curriculum development and instruction when remedial course-work is an academic department's responsibility.

Few interviewed administrators and faculty members failed to point up the fact that community college open door admissions policies serve to complicate the basic skills development problem. To illustrate the gravity of the situation, one academic dean cited recently compiled data which showed that during the 1987-88 school year, community college freshmen required substantially more remediation in all three basic skill areas than their state university counterparts. In math, 50 percent of community college students were deficient; 28 percent needed additional work in English; 25 percent required remediation in reading. The three respective percentages in that year for university

students were five percent, two percent and four percent (Standing Committee on Student Achievement, 1989, pp. 4-5). It was explained that, within Florida, college preparatory testing and placement is standardized and specified by Department of Education rule. Only four exam series, all commercially prepared by either the American College Testing Program or College Entrance Examination Board, are sanctioned by Florida DOE Rule 6A-10.0315. ACT Assessment, ASSET, MAPS and the SAT are the only four tests authorized for reading, writing and math placement within the state community college and university systems. Cut scores have been established for each subtest for purposes of equivalency. Students who do not meet the cut scores are required to complete college prep courses prior to enrollment in respective college-level English or math courses. (See Appendix VII for pertinent details of the placement tests and cut scores.)

Although the established placement scores appear to be generally accepted as realistic indicators of ability, at least two colleges have found it desirable to relax rules on drop-add procedures in order to "fine tune" the process. Whereas normal drop-add time frames are approximately one week after classes begin, at LSUM and PHCC, students are permitted to move into and out of

math and English developmental courses during approximately the first month of standard semesters. At both colleges, however, such extraordinary course changes are based on demonstrated ability, or lack of ability, and must be approved by all instructors involved.

Academic Support Facilities. No facet of institutional response to the CLAST mandate was more impressive or more intuitively appealing than the strong academic support programs evident at some of the visited community colleges. At GCCC, LSUM, IRCC and BROW, in particular, comprehensive programs were in place which were designed to motivate, guide and, occasionally, to coerce students to learn basic skills.

A centerpiece of GCCC's Success Center is the Individualized Manpower Training System (IMTS). The IMTS reportedly was conceived during the mid 1970s as a self-paced vocational education program which could be used by adults to (a) analyze individual weaknesses in basic skills, and (b) provide the means for systematic remediation. Success Center staff members function as managers rather than instructors with regard to the IMTS and principally assist students with logistics and periodic assessment. The IMTS routine begins with administration of the Test of Adult Basic Education to

determine a program starting point. Then, staff members consult a prescribing catalog to outline individualized study schedules. At specified points in a program, pre- and post-tests are administered to assess mastery of subject areas.

The emphasis at LSUM's Learning Opportunity Center (LOC) is close student supervision and support of core course goals. Professional English tutors and student math tutors are available during the 60 hours per week the LOC is open. Staff at the LOC maintain meticulous records cross-referenced by students and teachers in order to monitor participation and progress. Assessment testing is frequent and, for the most part, computer assisted. When students fail to meet testing benchmarks, instructors are automatically notified by form letters. Although the LOC appears to have originally been formed as a learning lab only for students with recognized deficiencies in basic skills, it has been expanded to provide academic support for all English and most math courses.

In 1982, the Learning Lab at BROW began indexing textbook and audio-visual holdings to CLAST competencies. Currently, all CLAST diagnostic testing is accomplished at the lab and students with identified basic skill deficiencies are provided indexed

information in order to narrow their study focus. Objective portions of the CLAST-diagnostic tests are scored in the lab; essays are forwarded to the English department for holistic grading and returned to students via the lab.

Faculty and administrators at IRCC are quick to praise the Center for Personalized Instruction (CPI) as an essential element in their institutional record of success with the CLAST. The CPI works with students enrolled in both developmental and college-level courses to supplement their opportunity to drill on math, reading and English composition. The CPI is also responsible for administering the Skills Readiness Test to students who have registered for the CLAST. The results of the exam are furnished to academic counselors and individual study plans are constructed for those in need of remediation.

Expanded Faculty Roles. Florida's CLASP was the primary outgrowth of legislation requiring minimum competency testing at the college level. But educators rarely discuss the CLASP in isolation, and almost invariably include an important corollary: the Gordon Rule. Inasmuch as institutional responses to the CLASP have to some extent been affected by Gordon, a brief description of that legislation is in order.

In 1982, State Senator Jack Gordon petitioned the Florida Board of Education to adopt a policy which would require students in the state's public colleges to complete 12 semester hours of English course work and six hours of college-level mathematics. Students would also be required to write 24,000 words in graded essays within the English courses. Gordon made the recommendations after reviews of institutional catalogs revealed it was possible that a student could earn a bachelor's degree without having to take a single math course or "ever writing an essay beyond what was required in freshman English" (Gordon, 1988, p. 26). The Gordon proposal was controversial from its inception, drawing criticism from senior college administrators and the chancellor of the State University System, with the latter complaining of inconvenience and "an assault on academic freedom." Math and English chairs who attended hearings on the proposal appeared to support Gordon's concepts. It is believed that a group of students inadvertently convinced the board of the need for the proposed writing requirement. It seems that they had launched a letter-writing campaign to the Board in a concerted attempt to thwart a proposed tuition increase. The preponderance of poorly-written letters apparently

convinced Board members to adopt Gordon's proposed rule.

In its final form, the rule provided for alternate plans designed to accomplish Gordon's objectives. Within a year of the rule implementation, 14 community colleges had plans approved by the State Board. Holladay, PETE English Chair, explained how the curriculum at PETE was adjusted to comply with the Gordon Rule, help students with CLAST competencies, minimize cost increases attendant to the rule and maintain existing opportunities for elective courses: Half of the 24,000 words would be written in two required English composition courses with the remaining 12,000 words to be written in elective humanities courses. Two general math courses were restructured to incorporate all of the 56 CLAST computation skills.

Reviews of catalogs at the nine colleges visited indicate that "writing across the curriculum" and restructuring of at least one math course is the typical approach to satisfying the Gordon Rule requirements. Based on observations and interviews, it appears that the cross-discipline writing modification to Gordon's original proposal has had a beneficial net effect in that more faculty members outside English and math departments have become sensitized to the existence and importance of CLAST.

In addition to the interdisciplinary consequence of writing-across-the-curriculum, colleges have begun to experiment with additional ways to expand the faculty role with regard to CLAST. In at least three institutions, PETE, GCCC and OWCC, specific faculty positions have been designated as CLAST coordinators. With release time from classroom duties, these coordinators are responsible for maintaining continuity between instructional and support staffs, for ensuring that students are adequately advised about core courses and CLAST requirements and for interpretation of test results.

Awareness. From a global standpoint, student motivation regarding CLAST may have been nearly as important as ensuring all the required competencies are covered in mandatory core courses. Attempts to raise CLAST consciousness were evident on all nine campuses visited. Bulletin boards adjacent to math and English departments and within student services complexes typically contained flyers directing student attention to offices where additional CLAST information could be found.

The catalogs of all nine colleges contained explanations of CLAST and several included the entire list of CLAST competencies. Additional awareness

materials ranged from single page flyers on service counters in registrars' offices to the 92 page booklet entitled "CLAST and You" which HILL provides to all registrants.

Casual inquiry at library front and reference desks revealed that seven of the nine colleges maintain separate reserve sections for CLAST study materials. Also, most librarians encountered were familiar with the availability of ancillary services such as learning labs and success centers.

Research Question 2:

In what forms and at what administrative levels did CLAST initiatives originate?

In response to survey question three ("What level of impact has the CLAST had on your department?"), 30 of the chairs (44 percent) indicated a "significant" effect. Twenty-eight (41 percent) reported a "moderate" impact; eight (12 percent) a "slight" impact; and two (three percent), no impact.

Fourteen of the chairs (21 percent) indicated that teaching reassignments had been made because of the CLASP (survey question four: "Did the CLASP induce teaching reassignments in your department, i.e., were teachers with certain attributes designated to teach courses which address CLAST competencies?").

Conversely, 54 (79 percent) replied that teaching reassignments had not been made.

Replies to survey question 10 ("Which group in the college has primary responsibility for ensuring the greatest possible number of students master CLAST competencies?") indicate that most department chairs accept their central academic role. Sixty respondents (88 percent) wrote that the academic departments are primarily responsible; one (two percent) suggested that student services is responsible; and five (seven percent) perceived shared responsibility between academic departments and support services.

As a group, senior administrators credited college executive leadership with providing the impetus for CLAST-related innovation. When asked interview question four ("How did the most significant CLAST innovations develop, i.e., within faculty groups or at the administrative level?"), 19 administrators (66 percent) indicated "top-down direction" was most important. Four (14 percent) credited their faculties with initiatives; three (10 percent) replied they were joint efforts and one (three percent) did not know. Two interviewees claimed no initiatives had been taken by any college staff.

