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A STUDY OF THE RELATIONSHIP BETWEEN FOUR SELECTED STUDENT ATTRIBUTE VARIABLES AND ACADEMIC SUCCESS IN A PERFORMANCE-BASED ENGLISH PROGRAM AT A PRIVATE LIBERAL ARTS COLLEGE

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy in the Graduate School of The Ohio State University

By
Patricia Ann Hampton Brooks, B.A.

The Ohio State University 1976

Reading Committee: Approved by
Dr. John Hough, Chairman
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ABSTRACT
This study investigated the relationship between the student attribute variables of: (a) sex, (b) academic capability, (c) perceptions of locus of control and (d) evaluative tone, and successful performance in a performance-based program in freshman English at a small liberal arts college.

The sample consisted of sixty-eight of the 75 students who were still enrolled in the college during their sophomore year and on whom data for the attribute and dependent variables were available. Academic capability was operationally defined in terms of a student's: American College Test English score, Pretest score for each of the modules of the performance-based program, the student's total high school grade point average and the student's high school grade point average in English. Perception of locus of control was operationally defined as the student's score on the Rotter Internal-
External Control Scale. Evaluative tone (similar to attitude) was operationally defined as a student's score on the Course Description instrument developed by Silberman and Allender. The dependent variable of academic success was operationally defined as the percentage of modules in the performance-based English program that were completed by a student out of the nine modules needed to be completed (based on the student's performance in module pretests).

Relationships between the attribute variables and the dependent variable were tested by means of product moment correlation and step-wise multiple regression techniques. In addition, evaluation data was tabulated and analyzed for trends in students' attitudes regarding aspects of the performance-based program and the administration of the program.

A significant relationship was found between student sex and successful performance in the program $r = .46$. Female students achieved greater academic success. Significant relationships were also found between student PBC Pre-test Scores $r = .49$, ACT English Scores $r = .46$, high school English grade point averages, $r = .44$ and total high school grade point average $r = .42$ and the dependent variable of academic success. Evaluative tone and locus of control were not found to be related to academic success. In the step-wise multiple regression 40 percent of the variance was attributed to the students' PBC pretest scores and their sex. The remaining six steps accounted for only nine percent of the remaining accountable variance.
An analysis of evaluative tone data showed that in general students responded negatively to the performance based program and the program's administration.

Conclusions were drawn that the program was most effective for female students who had already mastered a substantial amount of the content to be taught as measured by PBC pretest scores.

Recommendations for program revision and additional research are made on the basis of the findings of the study.
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CHAPTER I

INTRODUCTION

Statement of the Problem

A potential problem faced by all who are responsible for Competency-Based educational programs in higher education is that of developing programs and program components that can accommodate students with different human attributes, so that, given reasonable effort on their part, students can experience success. This is a problem of importance because, though the development of such programs may be a goal, the goal is often difficult to attain. A poor match between student attributes and program and/or program component characteristics can result in the failure of some students to succeed. In other cases, the design of program components themselves may inadvertently result in general student inability to achieve academic success.

Therefore, using the conceptual frame of reference mentioned above, the purpose of this study was to investigate the relationship between four sets of student attribute variables: (1) sex, (2) academic capability,
(3) locus of control, and (4) evaluative tone and academic success in the Performance-Based Composition program at the college where this study was conducted.

Through the investigation of this problem it is hoped that such relationships that may exist that relate to student academic success may be identified so as to provide an empirical basis for program and/or program component revision that will better accommodate students. A second related problem that was investigated was the nature of program components that may be identified as ones with which students in general have difficulty regardless of their particular attributes. Finally, as a result of ascertaining the students' reactions to the Performance-Based Composition program, it is hoped that this information will prove useful in making program and/or program component revisions.

Background of the Problem

Although Competency-Based Teacher Education programs exist to some degree in many colleges and departments of education across the nation, few Competency-Based Education programs exist in other subject matter fields. Yet, there is some reason to believe that other subject matter
fields could profit from the adoption of certain basic tenets of the Competency-Based approach such as: (1) specifying exactly what is to be learned, (2) making public the criteria for evaluation, (3) allowing students to pre-test out of educational experiences that would teach competencies that students already possess, and (4) encouraging students to progress at their own rate.

Several factors seem to account for the reluctance of other disciplines to engage in the Competency-Based approach. In Performance-Based Teacher Education and the Subject Matter Fields, Michael F. Shurgue (1973) states:

Another objection to PBTE arises from the long standing academic distrust of reforms initiated by the educational establishment. Because it has been fostered by professional educators and directed almost exclusively at the professional preparation of teachers, PBTE could be subject to uniformed criticism from the liberal arts and sciences for 'anti-intellectualism, low academic standards, and the like.' (p. 5)

In "Limitations and Advantages of Behavioral Objectives in the Arts and Humanities," James Hoetker (1970) states:

I believe that our educational practices can be improved if teachers and administrators and curriculum writers begin to think about their work in terms of changes in student behaviors. But as a humanist, I also think that simple-minded insistence upon a priori
specification of all objectives in terms of conveniently observable behaviors does far more harm than good. (p. 50)

However, some leaders from fields other than teacher education are beginning to investigate and actively seek more viable methods of instruction and are looking to Competency-Based Education as a positive alternative. With regard to the humanities in particular, John Gerber (1972) of the University of Iowa, in an important address to his fellow English department chairmen, states the issue in the following way:

At the risk of sounding a bit like a behaviorist, I would suggest that our most pressing obligation at the moment is to redefine our goals in reasonably precise terms; that these goals be realizable ones that can be used as criteria for measuring the success or failure of our programs; and that they clearly relate to the needs of students and of society, as well as reflect our own deepest convictions. (pp. 7-8)

Views such as those stated by Gerber may help to further the acceptance of Competency-Based Education in other subject matter fields because, as Leon Lissinger (1970) asserts in "Accountability in Education":

When a student is able to demonstrate concretely what he has or has not learned, educators will be in a better position to judge where and why a program succeeds or fails and make the necessary changes to achieve success. (p. 1)
Definition of Terms

The terms which are presented below were defined in order to both clarify and facilitate the reader's understanding of their meaning as they were used in this study.

Academic capability is the intellectual ability of the student as measured by his American College Test (ACT) English score, high school grade point average, high school grade point average in English, and PBC Pretest scores.

Academic success is the percentage of modules completed in two years to fulfill requirements for Freshman English. The number of modules needed by each student is determined by his scores on the PBC Pretest.

Competency-Based Education ...in performance-based programs [Competency-Based] performance goals are specified, and agreed to, in rigorous detail in advance of instruction. The student must either be able to demonstrate his ability to promote desirable learning or exhibit behaviors known to promote it. He is held accountable, not for passing grades, but for attaining a given level of competency in performing the essential tasks... (Elam, 1971, p. 1).
Evaluation is the appraisal and assessment of the overall strengths and weaknesses of the PBC program.

Evaluative tone is the predominant value (positive or negative) and intensity of evaluative remarks made about the course (Silberman and Allender, 1974, p. 452).

External locus of control is a belief held by an individual when a reinforcement is perceived by the subject as following some action of his own but not being entirely contingent upon his action, then, in our culture, it is typically perceived as the result of luck, chance, fate as under the control of powerful others, or as unpredictable because of the great complexity of the forces surrounding him (Rotter, 1966, p. 1).

Extreme difficulty is the completion of none or less than fifty percent of the modules needed, as a result of the PBC Pre-test scores, to complete the PBC program.

High school average is the average of high school grades in English, Mathematics, Social Studies and Natural Science. It is computed using a four-point scale (A=4, B=3, C=2, D=1, F=0).

Impact is the extent to which a student indicates in his description that the course has contributed to personal change (Silberman and Allender, 1974, p. 452).
Internal locus of control is a belief held by an individual when the person perceives that the event is contingent upon his own behavior or his own relatively permanent characteristics (Rotter, 1966, p. 1).

Module is a unit of learning which includes a set of activities intended to facilitate the learner's achievement of a specific objective or a set of objectives. It is a relatively self-contained unit, designed for a specific purpose, and is a part of a broader, more comprehensive instructional system. Although modules vary widely in scope and in time commitment from one program to another, most modules include the following five parts: (1) rationale, (2) objectives, (3) pre-assessment, (4) enabling activities, and (5) post-assessment (Houston and Howsam, 1972, p. 10).

Performance-Based Composition Pre-test score is the composite score for the objective tests in the spelling, vocabulary, punctuation, and logic modules and the writing samples for the sentence, paragraph, essay, and writing as discovery modules. There is no pre-test for the research module. Students must achieve a mastery level of 80 percent to pre-test out of the modules utilizing the objective testing format and an evaluation of passing on
the pass-fail grading system utilizing the writing samples which are judged by the PBC program staff.

Reactions are the data produced by the Course Description developed by Silberman and Allender relative to the students' opinions regarding the Performance-Based Component program.

Sex is the identification of each subject in the study as being either male or female.

Statement of Hypotheses

In the process of investigating the problem in question, several hypotheses were tested. These hypotheses were stated in the null form to conform to the typical canons of research in which an inadequate theoretical and empirical base exists to suggest directional hypotheses.

The overall null hypotheses tested in this study was that no relationship exists between students' (1) sex, (2) academic capability, (3) locus of control, and (4) evaluative tone and their academic success in the Performance-Based Composition program at a private Black college.

Student academic capability was measured by the student's ACT English score, high school grade point average,
high school grade point average in English, and the PBC Pre-test composite score.

Student locus of control was measured by the Rotter Internal-External Control Scale (1966). Student evaluative tone was measured by the Course Description developed by Silberman and Allender (1974).

Student academic success in the Performance-Based Composition program was measured by the percentage of components (modules) completed by the end of the spring semester, 1976.

The following specific hypotheses were tested:

1. There is no significant relationship between students' sex and their academic success in the Performance-Based Composition program.

2. There is no significant relationship between students' academic capability and their academic success in the Performance-Based Composition program.

3. There is no significant relationship between students' locus of control and their academic success in the Performance-Based Composition program.

4. There is no significant relationship between students' evaluative tone and their academic success in the Performance-Based Composition program.
5. There is no significant multiple relationship between students' sex, academic capability, locus of control, and evaluative tone and their academic success in the Performance-Based Composition program.

In addition to the statistical testing of the above hypotheses, a descriptive analysis was performed to depict the students' general reactions to the Performance-Based Composition program.

**Significance of the Problem**

This study has potential significance for both the students and faculty of the private Black college investigated in this study as well as the broader educational community.

Recognizing that one of the characteristics of Performance-Based educational programs is that students can proceed within reason, at their own pace, the identification of variables associated with student progress (academic success) through the program should give valuable information about staff allocation principles and problems as they relate to faculty and student load at various points in the Performance-Based Composition program at the college where this study was conducted.
The identification of program components with which students in general may have difficulty could provide valuable information to the English department at the college investigated in this study that may suggest areas of needed program revision.

Information about student reactions to the Performance-Based Composition program at the college where this study was conducted should provide the faculty with valuable information on which future programmatic planning and decision making could be based.

Information about the relationships between selected student attributes and academic success with the program could provide a data base that could be used to support and counsel students as they proceed through the program.

Finally, to the extent that the Performance-Based Composition program and the students investigated in this study are representative of programs and students at other colleges, this study will have potential significance to the broader educational community. Furthermore, this study will be of particular importance to colleges that are planning on implementing a Performance-Based English program as well as colleges that already have a Performance-Based English program.
Limitations of the Study

The reader of this study should be aware of its major limitations. (1) Foremost, it will include as subjects only 68 students. Therefore, the validity of the generalizations of its findings is dependent upon the extent to which these subjects are representative of Black college sophomores, in particular, and college sophomores, in general. (2) Equally important is that the findings of this study are important insofar as the success in the PBC program is indeed a true measure of the student's ability with regard to his basic English skills. (3) Student levels of achievement on the ACT English Usage Test, high school GPA, and high school GPA in English may not adequately measure the student's capability in these areas. (4) Regarding the Rotter Internal-External Control Scale (1966), students may not answer truthfully, and therefore false information would have been obtained. (5) The Course Description developed by Silberman and Allender (1974) may not elicit from the students their true reactions to the PBC program because the instrument may be too unstructured to get the information needed, students may not be totally honest in their responses for fear of reprisal, lack of interest in the testing situation, or in the PBC program.
CHAPTER II

REVIEW OF RELATED LITERATURE

There were three areas of related literature which directly pertained to this study. The first area was that of Competency-Based Education in general. The second area was a subset of the first and dealt with Competency-Based Education in English. The third area dealt with the relationship between the four student attribute variables: (1) sex, (2) academic capability, (3) locus of control, and (4) evaluative tone and academic success in the Performance-Based Composition program investigated in this study.

Competency-Based Education

All too often in the field of education, new trends seem to come and go at an ever increasing rate. In order to more firmly establish the Competency-Based Education movement, educators who are concerned about the growth and permanence of Competency-Based Education are spending a great deal of time and effort on formulating a systematic approach for both the implementation of a CBE program and
on the learning modules in a CBE program. Also, in a more humanistic direction than some critics of the CBE movement would care to admit, the proponents of CBE are concerned about the students and how CBE can help to reduce negative psychological effects and thereby, hopefully, increase learning.

Elam (1971) in *Performance Based Teacher Education: What is the State of the Art?* provided a very adequate and detailed description of CBE/PBE. In August 1971, the American Association of Colleges for Teacher Education (AACTE) committee met to study the current status of performance based teacher education. Elam was asked to report on their deliberations and in his report he included three levels of description in this definition of CBE/PBE: (1) essential elements, (2) implied characteristics, and (3) related or desirable characteristics.

**Essential Elements**

There now appears to be general agreement that a teacher education program is performance-based if:

1. Competencies (knowledge, skills, behavior) to be demonstrated by the student are
   - derived from explicit conceptions of teacher roles,
stated so as to make possible assessment of a student's behavior in relation to specific competencies, and

made public in advance;

2. Criteria to be employed in assessing competencies are

- based upon, and in harmony with, specified competencies,
- explicit in stating expected levels of mastery under specified conditions and
- made public in advance;

3. Assessment of the student's competency

- uses his performance as the primary source of evidence,
- takes into account evidence of the student's knowledge relevant to planning for, analyzing, interpreting, or evaluating situations or behavior, and
- strives for objectivity;

4. The student's rate of progress through the program is determined by demonstrated competency rather than by time or course completion;

5. The instructional program is intended to facilitate the development and evaluation of the student's achievement of competencies specified.
Only those professional training programs which include all of the essential elements can be judged or defined as CBE/PBE.

**Implied Characteristics**

1. Instruction is individualized and personalized...

2. The learning experience of the individual is guided by feedback...

3. The program as a whole is systemic, as the essential elements require...

4. The emphasis is on exit, not on entrance requirements...

5. Instruction is modularized...

6. The student is held accountable for performance, completing the preparation program when, and only when, he demonstrates the competencies that have been identified as requisite for a particular professional role.

The above characteristics, although not essential, were often found in competency-based programs.

**Related and Desirable Characteristics**

1. The program is field-centered. Because of the heavy emphasis upon performance in the teacher role and assessment in real settings involving pupils, much performance-based preparation is conducted in the field.

2. There is a broad base for decision making (including such groups as college/university faculty, students, and public school personnel)...

3. The materials and experiences provided to students focus upon concepts, skills, knowledges (usually in units called modules...) which can be learned in a specific instructional setting.

4. Both the teachers and the students (i.e., prospective teachers) are designers of the instructional system...

5. Because PBTE is systemic and because it depends upon feedback for the correction of errors and for the improvement of efficiency, it is likely to have a research component; it is open and regenerative.

6. Preparation for a professional role is viewed as continuing throughout the career of the professional rather than being merely preservice in character.

7. After the student has an adequate conception of the goals of teaching, instruction moves from mastery of specific techniques toward diagnosis and selective utilization of such techniques in combination. That is, role integration takes place as the prospective teacher gains an increasingly comprehensive perception of teaching problems. (pp. 6-11)

Also, according to Elam, the term "student" had been used to mean the person completing the preparation program. Although in-service teachers were not excluded from being considered, the primary emphasis was on preservice or prospective teachers.

Burke (1972) examined many of the most frequent questions that were raised regarding the curriculum design of
competency-based curricula. One aspect of the work by Burke dealt with representative problems that were encountered when a competency-based curriculum was being implemented.

Regarding changing institutional procedures, it is suggested that administrators become involved long before implementation takes place. However, the author realizes that there will be persons who are against any change, no matter what. Furthermore, once certain changes do take place, they affect not only the students and teachers in the competency-based program, but the function of particular persons and offices of that institution. For example, in a competency-based curriculum it is necessary to keep detailed records on the progress of the student which would affect the record keeping functions of the teachers in the competency-based curriculum as well as certain functions in the registrar's or bursar's office. Various institutions are experimenting with ways to improve their records system.

At some universities, students sign up for credit and pay fees at the completion rather than at the beginning of a set of modules. Because individual students complete sets of modules at different times, the need is eliminated for massive registration procedures at particular points in the academic year. (p. 47)
Another important consideration was that of faculty orientation and retraining. A modular format will cause the faculty to perform different roles and operate under different rules. Therefore, time should be provided before program implementation for faculty orientation and retraining.

Finally, the misconception that a competency-based program will isolate students from each other and from the professors was examined. It should be realized that although students were in physical proximity to other students, such as in a large lecture class, this physical closeness did not necessarily cause a feeling of belonging. Another misconception was that students who were engaged in an individualized program always worked alone. The most effective learning situations should be utilized; sometimes the student might work alone, other times in a small group, or even in a field setting.

Schmieder (1973) in one facet of Competency-Based Education: The State of the Scene detailed the degree of participation by states, higher education, teachers, administrators, and communities. Although it is not all inclusive and is constantly being updated, the extensiveness
of the CBE movement is indicated by the number of various participating agencies and persons.

General Degree of participation (greatest first, etc.):
- states, higher education, teachers, administrators,
- community, students.

States

1. Legislative and/or administrative support:

2. Actively working on new certification standards and approaches:
   - Alabama, Arkansas, Illinois, Kansas, Louisiana, Maryland, Massachusetts, Nebraska, Oklahoma, Ohio, Rhode Island, South Carolina, South Dakota, Tennessee.

There is, as would be expected, some variety from state to state regarding their new and/or developing competency-based certification programs, but several characteristics are relatively common to all:

a) The CBE certification program is established as an alternative to the approved program plan (excepting Texas and New York which have long range requirements for total conversion);

b) During the early stages of implementation there is a heavy dependency on the successful sharing of materials, models, and resources personnel among states developing CBE programs;

c) The "first phase" of program development has generally been characterized by numerous local meetings directed at briefing potential
constituencies and expanding the base of involvement;

d) Programs are generally developed by parity groups—that is groups composed of representatives from all major educational constituencies, i.e., state education department, school administrators, teacher associations, institutions of higher education, students, and the community.

Higher Education

1. American Association of Colleges for Teacher Education gives high priority

---sponsors National Committee on Performance-Based Teacher Education

---highlighted in "Beyond the Upheaval," an assessment of the full 1970's by its executive director
---full day given to CBTE at 1972 and 1973 annual meetings
---co-sponsor of 1972-73 Teacher Corps/NCIES Regional Seminars on CBTE

2. Questionnaires were sent to 1200 teacher training institutions by the AACTE Committee on Performance-Based Teacher Education in order to obtain a rough estimation of the degree of involvement of those institutions in competency-based education. Seven hundred eighty-three places responded:

---125 indicated that they had programs that "for the most part," could be characterized by the CBE definition in Elam's What is the State of the Art?

---366 indicated that they "are now in the developmental stage and plan to establish a PBTE program." (The data indicate that most of these new programs will be started as parallel programs.)
---of the 783 places responding, only 228 indicated that they were "not involved in PBTE at this time."
3. The liberal arts have generally not been involved in CBE developments, but some examples of programs do exist for almost every academic subject, e.g., Maryland Institute of Art, art; Marymount College, music; Illinois State University, social studies; Columbia Teachers College, language arts; University of Alberta, mathematics; University of Georgia, science; Wayne State University, industrial arts; School Library Manpower Project, library-media education; Ohio State Center for Vocational and Technical Education, vocational education.

In active CBE states, subject matter specialists from the state, local education agencies, and cooperating institutions of higher education have also worked on CBE programs for particular subjects.

4. Institutions with high involvement in CBE: (pp. 10-11)

**Total Teacher Education Program**

There were ten programs at educational institutions in ten states. (See Appendix A for Total and Alternative or Parallel Teacher Education Programs).

**Alternative or Parallel Teacher Education Programs**

There were eighty programs at educational institutions in thirty-four states. (See Appendix A for Total and Alternative or Parallel Teacher Education Programs).

**Schools**

**Teachers:**

1. CBTE was focus of American Classroom Teachers Association (NEA) 1971 Annual Thanksgiving Workshop
2. Sessions on CBTE held at all 1971-72 NEA GRIP (Grassroots Involvement Program) Regional Seminars

3. The UFT appointed a study commission on CBTE

4. Position papers on CBTE prepared for "Quest," the 1972 Annual Meetings of the "teacher education and certification by 'performance'."

Administrators:

1. ASA appointed a study commission on CBTE


3. One session devoted to CBTE, AASA Annual Meeting, Atlantic City, 1972

4. CBE programs for administrators: Los Angeles State University, St. Johns University (N.Y.), University of Connecticut, University of Utah, University of Vermont

5. Great Cities School Council Annual Meeting, 1972, General Sessions on CBE

Some School Districts with Emphasis on CBTE:

1. Broward, Dade, and Palm Beach Counties, Florida

2. Houston School Districts, Texas

3. Portal schools with cooperating institutions in Albany, N.Y.; Athens, Ga.; Atlanta, Ga.; Buffalo, N.Y.; Emporia, Kan.; Houston, Tex.; Oakland, California; Pueblo, Colo.; Schenectady, N.Y.; Tallahassee, Fla.

4. School-based Teacher Corps projects (See Appendix B for State Profile of project locations)
5. Schools participating in Connecticut, Florida, New York, Texas, Washington, and other state pilot projects (pp. 13-14)

Houston (1973) outlined and explained a ten-stage model which employed the systems approach in designing competency-based programs. "While consistent with the philosophical and psychological bases of CBE, it provides a variable way to reconceptualize the total preparation program." (p. 200) The ten stages were: (1) Specify assumptions or propositions (2) Identifying competencies (3) Delineate objectives (4) Indicate criteria levels and assessment modes (5) Cluster and order objectives for instruction (6) Design instructional strategies or modules (7) Organize a management system (8) Implement program trial (9) Evaluate instructional design (10) Refine program. Two important warnings were shared with the reader concerning development of this model:

While the stages may appear simple and linear in practice, they are not. For instance, insights gained in stage three press designers for changes in stages one and two. Some stages can be completed concurrently, (e.g., stage four on assessment, stages five and six on instruction, and stage seven on the management system). Political pressures and strengths of individual designers to a certain extent also alter a potentially linear process.
One further caveat concerning program development is in order. After nearly a century of scientific study in behavioral sciences, the complexity of the human organism still eludes precise formula, definitions, or change strategies. Inferences replace cause-effect relations or logical research outcomes.

Because of this thin knowledge base, the systematic approach to program design appears more effective. With this approach, the results of actions are evaluated and used to modify objectives or procedures, or both. Thus the systematic approach is a refinement model, a more and more precise, effective, and efficient developmental process. (p. 200)

Klingstedt (1973) asserted that although learning modules may contain many elements, six major parts were usually--objectives, pretest, rationale, learning alternatives, post-test and resources. Klingstedt provided valuable information regarding the rationale and learning alternatives. The rationale should indicate to the learner how the accomplishment of the stated objectives will be useful to him both now and in the future. If the learner seriously questioned the value of a given learning module after the rationale has been read, he should consult with the teacher before going any further. With regard to learning alternatives, this method provided for the optimum use of both teaching styles and student learning styles. If a teacher constructed his own modules, he should be
able to provide at least two options, and probably more, for the learner.