Research Question 3:

What supplemental resources were allocated to support CLASP programs?

Departmental chairs generally perceived that their senior administrators evidenced concern about CLAST performance. In response to survey question five ("At what priority level do senior administrators at your college view student performances on the CLAST?"), 36 of the chairs (53 percent) indicated "exceptionally high" and 30 (44 percent) answered "moderately high." Only two (three percent) believed the administrators viewed the CLAST as a low priority.

Concern about the CLAST apparently did not automatically translate to financial support however. Chair responses to survey question nine ("In what context do you typically become aware of senior administrator views regarding institutional responses to the CLASP mandate?") revealed a slightly different perspective. The categorized answers are outlined in Table 4-4.

Nearly two-thirds of respondents perceived senior administrator concern about CLASP as continual, irrespective of evidence of concrete support. Conversely, nearly a third of the department chairs perceived senior concern to be evident only when prompted by external publicity.

Table 4-4. Summary of Departmental Chair perceptions of Administrators' Concerns Regarding CLASP

Number and Percentage of Responses	Response Choices
17 (25%)	Concern is expressed on a continual basis, but more in form than in substance.
20 (29%)	Concern is only evident when publicity acts as a catalyst, i.e., concurrent with public release of aggregate CLAST scores.
25 (37%)	Concern is continual and often includes additional resource allocations.
4 (6%)	There is rare or infrequent evidence of concern.
2 (3%)	Concern is expressed in ways not adequately covered in the above characteristics (explain).
	- "External concerns (the board and media) have been beneficial because they force attention on basic skills."
	- "CLAST data continually reminds administrators of the need to help-- by way of support."

Telephone interviews of senior administrators indicated that, statewide, relatively few supplemental resources were allocated to support CLASP programs. In answer to question five ("What resource reallocations were necessitated by CLAST innovations?"), 20 of the 29 administrators interviewed indicated either that no significant resource adjustments were made or that they were unaware of reallocations. One "assumed" a heavy investment was made; six reported "light" or "modest"

investments were made in supplemental instruction pay for pre-CLAST workshops; two revealed that instructional costs increased slightly due to reduced core English course class sizes and a decision that only full-time instructors would teach CLAST-related courses.

Interviews during site visits provided additional insight regarding CLAST prompted resource allocations. Funds for support of CLAST-related activities principally fell into three categories: salary supplements, new instructional hires and the addition of academic support positions. At GCCC, for example, all faculty were invited to participate in what amounted to mini-challenge grants. Instructors who demonstrated the interest and ability to devise innovative writing-across-the-curriculum programs were financially compensated for their additional workloads. Similarly, the SJCC English and math staffs were awarded financial incentives for updating developmental courses in view of CLAST competencies. Additional funds were provided at several colleges to hire new faculty necessitated by reduced core English and math class sizes. Instructors were hired to accomplish teaching duties of CLAST coordinators who were granted release time. Tutors and counselors hired to staff learning labs also accounted for additional financial reallocations.

Research Question 4:

At what points and to what extent have teaching faculties provided innovative inputs to CLASP programs?

This is a close corollary to research question two and many of the interview responses pertain to both. Administrators were quick to credit the faculties with essentially "creating" the CLAST. It was explained that, when, in the early 1980s, the Department of Education decision was made not to purchase commercially available achievement tests to measure basic skills competency, statewide faculty task forces were formed, initially to identify competencies and ultimately to create test item banks. Then, at the institutional level, math faculties designed new core courses to fill gaps in the curriculum. The widespread and popular CLAST review workshops were almost entirely constructed and taught by regular faculty members. And, as previously noted, those academic support programs which appear to be the most effective are supported by teaching faculty in order to provide consistency of focus.

Research Question 5:

To what degree have faculties accepted and supported the CLASP mandate?

Four survey questions contributed to research question five. In response to question one ("Is minimum

competency testing of basic skills appropriate at the college level?"), 57 faculty chairs (84 percent) replied in the affirmative. Answers to question two ("Is the CLASP mandate necessary primarily because minimum competency certification at the secondary level has failed?") were more evenly divided: 37 (54 percent) of the chairs indicated yes; 18 (27 percent), no; 13 (19 percent) declined to offer an opinion.

Survey question seven ("Which of the below statements best characterizes the collective view of your department's faculty when CLASP was introduced?") was answered as summarized in Table 4-5.

Table 4-5. Departmental Chair Assessments of Prevailing Faculty Attitudes Toward CLASP when it was Created.

Number and percentages of Responses	Choice Statements
12 (18%)	Most or all were opposed to CLAST because of student-based concerns.
7 (10%)	Most or all were opposed, primarily based on concerns about the potential for faculty disruption.
16 (24%)	Most were relatively unconcerned, either positively or negatively.
32 (47%)	Most were in favor of CLASP because of the expected increase in value and credibility of Florida's academic standards.
1 (2%)	Most were in favor of CLASP because the external competency testing mandate could reduce course grade inflation.

Thus, according to department chairs, the introduction of CLASP was favorably received by nearly half of the faculties, opposed by about a fourth, leaving about a fourth relatively unconcerned.

In answer to survey question eight ("How would you describe the current collective faculty attitude toward the CLASP?"), 52 of the responding chairs (76 percent) indicated it was "basically favorable." Forty-five of the respondents commented on the rationales for the basically favorable or unfavorable postures of their faculties. Outlined below are the more representative remarks:

FAVORABLE:

-CLAST helps students learn their basic skill weaknesses.

-The faculty prefers the high structure and consistency which resulted from CLAST.

-The faculty <u>has</u> to favor CLAST. . .they set the standards.

-CLAST has enhanced the image and importance of English.

-The faculty actually welcomes accountability.

-The faculty recognizes that basic skills development and standards are necessary to upper division success.

-External testing is necessary to validate student mastery of material.

-CLAST serves to enhance student performance.

-The faculty recognized the need for objective standards.

-They all agree with the validation philosophy.

-CLAST puts students 'on notice' and has forced better advisement and placement.

-CLAST provides a common measure and, therefore, consistency.

-Most faculty members favor CLAST because of the increased credibility of community colleges.

-They welcome accountability; it also is a motivator for students.

-Common state standards for universities and colleges strengthens the articulation agreements.

-Competition on the institutional level is healthy; CLAST provides the means.

-CLAST forces us to keep focused on fundamentals.

-Writing across the curriculum brings more consistency to the college experience.

-CLAST has increased statewide faculty cohesiveness.

-At last, a means to force students to take writing skill seriously.

-The faculty is collectively proud of increased student performance.

UNFAVORABLE:

-CLAST is unnecessary; results are used for negative comparisons.

-Course grades are better indicators of skill proficiency.

-The faculty members feel forced into unwanted competition.

-Math instructors do not consider logic a basic skill.

-The CLAST-math does not adequately address topics taught in math.

-Knowledge of geometry is not a 'basic skill.'

-They object to testing 'skills' rather than knowledge.

-Skills tested are not college-level.

-The faculty is concerned with the dominant administrator view that all students should pass the test.

-Colleges emphasize only what is tested and CLAST therefore narrows the curriculum.

-CLAST scores do not correlate with upper division success.

-The test does not reflect the curriculum; non-educators therefore drive the curriculum.

The results of personal interviews were consistent with findings in the initial surveys of faculty chairs and senior administrators: the vast majority of community college faculties support the concept of minimum competency testing. And, the support was even stronger in 1989 than it was in the early 1980s when CLAST was introduced. The only relatively consistent criticism of CLAST--and it appeared to be a minor issue--pertained to the appropriateness of the math broad skill categories of statistics and logical reasoning.

Research Question 6:

What evaluative measures have been used to assess effectiveness of institutional CLASP performance programs?

In response to question six ("How successful have CLAST-related innovations been?"), 17 administrators (59 percent) said they did not know to what degree instructional innovations have or have not influenced collective CLAST performance. Seven (24 percent) responded that, notwithstanding the absence of objective data, they intuitively believed the initiatives had been helpful to students in their success on the CLAST. Three administrators from upper quartile colleges replied essentially that "the results speak for themselves (aggregate scores and pass rates)."

Regarding Interview question nine ("Do you conduct CLAST-related research at the institutional level?"), 20 administrators replied either that they were not aware of specific institutional level research or that it was not conducted. Three interviewees indicated that "item analyses" were performed; two said that results were disaggregated by campus for comparative purposes; four replied that results were used for statistical projections to measure the adverse impact of future increases in scoring standards. Also, MDCC reportedly has used CLAST results in a variety of correlational studies to identify possible links with such variables as high school tracks and developmental course participation.

The "item analyses" were described by interviewees as summaries of broad skill area items answered incorrectly by an institution's students. Following all CLAST administrations, duplicate computer tapes or diskettes are mailed to each college with a test blueprint to guide analysis. Although test security considerations preclude the dissemination of actual test questions or specific skill areas, the blueprint and data tapes can, if institutional researchers choose to use them, be used to identify broad skill area deficiencies. Broad skills in math, for example, are arithmetic, geometry & measurement, algebra, statistics & probability and logical reasoning (see Appendix I for additional skill areas).

Inquiries during site visits indicated that, with the exception of correlational studies conducted at MDCC pertaining to CLAST performance and participation in college prep programs, there appears to be a paucity of effectiveness research within the community college system. Item analyses, such as routinely conducted at PHCC, serve as barometers of overall institutional coverage of broad skill areas but there exists little but intuitive evidence of how such programs as learning labs contribute to CLAST success.

Research Question 7:

To what extent have mastery learning principles been incorporated into courses which address CLAST competencies?

Survey question 13 ("Minimum competency testing programs are implicitly based on teaching concepts such as mastery learning, variously known as outcomes-based education and competency-based education. Has your faculty incorporated mastery learning principles into courses which emphasize CLAST competencies?") elicited 25 affirmative and 43 negative responses from faculty chairs (respectively 37 and 63 percent of the total).

Although 25 respondents answered affirmatively, only seven complied with the request to explain how mastery learning was implemented at their college. Also, the "explanations," quoted below, indicate "mastery learning"--at least in Bloom's conception--is not universally understood. Answers to the question are quoted below:

-Our math courses are taught by units; progress is determined by steps.

-Our final English exams are patterned after CLAST.

-Individualized, self-paced learning occurs in the laboratories.

-We have some programmed courses where students work self-paced.

-When the curriculum was restructured, course goals were written in competency-based terms.

-We require 90% mastery on composition comprehensive exams.

-Course exit exams are passed with 75% mastery.

Senior administrators were asked a similar question in interview item 10 ("Have mastery learning principles been incorporated into courses which concentrate on CLAST competencies?"). Twelve of the 29 interviewees (41 percent) indicated that mastery learning was not employed at their colleges. Eleven (38 percent) said they did not know. Six (21 percent) asserted that mastery learning principles had been employed but two of those could not cite specific programs. The remaining four colleges--GCCC, HILL, LSUM and PETE--were scheduled for site visits.

Premier examples of the application of mastery learning were noted at GCCC and BROW. At GCCC, both Basic English and Fundamentals of Algebra may be taken as single, three semester hour courses or as sequences of three, one semester hour courses. Students must achieve mastery in each of the one hour courses before progressing to subsequent levels. BROW has a similar arrangement with its general math course.

Commentators at the colleges visited pointed out that creation of common course exams and exit essay

requirements are effectively mastery learning approaches at the departmental rather than classroom level. Furthermore, learning labs generally require evidence of having mastered increments of individualized programs as a condition for progression, particularly in segments which are tied to formal academic courses.

Research Question 8:

How have aggregate CLAST scores been used at the institutional level in formative and summative evaluations?

When asked, "In what ways have senior administrators used aggregate CLAST results as management tools, either explicitly or implicitly?" (survey question 11), faculty chairs selected the choices depicted in Table 4-6.

Interview question eight ("How have CLAST results been used as management tools, e.g., for program evaluation, accountability, faculty development or personnel decisions?") elicited the responses detailed in Table 4-7.

Four of the six administrators who implied that CLAST data was used for management decisions explained that the State Department of Education generates reports after each CLAST administration which indicates, by institution, average student performances by broad skill categories (see Appendix I regarding technical aspects

of the CLAST). That data, the administrators explained, was routinely passed on to math and English department chairs to be used for further discussions with faculty members.

Table 4-6. Faculty Chair Views Regarding Administrative Uses of Clast Data.

Number and Percentages of Responses	Option Choices
11 (16%)	In faculty development decisions.
2 (3%)	In performance evaluations.
13 (19%)	As the basis for motivational initiatives.
8 (12%)	As a basis for resource allocations.
21 (31%)	For promotional purposes, i.e., as evidence of institutional accomplishments.
6 (9%)	Not used in any way.
4 (6%)	Unknown.
3 (4%)	Other (explain).

Explanations:

--"Aggregate data is given to department heads to identify weaknesses."

--"The data is shared with feeder high schools so they know about patterns of deficiencies."

--"CLAST results forced our curriculum affairs committee to 'tighten up' and more closely scrutinize course syllabi."

Table 4-7. Senior Administrator Replies to Inquiries About Using CLAST Data for Decision-making.

Number and Percentages of Responses	Categories of Response
13 (45%)	No
5 (17%)	Emphatic no; philosophically opposed
6 (21%)	Indirect implication
5 (17%)	Yes

The five administrators who described using CLAST data for specific decision-making made the following remarks:

- "We use the results as motivational evidence."
- "Informal reports showing numbers of students who failed subtests and who taught them are produced for chairmen but with the understanding it will not be used for summative purposes."
- "The branch campuses use the data to compare performance but not for personnel decisions."
- "We use it for faculty development; individual accountability is now possible."
- "CLAST is a component in the staff development program."

In a personal interview during a site visit, one senior administrator candidly remarked that he compares individual student CLAST performances with grades recorded in corresponding core courses. He indicated that teachers who certify the competence of students who

subsequently cannot demonstrate the same proficiency on the CLAST are liable to "have their butts in a briefcase." Upon assuming managerial duties within the past year, another administrator learned that his predecessor had informally ranked teachers according to their former students' CLAST performances. He was particularly disturbed by the practice because his son was one of the teachers listed in the ranking. A full-time faculty member at one college said he knew he was hired based, in part, on his superior CLAST record when he taught as an adjunct at another institution.

Other than the above-described remarks indicative of some summative evaluative use of CLAST results, administrators denied or were reluctant to discuss such possibilities. More often, they took the position that individual or even departmental accountability is not fair and would probably be severely detrimental to morale.

Summary

This study involved three avenues of investigation in order to ascertain how Florida public community colleges have responded to the legislative requirement that college students demonstrate competency in basic academic skills.

In May, 1989, written questionnaires were mailed to 82 chairs of mathematics and English departments at

each of the State's 28 community colleges. Sixty-eight of the questionnaires were returned, 35 from math chairs and 33 from English chairs, for an overall response rate of 83 percent. From a disciplinary standpoint, the representative response rate was 96 percent, in that at least one response in each academic discipline was received from each college.

Highlights of the departmental chair survey include the following:

--82 percent reported that the CLASP induced curricular changes at their institutions.

--75 percent replied that the overall impact of CLASP has been significant or moderate.

--97 percent perceived that senior administrators at their institutions place a high priority on student CLAST performance.

--Regarding support from senior administration, 37 percent perceived total support; 25 percent essentially receive only moral support; and 29 percent believe support is basically transitory and depends primarily on publicity.

--Respondents indicated that, at its inception in 1982, about half the affected faculties favored CLAST; in 1989 about three-fourths of the faculties were believed to approve of CLAST.

--88 percent of the math and English chairs believe the primary institutional responsibility for conveyance of CLAST competencies lies in the academic departments.

-- In descending order of mentioned frequency, CLAST-related innovations identified by the departmental chairs were (a) core course inventory, (b) creation of prep courses, (c) development of essential skills courses, (d) an increase in essay-writing requirements, and, (e) common course exit exams.

Between May and July, 1989, telephonic interviews were conducted with 29 senior academic administrators at the 28 colleges. Their collective perceptions of CLAST induced innovations corresponded closely with those of departmental chairs. When asked about the origins of the innovations, 66 percent indicated that the impetus originated within the administration.

Analysis of aggregate 1986-87 and 1987-88 CLAST data, primarily institutional-level passing rate percentages and mean scores, revealed that five colleges maintained upper-quartile passing records during the two year period. Information obtained during the interviews of senior administrators and considerations of geographic representation were combined with the passing rate data in selecting nine colleges to comprise a stratified sample for personal site visits.

During July and August, 1989, the nine colleges were visited for purposes of observation, data collection and followup interviews of employees knowledgeable of institutional responses to the CLAST. The results of the written surveys, the telephonic interviews and the personal visits provided the basis for informed conclusions about Florida community college responses to the CLAST.

CHAPTER 5

INTERPRETATIONS, CONCLUSIONS AND RECOMMENDATIONS

Interpretation of Findings

This study was predicated on the need to identify significant facets of organizational responses to the CLASP challenge. Elements of the study population--the 28 institutions of the Florida community college system--were found to be homogeneous in many important respects. Core curricula, graduation requirements, general services offered and philosophical orientations were markedly similar--notwithstanding the wide range of demographic differences within the various college service areas.