Young and Van Mondfrans (1973) examined the following psychological implications: interest, motivation, frustration, anxiety, and self-concept and how competency-based education can reduce negative psychological effects and increase learning. Young and Van Mondfrans' comments on motivation, frustration and self-concept are of particular interest. Although the material that the student was expected to learn may be predetermined, he was encouraged to select specific goals which take into consideration his views of the knowledges required, e.g., in his major area or chosen profession. With regard to the spirit of competition, in a CBE program competition was not between students, but within the student himself. Secondly, frustration should be considerably reduced in a CBE program because if a student fails in his first attempt to reach a certain goal, he does not have to return to the original instructional material but should be able to choose some other learning alternative which would yield the same results. Finally, since anxiety should be reduced in a CBE program, it would seem to follow that negative or
failing experiences would decrease and the student's positive self-concept would increase.

Houston (1974) described the rapid growth of the competency based or performance based education movement. In addition to the numerous states and teacher education institutions cited by Schmieder (1973) in Competency Based Education: The State of the Scene which are utilizing the CBE concept, other quite diverse groups are studying, in the process of implementing, or actually using the CBE approach, e.g., (1) career education and other programs funded by the U.S. Office of Education and the National Institute of Health, (2) the Committee on Performance Based Teacher Education which has published a dozen monographs on CBE/PBE and has sponsored a number of regional and national study conferences, (3) the National Consortium of CBE Centers which is composed of eight institutions which develop model programs related to CBE, (5) the National Commission for Performance Based Education which is concerned with research and development, (6) elementary and secondary schools, and (7) other professions such as medicine, nursing, allied health programs, engineers, plumbers, and computer programmers.
Furthermore, Houston viewed competency based education as being part of a culturally based movement. With regard to the present day American society, two forces which contributed to the development of CBE were the need for accountability and personalization which reflect the changes in society.

Although Houston used the terms competency based and performance based education interchangeably, some needed distinctions were made. Regarding PBE, its advocates referred to the way in which the learner demonstrated knowledge and skills, while the advocates of CBE were concerned with a minimum standard for effective performance and added criterion levels, value orientation, and quality to the definition. In CBE, five types of objectives were defined and utilized:

1. **cognitive based objectives** - the participant is expected to demonstrate knowledge and intellectual abilities and skills;

2. **performance based objectives** - the participant is required to do something rather than simply to know something;

3. **consequence based objectives** - the participant is required to bring about change in others;

4. **effective objectives** and

5. **exploratory objectives** are usually included in competency based programs but both are not as easily defined as the other three types.
Affective objectives were generally evident in the first three objectives mentioned and were important in any competency based program. Since the use of exploratory objectives may cause a high degree of randomness to be encountered, they were used in program areas where precise outcomes cannot as yet be explained. (pp. 7-8)

Whether the term CBE or PBE is utilized, both provide needed distinctions for the proper understanding of the movement. Although CBE emphasizes objectives and PBC emphasizes criteria, both advocate that educational programs must go beyond the mere gaining of knowledge and require the demonstration of the needed competencies.

Johnson (1974) defined Competency-Based Education by comparing some practical characteristics of CBE and traditional educational programs which are presented in Table 1.
### TABLE 1

**A COMPARISON OF THE CHARACTERISTICS OF COMPETENCY-BASED AND TRADITIONAL EDUCATION PROGRAMS**

<table>
<thead>
<tr>
<th>Characteristics of CBE Programs</th>
<th>Characteristics of Traditional Education Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The main indicator of student achievement is ability to do the job effectively and efficiently.</td>
<td>1. The main indicators of student achievement are knowledge of the subject and ability to do the job effectively and efficiently.</td>
</tr>
<tr>
<td>2. Once a student has demonstrated ability to do the job, his or her preparation is complete. Time is not a factor. Some students finish early, others late.</td>
<td>2. Students operate within specified time limits, such as academic years, semesters, or quarters. Class hour requirements are generally adhered to.</td>
</tr>
<tr>
<td>3. The criterion of success is demonstration of ability to do the job. Mastery criteria are used to determine how well students perform. These criteria must be met for students to be considered competent.</td>
<td>3. The criteria of success are letter grades which indicate the extent to which the student knows the required subject matter.</td>
</tr>
<tr>
<td>4. Entrance requirements are not paramount concern. Students start where they are. If they are not ready, they are helped to become ready.</td>
<td>4. Entrance requirements are important concerns. Students who are not ready cannot be admitted.</td>
</tr>
<tr>
<td>Characteristics of CBE Programs</td>
<td>Characteristics of Traditional Education Programs</td>
</tr>
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<tr>
<td>5. Flexible scheduling of learning activities is essential to provide for individual differences among students. This allows for year-around educational opportunities and numerous possible times for enrollment.</td>
<td>5. Students are scheduled for instruction into fairly rigid blocks of time. The academic year and infrequent mass registration are standard practices.</td>
</tr>
<tr>
<td>6. There are no fixed rules as to how, when, or where learning is to be accomplished.</td>
<td>6. On-campus classroom teaching is the most common approach to instruction. Required lengthy on-campus attendance is standard practice.</td>
</tr>
<tr>
<td>7. Opportunities are provided to acquire competencies in practical field or on-the-job experiences.</td>
<td>7. Practical field experiences are limited.</td>
</tr>
<tr>
<td>8. Learnings (competencies) presented in small learning units or modules, combinations of which are designed to help students acquire full competence.</td>
<td>8. Learnings (subject matter) are organized into courses representing academic time units.</td>
</tr>
<tr>
<td>Characteristics of CBE Programs</td>
<td>Characteristics of Traditional Education Programs</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td><strong>9.</strong> Provision is made for differences among students in their styles of learning by providing them with various alternate paths for acquiring competence.</td>
<td><strong>9.</strong> Lecture-discussion is the most common mode of presentation, supplemented by seminars, laboratory activities, and limited field experiences. Little attention is given to student style of learning.</td>
</tr>
<tr>
<td><strong>10.</strong> The criterion for a &quot;good&quot; instructor is the extent to which he or she is effective and efficient in helping students acquire the competencies they are seeking.</td>
<td><strong>10.</strong> The criterion for a &quot;good&quot; instructor is how much he or she knows about the subject and how well it is presented.</td>
</tr>
<tr>
<td><strong>11.</strong> There must first be consensus as to the mission of the program; then an organization and operational strategy judged most effective and efficient in fulfilling the mission is selected or designed, and implemented.</td>
<td><strong>11.</strong> Management is organized around departments and divisions. This organization is regarded as that within which the mission of the program is most effectively and efficiently fulfilled. Departments and divisions sometimes differ in their interpretation of the mission.</td>
</tr>
<tr>
<td>Characteristics of CBE Programs</td>
<td>Characteristics of Traditional Educational Programs</td>
</tr>
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<td>--------------------------------</td>
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</tr>
<tr>
<td><strong>12. Criteria for staff selection</strong> are based on the needs of the instructional components of the program. Differentiated staffing for instruction and team teaching are commonly practiced.</td>
<td><strong>12. Criteria for staff selection</strong> are often based on departmental needs. Differentiated staffing for instruction and team teaching are not commonly practiced.</td>
</tr>
<tr>
<td><strong>13. Humanization and personalization</strong> are systematically planned for as an integral part of the education program.</td>
<td><strong>13. Humanization and personalization</strong> are endorsed as essential but little systematic provision is made for them. It is generally left up to the individual instructor to respond to student's special needs.</td>
</tr>
<tr>
<td><strong>14. Continuous evaluation, feedback, and revision of the program</strong> are systematically implemented by persons who regard it as their major concern.</td>
<td><strong>14. Program changes occur as needed, usually in the form of innovations imposed on the basic pattern.</strong></td>
</tr>
<tr>
<td>Characteristics of CBE Programs</td>
<td>Characteristics of Traditional Education Programs</td>
</tr>
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<td>---------------------------------</td>
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<tr>
<td>15. Specifying the competencies to be acquired by the learner is accomplished by involving practitioners; supervisors of practice; college instructors and professors; learners, and the interested community that affects or is affected by what students are taught.</td>
<td>15. Subject matter is selected and organized primarily by the person teaching the course.</td>
</tr>
<tr>
<td>16. Instructors are held accountable for the extent to which students acquire the desired competencies within the limits dictated by the nature of their abilities.</td>
<td>16. Students are held accountable for acquiring the target subject matter as organized and presented by the instructor.</td>
</tr>
</tbody>
</table>


Quirk (1974) examined some measurement issues that are associated with the Competency-Based Teacher Education movement. It should be noted that it is important to carefully consider the problems of measurement connected with
any teacher education program, regardless of whether or not it is labeled "competency-based."

All too often, in order to prove that a particular program is competency-based, a long list of performance objectives are created. With regard to this situation, Quirk stated:

The main measurement problem with these long lists of performance objectives has to do with the reliability of the individual measures. Within the most popular standardized tests an analogous example is found by comparing the reliability of different subtests within a battery of tests to the reliability of the total test score. (p. 254)

The appropriate measurement principles related to this approach are presented in Table 2.

Since teaching is in reality a sociopsychological situation, the act of teaching cannot always best be measured by a paper-and-pencil tests. Therefore, as microteaching and other simulated teaching techniques become a permanent part of the measurement process, some important questions should be answered, e.g., How consistent over time is the teacher's behavior? What is the effect of familiar as opposed to unfamiliar pupils on the teacher's behavior? At present, unfortunately, there are more questions than suitable answers.
<table>
<thead>
<tr>
<th>Principles of CBTE Programs</th>
<th>Related Principles of Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competence should be defined in relation to lists of well-defined behavioral objectives.</td>
<td>In general, the fewer the number of items in a test, the lower the reliability of the test.</td>
</tr>
<tr>
<td>Superior ability in one critical area or skill should not be allowed to compensate for less-than-adequate competency in another critical area or skill.</td>
<td>The reliability of individual difference scores (either between different objectives or within re-testing the same objectives) is a function of the reliabilities and intercorelation between the two sets of scores.</td>
</tr>
<tr>
<td></td>
<td>Restricting the range of scores on a test decreases the predictive validity of the test.</td>
</tr>
<tr>
<td>The competencies of individual candidates, rather than the process characteristics of the teacher training programs, should be the most important measurement emphasis.</td>
<td>The reliability of the score of an individual candidate is lower than the reliability of the scores of a group of candidates. The standard error of measurement is a function of the reliability of the test.</td>
</tr>
</tbody>
</table>
### TABLE 2 (continued)

<table>
<thead>
<tr>
<th>Principles of CBTE Programs</th>
<th>Related Principles of Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>The effectiveness of a teacher should be determined in relation to pupil development.</td>
<td>Interactive teaching between a teacher and a group of pupils produces a situation in which neither the stimulus nor the response is well controlled; more importantly, this situation is subject to a wealth of interactive influences—some negative in their contribution to the outcome.</td>
</tr>
</tbody>
</table>


Another practice that is commonly used in CBTE programs is that of setting a fixed cutoff percentage of correctly answered items as the passing score for each performance objective. Quirk viewed this practice as being unsound from a measurement point of view because:

> the percentage of objective-related items that a candidate answers correctly is a function not only of the content of the items, but also of their difficulty. An estimate of the difficulty of the items can be obtained either from a logical judgment based on a study of the specific items or from empirical item analysis data. (p. 256)
Also, additional problems were created when the fixed cutoff score was applied to a form of the test when the candidate did not achieve mastery on the first testing. "Unless they have been equated, the results could have quite different meanings even though the tests attempt to measure the identical content" (p. 256).

Cox (1974), in an article which reacts to some of the measurement issues discussed by Quirk, sets out to dispel some of the confusion between norm-referenced and criterion-referenced measurement. Cox asserted that many of the principles used in the Quirk article have been developed for norm-referenced measurement and are probably not applicable to criterion-referenced measurement.

Criterion-referenced instruments are designed to assess an individual's attainment of desired performance of objectives which have been stated in behavioral terms. The standard to which an individual's performance is compared is the behavior as specified by the objective. The crucial measurement issue, then, is how reliably and validly the test items measure this criterion behavior. (p. 319)

Cox further explained that when a composite test is developed to measure several different behavioral objectives, it might not be reliable with respect to internal consistency because "the mere addition of test items does not ensure a more reliable test."
Finally, Cox maintained that problems might be caused by Quirk's consideration of:

the standard error of measurement, the reliability of different scores, and prediction validity in the traditional way when evaluating instruments for competency-based programs. Since these measurement concepts are dependent on the variability of tests scores, the lack of variability may cause their interpretation to be meaningless. (p. 319)

Dolinsky (1974) examined the question of student involvement in making decisions in various aspects of a competency based program. Three groups of students were viewed in order to learn the amount of input they had, whether change occurred as a result of their input, and whether or not students should have this input. The three student groups were: (1) undergraduate students enrolled in the University of Toledo's competency based teacher training program; (2) Teacher Corps interns from the University of Toledo who were teaching a half day at an elementary school and have their classes there; and (3) doctoral candidates in educational psychology at the University of Toledo.

Regarding defining skills and stating objectives, the undergraduate students had no input but the Teacher Corps students did express their views on the need to
acquire certain skills. Although the doctoral students felt they should help the department faculty decide the graduate program, and they discussed and evaluated the program objectives, most of the objectives were set by the faculty.

Two criteria for determining whether or not students should have input into all facets of CBTE design and implementation competency based programs were: (1) if it is good for the program and (2) if it is good for the student. One of the best reasons for student involvement is that it has been found that students who have had problems with the program have become useful to both the program and to themselves if the program staff listened patiently and then tried to involve the students in finding solutions.

Probably the most valuable input of the undergraduate students dealt with program management. Some of the problems students encountered were: self-pacing, structured feedback on the amount of progress made in the program and what modules were needed to complete the program, all the materials they were getting at various times, and that they were having difficulty coordinating everything. The previously mentioned student input
resulted in the students receiving a list of objectives and due dates and the next quarter, along with the module outline, students received materials for all of the modules bound together.

In general, faculty reaction to student input was frustrating but valuable. It was frustrating because it was difficult to listen to students describe what was wrong when the faculty knew what was wrong and was working hard to correct it. However, the faculty did listen and found student input valuable. Students were often surprised to find that their suggestions were implemented and this provided positive reinforcement for them to continue to offer input.

Four of the five ways Dolinsky suggested for bringing about student involvement were:

(1) provide instances of proof that student input has resulted in change,

(2) ask students to select representatives to team meetings and act as liaisons between students and faculty;

(3) posting in advance the agenda for meetings; and

(4) present students with a blank module and require that they develop objectives, a rationale, and some measurement procedures. (pp. 362-363)
Some of the criticisms of CBTE expressed by students were:

(1) CBTE requires more work and more self-management than a non-CBTE program;

(2) completion of the program because, all too often, the recycling procedures are the same as the original instructional procedures;

(3) the nonselectivity of criterion-reference grading and how this will affect their future employment or entry into graduate school; and

(4) whether CBTE is not encouraging mediocrity rather than excellence since some students could do much more than was required but are pronounced competent because the criteria of competence was somewhat low at the beginning. (pp. 363-365)

However, positive reactions to CBTE most often outnumber the negative reactions. Some of the positive reactions were:

(1) students are most pleased with the stating of objectives and the match between objectives and assessment;

(2) students know what is expected of them and how they will be assessed;

(3) students see the process of recycling as sensible and fair;

(4) students in CBTE are seeing it work and learning about it at the same time, and

(5) students view CBTE as being relevant. (p. 365)
Robin (1976) in "Behavioral Instruction in the College Classroom" examined the application of behavioral technology to college teaching. First, a historical prospective was used to trace the development of behavioral technology and its utilization at the college level.

Prior to the 1950's most research on college teaching consisted of comparisons of traditional lecture, discussion, and independent study techniques...In the 1950's experimental psychologists started to develop such new models [of the teaching-learning situation] by applying learning principles to individualize instruction (Skinner, 1954, 1958), and within several years a sophisticated technology of programmed and computer-assisted learning had evolved (Lumsdaine & Glaser, 1960; Stolourow, 1961; Taber, Glaser, & Schaefer, 1965). Although programmed and computer-assisted instruction individualized learning, these techniques replaced the human element with high speed, and in many cases, high-cost machines. The specialized knowledge, long preparation times, and large budgets necessary to develop and maintain programmed systems have often proved prohibitive. (p. 313)

Recently, however, the Keller Plan or Personalized System of Instruction has been developed "without eliminating human interaction and without adding prohibitive cost-training factors..." (p. 313)
The overall purpose of the review of literature was to (a) outline the nature of behavioral instruction, (b) evaluate research on the effectiveness of behavioral instruction, (c) evaluate research on the contribution of the components of behavioral instruction, and (d) discuss critical issues with an eye for future development.

With regard to the nature of behavioral instruction, features which characterized behavioral instruction in its original form are examined as well as five different approaches to behavioral instruction.

Five features characterized behavioral instruction in its original form (Keller, 1967, 1968):

1. The go-at-your-own-pace feature, which permits a student to move through the course at a speed commensurate with his ability and other demands upon his time;

2. The unit-perfection requirement for advance, which lets the student go ahead to new material only after demonstrating mastery of that which preceded;

3. The use of lectures and demonstrations as vehicles of motivation, rather than sources of critical information;

4. The related stress upon the written word in teacher-student communication; and
The use of proctors, which permits repeated testing, immediate scoring, almost unavoidable tutoring, and a marked enhancement of the personal-social aspects of the educational process.

Within the program itself some of the other distinct features are: the level of mastery is generally above 80%, grades are based mostly on the number of units mastered, with a small percentage based on midterm and/or final examinations, and the proctors are generally undergraduates who have completed the course with a high level of mastery.

With any system or methodology, there are and will be some variations. Four such methodological variations of the Keller Plan examined by Robin (1976) were:

Ferster (1968) utilized oral interviews instead of written exams as the primary mode of interaction between students and proctors in a behaviorally organized course. During an interview the listener remained quiet while the speaker answered short essay-type study questions or discussed the content of the readings. After the speaker finished, the listener provided feedback on the adequacy of the answers. If both were satisfied that the speaker had demonstrated mastery of the readings, the speaker continued to the next unit; if not, he studied for another interview. Students served as listeners for units they had already mastered and, in fact, were required to alternate roles between listening and speaking. Proctors and instructors also gave interviews, especially to the first few students to reach each unit. After each three to five interviews, the student took a written review quiz graded pass-fail by a proctor.
Johnston and Pennypacker (1971) developed the Performance Session, which consisted of an oral interaction between proctor and student emphasizing the rate of the student's correct responding to test questions. At a Performance Session the proctor randomly selected a handful of fill-in-items on index cards from a master file for that unit; the student read each item aloud, completing the blank or indicating that he did not know the answer; for incorrect responses he flipped over the card to discover the correct answer; the proctor timed the student's reading and recorded the number of correct and incorrect responses; after the student had completed the items, he received feedback on his performance from the proctor; the proctor calculated his rates of correct and incorrect responding and plotted them on a cumulative record. In order to pass a unit, the student had to attain an empirically developed minimum rate of correct and maximum rate of incorrect responding.

A third variation on behavioral instruction was the Group Remediation System (Bostow & Blumenfeld, 1972; Cooper & Greiner, 1971; Malott & Svinicki, 1969; Michael, 1969). Group Remediation scheduled teacher-paced, group-administered quizzes, and immediate feedback was provided to the group by the instructor. Two quizzes were scheduled each week. The first covered new material, and the second was a makeup quiz. If the student failed the first quiz, he had to take the second in order to receive credit for the unit. His score on the second quiz was his permanent score for the unit; no further makeups were allowed. If the student received an extremely low score on the first quiz, he lost part of the week's points regardless of his performance on quiz two.

Lloyd (1971; Lloyd & Knutzen, 1969) broadened the types of activities in which students participated for credit toward their grades. They programmed their course to expose students to many of the professional role-behaviors of psychologists by assigning point values for the following activities: class attendance, class participation,
textbook review quizzes, book reviews, movie reviews, tape reviews, discussions with other faculty about psychological research, animal laboratories, field trips, attendance at colloquia, learning about electronic circuitry, observation of ongoing faculty research, and oral presentations of independent research projects. Students were able to select activities of interest to them, with the restriction that they earn a minimum number of points for different classes of activities. In order to insure mastery, behavioral objectives were defined for each activity. A student's grade was based on a cumulation of points for combinations of activities. (pp. 315-316)

With regard to the evaluation of behavioral instruction, the review of the research was divided into two sections: (1) outcome comparisons of behavioral instructional packages with other methods, and (2) analyses of the contribution of various components to the packages. Also, it should be noted that thirty-nine between-group comparisons of behavioral instruction and lecture-discussion methods were reviewed and analyzed. Furthermore, the review focused on the following variables: academic achievement, retention, attitudes, withdrawal rates, and study time.

With respect to the general results:

It can be concluded from the 39 studies reviewed...that behavioral instruction produces superior academic achievement, retention, and student attitudinal responses to lecture-discussion systems. A highly consistent 8% to
11% achievement gained occurred across instructional variants, class sizes, and academic disciplines. (p. 323)

Nevertheless, Robin (1976) felt that "in order to place the research conducted to date in its proper perspective, three critical issues need to be explored: methodology, the nature of attitudinal responses, and the high withdrawal rate" (p. 323). It should be noted that the nature of attitudinal responses will be discussed in the final section of this chapter which deals specifically with student attitudes.

Regarding methodology, some of the most frequent weaknesses were: "considerable variability in the degree of experimental control provided for subject assignment, initial equivalence of groups, and objective evaluation of the dependent measures" (p. 323).

With respect to high withdrawal rates:

In studies with differentially high withdrawal rates, it is possible that the academically deficient students drop out of the experimental groups, biasing the achievement results. Consequently, the investigator should (a) test for the equivalence of dropouts and completers and (b) statistically control for any obtained discrepancies. (p. 323)
In addition, the investigation of the problem of a high withdrawal rate for students involved in behavioral instruction might be better understood by noting some of the reasons explored by Robin (1976):

1. Perhaps students who have not developed regular study habits flounder with the freedom provided by self-pacing, permanently falling behind and eventually withdrawing.

2. Evidence of an association between ability as measured by standardized tests and success/failure in behavioral instruction has been found. Wood and Wylie (1975) noted that students dropping out of a Keller Plan Course scored lower on the American College Test (ACT) than students receiving high grades but scored similarly to students receiving lower grades.

3. Even if a student has sufficient ability and positive attitudes towards a subject matter, the unfamiliarity of behavioral instruction may precipitate panic and withdrawal. (pp. 326-327)

In reference to the third section of the review which pertained to an evaluation of the research on the contribution of the components of behavioral instruction, the following conclusions were made:

Frequent testing, proctoring, the unit-perfection requirement, and study objectives have been shown to contribute to the effectiveness of behavioral instruction. The evidence is unclear for short-unit length. Self-pacing and optional lectures are not necessary for behavioral
instruction to be effective, and both written and oral tests formats are equally effective. Although students prefer multi-level to A-F grading systems, either will produce satisfactory achievement. (p. 343)

In conclusion, Robin (1976) made the following recommendations concerning future research:

(1) The methodology of outcome studies must be improved.

(2) The development of a standard notational system encompassing all the relevant parameters would greatly facilitate communication between researchers and help to place the many variations of behavioral instruction within an understandable context.

(3) It is time for researchers in behavioral instruction to report more than group means and distributions in outcome studies, to report at minimum the number of individuals improving, and to design studies to determine what variables are preventing every student from scoring 100% on posttests.

(4) Investigations of interactions [between components] must push towards their natural end-point, the specification of a taxonomy relating parametric values of each component of behavioral instruction, subject matters, student characteristics, and dependent variables.

(5) Researchers and consumers alike need to step back and reexamine the broad theoretical and societal implication of behavioral instruction. (pp. 343-345)
Summary. The three levels of description in the definition of CBE/PBE provided by Elam (1971) would be of value to this study. Although the primary focus is on performance based teacher education, logical generalizations can be drawn and applied to any performance based program. By noting the description for (1) essential elements, (2) implied characteristics, and (3) related or desirable characteristics, the staff of the Performance Based Composition program investigated in this study would be able to determine whether the essential elements are present and to what degree the implied and related-desirable characteristics are evident in the program as it presently exists.