Institutional responses to the CLASP, at least from a categorical standpoint, also evidenced a high degree of similarity. Survey results indicated that most colleges make concerted attempts to apprise students of the content of the CLAST and the consequences of failure. Curricular inventories and resultant core course modifications designed to ensure coverage of tested competencies were in evidence at most colleges. Extra-curricular CLASP initiatives reported or observed

at multiple sites included diagnostic testing for CLAST "readiness," and recurring workshops in a variety of formats designed as knowledge refresher sessions and to teach "test-taking strategies." Traditional student service programs appear to be commonplace, however academic support efforts may vary considerably. Selected site visits revealed that certain colleges, notably GCCC, LSUM, BROW and IRCC, have support facilities which are closely tied to academic departments and basic skills instructors.

Survey and interview questions designed to assess possible relationships between CLASP initiatives and organizational contexts did not produce any definable patterns or trends. Data compiled pertaining to perceived administrator support, resource allocations and faculty involvement, viewed collectively, suggest a healthy regard for the importance of the CLASP mandate. Administrators readily acknowledged that the college faculties, working with their university counterparts, have set the standards, identified test competencies and revised the curriculum where necessary. By the same token, however, they recognize the role of executive leadership and the overall importance of creating climates conducive to cooperation.

A strict interpretation of the findings pertaining to mastery learning would indicate that Carroll and

Bloom's principles have not been widely adopted within Florida's community colleges. Indeed, few survey respondents or interviewees revealed clear understanding of the mastery learning concepts. On a broader level, however, practices which incorporate mastery learning precepts were observed at several colleges. Restructuring course objectives in behavioral terms, the "modularization" of developmental courses, and the creation of common departmental "exit" exams are practices which essentially are based on mastery learning principles.

Although a few candid remarks made by administrators would indicate that CLAST results are used, at least inferentially, to hold departments and individual instructors accountable, most executives seemed to scorn the practice. That prevailing attitude on the part of administrators is consistent with one of the major concerns teaching faculty have with the entire "outcomes assessment" movement. Perhaps the test results are used on a more widespread informal basis but the practice is not openly discussed because of the sensitivity of the underlying issues.

Use of CLAST data for other research purposes apparently is limited to very narrow applications. Institutional researchers have only begun to tap the

potential such data holds for assessing program effectiveness. Perhaps the administrators who direct such efforts have opted for conservatism because of the fine line between inquiries which focus on effectiveness of techniques, programs, departments and individual instructors.

Conclusions and Recommendations

The citizens of Florida, through their elected legislative representatives, demanded accountability in postsecondary education. The accountability sought through the College-Level Academic Skills Project was relatively limited in scope. The legislative intention was that college students, educated under state financial tutelage, must demonstrate, within the first two years of college, that they possess the academic skills necessary to benefit from continued study.

The accountability demanded of the direct recipients of public largess has been extended, by implication, to the institutions where the students begin their undergraduate educations. Although educators know that the basic communication and computation skills challenged by the CLAST are predominantly taught in secondary school, the general public perception is that colleges are responsible for

ensuring "college outcomes," at least in the area of fundamental skills.

From a philosophical standpoint, the assessment of college academic outcomes can be approached from two diverse perspectives. One may simply define standards and then measure to what extent the standards have been met at given points in time. Conversely, say some, a single point of measurement reflects an incomplete picture. The latter position holds that a "value-added" approach is the only accurate and fair way to judge performance on an institutional level. The intellectual appeal of that position notwithstanding, this study was not conducted under value-added considerations. In a previous study of CLAST performance and demographic variables, Cummings made an important finding: minority students, as a group, perform well on the CLAST at institutions where majority students perform well. Based on Cummings' 1987 statistically significant findings, a fundamental assumption was made for the purposes of this study: relative percentage passing rates and mean scores of a college student body's aggregate CLAST performance are valid indicators of institutional effectiveness. Thus, while an attempt was made to survey representatives of all 28 colleges with respect to certain issues, a degree of emphasis was

placed on colleges with demonstrably better CLAST performance records.

In some respects the study revealed a high degree of consistency in how all 28 colleges responded to the CLASP. There is reason to believe that most or perhaps all of the colleges attempted to ensure that CLAST competencies are covered in some part of the core curriculum. Similarly, probably most institutions disseminated, at least to some degree, the practice test information produced by the State Department of Education. Most campuses apparently put together some form of CLAST workshop or refresher session, open to all but primarily intended to help the marginally prepared students.

But the common measures, although probably effective to varying degrees, did not constitute the focus of this study; the identification, description and, where possible, evaluation of innovations were the original objectives.

In that regard, it must be acknowledged that "innovation" is a relative term. A new direction or initiative taken at a given campus may, in retrospect, be nothing new when viewed in the context of a system or region.

It became obvious in the course of this study that a high degree of cooperation exists within the Florida

community college system. In 1984, for example, the Presidents of all 28 public colleges formally endorsed an "agreement to cooperate" in the sharing of CLASP learning materials. That agreement had been made during the previous year by representatives of the Statewide Council on Instructional Affairs. An "Exchange Forum" was established to act as a clearinghouse and for collaboration in evaluating effectiveness of the materials. Initially, FJAX was designated as the host institution to collect information from all 28 colleges. The first order of business was the compilation of an inventory of materials held by the various colleges, both locally developed and commercially purchased. The inventory was made in two parallel forms, subjectively, i.e., math, reading, or English, and by medium, i.e., written, audio-visual, or computer programs. Standard forms were devised to facilitate identification of pertinent information and contact persons at each college should faculty members at sister institutions need assistance. In 1985, disciplinary representatives from each college were formed into a task force to evaluate all the catalogued materials in terms of difficulty level, accuracy, clarity, organization, feedback capacity and strengths. At that time, the task force evaluated 121 learning and study aids, 54 produced

by the colleges and 67 purchased commercially. Following the evaluation process, the task force made a series of recommendations: (1) that the materials inventory and evaluation forms receive wider dissemination on campuses, (2) that the materials receive prominent display at major statewide conferences, (3) that the Instructional Affairs Council seek funds to create a full-time coordinator position to manage the Exchange Forum and, (4) that the colleges collaborate financially to produce certain information videos and develop computer software to support CLASP. Those recommendations were made in 1985 but, as of the Summer of 1989, no further action has been taken. The host institution in 1989 for the Exchange Forum was PBCC.

Other forms of informal cooperation between colleges staffs were evident during the course of the study. Most administrators, department chairs and faculty members interviewed appeared to have a comprehensive understanding of what colleagues at other institutions were doing with regard to CLASP-related initiatives.

If a single, overriding conclusion may be made from the results of this study is that the differing institutional approaches to the CLASP mandate lies more

in the process of student guidance than in how students are taught in classrooms. Given that assertion, the following commentary, in model form, is intended to demonstrate how a college staff can maximize student test performance if that is viewed as a significant priority. The conclusions have been drawn from the information compiled during surveys, interviews and observations on campuses. They therefore comprise a mosaic which will not likely be found in entirety at any single college.

The logical first step is to identify at the outset those students who are weak in basic academic skills and therefore are candidates for failure if extraordinary measures are not taken. The required placement exams, supplemented by high school transcripts and, occasionally, "profile" demographic data serve that purpose adequately.

An important assumption to make, also from the outset, is that students don't always--sometimes rarely--have the self-direction and discipline to correct skill deficiencies which they have upon arrival at college. They must be afforded little leeway when it comes to independent study and academic remediation.

A related issue concerns the theory of mastery learning. Although it appeared that developmental

learning labs generally predicated study plans on specific objectives and employed competency-based gateway testing, little evidence surfaced to indicate that mastery learning principles were followed in classrooms. An institutional reorientation toward the mastery learning philosophy, particularly in math and English departments, could pay dividends in overall CLAST preparedness. It is therefore recommended that senior administrators and academic departmental chairs explore this potentially important approach to learning.

Academic support systems to supplement classroom instruction are essential to successful basic skills remediation. Attendance should be mandatory, closely monitored and highly structured. Faculty participation in the support system is highly desirable in that the teachers, tutors and counselors must be unified in purpose and direction.

Academic guidance must be consistent and leave as little as possible to chance. Professional advising is probably the more effective mode, at least as it pertains to developmental education. If, for reasons of economy, faculty advising is necessary, it behooves college administrations to continually strive to ensure that students receive objective, rigidly standardized information. Executive-level administrators should

establish basic skills development as a permanent part of their managerial agendas. It is essential that students, as well as faculty and support staff, know what the standards are, how they will be measured and the consequences of substandard performance.