The work by Burke (1972) would be of value to this study because it examined some of the common problems that are encountered when a competency-based curriculum is being implemented. Although Burke recommended that faculty orientation and retraining take place before the competency-based program is implemented, with regard to the program investigated in this study, this recommendation would be just as valuable now that the program has been in existence for two years. In all likelihood, the Performance-Based Composition program staff would be more receptive
than usual to faculty training because they would have an immediate frame of reference regarding the new roles and responsibilities that occur as a result of a program of this nature.

Schmieder (1973) provided very useful information regarding the degree of participation by states, higher education, teachers, administrators, and community. Although the list of persons and agencies utilizing competency based approaches is constantly expanding and being updated, the data reported by Schmieder would make available to the PBC program staff the names of some possible resource centers. More specifically, the list provides the names of liberal arts institutions and institutions in the same state, as well as neighboring states, where this study was conducted which would better enhance the utilizations of these institutions as resource centers and even possibly lead to some cooperative planning and/or research in the area of competency based education.

The works of Houston (1973) and Klingstedt (1973) were concerned, respectively, with the organizations of a Competency-Based Education program and of learning modules within a CBE program. These two works are important to this study because they would be useful as guidelines to
analyze organizational structure of the overall Performance-Based Composition program investigated in this study and the learning modules in the PBC program. Also, the article by Young and Van Mondfrans (1973) would be useful when considering whether negative psychological effects have been reduced or increased as a result of the PBC program examined in this study.

Houston (1974), in addition to providing information regarding the diverse groups which are using the CBE approach, made some needed distinctions between the terms competency based and performance based education. Although the data presented should not lead anyone to "cosmetic" name changes of a program, the information is valuable to this study because: (1) the distinctions that are made are clear and understandable, and (2) in particular, the reference to the affective objective in the five types of CBE objectives is one of the primary concerns of the staff of the PBC program investigated in this study. Although effective objectives are not easily defined or measured, the PBC program staff could further consider affective objectives that could be explicitly incooperated into the PBC program.
Johnson (1974) presented a detailed comparison of some practical characteristics of competency based education and traditional programs. These data would be valuable to this study because it would provide a sound basis for examining the characteristic of the PBC program investigated in this study and determining the levels of competence or traditionalism that are inherent in the PBC program.

The examination by Quirk (1974) and Cox (1974) of certain measurement issues associated with CBTE programs as well as teacher education programs in general would also be useful to this study. The information provided by Quirk concerning the setting a fixed cutoff percentage of correctly answered items as the passing score for each performance objective was of particular interest because this practice is used in the PBC program investigated in this study. Since measurement is an essential part of any program and especially to competency-based programs, it is crucial that the information provided by Quirk and Cox be carefully studied. Hopefully re-examination and modification of certain measurement practices will take place and thus result in more statistically sound methods of measurement being utilized.
Dolinsky (1974) examined the question of student involvement in making decisions in various aspects of a competency. The data presented by Dolinsky is most valuable to this study because many of the problems encountered and solutions to them which are cited in the article are very similar in nature to those in the PBC program investigated in this study. Furthermore, the several suggested ways of actively involving students in the total PBC program are worthy of serious consideration by members of the staff of the PBC program examined in this study.

In conclusion, Robin (1976) (a) outlined the nature of behavioral instruction, (b) evaluated research on the effectiveness of behavioral instruction, (c) evaluated research on the contribution of the components of behavioral instruction, and (d) reviewed critical issues that should be considered when further research is conducted on behavioral instruction. The discussion of and the conclusion made regarding academic achievement and withdrawal rates are very important to this study because: (1) the findings of this study and those reviewed by Robin are quite different academic achievement, and (2) the findings of this study and those reviewed by Robin are the same. In addition, the critical issues raised by
Robin concerning future research comprehensively covered a wide range of problems and their solutions and can probably be incorporated into the list of recommendations made regarding this study.

**Competency-Based Education in English**

Only a small amount of literature exists which is specifically concerned with Competency-Based Education in English. The reasons for this lack of information are primarily related to two factors: (1) In general, Competency-Based Education is still in its infancy, therefore outgrowths of CBE in other subject matter fields are just beginning to surface in practice. Once more CBE programs are in existence, the literature in the area will reflect this growth. (2) Educators in the field of English are, for the most part, still critical of the CBE movement for its seemingly over-emphasis on behavioral objectives and the lack of teacher creativity involved.

However, interest in Competency-Based Education in English is increasing. In the literature, the basic tenets of Competency-Based Education are evident as well as some specific strategies with regard to the subject area of English, e.g., the grading practices, the relationship between teacher load in a required course such as
freshman English, the pattern of student movement through the program, and the general components of a modular English program.

Golub (1974) in "A Development Cycle for a Competency-Based English Curriculum Grades K-12" described the components of this particular competency-based curriculum, taking into account competencies at various levels rather than grades. The content areas at each level included listening, speaking, reading, writing, language, literature, and media. The basic steps were taken with regard to the development of the proposed competency-based English curriculum with provisions made for a formative evaluation and revision of learning activity packets for maximum student attainment of objectives.

Illick and Taylor (1975) in "Transitional Grading in Competency Based Courses" dealt with the unpleasantness of having to assign a final grade in a remedial composition course for students who need additional time to gain the required competencies. They offered the grade of In-Progress (IP) as an alternative to the traditional D or F grades.

"The IP grade is a 'non-grade' in terms of the traditional letter grade hierarchy" (p. 85). Although staff
attitudes and college structures have been conditioned to assigning a final grade at the end of the quarter or semester, new instructional approaches dictate some needed modifications in grading practices.

The IP grade serves two main functions—academic and clerical. In academic areas where the levels of competency and the means of assessment are clearly defined, the IP grade is of particular value. For the student, the IP grade means that he has not met the minimum competency standards of the course but he is not penalized. Also, the IP grade has been proven to have a positive effect upon student motivation and retention.

In addition, there are two distinct differences between the IP and INC grades:

(1) the INC grade is used to indicate only that the student did not hand in an assignment or complete a test, and

(2) students receiving the former [INC] usually are not required to re-register for the course; they simply return to their instructor of record and complete whatever work was required of them. (p. 85)

It is with regard to the re-registration process that the major clerical advantages of the IP grade become more evident.
The two major advantages of re-registration are:

1. the student re-establishes an official enrollment in the course; he officially commits himself to continuing the course;

2. the instructor is not overburdened by students coming to his office at unscheduled times to pick up fragments of instruction. (p. 85)

With regard to the clerical advantages of the IP grade, the need for an accurate account of the instructor's class load, student enrollment in specific courses, as well as considerations of eligibility for athletics, veterans benefits, scholarships, grants, and financial assistance—all indicate a need for a grade to reflect student's progress. (p. 85) Although the IP grade requires the student to again pay fees for the course, the IP grade does show he is in the process of completing the work.

Illick and Taylor further suggested that the students have an individual conference with the instructor. During the conference the instructor should explain that accurate records will be maintained so that the student will not have to do unnecessary work, discuss if it would be beneficial to work with the same instructor or a different one, and assure the student that the IP grade does not indicate that he has failed. (p. 86)
Finally the grading scale of A, B, C, IP (In-Progress) or W (Withdrawal) is suggested for use in remedial composition courses and will reflect a philosophy of helping to keep the marginal student in college.

Diamond, Eickmann, Kelly, Holloway, Vickery, and Pascarella (1975) cited the freshman composition course at Syracuse University as an example of a project that had a rather substantial impact on students, faculty, resources, and the community. The freshman composition course consisted of three levels: Level I was the Basis Skills Track which included Sentences, Punctuation, Agreement, and Usage; Level II was the Essay Track which included weekly sequences of writing sessions and evaluation; Level III was the Literature and Writing Track. The Diagnostic Test (Objective) and Orientation and Essay Writing Lecture were required of all students before they proceeded to any level. As in any competency-based program, students' progressed at their own rate. In addition, if the student wished to accumulate additional credits, he had the opportunity to do so. The freshman composition course is described in further detail in Figure 1.
INSTRUCTIONAL SEQUENCE—FRESHMAN ENGLISH
Syracuse University
Center for Instructional Development

Note: Several changes in this format have been made based on further field testing. Levels I and II were combined, with a greater emphasis being placed on individual counseling. In addition, the essay test replaced the objective instrument as the basis for placement.

Based on diagnostic tests, students are placed in one of three instructional levels. Level I students are assigned to specific remedial areas according to need and may move up to Level II as soon as they can pass the criterion tests. Level II requires two passing papers before a student may move to Level III. In Level III students are required to take two four-week segments on Fiction and Poetry and may select from a series of minicourses or write a paper from an area of interest for additional credit. The required segments are repeated throughout the semester for the convenience of students moving into Level III during the year.

Source: Diamond et al., Instructional Development for Individualized Learning in Higher Education, p. 121.
First, in making judgments about a faculty member's load, certain questions had to be asked and answered:

1. How many students can a faculty member handle on each of the three levels?

2. What is the pattern of movement of students through the sequence and how does it affect instructional load requirements?

3. What is the total effect on instructional load of the new versus the traditional pattern? (p. 120)

Second, faculty involved in the new approach identified the number of students a full-time teacher could handle at each of the three levels in comparison to the traditional approach (See Table 3). This was an important step because the course had previously been taught by graduate teaching assistants (GA) who were under the supervision of a senior faculty member.

Third, a study was made of the number of students in each level on a week-by-week basis (see Table 4). Also, field testing was not done with 100 students in Level III because the number of students at a specific time in Level III was small.
### TABLE 3

**FACULTY LOAD REQUIREMENTS BY LEVEL**

<table>
<thead>
<tr>
<th>Faculty Load (Number of students per full-time faculty/GA)</th>
<th>Traditional - 40 (two, twenty-student sections)</th>
<th>Level III - 60 (with traditional instructional pattern)</th>
<th>Level II - 40</th>
<th>Level I - 100</th>
</tr>
</thead>
</table>

### TABLE 4

**WEEK-BY-WEEK STUDENT PATTERNS (APPROXIMATE)**

<table>
<thead>
<tr>
<th>Level</th>
<th>Week 1</th>
<th>Week 6</th>
<th>Week 11</th>
</tr>
</thead>
<tbody>
<tr>
<td>III</td>
<td>17</td>
<td>33</td>
<td>67</td>
</tr>
<tr>
<td>II</td>
<td>29</td>
<td>52</td>
<td>26</td>
</tr>
<tr>
<td>I</td>
<td>54</td>
<td>15</td>
<td>6</td>
</tr>
</tbody>
</table>

*aStudents in levels by percentages.*

Finally, a concept was developed regarding faculty requirements when took into account the relationship between student pattern by level and faculty load and then considering the anticipated 1,000 student enrollment on both factors (see Table 5).

Some meaningful and positive results of the new approach were:

(1) The new approach, plus some other modifications, could reduce total faculty load by 20 percent.

(2) Since maximum load requirement was reached during the middle of the semester when most students were in Level II, the new pattern permitted specialization of some staff and freed others to teach minicourses during the early and later parts of the course.

(3) There was over a 12 percent increase in the number of credits earned by students in the first semester of freshman composition (see Table 6).

(4) The instructional staff felt that by the time students reached Level III they were writing at a level at least equal to that traditionally expected by the end of the first year improved instructional effectiveness.

(5) Instructors were pleased with the variety of available teaching assignments, the opportunity for specialization, the chance to work with small groups of students and to teach a minicourse on a topic in which they were interested.
TABLE 5

FACULTY (GA) REQUIREMENTS BY WEEK (n=1000)

<table>
<thead>
<tr>
<th>Level</th>
<th>Week 6</th>
<th>Week 11</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n GA's</td>
<td>n GA's</td>
</tr>
<tr>
<td>III</td>
<td>170</td>
<td>3</td>
</tr>
<tr>
<td>II</td>
<td>290</td>
<td>7</td>
</tr>
<tr>
<td>I</td>
<td>540</td>
<td>5-1/2</td>
</tr>
<tr>
<td>TOTAL</td>
<td>15-1/2</td>
<td>20</td>
</tr>
</tbody>
</table>

Source: Diamond et al., Instructional Development for Individualized Learning in Higher Education, p. 122.

TABLE 6

FRESHMAN COMPOSITION: CREDITS GENERATED (ANTICIPATED) (n=100)

<table>
<thead>
<tr>
<th>Initial Assignment by Level</th>
<th>Credits Anticipated</th>
<th>Total Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>III</td>
<td>17</td>
<td>74</td>
</tr>
<tr>
<td>II</td>
<td>29</td>
<td>99</td>
</tr>
<tr>
<td>I</td>
<td>54</td>
<td>144</td>
</tr>
<tr>
<td>TOTAL</td>
<td>317</td>
<td></td>
</tr>
</tbody>
</table>

Source: Diamond et al., Instructional Development for Individualized Learning in Higher Education, p. 123.
(6) The new pattern proved extremely helpful to those graduate assistants who planned to become teachers by providing them with a variety of teaching experiences as well as an opportunity to teach a relatively short instructional unit several times over in order to improve their technique.

(7) The students approved of the new instructional approach, a particularly important factor since this large enrollment course which has traditionally been poorly received has been a problem for both students and teachers. With few exceptions, those enrolled felt they learned the skills expected of them, that the instructional pattern used their time efficiently, and that the options not only made sense but increased the relevancy of the course itself.

(8) An unexpected benefit was the progress of students who had not been successful in the traditional course. Several who had failed or been counseled out of the traditional course to avoid failure were able to complete their entire six-credit requirement in a single semester in the new program.

(9) The new English course has received support from faculty in other disciplines who have volunteered to cooperate in evaluating independent study papers that students have written in their area of specialization.

(10) Alumni and community groups have shown particular interest in this project (pp. 120, 123-124).
In addition, several problems were encountered which would be expected in any new program. Those problems cited by Diamond et al. (1975) which merited attention were:

1. Some students had difficulty in testing out of Level I and required special attention.

2. Some of the commercially available programmed tests used at this level contained errors and contradictions.

3. More than 18 months were required to validate a series of alternative tests for Level I that were equal in difficulty and measured what had to be measured.

4. When the course expanded to 1,000 students, logistics problems developed.

5. A special instructional package was needed for the large number of graduate teaching assistants required for the program each year.

6. Coordination of instructors became a major responsibility.

7. Critical comments of students, combined with various evaluation instruments, were extremely helpful in identifying problems with staff, procedures, and materials and in suggesting possible solutions.

8. Changes in the format of Levels I and II have been implemented as the project has continued.
(9) An effort is being made to utilize experienced, part-time instructors to work on an individual basis with students having major problems in the basic skills area. (pp. 124-125)

College IV, Grand Valley State Colleges is one of a federation of five colleges in Allendale, Michigan, and it has the distinction of being one of the few entirely self-paced liberal arts colleges in the nation. Holland and Malouf (1975) described the basic elements of the College IV program:

This curriculum is broken into modular units varying from one-half to three or more credits, so that the primary delivery made is portable and personalized via these modules. Objectives, activities, and self-assessments in each module maximize a learner's progress. Mastery is based on attainment of 90% of the competencies listed in the objectives.

Students admitted to Grand Valley are allowed to enroll in any number of modules, on any work day during any quarter, and avail themselves of faculty and tutors during any of the posted office hours. No formal class times or locations are established except on a demand basis as students enter discussion or group activity modules. (p. 7)

The two programs in the area of English at College IV were the Freshman English Program which existed in a
form coordinated with oral communication in the Communication Competency Program and the Communication Skills Career Track Program. The Communication Competency Program encompassed three levels, Levels 10, 20, and 30.

Level 10 requires the student to demonstrate competence in the fundamentals of reading, writing, speaking, and listening.

Level 20 requires the student to demonstrate competence in the use of the basic elements of message evaluation and composition.

Level 30 requires the student to demonstrate competence in the public, audience-directed form of communication. (White, 1975, p. 1)

The Communications Skills Career Track Program leads to the Bachelor of Arts or Bachelor of Science degrees and encompassed Levels 40, 50, and 60. In a report to the College IV faculty and administration regarding the Communication Skills Career Track Program, White described the competencies for Levels 40, 50, and 60.

Level 40 requires the student to demonstrate competence in interactive forms of communication (the interview, a private discussion, and a public discussion).

Level 50 requires the student to demonstrate competence in communication sensitivity (skills and characteristics).

Level 60 requires the student to demonstrate competence in communication consultancy and some of its components are the demonstration of human relations skills, the design,
conduction, and evaluation of a public relations campaign directed toward a specific public, and the application of appropriate communication concepts, principles, strategies, and techniques to actual, on-going organizations. (White, 1975, p. 3)

As one might expect, an entire institution which is devoted to the concept of self-pacing would encounter some problems. The two most unique problems were the open student access and the costs and administrative accounting.

In reference to the open student access, several very unusual methods had been implemented to solve the problem. Regarding the admissions and registration process:

Currently, Grand Valley and College IV jointly sponsor a records clerk to work with College IV registration and progress. Thus if an "enrollment period" is not underway on the Grand Valley campus, students still can register and start work in College IV. (Holland and Malouf, 1975, p. 7)

Another concern regarding registration was not just flexibility concerning time of admission and registration but also where students had to register. According to Holland and Malouf (1975): ..."College IV's Mobile Campus visits area businesses and industries and often attracts new students seeking entry into College IV" (p. 7).
Probably the most unique aspect of the College IV program described by Holland and Malouf "tuition-bank" system. Students had the option of "buying one credit at a time, or paying a lump sum and selecting the modular he wanted as long as he had money "banked." Even though the system demanded more record keeping, it is probably still worth the extra effort.

Finally, with regard to the cost and administrative accounting, "the costs of module development and the margin of profit made by the book store are all paid by the students as they pay the retail prices for modules." (Holland and Malouf, 1975, p. 8)

Frostburg State College in Frostburg, Maryland initiated a Competency-Based Freshman English 101 course in the Fall of 1973. According to Donald N. Smith, head of the English department, the major objectives in revising the former 101 course were:

(1) To clarify the objectives and expectations of the course for both students and staff

(2) To establish more uniform grading standards and procedures

(3) To accommodate a fairly wide range of proficiencies, absorbing into the course the function of the former remedial program (which posed the kind of motivational problems that no-credit remedial programs usually do pose)
(4) To raise the student-teacher ratio in the course without lowering standards or imposing a greater burden on instructor

(5) To ensure that students passing the course have demonstrated a prescribed level of competency in basic writing skills (grammar and usage and organization of ideas and supporting details). (Smith, 1974, p. 1)

In order to accomplish these objectives, it was decided to make

101 a basic skills course concentrating on form in the use of language and organization of ideas (with the possibility of exempting better prepared students from positions of it) and to reserve for 102 the task of developing in the student a sensitivity to language and ideas. (Smith, 1974, p. 1)

Smith (1975) in "The Second-Year Report on Competency-Based Freshman English 101, 1974-75," made a comparison of the results of the 1973-74 and the 1974-75 programs and found that the number and percentage of passes were very similar. However, the number of F's almost doubled those of the preceding year. Smith speculated on the reason for the increase in F's:

...it is probably a result of choices made by individual students who found themselves unwilling or unable to cope with the demands of the course - since, at least in the first semester, the F is not assigned on the basis of performance. (p. 1)
Smith (1975) speculated further and stated that although an attempt was made by the department to both ease the pressure of the course by offering more opportunities to take the final exam as well as making the structure of the course less prescribed, these factors may have accounted for the increase in students passing, but, conversely, it may have also caused an increase in students failing.

As a result of the new program, a student seemed to better understand precisely what was expected of him and was able to make a more realistic assessment of his own performance in the course. Also, students had, in general, not complained about the evaluation of their writing by faculty members.

With regard to the type of students in the program, a comparison made by Smith (1974) of the freshmen classes for the two years revealed:

a 10 to 12 percent increase in the number of scores falling below established cut-off points on the SAT verbal, English diagnostic, and reading tests administered prior to the students' enrollment. Also, Dr. Jae Choi, Director of Institutional Research, has reported that the number of freshman from the lower half of their graduating classes increased by 11.1 percent and those from the top quarter decreased by about 4 percent. (p. 4)
Both factors will undoubtedly cause these students to require more time than it usually takes to complete Freshman English requirements and the competency-based approach will provide the opportunity for them to do so.

Shelby State Community College in Memphis, Tennessee has an individualized competency-based program in both basic English composition and mathematics. Covington (1976) in an article about the program in the Commercial Appeal indicated that the program was started in the fall of 1975. It was instituted because the school has an open-door policy, thus admitting many students who were either coming directly from high school or those who had been out of school for several years and who were not academically prepared to perform at the traditional level of entering students.

Dr. Bower [Dr. Karen Bower, chairman of the Mathematics and Methodology department at Shelby State] said some entering students score as low as 1 or 2 in mathematics on the American College Test (ACT). (The minimum composite ACT score for admission to Memphis State University is 16). (p. 2)

Additional information provided by the Covington (1976) article covered some of the features of the program.
Diagnostic tests are given to entering students in order to prepare individualized programs.

The competency required in the basic English course is that a student must make at least a C on three out of four themes before becoming eligible to take a final examination, which is also a theme. A committee of three faculty members grade the student's theme and return it to the student's instructor for additional evaluation. The instructor cannot assign a student more than one letter grade above or below the one assigned by the committee.

Two teacher aides work with the instructor to provide students additional assistance. Also, three special English classrooms have been equipped at a cost of about $8,000 each and contain video and audio tape players and instructional tapes, individual slide machine and learning materials on various levels.

Regarding problems, two of the major problems encountered in the program are the continued difficulty of motivating some students and some difficulty among both faculty and students in adjusting to this new teaching and learning approach.
Finally, in reference to the results of the program:

Dr. Bower said only about 20 to 25 per cent of the students appear to be meeting the mathematics competency requirements in one quarter.

One English instructor said about one third of the students in her classes were meeting the requirements in one quarter.

"We still don't have all the answers," said Dr. Kathy Cowan, chairman of the English department.

"But while we cannot at this time get any statistical proof of its success, the program seems on the whole to be met enthusiastically by both students and faculty. The success of the program is based on the interaction between the faculty member and the student." (p. 2)

Summary. Golub's (1974) presentation of a Competency-Based English Curriculum for Grades K-12 will be helpful to the proposed study because of its description of a broad range of competencies for grades K-12 with emphasis on attaining competencies at various levels rather than grades as well as having as integral parts of the curriculum both evaluation and revision of learning activity packets.

Illick and Taylor (1975) present useful information regarding suggested grading practices in a CBE program in remedial composition. Although the Performance-Based Composition program investigated in this study is more
developmental than remedial in nature (there is a remedial course offered) the recommendations are applicable to the PBC program. Also, the two suggestions most useful to this study are: (1) students formally re-register for the course in which he received an IP grade and (2) the instructor have an individual conference with the student and provide necessary information, especially that the IP grade does not indicate that he has failed.

The Competency-Based freshman course at Syracuse University cited by Diamond et al (1975) will be very helpful because of its many similarities to the PBC program examined in this study. The information concerning the organizational structure of the program and the discussion of problems encountered and practical solutions to them will be useful when analyzing similar problems and making recommendations relevant to the PBC program investigated in the proposed study.

The information regarding the programs at College IV, Grand Valley State Colleges, Frostburg State College, and Shelby State Community Colleges will be invaluable in providing needed information about other English programs in various areas of the country.
College IV's methods of registration and record keeping provide information that could be modified and possibly adopted for use in the program investigated in this study. On a more comparable level with the PBC program examined in this study, the programs at Frostburg State College and Shelby State Community College provides significant data regarding not only the success of each program but also some of the problems as well, especially concerning the adjustment of faculty and students to the new approach.

Attribute Variables that Potentially Influence Student Success in Performance-Based Education Programs

The purpose of this study was to examine the relationship between four sets of attribute variables: (1) sex, (2) academic capability, (3) locus of control and (4) evaluative tone and student success in the Performance-Based Composition program at a private Black college. The first two attribute variables, sex and academic capability, were chosen because they are most often used in studies dealing with factors affecting student academic achievement. The inclusion of the variable of sex enabled the researcher to note whether a significant relationship
existed between academic performance and the sex of the students. Also, the inclusion of the variable of academic capability enabled the researcher to ascertain if there was a significant relationship between the student's level of performance on selected intellectual measures and student success in the PBC program. The selected intellectual measures to be used in this study are: ACT English score, high school grade point average, high school grade point average in English, and the Performance-Based Composition program Pre-test composite score.

The third variable, locus of control, was selected because its inclusion might help to better explain the relationship between this personality factor and academic success in the PBC program.

Finally, the fourth variable, evaluative tone, was selected because its inclusion might help to explain the relationship between the student's reaction to the PBC program and academic success in the PBC program.

**Prediction Studies Employing the Variable of Sex**

In general, sex is defined in this study as the subjects being identified as being either male or female. Sex is recognized as being one of the most significant
factors which influence academic success. M. E. Wagner (1934) and T.D.D. Quaid (1938) were among the first investigators in the field of predicting academic success to recognize the importance of sex. Wagner (1934) stated: "Dividing a total student body into more homogeneous groups, e.g. by graduation school or sex or age, and then developing prediction formulae for such groups will be found more fruitful." (p. 78)

Also, investigators have found women to be more predictable academically than men. Abelson (1952) investigated sex differences in predicting academic success. A comparison was made of the standard errors in estimating college grades from high school grades with standardized aptitude test scores for 1,411 males and 2,135 females. The findings were that an overall significance in differences for high school marks as predictors existed but no significant differences for aptitude scores. He attributed the differences to the homogeneity of the female group rather than the large correlations for females.

Seashore (1962) analyzed data for predicting high school and college grades from the Differential Aptitude Test (DAT) battery and reported sex differences mostly favored females. Seashore listed the following factors
as those which positively affect the consistency of performance of females: (1) motivation, (2) goal-orientation and conformity, and (3) the grading practices in high schools and colleges.

Endler and Steinberg (1963) studied correlations of high school grades and standardized predictors with the first-year average of 45 males and 24 females in a newly established liberal arts college found that females were more predictable than males.

Lavin (1965) offered a very informative interpretation and explanation of the reasons why the findings on sex differences indicate that the level of academic performance of females is higher than that of males. These findings also suggested that the development of underachievement may follow a different pattern for females than for males.

One logical explanation of the sex differences in academic performance is that males and females are socialized differently. Because the different societal roles played by females and males, as well as different attitudes and values, it can be assumed that:

(1)...academic success probably has different significance for males than for females, and (2) female teachers far outnumber male teachers, especially in elementary and high schools. This being the case, we might speculate that teacher
definitions of the student role include more characteristics of the female sex role. That is, the model of a good student is a female model. If this is true, then for the male, deviation from the student role actually constitutes a confirmation of his masculinity. (pp. 130-131)

Worthington and Grant (1971) presented a multivariate analysis of student characteristics which was drawn from information collected as part of the ACT program at the University of Utah. The sample was composed of 1270 men and 990 women who were freshmen at the University Autumn Quarter, 1968.

The student characteristics analyzed were: (1) sex, (2) high school average based on the four basic subject areas, (3) high school attended, (4) predicted GPA's, (5) ACT scores (English, Mathematics, Social Studies, Natural Sciences, and Composite), (6) importance of academic type of college goal, (7) importance of vocational type of college goal, (8) importance of social type of college goal, (9) estimated family income, (10) number of younger children in family, (11) number of non-academic high school achievements, and (12) choice of future vocational role. Table 7 presents a summary of the main effects and the two-factor interactions which in one or more hypotheses were significantly related to the dependent variable of first quarter college GPA.
TABLE 7

SUMMARY OF MAIN EFFECTS AND SIGNIFICANT INTERACTIONS

<table>
<thead>
<tr>
<th>Source</th>
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<tbody>
<tr>
<td>High School Averages</td>
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<tr>
<td>Predicted GPA's</td>
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<tr>
<td>ACT English Test Scores</td>
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<td>ACT Mathematics Test Scores</td>
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<td>ACT Social Studies Test Scores</td>
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<td>ACT Natural Sciences Test Scores</td>
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<td>ACT Composite Scores</td>
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<tr>
<td>Academic College Goal</td>
<td>.01</td>
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<tr>
<td>Sex</td>
<td>.01</td>
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<tr>
<td>Estimated Income of Family</td>
<td>.01</td>
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<tr>
<td>Number of Younger Children in the Family</td>
<td>.05</td>
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<tr>
<td>High School Attended</td>
<td>.01</td>
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<tr>
<td>Number of Non-Academic Achievements</td>
<td>.01</td>
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<tr>
<td>Future Vocational Role</td>
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<table>
<thead>
<tr>
<th>Source</th>
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<tbody>
<tr>
<td>Sex by High School Average</td>
<td>.05</td>
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<tr>
<td>Sex by ACT Social Studies Score</td>
<td>.05</td>
</tr>
<tr>
<td>High School by ACT Natural Sciences Score</td>
<td>.01</td>
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<tr>
<td>Sex by ACT Natural Sciences Score</td>
<td>.01</td>
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<tr>
<td>Income by High School</td>
<td>.05</td>
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Regarding the variable of sex:

[it] had a significant effect on GPA in some cases but in other cases it did not. This variation is related to the number of cells, the cell sizes, and the error term in each analysis of variance. There was a significant interaction between sex and high school average, sex and ACT Social Studies score, and sex and ACT Natural Sciences score. This indicates that men with a certain high school average, ACT Social Studies score, or ACT Natural Sciences score can be expected to earn different GPA's than women in the same high school average of ACT score categories. (p. 9)

More recently, S. B. Kahn (1973) conducted a study which dealt with the ability of newly developed standardized aptitude and achievement tests and of high school marks for predicting academic performance at the end of the freshman year. The predictor battery included verbal and mathematical aptitude tests, standardized achievement tests in English, mathematics, and physics, and an unweighted average of marks assigned by teachers during the final school year. The standardized tests were administered every year to all grade 13 (final high school year) students in Ontario under the program of testing for university. In addition, the criterion data (first-year average) for 10,379 males and 8,951 females was obtained from five publicly supported universities, both large and
small, over a period of three academic years (1967-70).

The results of this study substantiated the conclusions of previous studies that, in general, the correlations between predictors and achievement for females are higher than similar correlations for males. In total, 100 correlations were higher for females than for males; 22 of these were significant at or beyond the .05 level. Thirty-two correlations were found to be higher for males when compared with similar correlations for females; three were significant at or beyond the .05 level. The remaining nine correlations were equal for both males and females. (p. 90)

Gross, Faggen, and McCarthy (1974) conducted a study in order to find out whether females are more predictable than males in academic settings. Data were collected for 17,745 students at the City University of New York. Because of an open admission policy established in 1970, the sample of students was a very heterogeneous one.

The criterion variable was measured by the college grade point average (GPA) and the predictor variables were: two junior high school level achievement tests (Stanford Achievement Test-Mathematics and Verbal) administered prior to admission to college and average grades in four high school subjects (English, mathematics, science, and social studies).
Results indicated that in nine out of ten colleges studied, the multiple regression analyses showed that the academic performance for female college students is more predictable than for male students.

As yet, no studies exist which investigate the influence of the personal attribute variable of sex on successful student performance in a Competency-Based Education program. However, on the basis of the literature reviewed pertaining to the relationship between sex and the broad area of academic achievement two generalizations are supported which would have direct bearing on this study. First, sex is a significant factor when research is conducted regarding variables that influence academic success. Secondly, in general, females are more predictable than males with regard to academic achievement. Therefore, in this study, it would be sound to investigate the relationship between the independent variable of sex and the dependent variable of academic success in the PBC program.

**Prediction Studies Employing the Variable of Academic Capability**

Academic capability is defined in this study as the intellectual ability of the student as measured by his
American College Test (ACT) English score

Numerous studies have indicated that the standardized test composite score is one of the most often used predictors in studies which examine factors that influence academic achievement. Funches (1965) conducted a study to determine the degree of relationship between the ACT composite standard score and the year-end grade point average of 369 freshmen enrolled at Jackson State College. The findings supported the following conclusions:

1. There is a positive correlation of 0.59 between the ACT composite standard score and the year-end GPA of Jackson State College students,

2. the ACT composite score would be a reliable factor if used to predict first-year college success, and
(3) the degree of correlation between the ACT composite standard score and the grade point averages of freshmen students at Jackson State College is above what is generally accepted as sufficient evidence of a positive degree of relationship. (p. 326)

Since it has been often assumed that scholastic aptitude tests are biased against culturally different or disadvantaged students, Munday (1965) conducted a study to determine whether the validity of the ACT would be adversely affected in colleges whose student bodies were predominantly Negro. Five colleges located in four different Southern states were involved in the study. The results showed that grades for socially disadvantaged students are generally as predictable as grades for other students when standard measures of academic ability are used.

Marzolf (1967) conducted an investigation which was concerned with the shape of the distribution of inter-test variabilities, patterns of high and low score combinations and with associated factors on the four tests which compose the ACT test. The data were the ACT converted scores for freshmen at Illinois State University in 1963 and 1964 and at Northern Illinois University in 1963, which made a total of 7,021 scores. Most students (28.1 percent) have their
highest score in Social Studies, and fewest in English (21.7 percent). With regard to the English usage score, the results showed that for men high variability was usually due to a relatively lower English score and for females, a lower mathematics score. Also, for men, only 6.2 percent had their highest score in English usage portion of the ACT, for women the percentage was 29.4.

Merritt (1972) conducted a study to determine the predictive validity of the ACT for students from low socioeconomic levels. The same was composed of students employed on the Federal Work-Study Program during the school session of 1968-69 and 1970-71.

The data indicated that these two groups had identical average ACT scores (19.0) and the 1970-71 students earned a mean GPA as compared to a 2.50 for the 1968-69 group. Both GPA's were computed on the 4.0 basis. The correlational coefficient between predicted and earned GPA for the 1970-71 students was .71 and significant beyond the .001 level. (p. 444)

The findings supported the hypothesis that the ACT composite score is a valid predictor of college grades for students from a low socioeconomic background.

Since this study dealt specifically with the subject of Freshman English, the researcher felt that the use of the ACT English score, as opposed to the ACT composite score,
would provide a clearer depiction of the students' ability in this subject area.

Also, the findings of the study would indicate whether there is any significant relationship between the use of the ACT English score in conjunction with high school grade point average, high school grade point average in English and PBC Pre-test scores and success in PBC program. In addition, further research would be warranted in order to more directly investigate the relationship between the ACT English score and student success in a Freshman English program.

**High school grade point average**

Besides standardized composite scores, the other most often used predictor of academic success is the student's high school grade point average. Evidence from numerous studies, conducted over a long period of time, indicates the superiority of the use of the high school grade point average as the best single predictor of future academic achievement. Garret (1949) compiled a review of 194 investigations from 1920 to 1940 of all factors contributing to the prediction of academic success in college. He concluded that the student's high school average continues
to demonstrate a very high correlation with academic achievement.

Cosand (1953) summarized the findings of 35 studies which investigated single predictors of college academic performance. For 17 studies investigating the relationship between high school grades and college success, the median coefficient of correlation was found to .53, with 50 percent of the cases between .48 and .60. Of all the various measures investigated, high school grades commanded first place as a predictor with high school rank with coefficients ranging from .36 to .62.

Scannel (1960) conducted a study which investigated annually obtained comparable achievement measures as predictors of college success. Also, the predictive power of measures of school attainment was studied using these measures separately and in combination with achievement test scores.

The base sample was composed of 3202 students who had taken the Iowa Tests of Basic Skills (ITBS) during 1948 to 1952 and who enrolled the following fall at either the University of Iowa (SUI) or Iowa State College (ISC).

One of the major findings of the study was the high school grade point average was the best single predictor
of college success yielding correlations of .67 with the freshman grade point average and .59 with the four-year grade point average.

Funches (1967) conducted a study in order to determine whether the high school transcript or the ACT composite score was a more reliable predictor of first-term success for students at Jackson State College in 1965. The correlation between the secondary school transcript average and the first-term GPA was .06 and the findings of the study suggest the following conclusions relate to their study:

(1) there was a positive degree of relationship between the secondary school transcript average and the first term GPA,

(2) the degree of correlation between the secondary school transcript average and the GPA is below what is generally accepted as sufficient evidence of a positive degree of relationship, and

(3) the ACT composite standard score is a more reliable predictor of first term success at Jackson State College than the secondary school transcript average. (p. 54)

Although most studies indicate that the high school grade point average is very effective in predicting college success, other studies show that it is not. For example, Thomas and Stanley (1969) reexamined the value of high
school grades, relative to standardized test scores, for predicting college grades of black students. Data from studies previously done and from a predominantly black university were analyzed and the results, in general, indicated that high school grades do not consistently make the greatest contribution in predicting college grades of black students, especially for men, as they do for whites. Some of the plausible reasons for this phenomenon occurring are:

(a) invalidity of grades in high school and/or college, particularly for black males;
(b) unreliability of grades and grade reporting in black high schools;
(c) intergroup differences in personality characteristics; and
(d) restriction in range due to selection processes. (p. 211)

High School Grade Point Average in English

When considering the value of including the student's high school grade point average in English as a predictor variable in this study, it was found that several studies in the area of predicting academic success in college did utilize the overall high school grade point average as well as high school averages in English, Mathematics, Social
Sciences, and Natural Science. Douglass (1931) found that high school average reported the highest coefficient of correlation (.56) with college marks while high school English grades reported a correlation of .49 with college grades for three quarters of college work.

Carlson and Milstein (1958) in a study of 508 freshmen admitted to the University of Oregon in 1953 found that the overall high school grade point average reported the highest coefficient of correlation (.62) with college grade point average while high school English was the second highest correlation (.58).

Kerr (1959) conducted a study to determine what types of useful information could be produced from analyzing high school records and test scores and be used to ascertain whether there might be any reliable criteria for selective admissions.

One portion of the study dealt with a comparison of high school and college English grades. For group averages, students with higher grades in high school English also made higher grades in college English. However, for individual students, the following differences were evident:

Of 111 freshmen with lower than a C average or better in high school English, 45 (40 percent) made a C average or better
in College English. This figure may be slightly distorted, however, by the fact that probably some of this group were put in the remedial course in college English where they were able to make better grades than they would have in the regular course. On the other hand, of 360 freshmen with a B average (4.00 to 5.99) in high school English, 39 (11 percent made below C in college English and 2 percent made below a D average). No student with a straight A in high school English made below C in college English. (pp. 188-189)

Since this study dealt with student academic success in the specific subject area of Freshman English, the researcher felt the literature cited adequately supported the use of high school grade point average in English as a predictor variable. Not only did it prove to often high correlate with college success, but the use of this variable would also provide an even clearer depiction of the student's past academic achievement in English than just the use of the high school average alone.

**Performance-Based Composition (PBC) Pre-Test Composite Score**

Academic success is defined in this study as on the basis of the PBC pre-test scores, the number of modules completed in two years to fulfill requirements for Freshman
English. Noting this definition of academic success, including the variable of the student's PBC Pre-test scores would also seem to be necessary. Since the overall high school average related significantly to college academic success, then it may be speculated that there would appear to be a significant correlation between performance in high school English courses and, in this case, Freshman English.

Also, the PBC Pre-test composite score will show not only what students have acquired as a result of four years of high school English, but their level of retention of these basic English skills in light of the fact that a large portion of the requirements in the PBC program are basic English skills that should be possessed by all entering college Freshmen.

**Prediction Studies Employing the Variable of Locus of Control**

Rotter (1966) defined internal locus of control as an individual's belief that reinforcement is contingent upon his behavior and external locus of control as an individual's belief that reinforcement is independent of his actions and is controlled by luck, chance, or powerful others.
In general, the evidence indicates that internals tend to exhibit greater interest and effort in achievement-related activities than do externals. Coleman et al. (1966) found that children of minority groups who showed a sense of control of the situations in which they found themselves had higher achievement than those who did not feel they were in control of their environment. Also, internal control was reported to be related to achievement for all minority groups, excluding Oriental Americans, in grades 6, 9, and 12.

Furin et al. (1969) noted that students who have a high sense of personal control had higher achievement test scores and grades, higher academic confidence, and higher educational expectations and aspirations than students who held a belief in control ideology.

Hjelle (1970) conducted a study to examine the relationship between Rotter's (1966) internal-external control dimension (I-E) and academic achievement. The results showed an indication of only marginal support for this prediction, p. < .250. However, Hjelle suggests two possibilities that may account for the lack of relationship between the I-E and academic achievement variables.
First, and along the same lines suggested by Rotter (1966), there may be an overabundance of students who have arrived at an external view of the world as a defense against failure but who were initially highly competitive. Thus, externals would still maintain comparatively strong achievement motivation in clearly structured competitive situations but defensively account for failure by externally controlled attitudes. Second, the I-E dimension is probably not generalizable across situation, and in a highly structured academic achievement situation there is probably more specificity determining the QPA quality point average than in other kinds of competitive situations. (p. 326)

With regard to literature dealing with the Rotter I-E scale (1966) and academic achievement in a competency-based education course, Johnson and Croft (1975) examined the relationship between locus of control and performance in a Personalized System of Instruction (PSI) course. The hypotheses tested were (a) internals would complete the course faster and earn higher grades than externals, and (b) change toward an internal direction subsequent to course to participation would be evident. Rotter's Internal-External (I-E) Scale was administered to 179 college students prior to and upon completion of a PSI course in personality, which contained standard PSI features as well as variations in proctor influence. Although the results showed locus of control was not
related to course performance, significant change toward an internal direction was observed (p. < .01).

In conclusion, the literature reveals that the relationship between Rotter's I-E scale and academic achievement is a complex one. Studies which reported locus of control differences in academic performance have been conducted with children and most often used the Intellectual Achievement Responsibility Questionnaire (IAR) as a measure of locus of control, for example McGhee and Crandall (1968). On the other hand, when subjects were adolescents or college students, the results have shown no significant relationship between locus of control and academic achievement. Therefore, variables of specificity of the measure used and the age of the subject may directly influence the relationship between locus of control and academic performance.

With reference to academic success, defined in this study as on the basis of the PBC Pre-test score, the percentage of modules completed in two years to fulfill requirements for Freshman English, studies such as the one by Johnson and Croft (1975) will prove helpful because of its similarity to this study in the use of the Rotter I-E scale in a performance-based situation.
Silberman and Allender (1974) defined evaluative tone as the predominant value (positive or negative) and intensity of evaluative remarks made about the course. More specifically, the evaluative tone is an outgrowth or the product of the student's attitude towards a particular course. Thus, the student's attitude causes him to evaluate the course in a positive or negative manner. Using this connotation of evaluative tone as a conceptual framework, it is necessary to cite literature which deals with the correlation between attitude and achievement.

Although it is often believed that there is a positive correlation between a student's attitude and his achievement, studies in this area reveal that this is all too often not the case. For example, Jackson (1968), in *Life in Classrooms* reviewed many studies in this area and found that most times there was no statistically significant relationship between a student's attitude toward school and his achievement. However, Jackson dealt with the student's attitude toward school in general rather than toward specific subjects and/or instructional
methodology which could have affected the results of the studies he reviewed.

First of all, when the review of literature dealt with the correlation of the student's attitude toward specific subjects and his achievement in those subject areas, the findings were somewhat different than those of Jackson. Neale, Gill, and Tismer (1970), conducted a study which investigated: (1) whether there is a relationship between a student's attitude toward the subjects of social studies, science, arithmetic, and reading and achievement in these areas, (2) whether attitude could be useful as a predictor of achievement, and (3) whether the student had a change of attitude from the beginning of the school year to the end of the year.

The subjects were 215 eighth graders (105 boys and 110 girls). The Semantic Differential was used to measure attitudes, intelligence was measured by the Lorge-Thorndike Intelligence Test (III), and achievement was measured by the SRA Achievement Series. The results showed significant positive correlations ($p < .01$) for the boys in the subjects of social studies, arithmetic, and reading. The girls only showed a positive correlation ($p < .01$) in reading. Secondly, it was found that attitude served only as a
predictor for boys in the subject of arithmetic (p. < .01). Finally, the Semantic Differential ratings for both boys and girls showed that their attitudes were less favorable for most subjects at the end of the year. Although, as might be expected, the girl's attitudes were generally more favorable towards school than boy's, the overall results indicated that for both boys and girls the attitudes were less favorable at the end of the year.

Secondly, when the review of literature dealt with the correlation of the student's attitude towards a specific instructional methodology and achievement, the findings were again somewhat different and showed a positive relationship in some instances. With specific attention being given to non-traditional instructional methodology, e.g., Personalized Systems of Instruction (PSI), Competency-Based Education, the Keller Plan, etc., two factors are readily apparent: (1) very little research has been done which investigates the relationship of the student's attitude towards this specific method of instruction and achievement, and (2) those studies which do attempt to research student attitudes are, most often, primarily concerned with other phenomena besides achievement, e.g., whether the positive attitudes of students in
personalized courses can be explained in terms of the newness or novelty of the method of learning, (Linder and Whitehurst, 1973) or the primary focus is instrumentation regarding attitudes and prior preparation in that particular field (Coon, 1969).

However, studies were found which dealt with the student's attitude and achievement. Silberman and Parker (1974) were concerned, primarily, with student attitudes towards the Keller Plan and to a lesser degree, their performance in the program. The plan used was a modification of the Keller plan, especially with regard to the time limit for completing the course. Rather than allowing the student an unlimited amount of time, the student was required to complete the course in general organic chemistry in one semester.

Data were gathered on seven student variables: (1) reading comprehension and (2) speed of reading comprehension which were measured by the Davis Reading Test (Form 10), (3) general chemistry grade point average, and the personality factors of (4) responsibility, (5) sociability, (6) ascendency and (7) emotional stability which were measured by the Gordon Personal Profile.
In order to measure achievement, students were administered the same final examination. Although students in the Keller Plan had less pressure on them because the final exam was not going to be averaged as a part of their final grade, these students achieved a slightly higher mean final examination grade than the students in the traditional section. However, this slight difference was not statistically significant at the 0.05 alpha level.

Also, at the end of the course, students in both sections were asked to complete an attitudinal survey. The results of the survey revealed a mean score of 1.53 for students in the Keller Plan and a mean score of 2.72 for students in the traditional course. The results were statistically significant at the 0.05 alpha level which indicated the students in the Keller Plan had a more positive attitude than those students in the traditional course.

Taylor (1975) conducted a study in which a comparison was made between the grade performance or achievement for students with good, average, and poor academic records in a personalized instruction course in comparative politics and in traditional courses taken during the same
semester. Also, a questionnaire was administered to ascertain the student's evaluation of the Keller Plan course and the traditionally taught courses they were taking that same semester.

The results of a comparison between the student's performance in the Keller Plan course and their performance in the traditional courses indicated most of the students in the Keller Plan course had higher grades than their grade point averages for the other courses.

An examination of the attitudinal responses and the student's grade point average resulted in low correlations between the grade point average and the course rank given to the items of: (1) feelings of achievement, (2) interest in the course material, and (3) amount learned in the course. The correlations ranged from \( \tau = -0.058 \) to \( \tau = -0.051 \) (\( p < 0.10 \)). However, Taylor states:

"The low correlations are not necessarily grounds for rejecting the hypothesis (which predicted negative correlations between cumulative grade point average and the course rank assigned to the three items: (1) feelings of achievement, (2) interest in the course material and (3) amount learned in the course.) The course was ranked very favorably on these three items and deviation from the mean rank is small. When this fact is kept in mind, it is apparent that the meaning of the lack of correlation between grade point group and "interest value" is that
the course was a very positive experience, relative to their other courses, for all grade point groups with respect to these self-generated reinforcers." (p. 59)

Robin (1976) in the second section of the article "Behavioral Instruction in the College Classroom" discussed student attitudes and their relationship to the evaluation of course outcome. On the basis of the review of literature regarding this relationship, Robin (1976) concluded that since in most of the studies reviewed teacher-made, self-report questionnaires have served as the primary means of ascertaining student attitudes, two facts are readily clear:

Knowledge of the final grade, especially if it is an A, may differentially inflate attitudinal responses in favor of behavioral instruction. In addition, the enthusiasm of the instructor and the novelty of the method may also contribute to positive student evaluations. (p. 324)

Also, Robin (1976) focused attention on the fact that additional experimental analysis is needed to:

parcel out the percentage of the attitudinal variance accounted for by student opinions about behavioral instruction itself and the percentage accounted for by nonspecific, situational factors accompanying the introduction of any innovative procedure. (p. 324)

In this regard, Robin cited a study by Sheldon, Sherman, Wolf, Minkin, and Minkin (1975) which concluded:
student evaluation of the Keller Plan course were less positive on a university-wide standardized questionnaire than on an internal teacher-made survey. In particular, students objected to four aspects of their Keller Plan course: (a) the method encouraged memorization of isolated facts instead of understanding and application of general principles; (b) there was too little contact with the instructor and students did not get to know each other; (c) there were too few class discussions; (d) the course was individualized, but ironically "lacked a personal touch."