Teaching faculty must be apprised of an important fact: accountability has two basic facets, effective teaching and conscientious evaluation. Unless teachers are held accountable for accurate student evaluations, the students and the supporting society are deceived. Grade inflation is an inevitable result of the absence of evaluation accountability because of the collective mores of modern American education. In that regard, when educational managers avoid using available tools to enhance the educational process, they simply are engaging in nonfeasance. Until that assertion is generally accepted, the legislative goal in establishing minimum competency testing will not be accomplished.

Implications for Further Study

The obvious limitations of this study are hereby acknowledged. Derivative opinions, such as those solicited of departmental chairs concerning faculty attitudes, are admittedly not likely to be as accurate as first person perspectives. If resources are available, any researcher wishing to pursue that line of

investigation should attempt to tap original sources. Also, since departmental chairs are quasi-administrators, their perceptions of both faculty and senior administrator values, priorities and attitudes are prone to distortion.

Insufficient attention to the role of institutional research was made in this study. It belatedly became apparent that much greater potential insight could have been gained by a comprehensive survey of that subpopulation. Future research of institutional effectiveness and responsiveness should attempt to mine that resource.

On the positive side, it should be noted that an untraditional research approach can pay dividends if conducted methodically and with a solid sense of direction. And, of course, it's a substantial advantage to select educators as the study population. Participants in this project were cooperative to such a degree that, should any benefit derive from the study, Florida Educators must be acknowledged as the benefactors.

APPENDIX I

TECHNICAL ASPECTS OF THE FLORIDA COLLEGE-LEVEL ACADEMIC SKILLS TEST

As of August, 1989, the CLAST was comprised of four subtests: objective tests in reading, writing and computation plus a subjective essay. Beginning with the October, 1989 test administration, scaled cut scores were established at 298 for writing, at 295 for reading and at 285 for mathematics. The three subtests respectively consisted of 34, 36 and 50 items, therefore minimum raw scores of 27, 25 and 29 were required for passing certification. The essay is holistically scored by two professional graders. Each grader assigns a score of from four to one points, with respective values roughly equivalent to letter grades A, B, C, and D. An individual student's composite essay grade may therefore range from 2 to 8 points. The minimum essay score needed to pass as of 1989 was 4, however the minimum is scheduled to be raised to 5 during 1990.

Outlined below are the generic, categorical and specific skills measured by the CLAST. The skills were originally identified by teams of English, mathematics and reading faculty members from universities and colleges throughout the state.

GLOBAL COMPETENCY: Computations

Generic Competencies:

I. Algorithmic Processes
II Concepts
III. Generalization.
IV. Problem solving

Broad Skill Categories:
- A. Arithmetic
- B. Geometry & measurement
- C. Algebra
- D. Statistics, including probability
- E. Logical reasoning

Specific Skills:
- IA1a - Adds and subtracts rational numbers
- IA1b - Multiplies and divides rational numbers
- IA2a - Adds and subtracts rational numbers in decimal form
- IA2b - Multiplies and divides rational numbers in decimal form
- IA3 - Calculates percent increase and percent decrease
- IIA1 - Recognizes the meaning of exponents
- IIA2 - Recognizes the role of the base number in determining place value in the base-ten numeration system and in systems that are patterned after it.
- IIA3 - Identifies equivalent forms of positive rational numbers involving decimals, percents, and fractions
- IIA4 - Determines the order-relation between magnitudes
- IIA5 - Identifies a reasonable estimate of a sum, average, or product of numbers
- IIIA1- Infers relations between numbers in general by examining particular number pairs
- IIIA2- Selects applicable properties for performing arithmetic calculations
- IVA1 - Solves real-world problems which do not require the use of variables and which do not involve percent
- IVA2 - Solves real-world problems which do not require the use of variables and which do require the use of percent
- IVA3 - Solves problems that involve the structure and logic of arithmetic

IB1 - Rounds measurements to the nearest given unit of the measuring device
IB2a - Calculates distances
IB2b - Calculates areas
IB2c - Calculates volumes
IIB1 - Identifies relationships between angle measures
IIB2 - Classifies simple plane figures by recognizing their properties
IIB3 - Recognizes similar triangles and their properties
IIB4 - Identifies appropriate types of measurement of geometric objects
IIIB1- Infers formulas for measuring geometric figures
IIIB2- Identifies applicable formulas for computing measures of geometric figures
IVB1 - Involves real-world problems involving perimeters, areas, and volumes of geometric figures
IVB2 - Solves real-world problems involving the Pythagorean property
IC1a - Adds and subtracts real numbers
IC1b - Multiplies and divides real numbers
IC2 - Applies the order-of-operations agreement to computations involving numbers and variables
IC3 - Uses scientific notation in calculations involving very large or very small measurements
IC4 - Solves linear equations and inequalities
IC5 - Uses given formulas to compute results when geometric measurements are not involved
IC6 - Finds particular values of a function
IC7 - Factors a quadratic expression
IC8 - Finds the roots of a quadratic equation
IIC1 - Recognizes and uses properties of operations
IIC2 - Determines whether a particular number is among the solutions of a given equation or inequality
IIC3 - Recognizes statements and conditions of proportionality and variation
IIC4 - Recognizes regions of the coordinate plane which corresponds to specific conditions
IIIC1- Infers simple relations among variables
IIIC2- Selects applicable properties for solving equations and inequalities
IVC1 - Solves real-world problems inviting the use of variables, aside from commonly used geometric formulas

IVC2 - Solves problems that involve the structure and logic of algebra
ID1 - Identifies information contained in bar, line and circle graphs
ID2 - Determines the mean, median, and mode of a set of numbers
ID3 - Counts subsets of a given set
IID1 - Recognizes properties and interrelationships among the mean, median, and mode in a variety of distributions
IID2 - Chooses the most appropriate procedures for selecting an unbiased sample from a target population
IID3 - Identifies the probability of a specific outcome in an experiment
IIID1- Infers relations and makes accurate predictions from studying particular cases
IVD1 - Solves real-world problems involving the normal curve
IVD2 - Solves real-world problems involving probabilities
IE1 - Deduces facts of set-inclusion or non-inclusion from a diagram
IIE1 - Identifies simple and compound statements and their negations
IIE2 - Determines equivalence or nonequivalence of statements
IIE3 - Draws logical conclusions from data
IIE4 - Recognizes that an argument may not be valid even though its conclusion is true
IIIE1- Infers valid reasoning patterns and expresses them with variables
IIIE2- Selects applicable rules for transforming statements without affecting their meaning
IVE1 - Draws logical conclusions when facts warrant them

GLOBAL COMPETENCY: Communications

Generic Competency: Reading

Broad Skill Categories:
A. Literal comprehension
B. Critical comprehension

Specific Skills:
A1 - Recognizes main ideas in a given passage
A2 - Identifies supporting details
A3 - Determines meanings of words on the basis of context

B1 - Recognizes the author's purpose
B2 - Identifies author's overall organizational pattern
B3 - Distinguishes between statements of fact and statements of opinion
B4 - Detects bias
B5 - Recognizes author's tone
B6 - Recognizes explicit and implicit relationships within sentences
B7 - Recognizes explicit and implicit relationships between sentences
B8 - Recognizes valid arguments
B9 - Draws logical inferences and conclusions

GLOBAL COMPETENCY: Communications

Generic Competency: Writing

Broad Skill Categories:
B1: Word choice
B2: Sentence structure
B4;B5: Spelling, capitalization, punctuation

Specific Skills:
B1a - Uses words which convey the denotative and connotative meanings required by context
B1c - Avoids wordiness
B2a - Places modifiers correctly
B2b - coordinates and subordinates sentence elements according to their relative importance
B2c - Uses parallel expressions for parallel ideas
B2d - Avoids fragments, comma splices, and fused sentences
B4a - Uses standard verb forms
B4b1- Maintains agreement between subject and verb
B4b2- Maintains agreement between pronoun and antecedent
B4c - Uses proper case forms
B4e - Uses adjectives and adverbs correctly
B5a - Uses standard practices for spelling
B5b - Uses standard practices for punctuation
B5c - Uses standard practices for capitalization

APPENDIX II

FLORIDA PUBLIC COMMUNITY COLLEGES: INSTITUTIONS ABBREVIATIONS, COUNTY SERVICE AREAS AND 1987-1988 ENROLLMENTS

Abbreviations	Identities, Main Campuses, County Service Areas	FTE (size rank)*
BREV	Brevard C.C. Cocoa (Brevard)	8075 (5)
BROW	Broward C.C. Ft. Lauderdale (Broward)	9743 (3)
CENT	Central Florida C.C. Ocala (Marion, Citrus, Levy)	2491 (18)
CHIP	Chipola J.C. Marianna (Jackson, Calhoun, Holmes, Liberty, Washington)	1147 (24)
DAYT	Daytona Beach C.C. Daytona Beach (Volusia, Flagler)	7004 (8)
EDIS	Edison C.C. Ft. Myers (Lee, Charlotte Collier, Glades, Hendry)	3108 (16)
FJAX	Florida C.C. at Jacksonville Jacksonville (Duval, Nassau)	12,798 (2)
FKEY	Florida Keys C.C. Key West (Monroe)	777 (28)
GCCC	Gulf Coast C.C. Panama City (Bay, Gulf, Franklin)	2445 (19)
HILL	Hillsborough C.C. Tampa (Hillsborough)	6562 (9)
IRCC	Indian River C.C. FT. Pierce (St. Lucie, Indian River, Martin, Okeechobee)	5462 (13)