Deliberate structural changes were made in the program by the authors in order to positively affect student evaluation on the university-wide level and they did accomplish their goal. Two of the techniques used were generalization tests aimed at promoting integration of knowledge and scheduled discussions with the instructor concerning the generalized tests.

In conclusion, Robin (1976) expressed the view that teacher can influence student attitudes towards behavioral instruction by direct reinforcement, or by changing particular components of the course. However, Robin (1976) offered some excellent advice in reference to maximizing student attitudes.

In some cases, students prefer course procedures that promote relatively poor academic achievement. (Whitehurst, 1972) of maximizing student attitudinal
responses entails diluting elements of behavioral instruction that can contribute to increased learning, such a goal would prove counterproductive. (pp. 325-326)

In conclusion, the literature revealed that the relationship between student evaluative tone or attitude and academic performance is one that does not conform to broad generalizations. Studies dealing with the relationship between the student's attitude toward school in general and academic performance most times find that there is no significant relationship, such as the findings of Jackson (1968).

However, when the studies dealt with the relationship between the student's attitude towards specific subjects or instructional methodologies and achievement, the evidence often reveals a statistically significant relationship, even though a low degree of correlation is sometimes the result. The study conducted by Neale, Gill, and Tismer (1970) will be of value to this particular study because the following comparisons can be made between the two: (1) an investigation was made of the relationship between the student's attitude towards a specific subject and his achievement in that area, and (2) the findings were often statistically significant.
However, it should be remembered that the basic contrasting element was that the subjects in the study by Neale, Gill, and Tismer (1970) were sixth grade students and subjects in this study are college sophomores.

One further significant aspect of the study by Neale, Gill, and Tismer (1970) revealed that at the end of the year student attitudes were less favorable for most subjects that a variety of school related attitudes become less favorable as the students progress in school (Neale and Proshek, 1967). Whether the time span is one year or several years, the assumption is made that, in general, schools are not causing students to become more positive as they progress, but rather more negative. The phenomenon of a decrease in positive attitude as students progress can probably be explained in a variety of ways and does suggest further research in this area.

The study conducted by Silberman and Parker (1974) is of importance to this study because it found that students in the Keller Plan courses had a more positive attitude and achieved a higher mean score on the final exam in comparison with students in the traditional section of the general organic chemistry course. Although it was not the major purpose of the study by Silberman and Parker (1974)
to relate the variables of attitude and achievement, the findings are still of general value to this study.

Finally, the study by Taylor (1975) is of particular importance because of its use of a similar instructional methodology and its interest in examining the relationship between the two. In contrast, however, is the element of student performance. In the study conducted by Taylor (1974) and in this particular study, poor and average students received higher grades than they would normally achieve and performance for good students remains high. The students in the study by Taylor (1974) seem to have understood that although the work was harder and assumed more of their time, in the end the rewards of greater comprehension, higher attainment, and grades are there. Students in this particular study generally viewed the rewards mentioned above as not necessarily worth the effort and seemed to prefer a more traditional approach even if it meant less comprehension and lower attainment or grades, it would mean less work.

Studies such as the one by Taylor (1975) also show a grading scale of A to F with a negatively skewed grade distribution when compared with grades in conventional courses. Some feel a lower criterion of performance is
utilized in the Keller Plan or other similar methodologies. However, closer examination would reveal students in the Keller Plan knew more clearly what it is that is expected of them and how they will be evaluated. Also, the students in the Keller Plan are evaluated more frequently than in traditional courses and may often repeat the testing process as often as necessary in order to achieve a specified level of competency.

In addition, the studies cited by Robin (1976) as well as some of the negative attitudes of students about behavioral instruction and ways to positively affect student attitudes will be valuable to this study.

The studies cited support the use of evaluative tone or attitude towards school or specific subjects as an important variable to include when considering factors which affect the student's academic success. Also, the studies which dealt specifically with methods of self-paced instruction and student's attitudes and achievement are of even greater use to this study.
SUMMARY

There were three areas of related literature which directly pertained to this study. The first area was that of Competency-Based Education in general. The second area was a subset of the first and dealt with Competency-Based Education in English. The third area dealt with the relationship between the four student attribute variables: (1) sex, (2) academic capability, (3) locus of control, and (4) evaluative tone and academic success in the Performance-Based Composition program investigated in this study.

The first area of the review of literature regarding Competency-Based Education showed a considerable amount of research had been conducted. The studies reviewed were concerned with the general areas of essential, implied, and related or desirable characteristics of Competency-Based Education; comparisons of competency-based and traditional programs; and the rapid growth of the movement, as well as some of the more specific issues and problems relative to CBE such as some of the problems that are encountered when beginning a CBE program; a systematic approach to designing CBE problems, the role
of CBE in reducing negative psychological effects; some of the measurement issues associated with CBTE, and student involvement in making decisions.

The second area of the review of literature dealt with Competency-Based programs in English. Although these programs were both new and few in number, the literature did reveal that regardless of geographical location, there were common purposes and problems. The literature reflected the fact that as the degree of preparedness of students has decreased nation-wide, a new and more effective approach has to be utilized in college foundation courses such as English, mathematics, and science. Some of the common problems examined in the literature were the effect a competency-based program had on teacher load, students and faculty members adjusting to the new instructional approach, and motivating students who were experiencing difficulty.

The third area of related literature dealt with the relationship between the four student attribute variables of (1) sex, (2) academic capability, (3) locus of control, and (4) evaluative tone and academic success in the Performance-Based Composition program investigated in this study. The literature related to the variable of
sex substantiated two generalizations: (1) sex is recognized as being one of the most significant factors which influences academic success and (2) investigators have found that women are more predictable than men.

Academic capability was measured by the student's American College Test (ACT) English score, high school grade point average, high school grade point average in English, and Performance-Based Composition Pre-test scores. Standardized tests composite scores and high school grades were most often used as predictors in studies examining factors that affect academic success and the studies cited, in general, confirmed this point of view. Although the literature did not reflect the frequent use of the high school average in a particular subject or Pre-test scores as predictor variables, these two were considered to be important to this study.

Broad generalizations cannot be made about the third area of the related literature, locus of control. The review of literature indicated variables of specificity of the measure used and the age of the subject may have directly influenced the relationship between locus of control and academic performance.
The review of literature related to evaluative tone or attitude showed that studies dealing with the relationship between the student's attitude towards school in general and academic performance most times showed that there was no significant relationship. However, when the studies pertained to the relationship between the student's attitude towards specific subjects or instructional methodologies and achievement, the relationship was often statistically significant, even though a low degree of correlation was often the result.

In conclusion, the review of related literature supported the use of some of the more traditional predictor variables such as sex and high school grade point average as well as those non-traditional predictor variables such as evaluative tone or attitude. The use of the predictor variables in this study as they relate to academic success in an innovative approach like Competency-Based Education will hopefully provide a clearer and more detailed depiction of student performance of the students investigated in this study.
CHAPTER III

RESEARCH METHODOLOGY

This chapter is divided into six sections. It contains the design of the investigation as well as a description of the following: (1) the setting in which the study was conducted, (2) subjects in the study, (3) the instruments used, (4) data collection and processing procedures, (5) data analyses procedures, and (6) the Performance-Based Composition program at the college where this study was conducted.

The Design

The purpose of this study was to investigate the relationship between performance in the Performance-Based Composition program at a private Black college and (1) student sex, (2) academic capability, (3) locus of control, and (4) evaluative tone. The subjects in this study were students in the 1974-75 freshman class, who as a result of ACT scores, were placed in the Performance-Based Composition program. The following data were collected for each subject: (1) ACT English score, (2) high school grade point average, (3) high school grade point average in English, (4) Performance-Based Composition Pre-test scores, (5) the score from the Rotter Internal-External Scale (1966), and (6) the scores from the Course Description developed by Silberman and Allender (1974).
The Setting

The study was conducted at a private, southern, church-related, Black liberal arts college during the 1975-76 academic year. The college was founded in 1882 by the Colored Methodist Episcopal Church. The two degrees offered are the Bachelor of Arts and the Bachelor of Science.

The student body is 99 percent Black with approximately one percent representing other ethnic groups and nationalities. Approximately 80 percent of the approximately 668 students enrolled during the 1975-76 academic year are either from within the state or several bordering states. More than 50 percent of the students are from cities with populations less than 40,000.

Approximately 80 percent of the students come from families whose average income is less than $6,000 annually, resulting in the majority of the students receiving some form of financial aid.

Subjects in the Study

The students who served as subjects for this study were mostly second semester sophomores who entered college in September of 1974. In order for a student to be eligible to participate in the study, he or she must have been a participant in the PBC program and have completed both the Rotter Internal-External Scale (1966) and the Course Description, an instrument used to measure evaluative tone by Silberman and Allender (1974).

The 1974-75 freshman class had an enrollment of 256 students. On the basis of ACT English scores, 101 students were placed in the
Performance-Based Composition program. As a result of student attrition and transfers, 75 students were still in the program of which 68 or 93 percent of them participated in the study. Also, it should be noted that of the total 256 students who were freshmen in 1974-75, 155 were placed in Remedial English.

**Description of the Instruments**

Three instruments were employed in this study. These instruments are: (1) The American College Test (ACT), the Rotter Internal-External Scale (1966), and (3) the Course Description developed by M.L. Silberman and J.S. Allender (1974). Each of these instruments will be described below.

**American College Test (ACT)**

The major portion of the ACT battery consists of four tests-in English, mathematics, social sciences, and natural sciences. These tests were developed to measure as directly as possible the abilities the student has that can be applied in his college work. In other words, the tests are designed to measure the student's ability to perform the kinds of intellectual tasks typically performed by college students. Most of the test items are concerned with what a student can do with what he has learned; they are not concerned primarily with specific and detailed subject matter. (Using ACT on the Campus, 1971, p.4). These four tests of educational development and academic potential, a set of self-reported high school grades, and a student information blank or Student Profile Section, make up the ACT student assessment program for a college. The four-section battery of tests
of educational development is described in detail below.

The **English Usage Test** is a 75-item, 40-minute test that measures the student's understanding and use of the basic elements in correct and effective writing: punctuation, capitalization, phraseology, style, and organization. The test stresses clear and accurate expression more than rote recall of rules of grammar. The format of the test is four prose passages with certain portions underlined and numbered. For each underlined portion four alternatives are given. The student must decide which alternative is most correct.

The **Mathematics Usage Test** is a 40-item, 50-minute examination that measures the student's mathematical reasoning ability. The test emphasizes the solution of practical quantitative problems that are encountered in many college curricula. It also includes a sampling of mathematical techniques covered in high school courses. It emphasized reasoning in a quantitative context rather than memorization of formulas, knowledge of techniques, or computational skill. There are two general types of items: the first, verbal problems, presents quantitative problems in practical situations; the second consists of formal exercises in arithmetic, algebra, and geometry. The format of the item is a question with five alternative answers, the last of which may be "Not given."

The **Social Studies Reading Test** is a 52-item, 35-minute test that measures the evaluative reasoning and problem-solving skills required in the social studies. There are two general types of items: the first is based on four reading passages, the second on general background or information obtained in high school social studies courses. All items are multiple-choice with four alternatives. Those based on the reading passages require more than reading comprehension skills: they require the student to draw inferences and conclusions, to extend the thoughts of the passages to new situations, to make deductions from experimental or graphic data, and to recognize a writer's bias, style, and mode of reasoning.

The **Natural Sciences Reading Test** is a 52-item, 35-minute test that measures the critical reasoning and problem-solving skills required in the natural sciences. There are two general types of items: the first is based on four reading passages, the second on information about science. All items are multiple-choice with four alternatives. The passages concern a variety of scientific topics and problems, with summaries of the procedures and the outcomes of experiments being perhaps the most common
The items require a student to interpret and evaluate scientific materials and, in particular, to understand the purposes of experiments, logical relations between experimental hypotheses, and generalizations that can be drawn from the experiments. The informational items ask the student to apply what he has learned in high school sciences courses to familiar, new, and analogous problems. Arithmetical computation and algebra are avoided. (Using ACT on the Campus, 1971, p.4).

Reliability of ACT

The internal consistency was determined using the odd-even procedure which involved student samples ranging from 864 to 1,155. The median reliabilities of the ACT tests ranged from .84 for a single test to .95 for the complete score.

One study of parallel forms has been completed. It included 433 high school students who were administered form 7AC after having taken form 6AC two weeks earlier. The correlated retest reliabilities of the four tests ranged from .78 to .87. Lastly, a study of 63 students were retested after two years of college. The retest form was different from any of the forms used in the original testing. The retest coefficients ranged from .67 to .84. (ACT Technical Report, 1965)

Validity of the ACT

The median predictive validity of the individual ACT tests ranged from .37 to .50, based on data from a 20 percent random sample of college participants (over one million) in the 1962, 1963, and 1964 Research Service Programs. The median correlations for the five criteria based on data from all Research Service participants ranged from .42 to .53. (ACT Technical Report, 1965).

With regard to high school grades, since 1961, self-reports of high school grades have been collected and transmitted to the colleges
along with ACT scores. In estimating academic promise there has been a substantial increase in the predictive validity. Correlations based on the equation of the four ACT tests and the equation based on the four self-reported high school grades when averaged ranged from .52 to .64. (ACT Technical Report, 1965).

Rotter Internal-External Control Scale (1966)

For several years Rotter, in developing a "social learning theory" (Rotter, 1954; 1955; 1960), has been concerned with the effects of perceived internal vs. external control of reinforcement.

"Acquisition and performance differ in situations perceived as determined by skill versus chance. Persons may also differ in generalized expectancies for internal versus external control of reinforcement."

The instrument was designed to measure these "generalized expectancies." (Rotter, 1966, has discussed the similarity of this notion to alienation, competence, field dependence, and ego-strength).

Regarding developmental history of the Internal-External Control (I-E) Scale, following several revisions based on item-analyses, social desirability controls, and studies of discriminant validity, a 29-item, forced-choice questionnaire was produced. Six of these items are "fillers," the other 23 offer choices between internal and external belief statements. The total score is computed simply by summing the number of external beliefs endorsed. (Robinson and Shaver, 1972,p.143).

Normative Data of Rotter I-E Scale (1966)

The correlations presented with the items are based on 200 male and 200 female Ohio State University elementary psychology students. The I-E Scale has also been administered to other groups. That part of the decrease after the two-month period is due to differences in
administration (group vs. individual). (Robinson and Shaver, 1972, p.143).

**Validity of Rotter I-E Scale** (1966)

Correlations with the Marlowe-Crowne Social Desirability Scale (1964) range from -.07 to -.35 which indicated a negative relationship with the Rotter Scale (1966). (Robinson and Shaver, 1972, p. 143).

The Marlowe-Crowne Social Desirability Scale (1964) attempts to locate individuals who describe themselves in favorable, socially desirable terms in order to achieve the approval of others. (Robinson and Shaver, 1972, p. 640).

Several factor analyses reported by Rotter support the assumption of undimensionality of the I-E Scale, and numerous laboratory and survey studies give evidence for its construct validity. (Robinson and Shaver, 1972, p. 143).

**The Course Description**

The Course Description is a semiprojective technique for assessing students' reactions to college courses. The instrument was developed by M.L. Silberman and J.S. Allender.

The problem faced by the developers of the Course Description is becoming more and more common; how to devise a way of getting helpful feedback from students when nontraditional methods have been used and when the instructors goals have gone beyond product-oriented cognitive objectives.

More specifically, the authors were concerned with how to best elicit student evaluation of a multi-section introductory course in educational psychology required of all students in the College of
Education at Temple University.

Approximately one-half of the section of this course had been reorganized to include the utilization of student-directed inquiry procedures. However, the remaining sections employed relatively standard teaching methods, although in this case there was probably more student participation than usual.

After a review of many course evaluation instruments, the authors developed an instrument similar to the one used by Jackson, Silberman, and Wolfson (1969) which was used to note signs of involvement in teachers' descriptions of their students. Also, the methodology was similar to that used by Jackson et al. (1969). Students were asked to describe the course for the benefit of a hypothetical student who was considering enrollment in a subsequent semester. The content of the student responses could be looked at in a number of ways. An instructor might gain information from an unsystematic reading of these descriptions or look for any thematic trends of interest to him. Also, it was possible to assess the value that students attach to the course by analyzing the description for the presence of positive or negative evaluation of the course. However, the most valuable use of the Course Description seemed to be its ability to detect the absence or presence of students' thinking vis-a-vis the impact the course has had on them. Of course, the validity of this semiprojective approach is dependent upon the assumption that articulated thoughts, when they are not subject to cognitive pressures, reflect emotional states of mind. Even though this assumption has never had unequivocal support by social
scientists, it continues to be important to many who are interested in this area. (Silberman and Allender, 1974, pp. 450-452).

Administration and Scoring of the Course Description

The Course Description asks a student to write for 15 minutes and describe the course for the benefit of a hypothetical student who is considering enrollment in the course in a subsequent semester.

Guidelines have been developed and tested to derive two kinds of scores, the evaluative tone and impact, from a content analysis of the course descriptions. The evaluative tone score is based on the sum of positive and negative evaluative statements in the description with positive statements receiving a value of +1 and negative statements -1. The scoring procedure calls for a judge to identify statements that express (1) approval or disapproval of the course or any aspect of it, (2) a judgment of the worth of the course or any aspect of it, and (3) a pleasure or difficulty experienced in the course. After training judges using these criteria, interjudge agreement of 89 percent has been obtained.

Impact is scored by reading the entire description and rating it on a four point scale, according to the following criteria: 1= no impact; 2= inferred impact; 3= limited impact; and 4= sustained impact. Judges trained with this scoring procedure agreed 84 percent of the time. (Silberman and Allender, 1974, p. 45-453).

In this study, the researcher trained two persons to serve as judges or scorers. Also, the researcher served as a scorer. All guidelines regarding the scoring of the Course Description were followed.
Data Collection and Processing Procedures

Sixty eight students were administered the Rotter Internal-External Control Scale (1966) and the Course Description (Silberman and Allender 1974). The students were administered the two instruments in large group sessions, small group sessions or individually over a two-week period.

The students' level of performance on the PBC Pre-test and the number modules completed by each student at the end of the spring semester, 1976 were obtained from the PBC files in the Office of the English Department chairman.

The information regarding the PBC program was obtained from discussions with the PBC staff and from printed information about the PBC program prepared by the PBC staff.

The students' ACT English score, high school grade point average, and high school grade point average in English were obtained from the Office of the Registrar.

For each student participating in this study, the following data were punched on data cards: (1) sex, (2) ACT English score, (3) high school grade point average, (4) high school grade point average in English, (4) PBC Pre-test scores, (5) locus of control score, (6) the Course Description evaluative tone average score (7) the Course Description impact average score, (8) percentage needed of total nine modules as a result of the PBC Pre-test, (9) percentage completed of the modules needed, and (10) percentage needed to complete the PBC program. All data were subjected to computer analysis in order to maximize accuracy and time usage.
Data Analysis Procedures

The data were analyzed by using the Statistical Package for Social Sciences (SPSS) subprogram for bivariate correlation analysis, PEARSON CORR, and the SPSS subprogram for multiple regression analysis, Regression. The statistical analyses were performed on the IBM 360/370 computer at the Instruction and Research Computer Center at the Ohio State University.

The PEARSON CORR computes Pearson product-moment correlation coefficients pairs of variables. PEARSON CORR serves a dual purpose. Besides its role as an indicator of the goodness of fit of the linear regression, it is a measure of association indicating the strength of the linear relationship between the two variables. The output from the PEARSON CORR subprogram includes the coefficient; the test of significance; and the number of cases, upon which the correlation coefficient is computed.

The REGRESSION subprogram combines standard multiple regression and stepwise procedures in a manner which provides considerable control over the inclusion of independent variables in the regression equation. Multiple regression is a general statistical technique which analyzes the relationship between a dependent variable and a set of independent variables. The relationships among the variables are linear and additive. The output from the REGRESSION subprogram is divided into two basic parts: (1) step-by-step results and (2) a summary table. Each step-by-step section is headed with the step number and a list of independent variables entered on the current step. Immediately below the heading is a statistical summary of the
entire equation. Statistics listed are: (1) the multiple correlation coefficient, (2) $R^2$, (3) adjusted $R^2$ and the standard error of estimate. The F ratios are used in tests of significance for the multiple R coefficients. (Statistical Package for the Social Sciences, 1975, pp. 320-322).

Description of Performance-Based Composition Program

Background

For quite some time, the English department faculty had recognized that the individual needs of the freshman students were not being met. This view was substantiated by the following facts:

(1) Teachers found that students did not possess the writing skills necessary to perform well in courses that depended heavily on the students' mastery of certain basic communication skills,

(2) The Cooperative English Test which is administered during the sophomore year revealed deficiencies in students' basic writing skills, reading comprehension, and vocabulary,

(3) During the 1972-73 academic year, 33 percent of the students were enrolled in the remedial English course which was normal. However, during the 1973-74 academic year 66 percent of the students were placed in the course,

(4) The present structure of the freshman English courses did not allow for the individual academic differences of the student.

An initial step was taken during the 1972-73 academic year to rectify the situation. Freshman students who achieved a B or above during their first semester English course and who had scored highly on the American College Test (ACT) were allowed to substitute their second semester English course for a higher level English course. Although this new policy affected only a very small percentage of the
students, it has been viewed as one step that was necessary in order to continuously challenge the better students.

Regarding student placement in freshman English courses, the primary criterion is the ACT English Usage score. At first, students who had a high ACT English scores were placed in English 133, a one semester version of freshman English. The student was allowed to choose any upper level English course to satisfy the requirement for one more semester of freshman English. Average scoring students are still placed in English 131, which is a typical freshman composition course, and low scoring students are still placed in 131A, which is remedial in nature. A student has to have an ACT English score of 10 or above to be placed in English 131.

Pilot Program

During the spring of the 1972-73 academic year, a meeting of the English department faculty was held to discuss and formulate a plan of action which would improve the freshman English courses. Although all persons present agreed that improvements were needed, there was disagreement as to how the improvements should be made. Two schools of thought emerged: (1) change could occur within the existing structure of the courses, or (2) change could occur by abolishing the existing framework and adopting a modular approach.

The faculty members who expressed a commitment to adopt a modular approach decided to launch a pilot program for the 1973-74 academic year. During the 1973-74 academic year, 50 percent (3) of the faculty members participated in the pilot program and 50 percent (3) faculty
members conducted their classes in the usual manner. There were six full-time English faculty members and one part-time English faculty member. All full-time English faculty members taught at least one freshman course. Also, the three faculty members who participated in the pilot program made an analysis of their teaching strengths and weaknesses in order to determine which modules each person would teach.

Student participants were those who were in the classes of the three English faculty members who were teaching in the pilot program. Besides the primary criterion of the ACT English score, a second criterion for placement was a pre-test developed and administered by the English department faculty consisting of two writing samples: (1) a writing sample is done in a formal, classroom setting where the students give their perception of a composition, and (2) a writing sample is done outside of the classroom on a topic and in a literary form of the student's choosing.

The major problems encountered in the pilot program were:

(1) Teachers did not have ample time to develop materials for the modules to enable students to move at their own rate. Although the materials for the modules had been outlined, materials for only the first two modules had been amassed.

(2) Behavioral objectives were used, but they tended to be general rather than specific. This degree of generality led the teachers to realize problems might occur when teachers began to evaluate the students' performance because of the present policy of giving grades at the end of the semester.

(3) Although reading and vocabulary were viewed as being very important, they were not a formal part of the program nor was the reading teacher formally a part of the pilot program staff.

(4) The present facilities were not conducive for students to work individually, in some degree of privacy, to move about,
or confer with the teacher.

(5) The scheduling of classes precluded teachers and students from meeting so that individual concerns could be analyzed and studied.

Performance-Based Composition Program 1974-75

As of the 1974-75 academic year, the following policies were adopted with regard to the Performance-Based Composition program:

Placement

Students who achieve an ACT English score of 10 or above are placed in the PBC program.

Pre-test

Students have to take a pre-test for eight of the nine modules: Usage, Spelling, Vocabulary, Sentences, Paragraphs, Essay, Reasoning/Logic, and Writing as Self-Discovery. There is no pre-test for the Research module. The pre-tests are administered during the first two weeks of the fall semester. Students must achieve at least 80 percent in order to pre-test out of a particular module. Results of the pre-test determine the specific modules each student has to take in order to fulfill requirements for freshman English.

Grading Policy

A student must achieve 80 percent or better on the post-test before he is allowed to move to another module. Students who achieve a grade of 80-89 received a grade of B and students who achieve a grade of 90-100 received an A. Students can take the post-test as many times as needed in order to achieve 80 percent proficiency.
At the end of each semester, students who have not completed the requirements for the module in which he is presently enrolled, receive a grade of "Incomplete" which is to be removed as soon as possible. Also, if a student has had an "Incomplete" for a year or more, the grade is changed by the instructor to an F and the student has to re-enroll in the module.

Objectives

1. Students should be able to write sentences in all major patterns from gross errors of usage, spelling, diction, punctuation, and structure.

   1. Usage. Students should be able to write standard forms of English grammar and idiom.

   2. Spelling. Students should be able to write sentences that are free from gross errors of spelling.

   3. Vocabulary. Students should have a command of those words needed for reading and writing in Freshman English.

   4. Sentences. Students should be able to write sentences in all major patterns, free from gross errors, as demonstrated by their ability to transform simple sentences into a variety of complex patterns. They should demonstrate an ability to punctuate these sentences correctly.

II. Students should be able to write expository and argumentative essays that demonstrate skill in paragraph development and that are clear, logical, and well organized. They should be able to distinguish between sound and unsound arguments, between opinion and fact.
5. **Paragraphs.** Students should be able to write unified and well-ordered paragraphs of various types (for example, definition, comparison).

6. **The Essay.** Students should be able to write clear, unified essays of at least three paragraphs, following an argumentative or expository pattern.

7. **Reasoning/Logic.** Students should be able to distinguish between sound and unsound arguments, both deductive and inductive, and between opinion and fact. They should be able to demonstrate these capacities in their own writing.

III. Students should be able to write vividly about experience. They should be able to write a research paper that demonstrates skill in both form and language.

8. **"Writing as Self-Discovery."** Students should be able to write vividly about their experience (both narratively and descriptively). They should demonstrate, in their writing, awareness of the appropriateness of different "voices" for different audiences. (It is hoped that they will learn something about themselves in the process).

9. **Research Paper.** Students should be able to write a 5-7 page research paper which meets conventional standards of organization and documentation.
CHAPTER IV

FINDINGS OF THE STUDY

This chapter presents the statistical and descriptive analyses as well as findings of the study. The findings are reported in terms of each hypothesis.

The overall null hypothesis was that no relationship exists between the students' (1) sex, (2) academic capability, (3) locus of control, and (4) evaluative tone and their successful performance in the Performance-Based Composition program investigated in this study. The testing of the overall null hypothesis was accomplished by formulating and testing the following sub-hypotheses:

1. There is no significant relationship between the students' sex and their academic success in the Performance-Based Composition program.

2. There is no significant relationship between the students' academic capability and their academic success in the Performance-Based Composition program.

3. There is no significant relationship between the students' locus of control and their academic success in the Performance-Based Composition program.
4. There is no significant relationship between the students' evaluative tone and their academic success in the Performance-Based Composition program.

5. There is no significant multiple relationship between students' sex, academic capability, locus of control, and evaluative tone and their academic success in the Performance-Based Composition program.

In addition to the statistical testing of the above hypotheses, a descriptive analysis was performed to depict the students' general reaction to the Performance-Based Composition program.

The hypotheses of this study were analyzed by computing Pearson product moment correlation, multiple regression equations, and Spearman's rank-difference correlation. These statistical analyses were employed to determine the relationship between all the variables under investigation.

The Rotter Internal-External Control Scale and the Course Description developed by Silberman and Allender were administered to those students who were sophomore participants in the Performance-Based Composition program during the Spring Semester of 1975-76 at a private, predominantly Black college. The subjects for the study consisted of 68 students, 40 females and 28 males. The following data were available for each subject in the study: (1) sex,
(2) ACT English score, (3) high school grade point average, high school grade point average in English, PBC Pre-test scores, locus of control score, and the Course Description evaluative tone and impact scores.

In this study, the independent variables were: (1) sex, (2) ACT English score, (3) high school grade point average, (4) high school grade point average in English, (5) PBC pre-test composite score, (6) locus of control score, and (7) the Course Description evaluative tone score. The dependent variable was academic success in the Performance-Based Composition program.

In the first analysis, sex was employed as the independent variable and academic success in the PBC program as the dependent variable. A Pearson product moment correlation coefficient was computed for the total group. In addition, a t-Test was computed to determine whether the mean performance difference in the PBC program between males and females was significant.

In the second analysis, academic capability was employed as the independent variable and academic success in the PBC program as the dependent variable. Academic capability was measured by the students' ACT English score, high school grade point average, high school grade point average...
in English, and the PBC Pre-test composite score. A multiple regression equation was computed to determine the relationship between academic capability and academic success in the PBC program.

In the third analysis, locus of control was employed as the independent variable and academic success in the PBC program as the dependent variable. A Pearson product moment correlation coefficient was computed to determine the relationship between locus of control and academic success in the PBC program.

In the fourth analysis, the Course Description evaluative tone was employed as the independent variable and academic success in the PBC program as the dependent variable. A Pearson product moment correlation coefficient was computed for the total group to determine the relationship between the Course Description evaluative tone and academic success in the PBC program.

In the fifth analysis, sex, academic capability, locus of control, and the Course Description evaluative tone were employed as the independent variables and academic success in the PBC program as the dependent variable. A multiple regression equation was computed for males, females, and for the total group to determine the relationship between
sex, academic capability, locus of control, and the Course Description evaluative tone and academic success in the PBC program.

In addition to the analyses described above, because of the abnormality of the distribution of the data a Spearman's rank-difference correlation was computed to further determine whether the Pearson product moment correlations were an inflated or deflated estimate of the relationship between the four independent variables and academic success in the PBC program as the dependent variable.

Hypothesis I. There is no significant relationship between the students' sex and their academic success in the Performance-Based Composition (PBC) program. The Pearson product moment correlation (r) was computed to test the relationship between the students' sex and their academic success in the PBC program. The test produced an r of .463 which is statistically significant at the .001. The correlation coefficient (r=.463) indicates that a moderated relationship exists between sex and success in the PBC program. Therefore, Hypothesis I was rejected.

In addition to the above analysis, Table 8 presents
a t-test analysis to determine whether the mean performance difference between males and females in the PBC program was significant.

**TABLE 8**

**t-TEST ANALYSIS SHOWING MEANS, STANDARD DEVIATIONS AND F-VALUE BETWEEN MALES AND FEMALES IN THE PBC PROGRAM**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>25.071</td>
<td>32.028</td>
<td>-4.24*</td>
</tr>
<tr>
<td>(N=28)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>61.700</td>
<td>37.046</td>
<td></td>
</tr>
<tr>
<td>(N=40)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at the .05 level.

The t-Test analysis shows a negative t value of -4.24 in the performance means between the males and females in the PBC program. The t value which was significant at .05 level for 66 degrees of freedom was equal to 2.06. Since the obtained value of -4.24 was larger than 2.06, it was concluded that there was a difference in the performance means between the males and females in the PBC program.
Tables 9, 10, and 11 present the frequency and percentage of PBC modules completed for males, females, and for the total group.

**TABLE 9**

PERCENTAGE OF PBC MODULES COMPLETED BY MALE STUDENTS  
(N=28)

<table>
<thead>
<tr>
<th>Percentage of Modules Completed</th>
<th>Absolute Frequency</th>
<th>Relative Frequency (Percentages)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>11</td>
<td>39.3</td>
</tr>
<tr>
<td>11</td>
<td>3</td>
<td>10.7</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>17</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>22</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>33</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>43</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>44</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>67</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>86</td>
<td>1</td>
<td>3.6</td>
</tr>
<tr>
<td>88</td>
<td>2</td>
<td>7.1</td>
</tr>
<tr>
<td>100</td>
<td>1</td>
<td>3.6</td>
</tr>
</tbody>
</table>
TABLE 10

PERCENTAGE OF PBC MODULES COMPLETED BY FEMALE STUDENTS
(N=40)

<table>
<thead>
<tr>
<th>Percentage of Modules Completed</th>
<th>Absolute Frequency</th>
<th>Relative Frequency (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>5</td>
<td>12.5</td>
</tr>
<tr>
<td>11</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td>12</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>22</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>23</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>37</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>43</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>67</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td>71</td>
<td>2</td>
<td>5.0</td>
</tr>
<tr>
<td>75</td>
<td>4</td>
<td>10.0</td>
</tr>
<tr>
<td>78</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>83</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>86</td>
<td>3</td>
<td>7.5</td>
</tr>
<tr>
<td>89</td>
<td>1</td>
<td>2.5</td>
</tr>
<tr>
<td>100</td>
<td>11</td>
<td>27.5</td>
</tr>
</tbody>
</table>
### TABLE 11

PERCENTAGE OF PBC MODULES COMPLETED BY THE TOTAL GROUP (N=68)

<table>
<thead>
<tr>
<th>Percentage of Modules Completed</th>
<th>Absolute Frequency</th>
<th>Relative Frequency (Percentages)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>16</td>
<td>23.5</td>
</tr>
<tr>
<td>11</td>
<td>6</td>
<td>8.8</td>
</tr>
<tr>
<td>12</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>17</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>22</td>
<td>3</td>
<td>4.4</td>
</tr>
<tr>
<td>33</td>
<td>3</td>
<td>4.4</td>
</tr>
<tr>
<td>37</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>43</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>44</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>67</td>
<td>4</td>
<td>5.9</td>
</tr>
<tr>
<td>71</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>75</td>
<td>4</td>
<td>5.9</td>
</tr>
<tr>
<td>78</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>83</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>86</td>
<td>4</td>
<td>5.9</td>
</tr>
<tr>
<td>88</td>
<td>2</td>
<td>2.9</td>
</tr>
<tr>
<td>89</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td>100</td>
<td>12</td>
<td>17.6</td>
</tr>
</tbody>
</table>
Table 9 shows that for the total male sample, N=28, only one male, representing 3.6 percent of the total, had completed all modules needed to complete the PBC program. Furthermore, 23 males representing 82.1 percent of the total, had completed less than 50 percent of the modules needed, i.e., 44 percent. Finally, 11 males representing 39.3 percent of the total, had not completed any of the modules needed.

In contrast, Table 10 shows that for the total female sample, N=40, 11 females representing 27.5 percent of the total, had completed all modules needed to complete the PBC program. In addition, 14 females representing 35.0 percent of the total, had completed less than 50 percent of the modules needed, i.e., 43 percent. Finally, 5 females representing 12.5 percent of the total, had not completed any of the modules needed.

Table 11 shows that for the total group, N=68, 12 subjects representing 17.6 of the total, had completed all modules needed to complete the PBC program. Also, 37 subjects representing 54.4 percent of the total, had completed less than 50 percent of the modules needed, i.e., 44 percent. Finally, 16 subjects representing 23.5 percent of the total had not completed any of the modules needed.
Hypothesis II. There is no significant relationship between the academic capability and academic success of students in the Performance-Based Composition program. A stepwise multiple regression analysis was performed using the variables which constitute academic capability (the ACT English score, high school grade point, high school grade point average in English and the PBC Pre-test composite score) as the independent variable and academic success in the Performance-Based Composition program as the dependent variable for the total sample (N=68). Table 12 presents the correlation ($r$) for each independent variable with the dependent variable, the order of the independent variables were entered in the regression equation, the F statistic for the significance of each independent variable, the multiple correlation coefficient ($R$), and the percentage of variance in one variable "explained" or "accounted for" by the other ($R^2$).

The PBC Pre-test composite score was the first variable and yielded a $r$ of .489 with the dependent variable. The second variable selected was the ACT English score. It yielded a $r$ of .459 with the dependent variable. The third and fourth variables to enter the regression equation were the high school English grade point average and the
high school grade point average. The r's for these variables were .444 and .416, respectively.

TABLE 12

SUMMARY OF MULTIPLE REGRESSION ANALYSIS
EMPLOYING ACADEMIC CAPABILITY VARIABLES FOR
THE TOTAL GROUP
(N=68)

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>r with success In PBC Program</th>
<th>Step</th>
<th>F</th>
<th>R</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBC Pre-Test Comp.</td>
<td>.489a</td>
<td>1</td>
<td>20.777b</td>
<td>.489</td>
<td>.239</td>
</tr>
<tr>
<td>ACT English</td>
<td>.459a</td>
<td>2</td>
<td>16.726b</td>
<td>.583</td>
<td>.339</td>
</tr>
<tr>
<td>High School English GPA</td>
<td>.444a</td>
<td>3</td>
<td>11.995b</td>
<td>.599</td>
<td>.359</td>
</tr>
<tr>
<td>High School GPA</td>
<td>.416a</td>
<td>4</td>
<td>8.932b</td>
<td>.601</td>
<td>.361</td>
</tr>
</tbody>
</table>

^Significant at the .001 level.

The PBC Pre-test composite score was the first variable and yielded a r of .489 with the dependent variable. The second variable selected was the ACT English score. It yielded a r of .459 with the dependent variable. The third and fourth variables to enter the regression equation were the high school English grade point average and the high school grade point average. The R's for these variables were .444 and .416, respectively.
The Pearson correlation coefficient (r) for each of the four variables was statistically significant at the .001 level of significance.

The multiple R's for each of the four academic capability variables was statistically significant at the .001 level of significance. Operating jointly, these four variables produced a multiple R of .601. Also, these variables operating jointly accounted for 36 percent of the variance in academic success in the PBC program. The remaining 64 percent of the variance in academic success in the PBC program was due to chance, differences in motivation or study habits, or some other condition of no prior knowledge. The statistically significant Pearson's r and multiple R's for each of these academic capability variables indicated a moderated linear relationship with academic success in the PBC program. Therefore, Hypothesis II was rejected.

Hypothesis III. There is no significant relationship between students' locus of control scores and their academic success in the Performance-Based Composition program.

A Pearson product-moment correlation (r) coefficient was computed for the total group (N=68) to measure the degree and strength of the relationship between students'
locus of control score and academic success in the PBC program. The computed $r$ of $-0.083$ was not statistically significant at .05 level. The correlation coefficient ($r=-0.083$) was very low and the relationship was negative or inverse. The data supported the hypothesis, therefore, Hypothesis II was not rejected.

**Hypothesis IV.** There is no significant relationship between the students' evaluative tone and academic success in the Performance-Based Composition program.

Hypothesis IV was tested by computing a Pearson product moment correlation ($r$) for the total group of 68 students. A correlation coefficient of 0.256 resulted and it was statistically significant at the .05 level. The correlation coefficient of 0.256 was very low and showed that a slight relationship existed between the students' evaluative tone and academic success in the PBC program. As a result of the coefficient's statistical significance and slight relationship, Hypothesis IV was rejected.

**Hypothesis V.** There is no significant multiple relationship between students' sex, academic capability, locus of control score, and the evaluative tone and their academic success in the Performance-Based Composition program. A stepwise multiple regression analysis was performed using
sex, academic capability, locus of control, and evaluative tone as the independent variables and academic success in the PBC program. A stepwise multiple regression analysis was performed for the total group (N=68). Table 13 presents for the total group the correlation (r) for each of the independent variables with the dependent variable, the order the independent variables entered the regression equation, the F statistic for significance of each variable, the multiple correlation coefficient (R), and the percentage of variance in one variable "explained" or "accounted for" by the other (R²).

**TABLE 13**

**SUMMARY OF THE MULTIPLE REGRESSION ANALYSIS EMPLOYING ACADEMIC CAPABILITY, LOCUS OF CONTROL AND EVALUATIVE TONE VARIABLES FOR THE TOTAL GROUP (N=68)**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>r with success In PBC Program</th>
<th>Steps</th>
<th>F</th>
<th>R</th>
<th>R²</th>
</tr>
</thead>
<tbody>
<tr>
<td>PBC Pre-Test Comp.</td>
<td>.489a</td>
<td>1</td>
<td>20.777b</td>
<td>.489</td>
<td>.239</td>
</tr>
<tr>
<td>Males and Females</td>
<td>.462a</td>
<td>2</td>
<td>22.008b</td>
<td>.635</td>
<td>.403</td>
</tr>
<tr>
<td>Evaluative Tone</td>
<td>.255c</td>
<td>3</td>
<td>16.805b</td>
<td>.663</td>
<td>.440</td>
</tr>
<tr>
<td>ACT English</td>
<td>.459a</td>
<td>4</td>
<td>14.192b</td>
<td>.688</td>
<td>.473</td>
</tr>
<tr>
<td>Locus of Control</td>
<td>-.082</td>
<td>5</td>
<td>11.495b</td>
<td>.693</td>
<td>.481</td>
</tr>
<tr>
<td>High School English GPA</td>
<td>.444a</td>
<td>6</td>
<td>9.493b</td>
<td>.694</td>
<td>.482</td>
</tr>
<tr>
<td>High School GPA</td>
<td>.416a</td>
<td>7</td>
<td>8.258b</td>
<td>.700</td>
<td>.490</td>
</tr>
</tbody>
</table>

*aSignificant at the .001 level.

bSignificant at the .001 level.

cSignificant at the .02 level.
As shown in Table 13, the Pearson r correlation coefficients were statistically significant at the .001 level for five of the seven independent variables. The evaluative tone variable (r=.255) was significant at the .02 level and the locus of control variable (r=-.083) was not statistically significant because the relationship between locus of control and academic success was negative and inverse. The multiple R's for each of the seven independent variables were statistically significant at .001 level. The first variable to enter the regression equation was the PBC Pre-test, since it represented the highest correlation (r=.489) with the dependent variable (academic success in the PBC program). The second highest correlated (r=.462) variable to enter the regression equation was sex as the independent variable. These two independent variables, PBC Pre-test and sex, accounted for 40 percent of the variance in academic success in the PBC program. With the seven variables in the regression equation, operating jointly a multiple R of .700 was produced. As shown in Table 10, the R² for seven variables was .49072, indicating that 49 percent of the variance in academic success in the PBC program was explained by these variables. The remaining 51 percent of the unexplained variance was due to
chance, differences in motivation or study habits, or some other condition of no prior knowledge. In view of the statistically significant multiple R's at the .001 level for each of the seven independent variables it can be concluded that a moderately strong relationship existed between these variables and success in the PBC program. Therefore, Hypothesis V was rejected.

In addition, the Spearman rank-difference correlation were computed for all independent variables, excluding sex, and these findings did not dispute the findings of the Pearson product-moment correlation and the multiple regressions.

Descriptive Analysis of the Students' Responses on the Course Description

In addition to the statistical analysis used to test Hypothesis IV, a detailed descriptive analysis of the students' responses on the Course Description was also done for the total group. The primary purpose was this descriptive analysis is to present the students' responses in various formats which might help to better explain the relationship between the students' evaluative tone and their academic performance in the Performance-Based Composition program.
Table 14 presents the categories and frequencies of the positive evaluative tone responses and Table 15 presents the categories and frequencies of the negative evaluative tone responses. A detailed depiction of the positive and negative evaluative tone responses for each subject is shown in Appendix C.

Table 14 shows that the students' positive evaluative tone responses were grouped under two main categories, program-related and teacher-related. The highest frequencies were recorded in the following sub-categories under program-related responses: program is interesting and a good approach (11), course material can be mastered (9), and gained additional English skills (9) while the lowest frequencies were recorded in the following sub-categories under program-related responses: program allows student to work at his own pace (1) and program is workable (1).

Table 15 shows that the students' negative evaluative tone responses were grouped under four main categories, program-related, consequences of lack of academic success, evaluative, and teacher-related. The highest frequencies were recorded in the following sub-categories: program is a waste of time and should be discontinued (35) and
discouraged because of lack of academic success (20),
while the lowest frequencies were recorded in the follow­
ing sub-categories: program has not met the needs of
students who pretested out of most of the modules but
felt they wanted to learn the material missed on the Pre­
test (2), the time the course is offered is not always
convenient for most students (2), felt rushed to complete
the program (2), some teachers were not available, when
needed, to help students (2), some teachers did not keep
accurate records (2), and no feedback was given regarding
the Pre-test results (1).
<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Program-related</strong></td>
<td></td>
</tr>
<tr>
<td>A. Program objectives are clear and understandable</td>
<td>2</td>
</tr>
<tr>
<td>B. Program allows student to work at his own pace</td>
<td>1</td>
</tr>
<tr>
<td>C. Course material can be mastered</td>
<td>9</td>
</tr>
<tr>
<td>D. Gained additional English skills</td>
<td>9</td>
</tr>
<tr>
<td>E. Program is workable</td>
<td>1</td>
</tr>
<tr>
<td>F. Program has many advantages</td>
<td>9</td>
</tr>
<tr>
<td>G. Program is interesting and a good approach</td>
<td>11</td>
</tr>
<tr>
<td><strong>Teacher-related</strong></td>
<td></td>
</tr>
<tr>
<td>Teachers were helpful and interested in student's progress</td>
<td>2</td>
</tr>
<tr>
<td>Category</td>
<td>Frequency</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td><strong>Program-related</strong></td>
<td></td>
</tr>
<tr>
<td>A. Unaccustomed to this method of instruction</td>
<td>3</td>
</tr>
<tr>
<td>B. Disliked moving from one teacher to another</td>
<td>3</td>
</tr>
<tr>
<td>C. Disliked moving to a module then later having to return to an earlier module to complete requirements</td>
<td>3</td>
</tr>
<tr>
<td>D. Program has not met the needs of students who pre-tested out of most of the modules but felt they wanted to learn the material missed on the Pre-test</td>
<td>2</td>
</tr>
<tr>
<td>E. Adequate explanation was not given regarding the value of the Pre-test</td>
<td>9</td>
</tr>
<tr>
<td>F. No feedback was given regarding Pre-test results</td>
<td>1</td>
</tr>
<tr>
<td>G. Program is a waste of time and should be discontinued</td>
<td>35</td>
</tr>
<tr>
<td>H. Dislikes English now, although it had been one of the student's best subjects in high school</td>
<td>3</td>
</tr>
<tr>
<td>Category</td>
<td>Frequency</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>I. The same or greater benefits can be received by taking &quot;regular&quot;</td>
<td>14</td>
</tr>
<tr>
<td>English and receiving a grade</td>
<td></td>
</tr>
<tr>
<td>J. Material covered was like a review, thus student learned very little</td>
<td>5</td>
</tr>
<tr>
<td>K. The time the course is offered is not always convenient for most</td>
<td>2</td>
</tr>
<tr>
<td>students</td>
<td></td>
</tr>
<tr>
<td>L. Too much time is required to complete the program</td>
<td>14</td>
</tr>
<tr>
<td>M. Too much time is required to complete one module</td>
<td>18</td>
</tr>
<tr>
<td>N. Felt rushed to complete the program</td>
<td>2</td>
</tr>
<tr>
<td>Consequences of lack of academic success</td>
<td></td>
</tr>
<tr>
<td>A. Discouraged</td>
<td>20</td>
</tr>
<tr>
<td>B. Considered taking English in summer school at another college</td>
<td>4</td>
</tr>
<tr>
<td>C. Prevented from taking certain courses and seniors from graduating</td>
<td>14</td>
</tr>
<tr>
<td>D. Stopped attending class</td>
<td>16</td>
</tr>
</tbody>
</table>
### TABLE 15 (Continued)

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Evaluative</strong></td>
<td></td>
</tr>
<tr>
<td>A. Grading policy should be changed</td>
<td>5</td>
</tr>
<tr>
<td>B. Post-test score should not be the only criterion used to evaluate the student's progress</td>
<td>4</td>
</tr>
<tr>
<td><strong>Teacher-related</strong></td>
<td></td>
</tr>
<tr>
<td>A. Teacher-student conflicts (communication and personality problems)</td>
<td>9</td>
</tr>
<tr>
<td>B. Some teachers were too slow giving the Post-test</td>
<td>3</td>
</tr>
<tr>
<td>C. Some teachers appeared to be disinterested in the student's progress and/or in teaching in the program</td>
<td>6</td>
</tr>
<tr>
<td>D. Some teachers were not available, when needed, to help students</td>
<td>2</td>
</tr>
<tr>
<td>E. Some teachers did not keep accurate records</td>
<td>2</td>
</tr>
</tbody>
</table>
Table 16 presents the evaluative tone and percentage of modules completed for males (N=28) and Table 17 presents the evaluative tone and percentage of modules completed for females (N=40). Taking into consideration the abnormality of the distribution, the results indicate that the responses are predominantly negative regardless if a student had or had not completed the program.