LCCC	Lake City C.C. Lake City (Columbia, Baker, Dixie, Gilchrist, Union)	1719 (23)
LSUM	Lake - Sumter C.C. Leesburg (Lake, Sumter)	899 (26)
MANT	Manatee C.C. Bradenton (Manatee, Sarasota)	3632 (14)
MDCC	Miami - Dade C.C. Miami (Dade)	26,363 (1)
NFLA	North Florida J.C. Madison (Madison, Hamilton, Taylor, Lafayette, Suwanee)	860 (27)
OWCC	Okaloosa - Walton C.C. Niceville (Okaloosa, Walton)	2273 (20)
PBCC	Palm Beach C.C. Lake Worth (Palm Beach)	6373 (10)
PHCC	Pasco - Hernando C.C. Dade City (Hernando, Pasco)	1879 (22)
PENS	Pensacola J.C. Pensacola (Escambia, Santa Rosa)	7299 (7)
POLK	Polk C.C. Winter Haven (Polk)	2496 (17)
SJCC	St. Johns River C.C. Palatka (Putnam, Clay, St. Johns)	1110 (25)
PETE	St. Petersburg J.C. St. Petersburg (Pinellas)	8547 (4)
SANT	Santa Fe C.C. Gainesville (Alachua, Bradford)	5747 (12)
SEMI	Seminole C.C. Sanford (Seminole)	5970 (11)
SFLA	South Florida C.C. Avon Park (Highlands, De Soto, Hardee)	1959 (21)

TALL	Tallahassee C.C. Tallahassee (Leon, Gadsden, Wakulla)	3538 (15)
VALE	Valencia C.C. Orlando (Orange, Osceola)	7333 (6)

*FTE=A&P, vocational and continuing education

APPENDIX III

COVER LETTER FOR QUESTIONNAIRES MAILED TO MATH AND ENGLISH CHAIRS AT FLORIDA PUBLIC COMMUNITY COLLEGES May, 1989

Dear_____:

I am a student in the College of Education at the University of Nevada, Las Vegas. I am currently researching innovative community college responses to legislative mandates.

Frankly, I need your help. In your current position you have a unique perspective on how the CLASP challenge was met. Please take a few minutes to share with me your views on postsecondary competency testing in Florida. A response form and a self-addressed, stamped envelope are included.

Thank you for your consideration.

Sincerely,

Glenn Rogers

APPROVED:

Carl Steinhoff, Chair,
Department of Educational Administration
and Higher Education

APPENDIX IV

WRITTEN SURVEY: MATH AND ENGLISH DEPARTMENT CHAIRS AT FLORIDA PUBLIC COMMUNITY COLLEGES

1. Is minimum competency testing of basic skills appropriate at the college level? _____yes _____no

2. Is the CLASP mandate necessary primarily because minimum competency certification at the secondary level has failed?
____yes ____no ____no opinion

3. What level of impact has the CLASP had on your department?
_____significant _____moderate _____slight _____none

4. Did the CLASP induce teaching reassignments in your department, i.e., were teachers with certain attributes designated to teach courses which address CLAST competencies? ____yes ____no

5. At what priority level do senior administrators at your college view student performances on the CLAST?
____ exceptionally ____moderately ____relatively ____low
high high low

6. Have curricular changes been made in your department because of the CLASP mandate? _____yes _____no

If yes, briefly note the changes:_____

_____

7. Which of the below statements best characterizes the collective view of your department's faculty when CLASP was introduced?

_____Most or all were opposed to CLASP because of student-based concerns.

_____Most or all were opposed, primarily based on concerns about the potential for faculty disruption.

_____Most were relatively unconcerned, either positively or negatively.

_____Most were in favor of CLASP because of the expected increase in value & credibility of Florida's academic standards.

_____Most were in favor of CLASP because the external competency testing mandate would reduce course grade inflation.

_____Remarks (if necessary):_____

_____

8. How would you describe the current collective faculty attitude toward the CLASP?

_____Basically favorable _____Basically unfavorable

What is their fundamental rationale for that position?

_____

_____

9. In what context do you typically become aware of senior administrator views regarding institutional responses to the CLASP mandate?

_____ Concern is expressed on a continual basis, but more in form than in substance.

_____ Concern is only evident when publicity acts as a catalyst, i.e., concurrent with public release of aggregate CLAST scores.

_____ Concern is continual and often includes additional resource allocations.

_____ There is rare or infrequent evidence of concern.

_____ Concern is expressed in ways not adequately covered in the above characterizations. (Please explain):_____

_____

10. Which group in the college has <u>primary</u> responsibility for ensuring the greatest possible number of students master CLAST competencies?

_____ The Academic departments.

_____ Student Services

_____ Other (please specify):_____

_____ No identifiable group has primary responsibility; the college faculty as a body is "CLAST-conscious."

11. In what ways have senior administrators used aggregate CLAST results as management tools, either explicitly or implicitly?

_____ In faculty development decisions.
_____ In performance evaluations.
_____ As the basis for motivational initiatives.
_____ As a basis for resource allocations.
_____ For promotional purposes, i.e., as evidence of institutional accomplishments.
_____ Other (Please identify):_____
_____

12. What is your most notable innovation designed to increase student mastery of CLAST competencies?

_____

13. Minimum competency testing programs are implicitly based on teaching concepts such as mastery learning, variously known as outcomes-based education and competency-based education. Has your faculty incorporated mastery learning principles into courses which emphasize CLAST competencies? _____yes _____no

If yes, please briefly note how mastery learning was implemented:_____

14. How many years have you been in your current position?

_____

15. How long were you in the Department prior to assuming your current position? _____

Thank you for participating in the study. Your time and candor will help fellow educators apppreciate the complexities of MCT at the college level.

APPENDIX V

LETTER OF INTRODUCTION TO SENIOR ACADEMIC ADMINISTRATORS AT FLORIDA PUBLIC COMMUNITY COLLEGES

May 18, 1989

Dear_____,

This letter is to introduce Glenn Rogers, a graduate student in our College of Education. Glenn is currently working on a study of college outcomes assessment, a topic of intense interest within the national academic community.

As a former faculty member at Gulf Coast Community College, Glenn is familiar with certain aspects of the Florida College-Level Academic Skills Program, but we agree that an essential dimension to this study will focus on the perspectives of senior academic administrators.

I wholeheartedly endorse Glenn's study and hope you will take a few minutes to share with him your viewpoints and unique knowledge. He will call within the next two weeks to arrange a convenient time for a telephone interview.

Thank you for contributing to a worthy research initiative.

Sincerely,

Carl Steinhoff, Chair
Department of Educational Administration
and Higher Education

APPENDIX VI

TELEPHONE INTERVIEW SCHEDULE: SENIOR ACADEMIC ADMINISTRATORS

Name:_____

Title:_____

College:_____

Introduction Checklist:
--Grad Student at UNLV
--Steinhoff's letter
--Purpose of study
--Scope of interview
--Delphi technique

1. Which Florida community colleges are particularly successful in preparing students for success on the CLAST?

2. What criteria did you use for your selection?

3. What is the most significant instructional innovation you have implemented which is designed to improve performance on the CLAST?

4. How did it develop? (Prompts: Top-down, faculty, joint)

5. What resource reallocations were necessitated by the innovation? (Probe: funds, new hires, material)

6. How successful has it been? (Probes: measured?
compared?
evaluated?

7. What other CLASP-related program initiatives have you implemented?

8. How have CLAST results been used as management tools?
(Probes: accountability, faculty development, personnel decisions, program evaluation)

9. Do you conduct CLASP-related research at the institutional level?

10. Have mastery learning principles been incorporated into courses which concentrate on CLAST competencies?
(Probe: Competency-based education, outcomes-based education)

11. How long have you been in your current position?

_____

12. How long have you been at this college?

APPENDIX VII

LETTERS OF EVALUATION FROM EXPERT PANEL MEMBERS PERTAINING TO VALIDITY ASSESSMENTS OF SURVEY DATA COLLECTION INSTRUMENTS

Dr. Lewis Baber
Dean of Career Education
Gulf Coast Community College
Panama City, FL

Dr. Judith Costa
Coordinator of Testing, Research and Development
Clark County School District
Las Vegas, NV

Mr. Robert Jones
Chairman, Faculty of Technology
Gulf Coast Community College
Panama City, FL

Mr. William Sale
Chairman, Faculty of Social Sciences
Gulf Coast Community College
Panama City, FL

Dr. Betty Scott
Director of Institutional Research and Staff Development
Clark County Community College
Las Vegas, NV

Mrs. Pamela Whitelock
Dean of Lifelong Learning
Gulf Coast Community College
Panama City, FL

The Math and English Faculty Chair Questionnaire was evaluated by Costa, Jones, Sale and Scott. The Senior Administrator Telephone Interview Schedule was evaluated by Baber, Costa, Scott and Whitelock.