Finally, Appendix E presents illustrations of positive responses under each of the categories of evaluative tone and Appendix F presents illustration of negative responses under each of the categories of evaluative tone. Both appendices serve to better illustrate the students' concerns with regard to the PBC program and its effect on them both academically and psychologically.
**TABLE 16**

**EVALUATIVE TONE AND PERCENTAGE OF MODULES COMPLETED FOR MALES (N=28)**

<table>
<thead>
<tr>
<th>Student Number</th>
<th>Evaluative Tone</th>
<th>Percentages of Modules Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>-5</td>
<td>86</td>
</tr>
<tr>
<td>3</td>
<td>+5</td>
<td>88</td>
</tr>
<tr>
<td>5</td>
<td>-4</td>
<td>33</td>
</tr>
<tr>
<td>7</td>
<td>-2</td>
<td>22</td>
</tr>
<tr>
<td>10</td>
<td>-4</td>
<td>0</td>
</tr>
<tr>
<td>11</td>
<td>-6</td>
<td>33</td>
</tr>
<tr>
<td>14</td>
<td>-3</td>
<td>11</td>
</tr>
<tr>
<td>16</td>
<td>+1</td>
<td>44</td>
</tr>
<tr>
<td>24</td>
<td>-5</td>
<td>14</td>
</tr>
<tr>
<td>28</td>
<td>-4</td>
<td>0</td>
</tr>
<tr>
<td>38</td>
<td>+3</td>
<td>0</td>
</tr>
<tr>
<td>33</td>
<td>-5</td>
<td>12</td>
</tr>
<tr>
<td>36</td>
<td>-3</td>
<td>43</td>
</tr>
<tr>
<td>40</td>
<td>-2</td>
<td>0</td>
</tr>
<tr>
<td>41</td>
<td>-2</td>
<td>0</td>
</tr>
<tr>
<td>42</td>
<td>-4</td>
<td>0</td>
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SUMMARY

Chapter IV presented the findings of the study. The overall null hypothesis was that no relationship exists between the students' (1) sex, (2) academic capability, (3) locus of control, and (4) evaluative tone and their successful performance in the Performance-Based Composition program investigated in this study.

The study was designed to determine the degree or closeness of relationship between the four student attribute variables and academic success in the PBC program. Pearson product-moment correlation coefficients (r), multiple regression coefficients (R), and Spearman's rank-difference correlation coefficients (p) were computed. Sixty-eight students participated in the study, 28 males and 40 females.
The use of the Pearson product-moment correlation and multiple regression coefficients yielded the following results: three of the four student attribute variables, (1) sex, (2) academic capability, and (3) evaluative tone, correlated moderately with academic success in the PBC program and each was statistically significant. The fourth student attribute variable, locus of control, yielded a negligible relationship and was not statistically significant with academic success in the PBC program.

Also, the Spearman rank-difference correlation yielded results which were basically no different than the findings of the Pearson product-moment correlations and the multiple regression.

Analyses of the descriptive reaction of students on the Course Description with regard to the Performance-Based Composition program were performed. Analyses were made of the frequency and types of positive and negative responses for all students (N=68) who participated in the study as well as for males (N=28) and females (N=40). These analyses revealed that regardless of the students' level of performance in
the Performance-Based Composition program, the responses, in general, were negative.

Chapter V contains the summary of the findings, the discussion and recommendations for this study.
CHAPTER V

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Summary

Statement of the Problem

A potential problem faced by all who are responsible for Competency-Based educational programs in higher education is that of developing programs and program components that can accommodate students with different human attributes, so that, given reasonable effort on their part, students can experience success. This is a problem of importance because, though the development of such programs may be a goal, the goal is often difficult to attain. A poor match between student attributes and program and/or program component characteristics can result in the failure of some students to succeed. In other cases, the design of program components themselves may inadvertently result in general student inability to achieve academic success.

Therefore, using the aforementioned problems as a conceptual framework, the purpose of this study was to investigate the relationship between four sets of student attribute variables: (1) sex, (2) academic capability, (3) locus of control, and (4) evaluative tone and academic success in the Performance-Based Composition program at the college where this study was conducted.

Through the investigation of this problem it is hoped that such relationships that may exist that relate to student academic success may be identified so as to provide an empirical basis for program and/or program component revision that will better accommodate students.

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A second related problem that was investigated was the nature of program components that may be identified as ones with which students in general have difficulty regardless of their particular attributes. Finally, as a result of ascertaining the students' reactions to the Performance-Based Composition program, it is hoped that this information will prove useful in making program and/or program component revisions.

Background of the Problem

Although Competency-Based Teacher Education programs exist to some degree in many colleges and departments of education across the nation, few Competency-Based Education programs exist in other subject matter fields. Yet, there is some reason to believe that other subject matter fields could profit from the adoption of certain basic tenets of the Competency-Based approach such as: (1) specifying exactly what is to be learned, (2) making public the criteria for evaluation, (3) allowing students to pre-test out of educational experiences that would teach competencies that students already possess, and (4) encouraging students to progress at their own rate.

Several factors seem to account for the reluctance of other disciplines to engage in the Competency-Based approach. In Performance-Based Teacher Education and the Subject Matter Fields, Michael F. Shurgue (1973) states:

Another objection to PBTE arises from the long standing academic distrust of reforms initiated by the educational establishment. Because it has been fostered by professional educators and directed almost exclusively at the professional preparation of teachers, PBTE could be subject to uniformed criticism from the liberal arts and sciences for 'anti-intellectualism, low academic standards, and the like.' (p.3).
In "Limitations and Advantages of Behavioral Objectives in the Arts and Humanities," James Hoetker (1970) states:

I believe that our educational practices can be improved if teachers and administrators and curriculum writers begin to think about their work in terms of changes in student behaviors. But as a humanist, I also think that simple-minded insistence upon a priori specification of all objectives in terms of conveniently observable behaviors does far more harm than good. (p.3).

However, some leaders from fields other than teacher education are beginning to investigate and actively seek more viable methods of instruction and are looking to Competency-Based Education as a positive alternative. With regard to the humanities in particular, John Gerber (1972) of the University of Iowa, in an important address to his fellow English department chairmen, states the issue in the following way:

At the risk of sounding a bit like a behaviorist, I would suggest that our most pressing obligation at the moment is to redefine our goals in reasonably precise terms; that these goals be realizable ones that can be used as criteria for measuring the success or failure of our programs; and that they clearly relate to the needs of students and of society, as well as reflect our own deepest convictions. (p.4).

Statement of Hypotheses

The overall null hypothesis tested in this study was that no relationship existed between students' (1) sex, (2) academic capability, (3) locus of control, and (4) evaluative tone and their academic success in the Performance-Based Composition program at a private Black college. The following specific hypotheses were tested:

1. There is no significant relationship between students' sex and their academic success in the performance-Based
Composition program.

2. There is no significant relationship between students' academic capability and their academic success in the Performance-Based Composition program.

3. There is no significant relationship between students' locus of control and their academic success in the Performance-Based Composition program.

4. There is no significant relationship between students' Evaluative tone and their academic success in the Performance-Based Composition program.

5. There is no significant multiple relationship between students' sex, academic capability, locus of control, and Evaluative tone and their academic success in the Performance-Based Composition program.

The Design

The purpose of this study was to investigate the relationship between performance in the Performance-Based Composition program at a private Black college and student (1) sex, (2) academic capability, (3) locus of control, and (4) evaluative tone. The subjects in the study were students in the 1974-75 freshman class, who as a result of ACT scores, were placed in the Performance-Based Composition program. The following data were collected for each subject: (1) ACT English score, (2) high school grade point average, (3) high school grade point average in English, (4) Performance-Based Composition Pre-test scores, (5) the score from Rotter Internal-External Scale (1966), and (6) the scores from the Course Description developed by Silberman and
and Allender (1974).

In this study, the independent variables were: (1) sex, (2) ACT English score, (3) high school grade point average, (4) high school grade point average in English, (5) PBC Pre-test composite score, (6) locus of control score, and (7) the Course Description evaluative tone score. The dependent variable was academic success in the Performance-Based Composition program.

The sub-hypotheses of this study were statistically analyzed by computing Pearson product moment correlation and multiple regression equations. Also, in the first analysis a t-Test was computed in order to find out whether the mean performance difference in the PBC program between males and females was significant. In addition, Spearman rank-difference correlations were computed for each of the independent variables, excluding sex, did not dispute the original findings.

The Setting

The study was conducted at a private, southern, church-related, Black liberal arts college during the 1975-76 academic year. The college was founded in 1882 by the Colored Methodist Episcopal Church. The two degrees offered are the Bachelor of Arts and the Bachelor of Science.

The student body is 99 percent Black with approximately one percent representing other ethnic groups and nationalities. Approximately 80 percent of the approximately 668 students enrolled during the 1975-76 academic year are either from within the state or several bordering states. More than 50 percent of the students are from cities with populations less than 40,000.
Approximately 80 percent of the students come from families whose average income is less than $6,000 annually, resulting in the majority of the students receiving some form of financial aid.

Subjects in the Study

The students who served as subjects for this study were mostly second semester sophomores who entered college in September of 1974. In order for a student to be eligible to participate in the study, he or she must have been a participant in the PBC program and have completed both the Rotter Internal-External Scale (1966) and the Course Description developed by Silberman and Allender (1974).

The 1974-75 freshman class had an enrollment of 256 students. On the basis of ACT English scores, 101 students were placed in the Performance-Based Composition program. As a result of student attrition and transfers, 75 students were still in the program of which 68 or 93 percent of them participated in the study. Also, it should be noted that of the total 256 students who were freshmen in 1974-75, 155 were placed in Remedial English.

Description of the Instruments

Three instruments were employed in this study. These instruments were: (1) The American College Test (ACT), the Rotter Internal-External Scale (1966), and (3) the Course Description developed by M. L. Silberman and J. S. Allender (1974). Each of these instruments will be described below.

American College Test (ACT)

The ACT battery consists of four tests in English, mathematics,
social sciences, and natural sciences. These tests were developed to measure as directly as possible the abilities the student has that can be applied in his college work. The tests were designed to measure the student's ability to perform the intellectual tasks typically performed by college students. These four tests of educational development and academic potential, a set of self-reported high school grades, and a student information blank made up the ACT student assessment program for a college. (Using ACT on the Campus, 1971).

Rotter Internal-External Control Scale (1966)

The Rotter Internal-External Control Scale (I-E Scale) was designed by Julian Rotter to measure the effects of perceived internal or external control of reinforcement. The test is in the form of a 29-item, forced-choice questionnaire. Six of the test items are "fillers" while the other twenty-three items offer choices between internal and external belief statements. The total score is computed by adding the number of external beliefs endorsed. (Silberman and Allender, 1974).

The Course Description

The Course Description was developed by M.L. Silberman and J.S. Allender and is a semiprojective technique for assessing students' reactions to college courses.

The Course Description asks the student to describe the course for the benefit of a hypothetical student who is considering enrolling in the course in a subsequent semester. Guidelines were developed and tested in order to obtain two kinds of scores, the evaluative
tone and impact, from a content analysis of the Course Description. (Silberman and Allender, 1974).

Data Collection and Processing Procedures

Sixty-eight students were administered the Rotter Internal-External Control Scale (1966) and the Course Description (Silberman and Allender, 1974). The students were administered the two instruments in large group sessions, small group sessions, or individually over a two-week period.

The students' scores on the PBC Pre-test and the number of modules completed by each student at the end of the Spring semester, 1976 were obtained from the PBC files in the Office of the English Department Chairman.

Information regarding the PBC program was obtained from discussions with the PBC staff and from printed information about the PBC program prepared by the PBC staff.

The students' ACT English score, high school grade point average, and high school grade point average in English were obtained from the Office of Registrar.

For each student participating in this study, the following data were punched on data cards: (1) sex, (2) ACT English score, (3) high school grade point average, (4) high school grade point average in English, (5) PBC Pre-test scores, (6) locus of control score, (7) the Course Description evaluative tone average score, (8) the Course Description impact average score, (9) percentage needed of total nine modules as a result of the PBC Pre-test, (10) percentage completed of the modules needed, and (11) percentage needed to complete the PBC program.
Findings

The overall null hypothesis tested in this study was that no relationship exists between students' (1) sex, (2) academic capability, (3) locus of control, and (4) evaluative tone and their academic success in the Performance-Based Composition program at a private Black college. Testing of the over-all hypothesis was accomplished by formulating five sub-hypotheses. The major findings will be presented after each stated hypothesis.

Hypothesis I. -- There is no significant relationship between students' sex and their academic success in the Performance-Based Composition program.

Finding. -- The Pearson product moment correlation yielded an $r$ of .463 which was statistically significant at the .001. The correlation coefficient ($r=.463$) indicated that a moderate relationship existed between sex and success in the PBC program.

The t-Test analysis yielded a negative t value of -4.24 for the performance means between the males and females. At value which is significant at .05 level for 66 degrees of freedom is equal to 2.06. The obtained value of -4.24 was larger than 2.06, therefore there was a significant difference in the performance of males and females in the PBC program.

Hypothesis II. -- There is no significant relationship between the academic capability and academic success of students in the Performance-Based Composition program.

Finding. -- The Pearson correlation coefficient ($r$) and the multiple $R$'s for each of the four variables were statistically significant at
the .001 level which indicated a moderated linear relationship with academic success in the PBC program.

The correlations between each of the academic capability variables and academic success were as follows: PBC Pre-test score ($r=.489$), ACT English scores ($r=.459$), high school grade point average in English ($r=.444$), and high school grade point average ($r=.416$). The multiple $R$'s were significant at each step of the stepwise regression analysis. Academic capability accounted for 36 percent of the variance ($R^2$ at step form $=.361$).

**Hypothesis III.** — There is no significant relationship between students' locus of control scores and their academic success in the Performance-Based Composition program.

**Finding.** — The computed $r$ of $.083$ was not statistically significant at .05 level. The correlation coefficient ($r=.083$) was very low and the relationship was negative or inverse.

**Hypothesis IV.** — There is no significant relationship between the students' evaluative tone and academic success in the Performance-Based Composition program.

**Finding.** — The correlation coefficient of $.256$ significant at the .02 level indicating a slight relationship existed between the students' evaluative tone and academic success in the PBC program.

**Hypothesis V.** — There is no significant multiple relationship between students' sex, academic capability, locus of control score, and the evaluative tone and their academic success in the Performance-Based Composition program.
Finding. -- The multiple R's were significant at the .001 level for each of the seven variables which indicated a moderately strong relationship existed between these variables and academic success in the PBC program. At step seven the R value was .700 ($R^2 = .49$). It should be pointed out that 40 percent of the variance had been accounted for by step two (PBC Pre-test plus sex). The remaining five variables contributed only an additional nine percent of the variance.

Also, Spearman rank-difference correlations computed for each of the independent variables, excluding sex, did not dispute the original findings.

Findings Relating to Students' Responses on the Course Description.

In general, students were decidedly more negative than positive about the Performance-Based Composition program, regardless of the students' level of performance in the program.

With regard to the students' evaluative tone responses, the highest frequencies were recorded in the following sub-categories under positive responses: program is interesting and a good approach (11), course material can be mastered (9), and gained additional English skills (9).

Relative to negative responses, the highest frequencies were recorded in the following sub-categories: program is a waste of time and should be discontinued and discouraged because of lack of academic success (20).

In reference to the sex of the student and the student's evaluative tone, for males ($N=28$) only 3 percent were positive and the other 25 were negative, including the one male who had completed the program. For females, ($N=40$) only 7 were positive and the other 33 were negative.
Discussion

The purpose of this section is to provide logical explanations of the findings of this study in relationship to the following factors: (1) in general, the findings of some of the studies which were cited in the review of related literature, and (2) more specifically, the findings of this particular study. In addition, the findings of this particular study will be explored in view of the relationship between each of the independent variables and the dependent variable as well as the interrelationships between these variables.

Sex

With regard to sex, the correlation coefficient computed for Hypothesis I indicated that a moderate relationship existed between sex and academic success in the PBC program. Also, the results of the t-Test analysis indicated that there was a difference in the performance means between the males and females in the PBC program.

The review of literature revealed two generalizations pertaining to the variable of sex: (1) sex is recognized as being one of the most significant factors which influences academic success, and (2) investigations have found women to be more predictable than men. Lavin (1965) offered several very plausible reasons as to why the level of achievement was higher for females than for males. One
very prominent reason was that males and females were socialized differently. As a result of the different roles males and females play in our society the following assumptions were made: (1) academic success probably has different significance for males than for females, and (2) because female teachers greatly outnumber male teachers, especially in elementary and high schools, it can be speculated that teacher definitions of the student role include more characteristics of the female sex role. Also, Seashore (1962) listed the following factors which positively affect female academic performance: (1) motivation, (2) goal-orientation and conformity, and (3) the grading practices of high school and colleges.

If the aforementioned reasons proposed by Seashore (1962) and Lavin (1965) are assumed to be true regarding sex differences in academic performance, it is understandable why eleven females (N=40) had completed all modules needed but only one male (N=28) had done so. Secondly, societal expectations may demand more from females rather than males in the academic realm, thus females strive harder to live up to these expectations. Since these pressures are not as stringent for males, they may be prone to be more lax in the academic work.

Third, with the current trend towards the eradication of sexism in our society, females may be prone, to some degree, to not conform and thus emulate some of the characteristics that have just been discussed as applying to
males only. For example, females may take the position that it is all right for them not to succeed which could account for 14 females (N=40) not having completed more than fifty percent of the modules needed.

In order to provide plausible explanations as to why, after two years, fourteen females have not completed at least fifty percent of the modules needed, an analysis of the academic capability scores for these females was done. (See Appendix G for the Academic Capability Scores for the 14 Low Scoring Females). Regarding the ACT English score, although there were 5 cases of missing data, the highest score was 18, the lowest score 08, and the mean was 12 while the mean for college-bound high school students nationally is 18.2. (Using ACT on the Campus, 1971, p.15) However, in view of the relatively open-door policy of the college investigated in the study and the fact that the mean score was 14 for 49 of the 68 subjects, the score of 12 is a relatively average one.

Second, with only two instances of missing data, the highest high school grade point average (N=4) was 3.5, the lowest was 2.1, and the mean high school grade point average (N=14) was 2.6. The mean grade point average showed that according this indication of part academic performance, these females were of average ability.

Third, with only two instances of missing data, the highest high school grade point average in English (N=14)
was 3.0, the lowest was 1.5, and the mean high school grade point average in English was 2.3. A comparison of the means of the high school grade point average (2.6) and the high school grade point average in English (2.3) indicated the students (N=14) were still average in performance but to a lesser degree in English than in overall past academic performance. In reference to the PBC Pre-test Score #1, the highest score was 67, the lowest was 41, and the mean (N=14) was 55. The mean revealed that these students, in general, performed poorly on the Pre-test and also indicated that they would, in all probability, have to work very hard to achieve success in the program. In addition, the two students who had averages of 3.0 in high school English had scores of 57 and 64 on the Pre-test which indicated either that their high school English grades were inflated, the Pre-test was too difficult, the students had not tried to do their best on the test, they had not retained very much from high school English, or any combination of these factors.

Finally, an analysis of the percentage of modules completed (N=14) showed the highest percentage was 43, the lowest was 0, and the mean percentage was 15. The low mean resulted partly because five students had completed none of the required work, one student had completed only 12 percent and three others had completed only 11 percent.

In conclusion, an analysis of the variables which composed academic capability revealed that these female
students were average on all variables but the Pre-test. The diagnosis or predictive quality of the Pre-test was borne out which was that these students were weak in basic English skills and would have to work diligently to complete the program. However, two factors should be remembered: (1) these students had been in the program for two years, and (2) the results of the Pre-test did not predict that these students could not finish the program.

**Academic Capability**

With regard to academic capability, the correlation coefficients (r) and the multiple R's computed for each of the four variables indicated a moderate relationship between these variables (PBC Pre-test Composite score, ACT English score, high school grade point average in English, and high school grade point average) and academic success in the PBC program.

First of all, the PBC Pre-test composite score yielded an $r = .489$ and this is understandable because the test is diagnostic in nature and is composed of basic grammatical, usage, and writing skills that should be possessed by the average college freshman. Klingstedt (1973) viewed the pretest as one of the six major parts of a learning module. Diamond *et al* (1975) stated that the Diagnostic Test is one of the requirements for all students before they proceed to any part of the program at Syracuse University. Also, this is true of College IV, Grand Valley State Colleges (1975).
Therefore, it is evident, both in theory and in practice, that the diagnostic test is an integral part of typical performance-based programs.

Moreover, the Pre-test represents for the teaching staff of the college investigated in this study a more realistic depiction of the student's abilities more so than the results of the ACT English test which may have dealt with material too complex in nature for the student and thus, a false or unreliable impression was given. Also, the high school average in English and the overall high school average may have been affected by grade inflation, size of high school, general course offerings, whether the high school was college preparatory or vocationally-oriented, and the type of English courses taken by the students. (Kerr, 1959).

In other words, the PBC Pre-test serves as sort of a common ground of evaluation, whereby, regardless of the factors mentioned above, students are evaluated on an equal basis. In a CBE/PBE program, the emphasis is on exit, not on entrance requirements. This is one of the Implied Characteristics listed by Elam (1971) in Performance Based Teacher Education: What is the State of the Art? Students are not penalized for what they do not know. The supreme penalty would be to recognize what students do not know and then not teach it.

With regard to performance on the Pre-test in this study, of the twelve students (one male and eleven females)
who had completed the PBC program, all except one of these females had PBC Pre-test scores of 60 percent to above 80 percent. Also, one of the females and one male were transfer students. Thus, as a result of previous credits and pre-testing out of two modules, both of them needed only two modules. To a degree, these two students are not representative of all students in the program especially the one male.

Secondly, twenty-eight (28) students had PBC Pre-test scored of 60 percent to 82 percent but they did not finish the program. Of these students only 6 had completed 80 percent or more of the modules needed. One of the main reasons for these students not completing the program might be because they had a negative attitude towards the program. For example, subjects number 52 and 67 had above average grades and scores on all variables included under academic capability (see Appendix F) but subject number 52 recorded four types of negative responses and no positive comments on the Course Description. Subject number 67 recorded three types of negative responses on the Course Description. Also, both students had experienced conflicts with the same instructor. Therefore, at least for these two students in particular and other as well, a negative attitude may have adversely influenced their success in the PBC program.

In addition, the twelve students (nine males, three females) who scored 50 percent or below on the Pre-test had attained 11 percent or less of the modules they needed to
complete the PBC program. In general, these students were either transfer students or had average or below average high school grades or ACT English scores. Therefore, for these students, the variables of sex and academic capability were just as influential as the negative attitudes they had about the PBC program.