Gulf Coast Community College

5230 West U.S. Highway 98
Panama City, Florida 32401-1041
(904) 769-1551

Dean of Career Education

December 11, 1989

Mr. Glenn Rogers
5793 Queenstown Way
Las Vegas, Nevada 89110

Dear Glenn:

I read your research questions and telephone interview schedule. It is my judgement that the interview guide is valid and adequate to obtain answers which pertain to research questions one through four and six through nine. Furthermore, solicitation of opinions about "successful" colleges should provide insights about senior administrator perceptions of how the various institutions are performing.

Sincerely,

Lewis E. Baber
Dean of Career Education

LEB/bp

CLARK COUNTY SCHOOL DISTRICT

2832 EAST FLAMINGO ROAD LAS VEGAS, NEVADA 89121 TELEPHONE (702) 799-5011
FAX 799-5063

December 8, 1989

Glenn Rogers
5793 Queenstown Way
Las Vegas, NV 89110

Dear Mr. Rogers:

This is a formal reply, per your request, covering informal discussions we had during the spring of 1989 concerning your dissertation study of college competency testing in Florida.

I have reviewed your research questions, written survey instrument, and telephone interview guide. In my professional opinion the survey questions are clearly written, concise, and directly pertinent to your research questions. Similarly, the telephone interview guide appears to be well-constructed and germane to your research goals.

Do note, however, that whereas telephone and personal interviews are powerful techniques for development of new information, rigid discipline in recording information is essential for controlling bias. Some researchers trust their own memories to preserve subtle interview nuances and invariably lose important data in the process.

Let me know if I may be of further assistance.

Sincerely,

Judith S. Costa

Judith S. Costa, Ed.D.
Coordinator of Testing
Research and Development

JC:sm

Gulf Coast Community College

5230 West U.S. Highway 98
Panama City, Florida 32401-1041
(904) 769-1551

Division of Technology

December 12, 1989

Glenn E. Rogers
Department of Educational Administration
and Higher Education
University of Nevada, Las Vegas
Las Vegas, NV 89154

Dear Mr. Rogers,

This is a formal follow-up to our previous discussions concerning your study of institutional responses to the Florida College-Level Academic Skills Program. As you know, I have been a Division Faculty Chair since before the inception of CLASP and have an appreciation of both the importance and the impact of the program. I believe your study has potential for practical application if it helps provide operational insights about how our colleges can better prepare students to master basic academic skills.

I have reviewed your research questions and the survey questionnaire. The questionnaire is certainly straightforward and unambiguous and, were I in your survey population, would have no difficulty in either understanding or responding. The structure is rigid where necessary and flexible when desirable to elicit new information. It occurred to me that the questionnaire designed to survey departmental chairpersons will not generate information which addresses all your research questions, but upon reflection I recall that you are separately interviewing administrators and perhaps other college employees. In my opinion that is an adequate way to both answer your research questions and enhance validity through triangulation of methods.

I hope my observations contribute to your study and best wishes for success.

Sincerely,

Robert C. Jones, Chairman
Technology Division

RCJ:skg

Gulf Coast Community College

5230 West U.S. Highway 98
Panama City, Florida 32401-1014
(904) 769-1551

Division of Social Sciences

December 20, 1989

Glenn Rogers
Department of Educational Administration
and Higher Education
University of Nevada, Las Vegas
4505 S. Maryland Parkway
Las Vegas, NV 89154

Dear Mr. Rogers:

I have reviewed your survey questionnaire within the context of your stated research objectives (questions) and believe they constitute a valid means of eliciting the desired data.

Sincerely,

William F. Sale

William F. Sale
Chair, Social Sciences

WFS:dr

DR. BETTY SCOTT
532 COLLEGE DRIVE #826
HENDERSON, NV 89015

Mr. Glenn Rogers
5793 Queenstown
Las Vegas, NV 89110

December 12th, 1989

Dear Mr. Rogers:

I have reviewed the two surveys prepared for use as part of your dissertation project:

Telephone Survey: Senior Academic Administrators

and

Written Survey: Math & English Department Chairs at Florida Public Community Colleges.

The questions satisfactorily address your nine proposed research hypothoses and, therefore, I feel the study will provide substantial valuable data.

Sincerely,

Betty Scott

Betty Scott

Gulf Coast Community College

5230 West U.S. Highway 98
Panama City, Florida 32401-1014
(904) 769-1551

Office of Lifelong Learning

December 11, 1989

Glenn Rogers
5793 Queenstown Way
Las Vegas, NV 89110

Dear Mr. Rogers:

I am responding to your request for an assessment of your interview protocol designed to elicit information about the CLAST from community college administrators.

I believe the interview protocol is a valid tool to generate the information you need to answer most of your research questions. Furthermore, I am convinced your proposed semi-structured approach of telephone interviews is far more likely to be productive with regard to senior administrators than would be a written survey. As an administrator myself, I can attest to the many requests for research assistance which, because of time constraints, simply cannot always be honored.

I wish you much success in your academic endeavors, particularly with regard to the CLAST study. I am sure you are aware of how critical an issue increased CLAST standards is to our state, to our open door--value added philosophy.

Sincerely,

Pamela L. Whitelock
Dean

APPENDIX VIII

COLLEGE PREPARATORY TESTING, PLACEMENT AND INSTRUCTION IN FLORIDA POSTSECONDARY EDUCATION

Rule 6A-10.0315, Florida Administrative Code, specifies that all first-time-in-college applicants for admission to community colleges and universities shall be tested using one or more of the below-listed instruments, and shall enroll in college-preparatory communication and computation instruction if the test scores are below those listed:

ACT Assessment, American College Testing Program:

Reading	14	Composite Standard Score
Writing	14	English Usage Standard Score
Math	13	Mathematics Usage Standard Score

ASSET, American College Testing Program:

Reading	22	Raw Score
Writing	43	Raw Score
Math	12	Elementary Algebra Raw Score

MAPS, College Entrance Examination Board:

Reading	12	Scaled Score
Writing	30	Test of Standard Written English, Scaled
Math	206	Elementary Algebra, Scaled

SAT, College Entrance Examination Board:

Reading	340	Verbal Standard Score
Writing	30	Test of Standard Written English
Math	400	Mathematics Standard Score

Nothing provided in this rule will prevent the enrollment of a student in college preparatory instruction if the institution determined that enrollment would enhance the student's opportunity for future academic success. Counseling with the student and other assessment techniques may be used in such determinations.

MAPS, Multiple Assessment Programs and Services, includes a 35 question (30 minutes) elementary algebra test, a test of Standard Written English with 50 questions (30 minutes), and a 35 question (25 minutes) reading test.

ASSET, Assessment of Skills for Successful Entry and Transfer, includes a writing test of 36 items, a 24 item reading test and an elementary algebra test of 25 items. Twenty-five minutes are allowed for completion of each test.

MAPS, ASSET and the ACT ASSESSMENT are all aptitude test batteries which can be administered on an ad hoc basis and locally scored. Thus they are the tests of choice of Florida community colleges. The ACT ASSESSMENT is comprised of four subtests: English, mathematics, reading and science reasoning; the science test is not used for placement purposes. The English subtest is 75 objective items; 45 minutes are allowed for completion. The math test is 60 items and 60 minutes are allowed. The reading test is 40 items and takes 35 minutes.

The Scholastic Aptitude Test, used primarily as an admissions tool by universities, is employed by community colleges for placement purposes. Rule 6A-10.0315, FAC, stipulates that all public postsecondary institutions in the state must accept scores attained on any of the four approved instruments, provided the scores are not more than three years old.

Placement tests of choice of Florida community colleges in school year 1986-87 were:

ACT Assessment	ASSET	MAPS	SAT
CENT	BREV	DAYT	
CHIP	BROW	FJAX	
EDIS	LSUM*	GCCC	
FKEY	OWCC	HILL	
IRCC	VALE	LSUM*	
LCCC		MDCC	
MANT		PHCC	
NFLA		PENS	
PBCC		POLK	
SJCC		PETE	
SANT		SFLA	
SEMI		TALL	

*LSUM used ASSET for reading & writing placement and MAPS for mathematics.

APPENDIX IX

COURSE DESIGNATIONS IN FLORIDA PUBLIC INSTITUTIONS OF POSTSECONDARY EDUCATION

A necessary element in Florida's statewide agreement on college credit transfer is the common course numbering system which has been in legal force since 1978. Rule 6A10.24(7) of the Florida Administrative Code specified that all 37 state postsecondary education institutions are obligated to recognize and accept for transfer courses which have been categorized and assigned common designators by a statewide task force. The system applies only to undergraduate courses and exempts independent studies, internships, practicums and art performance courses. The course numbering system is similar to a library classification coding in that new disciplines and subdisciplines may be added over time without disrupting the existing schema.

The key to the system is the course codes rather than the course names. ENC1101, for example, is accepted as essentially the same course at two institutions even though one is referred to as "English composition I" and the other is termed "Freshman English." Since implementation of the common course numbering system, the number of course

prefixes has been substantially reduced. English, for instance, has been reduced from 39 to six and math has been distilled from 50 to 10.

The first digit of the numerical suffix merely denotes the academic year in which a given course is typically taken at a particular institution. MGF1207, Finite Mathematics, offered at one college is equivalent to MGF2207 at another, the initial digit merely indicating that the course is usually taken in the (1) freshman or (2) sophomore year.

APPENDIX X

CLAST RESULTS
FLORIDA PUBLIC COMMUNITY COLLEGES
PERCENT PASSING ALL SUBTESTS
1986 - 1987

Panhandle:	
CHIP	88.3
GCCC	90.3
NFLA	85.0
OWCC	86.7
PENS	80.6
TALL	82.4
Crown:	
CENT	85.4
FJAX	81.3
LCCC	89.9
SJCC	89.1
SANT	83.6
South:	
BROW	83.8
FKEY	77.6
MDCC	71.7
PBCC	77.3

East Central:	
BREV	86.2
DAYT	80.7
IRCC	94.1
LSUM	92.7
SEMI	88.1
VALE	81.4
West Central:	
EDIS	85.1
HILL	88.8
MANT	85.7
PHCC	89.4
POLK	85.6
PETE	86.1
SFLA	84.0

State Average: 82.1

APPENDIX XI

CLAST RESULTS
FLORIDA PUBLIC COMMUNITY COLLEGES
PERCENT PASSING ALL SUBTESTS
1987 - 1988

Panhandle:

CHIP	87
GCCC	90
NFLA	73
OWCC	85
PENS	76
TALL	84

Crown:

CENT	78
FJAX	82
LCCC	83
SANT	81
SJCC	90

South:

BROW	79
FKEY	82
MDCC	67
PBCC	79

East Central:

BREV	83
DAYT	82
IRCC	94
LSUM	90
SEMI	89
VALE	81

West Central:

EDIS	85
HILL	84
MANT	83
PHCC	90
POLK	83
SFLA	83
PETE	86

State Average: 80

APPENDIX XII

CLAST RESULTS
FLORIDA PUBLIC COMMUNITY COLLEGES
MATH SUBTEST
MEAN SCORES AND PERCENT PASSING
1986 - 87 and 1987 - 88

1986-87			1987-88	
College	Percent Pass	Mean Score	Percent Pass	Mean Score
CHIP	93.6	311	96	317
GCCC	96.6	315	98	318
NFLA	92.9	308	88	303
OWCC	92.4	310	93	313
PENS	88.7	307	88	306
TALL	92.3	306	94	308
BREV	93.1	311	91	309
DAYT	88.8	306	92	308
IRCC	99.0	327	99	330
LSUM	97.2	316	97	316
SEMI	96.3	314	98	319
VALE	92.7	306	93	308
BROW	93.8	308	93	307
FKEY	93.4	309	93	307
MDCC	91.2	310	87	308
PBCC	88.6	304	89	305
CENT	90.6	305	86	304
FJAX	91.8	308	92	307
LCCC	95.3	308	92	305
SJCC	94.8	308	91	306
SANT	91.7	307	97	316
EDIS	91.7	306	90	306
HILL	98.1	319	95	316
MANT	91.4	308	92	309
PHCC	98.2	317	97	322
POLK	94.7	313	93	314
PETE	92.9	310	93	311
SFLA	85.5	309	90	306
STATE	92.4	309	92	309

APPENDIX XIII

CLAST RESULTS
FLORIDA PUBLIC COMMUNITY COLLEGES
WRITING SUBTEST
PERCENT PASSING AND MEAN SCORES
1986 - 87 and 1987 - 88

	1986-87		1987-88	
College	Percent Pass	Mean Score	Percent Pass	Mean
CHIP	96.8	322	98	320
GCCC	98.3	325	99	326
NFLA	98.2	322	93	310
OWCC	97.7	325	99	325
PENS	94.8	321	96	320
TALL	95.5	316	97	316
BREV	96.5	320	96	318
DAYT	94.8	318	98	320
IRCC	99.5	336	100	332
LSUM	100	328	99	329
SEMI	95.0	318	97	319
VALE	95.3	316	96	316
BROW	95.9	314	97	316
FKEY	92.1	323	93	323
MDCC	91.3	308	92	307
PBCC	93.9	315	96	318
CENT	97.5	326	96	318
FJAX	96.2	321	97	320
LCCC	97.6	320	98	320
SJCC	98.2	320	97	318
SANT	95.9	316	99	325
EDIS	97.3	321	97	325
HILL	96.2	320	97	320
MANT	96.0	321	97	321
PHCC	98.2	322	97	324
POLK	95.2	317	98	319
PETE	96.5	320	98	322
SFLA	97.1	324	97	321
STATE	95.2	317	96	317

APPENDIX XIV

CLAST RESULTS
FLORIDA PUBLIC COMMUNITY COLLEGES
READING SUBTEST
PERCENT PASSING AND MEAN SCORES

College	1986-87 Percent Pass	Mean Score	1987-88 Percent Pass	Mean
CHIP	93.6	315	94	311
GCCC	95.1	319	95	317
NFLA	92.9	314	90	303
OWCC	96.2	322	95	314
PENS	91.2	315	92	308
TALL	93.5	310	93	307
BREV	95.5	319	94	312
DAYT	94.1	316	94	311
IRCC	97.7	322	97	318
LSUM	96.3	321	98	323
SEMI	95.2	316	97	316
VALE	90.9	312	91	309
BROW	92.6	312	92	306
FKEY	93.4	317	90	316
MDCC	84.6	300	84	299
PBCC	90.8	311	92	311
CENT	96.1	317	94	311
FJAX	90.5	314	92	311
LCCC	96.8	316	93	310
SJCC	97.1	316	92	310
SANT	92.7	313	98	315
EDIS	93.6	315	96	312
HILL	93.6	315	92	311
MANT	93.5	316	94	310
PHCC	96.4	320	97	317
POLK	93.5	314	93	309
PETE	95.8	319	96	316
SFLA	100	318	95	309
STATE	91.9	312	92	309

APPENDIX XV

CLAST RESULTS
FLORIDA PUBLIC COMMUNITY COLLEGES
ESSAY SUBTEST
PERCENT PASSING AND MEAN SCORES

College	1986-87 Percent Pass	Mean Score	1987-88 Percent Pass	Mean
CHIP	95.2	5.3	95	5.1
GCCC	96.3	5.3	95	5.2
NFLA	94.7	4.9	86	4.5
OWCC	95.8	5.2	94	4.9
PENS	92.2	4.9	91	4.7
TALL	93.8	5.2	93	4.9
BREV	93.9	5.1	92	4.9
DAYT	93.9	5.1	92	5.0
IRCC	96.3	5.4	97	5.3
LSUM	95.4	5.4	95	5.2
SEMI	94.2	5.1	93	5.1
VALE	93.4	5.1	92	4.9
BROW	93.1	5.0	90	4.8
FKEY	88.1	5.0	92	4.9
MDCC	85.9	4.6	82	4.4
PBCC	91.2	4.8	90	4.8
CENT	95.5	5.1	92	4.9
FJAX	93.0	5.0	91	4.9
LCCC	96.1	5.1	93	4.7
SJCC	96.5	5.2	92	4.9
SANT	95.2	5.1	94	4.9
EDIS	95.0	5.2	95	5.1
HILL	94.5	5.1	91	4.9
MANT	95.6	5.2	93	4.9
PHCC	95.3	5.2	95	5.1
POLK	94.2	4.9	91	4.8
PETE	94.1	5.2	94	5.1
SFLA	100	5.3	94	4.8
STATE	92.6	5.0	90	4.8

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