**American College Test (ACT) English Score**

Studies using the ACT subtests as predictors of academic success have generally shown a positive relationship. Finches (1965) and Funches (1967) found positive relationships with r's of .59 and .36, respectively between the ACT composite score and the year-end grade point average for freshmen enrolled at Jackson State College. In the present study, when the ACT English score was used as a predictor of academic performance in the PBC Program, a positive relationship existed with an r of .459. It should be noted that the students in Funches' and this investigator's study were similar in racial composition.

**High School Grade Point Average**

The high school average (r=.416) and the high school average in English (r=.444) were found to have a moderate relationship with academic success in the PBC program. Studies by Garret (1949), Cosand (1953) and Scannell (1960) attested to the use of the high school grade point average as one of the best and most frequently used
predictors of academic success in college.

However, Thomas and Stanley (1969) found that high school grades do not consistently make the greatest contribution in predicting college grades of black students, especially for men, as they do for whites. Some of the reasons stated by Thomas and Stanley for this situation are: (1) unreliability of grade reporting, (2) invalidity of grades in high school, (3) restriction in range due to selection processes, and (4) intergroup differences in personality characteristics.

High School Grade Point Average in English

Regarding the specific use of the high school grade point average in English, a few studies did indicate that its use might be a profitable one. Douglass (1927) found high school English grades to correlate \((r = .49)\) with college grades for three quarters of work. Carlson and Milstein (1958) found the high school grade point average reported \(r = .62\) with college grade point average and high school English was the second highest correlation \(r = .58\).

In this study, the degree of relationship between high school grade point average in English and academic success was not as positive as in the studies cited above, however this finding may be due to the higher standards and level of difficulty of college English as opposed to high school English.
More specifically, when the studies by Douglass (1931) and Carlson and Milstein (1958) were conducted, the instructional format for both high school and college English were basically the same. However, for most of the students in the PBC program, this is their first encounter with a competency-based program of any kind. Thus, the findings would not be similar.

Locus of Control

Locus of control was found to have a negative or inverse relationship with academic success in the PBC program. This finding of $r = -0.083$ is supported by a similar study by Hjelle (1970). The results (p. < .250) indicated only marginal support for the prediction that there was a positive relationship between the two variables and they are: (1) As earlier suggested by Rotter (1966), many college students have arrived at an external view of the world as a defense against failure, and (2) the I-E dimension is probably not generalizable across situations, therefore it may not be best suited to the highly achievement oriented situations such as college.

Also, Johnson and Croft (1975) investigated the relationship between locus of control and performance in a Personalized Instruction Course (PSI). Although the results showed locus of control was not related to course performance, significant change toward an internal direction was observed.
The above reasons cited by Hjelle (1970) are very logical regarding why a positive relationship is not evident between the two variables.

In reference to this study, the relationship between locus of control and academic success was of zero order. An explanation of the findings can be found by noting the performance of several students on the two variables. Three of the females who completed 100 percent of the modules needed, Subjects 18, 21, and 58 had locus of control scores of 12, 5, and 13, respectively. Since the higher the locus of control score is, the more external subject is viewed to be, two of these students would have to be judged as being neither obviously internal or external. However, the one subject who scored 5 would be judged highly internal.

In addition, when noting three students who had experienced extreme difficulty in the program, their locus of control score offers no obvious clues. For example, Subjects number 10 had completed 0 percent of the modules needed and had a locus of control score of 12, Subject number 14 had completed 11 percent of the modules needed and had a locus of control score of 12, and Subject number 32 had completed 0 percent of the modules needed and had a locus of control score of 12.

Finally, one student, Subject number 62 had a locus of control score of 23 which is judged as being highly external. However, she had completed 86 percent of the modules needed.
Therefore, from the examples cited it is evident why statistically there was no relationship between locus of control and academic success in the PBC program.

**Evaluative Tone**

Evaluative tone was found to have only a slight relationship (r=.256) with academic success. This finding could have been the result of the minimal impact of the degree of positive responses as well as the high degree of negative responses.

Robin (1976) in regard to student attitudes about behavioral instruction concluded from the study conducted by Sheldon et al (1975), that student attitudes were less positive on a university-wide, standardized questionnaire than on an internal teacher-made survey. This phenomenon may have caused students in this study to express more negative than positive views because: (1) none of the teachers in the PBC program had conducted any type of evaluative surveys, and (2) the evaluative instrument used in this study could have been considered a college-wide survey and thus could have been perceived as a way for students to voice their highly negative opinions.

With specific regard to the twelve students who had completed all modules needed, although it could have been expected that these students would have been expected that these students would have been more positive than others in the program only one of the twelve was positive.
Recommendations

These recommendations are made on the basis of: (1) the findings of the study, especially the student responses on the Course Description, (2) suggestions for programmatic changes and future research based on studies cited in the review of related literature, and (3) the professional judgment of the researcher. The recommendations will be divided into two parts: (1) programmatic changes, and (2) future research.

Programmatic Changes

1. During the orientation for freshman and transfer students, a better explanation of the PBC program should be given. Also, the potential value of the PBC program to the students, the objectives, philosophy, advantages and disadvantages should be explained.

2. Burke (1972) suggests that one of the institutional changes that should be associated with the introduction of a PBC program is the elimination of mass registration for program participants. Rather, students should enroll in aspects of the program when they are ready to start that part of the program. Burke's suggestion seems appropriate. More flexible registration procedures should be implemented in the college in which this investigation was conducted.

3. On the basis of a suggestion made by Taylor, (1975) the objectives of the program should be made clearer to the students, especially with regard to what he has to do in order to earn a particular grade.
4. Student attendance should be a factor in the grading process. All students who do not finish certain aspects of the program should no longer receive an Incomplete. The grade of Incomplete should be given to students who have put forth effort to achieve. Those students who have not should receive an F or similar low grade.

5. An attendance policy should be developed. Although not statistically documented in the study, many students on the Course Description stated that as a result of certain occurrences, they stopped attending class.

6. A review of the record keeping procedures should be made so that this procedure can better serve the students in need of ongoing feedback regarding progress.

7. The time that the initial post-test as well as subsequent ones (should the student fail) are given should be accelerated. The results of the initial test should be received and if necessary another post-test should be given as soon as possible.

8. With the number of students who need to complete the program constantly increasing and with the decrease in English majors, it would seem profitable to study alternative patterns of scheduling to meet the needs of a larger number of PBC students.

9. The academic advising system should address itself to the fact that too many students are postponing Freshman English. The result is undue pressure on PBC instructors. Since English represents a basic skill, it should be completed as early in the students foundation program as possible.
10. Burke (1972) cited faculty orientation and retraining as a key issue. PBC instructors would profit from conferences, discussion sessions on studies in the area and other activities that would strengthen the program.

11. Learning alternatives and a rationale should be developed for each of the modules. (Klingstedt, 1973)

12. Students should play an active role in helping to improve the program by serving on program advisory committees. (Dolinsky, 1974)

13. Changes may be needed regarding the measures used to indicate the students level of performances. However, the changes must not be hastily made but based on sound measurement principles. Cox (1974) and Quirk (1974).

14. Steps should be taken as a part of the PBC program to encourage students to take more responsibility for their academic performance in the program. The program demands that students become more responsible and they should be encouraged to do so, through counseling, class, or extra curricular activities.

15. On a systematic basis, teachers should be encouraged to be aware of the students' high school performance and performance on standardized tests. The standardized tests should not be used for placement purposes only.

16. The larger numbers of negative statements by students should not cause an over-reaction and thus cause a dilution of certain elements of the program to be changed to appease them. Changes must be based on careful
research and study. (Robin, 1976)

Future Research

1. A study should be conducted to determine the average amount of time it takes a student of average or below average ability to complete the program. Also, consideration should be given to the level of difficulty of each module.

2. A study should be conducted to determine the level of student performance on the English sections of standardized tests that they take while in college, e.g., the Sophomore Proficiency Examination, the Undergraduate Record Examination, and the Graduate Record Examination. A comparison should be made of the scores of students who were taught using a competency-based approach, and those taught using other approaches.

3. At a large college or university, a study should be made to determine the effectiveness of alternative approaches including the competency-based approach. At the end of a term or the academic year, the groups would be tested in order to determine where if any, approach fosters greater achievement.
APPENDIX A

TOTAL AND ALTERNATIVE OR PARALLEL TEACHER EDUCATION PROGRAMS
Total Teacher Education Programs

College of Saint Scholastica, Minnesota
Florida International University
Jarvis Christian College, Texas
Norfolk State College, [Virginia]
North Carolina Central University
Prairie View A & M College, Texas
Southwestern Minnesota State College
University of Northern Florida
University of Toledo
Weber State College, Utah

Alternative or Parallel Teacher Education Programs

Appalachia State University, North Carolina
Alabama A & M College
Albany State College, Georgia
Arizona State University
Auburn University, [Alabama]
Black Hills State College, South Dakota
Brigham Young University, [Utah]
California State College, Hayward
Carroll College, Montana
Chyney State College, Pennsylvania
Clark College, Georgia
Columbia University, [New York]
Doane College, Nebraska
Drake University, Iowa
East Tennessee State University
Eastern Montana College
Florida A & M University
Florida State University
Fordham University, [New York]
Frostburg State College, Maryland
Governor's State University, Illinois
Grambling College, [Louisiana]
Illinois State University
Indiana University
Kansas State College
Kansas State Teacher's College
Mankato State College, Minnesota
Marshall University, West Virginia
Maymount College, Kansas
Memphis State University
Michigan State University
Millersville State College, Pennsylvania
New Mexico State University
Oregon College of Education
Pembroke State University, North Carolina
Purdue University, Indiana
Sacramento State College, [California]
San Francisco State College
Shaw University, North Carolina
South Carolina State College
State University of New York at Albany
State University of New York at Buffalo
State University of New York, College at Cortland
Syracuse University, [New York]
Texas A & I University at Laredo
Texas Christian University
Texas Southern University
Temple University, [Pennsylvania]
Tennessee State University
University of California at Santa Cruz
University of California at San Diego
University of Denver, [Colorado]
University of Florida
University of Georgia
University of Houston, [Texas]
University of Illinois
University of Maryland, Baltimore County
University of Massachusetts
University of Michigan
University of Nebraska
University of Nevada
University of North Dakota
University of Oregon
University of the Pacific, [California]
University of Pittsburgh
University of Rhode Island
University of South Carolina
University of Texas at Austin
University of Texas at El Paso
University of Utah
University of Vermont
University of Washington
Upsala College, [New Jersey]
Washington State University
West Texas State University
Western Carolina University
Wheeling College, [West Virginia]
Winston-Salem State University, [North Carolina]

APPENDIX B

STATE PROFILE OF SCHOOL-BASED TEACHER CORPS PROJECTS
# STATE PROFILE OF SCHOOL-BASED TEACHER CORPS PROJECTS

<table>
<thead>
<tr>
<th>State</th>
<th>Educational Agencies and Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>Alaska Department of Education</td>
</tr>
<tr>
<td>Arizona</td>
<td>Northern Arizona University</td>
</tr>
<tr>
<td>California</td>
<td>San Francisco State College</td>
</tr>
<tr>
<td></td>
<td>University of California, Santa Cruz</td>
</tr>
<tr>
<td></td>
<td>University of Southern California</td>
</tr>
<tr>
<td></td>
<td>University of California, San Diego</td>
</tr>
<tr>
<td></td>
<td>Sacramento State College</td>
</tr>
<tr>
<td></td>
<td>California State College, Hayward</td>
</tr>
<tr>
<td></td>
<td>University of the Pacific</td>
</tr>
<tr>
<td>Colorado</td>
<td>Southern Colorado State College</td>
</tr>
<tr>
<td></td>
<td>Adams State College</td>
</tr>
<tr>
<td>Connecticut</td>
<td>University of Hartford</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>District of Columbia Public Schools</td>
</tr>
<tr>
<td>Florida</td>
<td>University of Florida</td>
</tr>
<tr>
<td></td>
<td>University of South Florida</td>
</tr>
<tr>
<td>Georgia</td>
<td>Atlanta Consortium</td>
</tr>
<tr>
<td></td>
<td>Albany State College</td>
</tr>
<tr>
<td></td>
<td>University of Georgia</td>
</tr>
<tr>
<td>Idaho</td>
<td>Idaho State University</td>
</tr>
<tr>
<td>Illinois</td>
<td>University of Illinois, Chicago</td>
</tr>
<tr>
<td>Indiana</td>
<td>Indiana University</td>
</tr>
<tr>
<td></td>
<td>Purdue University at Indianapolis</td>
</tr>
<tr>
<td>Iowa</td>
<td>Drake University</td>
</tr>
<tr>
<td>Kansas</td>
<td>Kansas State Teachers College</td>
</tr>
<tr>
<td>Kentucky</td>
<td>Louisville Public Schools</td>
</tr>
<tr>
<td>State</td>
<td>Institution(s)</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Louisiana</td>
<td>East Baton Rouge Parish School Board (with Southern University) Grambling College</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>University of Massachusetts</td>
</tr>
<tr>
<td>Michigan</td>
<td>Lansing Public Schools</td>
</tr>
<tr>
<td>Montana</td>
<td>Eastern Montana College</td>
</tr>
<tr>
<td>Nevada</td>
<td>University of Nevada</td>
</tr>
<tr>
<td>New Jersey</td>
<td>Comden Educational Development Program</td>
</tr>
<tr>
<td>New Mexico</td>
<td>New Mexico State University</td>
</tr>
<tr>
<td>New York</td>
<td>Columbia University Syrcause University</td>
</tr>
<tr>
<td>North Carolina</td>
<td>Appalachian State University Winston-Salem University Western Carolina University</td>
</tr>
<tr>
<td>North Dakota</td>
<td>University of North Dakota</td>
</tr>
<tr>
<td>Ohio</td>
<td>Toledo University</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>Oklahoma Consortium</td>
</tr>
<tr>
<td>Oregon</td>
<td>University of Oregon</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>Cheyney State College Temple University</td>
</tr>
<tr>
<td>South Carolina</td>
<td>University of South Carolina</td>
</tr>
<tr>
<td>South Dakota</td>
<td>Black Hills State University</td>
</tr>
<tr>
<td>Tennessee</td>
<td>East Tennessee State University Memphis State University</td>
</tr>
<tr>
<td>Texas</td>
<td>University of Texas Texas Southern University Texas A &amp; I University at Laredo University of Texas at El Paso</td>
</tr>
<tr>
<td>Utah</td>
<td>Weber State College</td>
</tr>
<tr>
<td>Virginia</td>
<td>Norfolk State College Virginia Consortium</td>
</tr>
</tbody>
</table>
Washington
University of Washington
Washington State College
Washington State University

Wisconsin
University of Wisconsin-Madison
Milwaukee, Stevens Point

APPENDIX C

POSITIVE AND NEGATIVE EVALUATIVE TONE RESPONSES BY EACH SUBJECT
(N=68)
<table>
<thead>
<tr>
<th>Subject</th>
<th>Positive Responses</th>
<th>Negative Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Program is interesting and a good approach</td>
<td>The time the course is offered is not always convenient for most students</td>
</tr>
<tr>
<td></td>
<td>Program is workable</td>
<td>Program is a waste of time and should be discontinued</td>
</tr>
<tr>
<td></td>
<td>Course material can be mastered</td>
<td>Discouraged because of lack of academic success</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Too much time is required to complete one module</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Grading policy should be changed.</td>
</tr>
<tr>
<td>2</td>
<td>Program has many advantages.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Program is interesting and a good approach</td>
<td>Program is a waste of time and should be discontinued</td>
</tr>
<tr>
<td></td>
<td>Program allows the student to work at his own pace</td>
<td>Discouraged because of lack of academic success</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Too much time is required to complete one module</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>Discouraged because of lack of academic success</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Too much time is required to complete one module</td>
</tr>
<tr>
<td>Subject</td>
<td>Positive Responses</td>
<td>Negative Responses</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------</td>
<td>--------------------</td>
</tr>
</tbody>
</table>
| 6       | Gained additional skills in English | Adequate explanation was not given regarding the value of the Pre-test  
Program is a waste of time and should be discontinued  
Stopped attending class because of lack of academic success |
| 7       | Program is interesting and a good approach | Too much time is required to complete the program  
Too much time is required to complete one module |
| 8       | Program has many advantages  
Gained additional English skills | The same or greater benefits can be received by taking regular English and receiving a grade |
| 9       | Program is interesting and a good approach  
Course material can be mastered | Stopped attending class because of lack of academic success  
The same or greater benefits can be received by taking regular English and receiving a grade  
Too much time is required to complete one module |
| 10      | Unaccustomed to this method of instruction  
Program is a waste of time and should be discontinued | |
| 11      | Program is a waste of time and should be discontinued  
Material covered was like a review, thus the student learned very little  
Too much time is required to complete one module  
Some teachers did not keep accurate records | |
<table>
<thead>
<tr>
<th>Subject</th>
<th>Positive Responses</th>
<th>Negative Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td></td>
<td>Program is a waste of time and should be discontinued</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discouraged because of lack of academic success</td>
</tr>
<tr>
<td>13</td>
<td>Program is interesting and a good approach</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gained additional English skills</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Program is interesting and a good approach</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Some teachers were not available, when needed, to help students</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>Program is a waste of time and should be discontinued</td>
</tr>
<tr>
<td></td>
<td>Discouraged because of lack of academic success</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Presented from taking certain courses and seniors from graduating because of lack of academic success</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Too much time is required to complete the program</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Program has many advantages</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prevented from taking certain courses and seniors from graduating because of lack of academic success</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teacher-student conflict</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Adequate explanation was not given regarding the value of the Pre-test</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Program is a waste of time and should be discontinued</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stopped attending class because of lack of academic success</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prevented from taking certain courses and seniors from graduating because of lack of academic success</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The same or greater benefits can be received by taking regular English and receiving a grade</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Program is interesting and a good approach</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Course material can be mastered</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Gained additional English skills</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Program has not met the needs of students who pre-tested out of most of the modules but felt they wanted to learn the material missed on the Pre-test</td>
<td></td>
</tr>
<tr>
<td>Subject</td>
<td>Positive Responses</td>
<td>Negative Responses</td>
</tr>
<tr>
<td>---------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>19</td>
<td></td>
<td>Adequate explanation was not given regarding the value of the Pre-test Discouraged because of lack of academic success The same or greater benefits can be received by taking regular English and receiving a grade Too much time is required to complete the program</td>
</tr>
<tr>
<td>20</td>
<td></td>
<td>Program is a waste of time and should be discontinued Stopped attending class because of lack of academic success The same or greater benefits can be received by taking regular English and receiving a grade Teacher-student conflict</td>
</tr>
<tr>
<td>21</td>
<td>Program is interesting and a good approach</td>
<td>Prevented from taking certain courses and seniors from graduating because of lack of academic success Grading policy should be changed</td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>Discouraged because of lack of academic success Stopped attending class because of lack of academic success Prevented from taking certain courses and seniors from graduating because of lack of academic success The same or greater benefits can be received by taking regular English and receiving a grade Too much time is required to complete one module Grading policy should be changed</td>
</tr>
<tr>
<td>Subject</td>
<td>Positive Responses</td>
<td>Negative Responses</td>
</tr>
<tr>
<td>---------</td>
<td>--------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>31</td>
<td>Discouraged because of lack of academic success</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stopped attending class because of lack of academic success</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Considered taking English in summer school at another college because of lack of academic success</td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>Program has many advantages</td>
<td>Teacher-student conflict</td>
</tr>
<tr>
<td>33</td>
<td>Considered taking English in summer school at another college because of lack of academic success</td>
<td>Grading policy should be changed</td>
</tr>
<tr>
<td></td>
<td>Post-test score should not be the only criterion used to evaluate students' progress in module</td>
<td>Some teachers appeared to be disinterested in the students' progress and/or in teaching in the program</td>
</tr>
<tr>
<td>34</td>
<td>Program has many advantages</td>
<td>Program is a waste of time and should be discontinued</td>
</tr>
<tr>
<td>35</td>
<td>Program has many advantages</td>
<td>Too much time is required to complete one module</td>
</tr>
<tr>
<td>36</td>
<td>Teachers were helpful and interested in the students' progress</td>
<td>Disliked moving to a module then later having to return to an earlier module to complete requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Too much time is required to complete one module</td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>Too much time is required to complete one module</td>
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Teacher-student conflict |
| 66      | Discouraged because of lack of academic success  
Stopped attending class because of lack of academic success | |
| 67      | Program is a waste of time and should be discontinued  
The same or greater benefits can be received by taking regular English and receiving a grade  
Teacher-student conflict | |
| 68      | Discouraged because of lack of academic success  
Prevented from taking certain courses and seniors from graduating because of lack of academic success | |
APPENDIX D

ILLUSTRATIONS OF POSITIVE RESPONSES
UNDER EACH OF THE CATEGORIES OF EVALUATIVE TONE
Program-Related

A. Program Objectives Are Clear and Understandable

"I am not in total disagreement with the program though, because I understand its objectives. The objective of the program is to cover thoroughly all the different aspects of English such as spelling, sentence writing, paragraphs and et cetera." [sic]

B. Program Allows Student to Work at His Own Pace

"Performing on your own level of intelligence, I think, is the best way to teach, because you have as much time as you need to learn and you will go over the same material that the fast student will. So, in the end you will have covered the same material as the accelerated [sic] student, and will have done it on your own level."

C. Course Material Can Be Mastered

"It seems like I was learning something new when I shouldn't have been, but I finally completed both papers."

D. Gained Additional English Skills

"In writing papers, I learned more about putting things in order and in their perspective places. I learned a lot of words that should have been in my vocabulary, but were not. I also learned how to judge a statement. By that, I mean to tell whether it meant exactly what it said or implied something altogether different."
E. Program Is Workable

"I think I am one of the few students here who really think [sic] the PBC is or could work."

F. Program Has Many Advantages

"The things you encounter [sic] in the time the course is in session are very worth while and meaningful." [sic]

G. Program Is Interesting and a Good Approach

"The Performance-Based Composition course was an interesting one."

Teacher-Related

Teachers were helpful and interested in students' progress

"The instructors were very helpful and understanding. They seemed to realize that there was a time limit to the completion of this course and tried to help us when we showed need as well as effort."
APPENDIX E

ILLUSTRATIONS OF NEGATIVE RESPONSES
UNDER EACH OF THE CATEGORIES OF EVALUATIVE TONE
Program-Related

A. Unaccustomed to this Method of Instruction

"If they are going to have this
type of program, then why not
have it in Jr. High-High School.
Because when you come to college
you feel like a first grader."

B. Disliked Moving from One Teacher to Another

"Well it have been to [sic] good in
the English Composition course to me
see I am use to just have one teacher
not have more than one teacher, teacher [sic]
the same thing or a different thing."

C. Disliked Moving to a Module then Later Having to
Return to an Earlier Module to Complete Requirements

"During the course if you are'nt [sic]
finished in the time of the closing of
the date your [sic] just sent to another
course and will have to come back to the
course you hadn't finished and start all
over. During [sic] the [sic] over and
over you will lose all consenc [sic] and
just give up."

D. Program Has Not Met the Needs of Students who Pre-tested
Out of Most of the Modules but Felt They Wanted to Learn
the Material Missed on the Pre-test

"I entered with the expectations of learning new
grammar and writing techniques yet I received
none of this. Maybe the reason for this is that
I pretested out of the majority of the modules.
Even though I may have had slightly above average
knowledge in English I wanted to sit in a normal
classroom and learn more facts about English ....
Some students may like the idea of pre-testing
out of a class but I did [not] come to
[college] just to barely get my classes without
gaining further knowledge than I received from
high school. Even though I scored above 80%
on the pretest I wanted to attend class and learn
the 20% I had not been exposed to."
E. Adequate Explanation Was Not Given Regarding the Value of the Pretest

"Really the class of 74 or the freshman [sic] that came here in 74 were tricked. Because when testing for the English course we were told that it wouldn't really count. Therefore those who could have made a lot more on the pre-exams made less, because of that statement."

F. No Feedback Was Given Regarding the Pre-test Results

"I never received any information as to what I finished when I took the series of tests. I never knew if I had past [sic] or failed."

G. Program Is a Waste of Time and Should Be Discontinued

"This course has been a waste to me."

The PBC course should be obsoleted because no one is able to complete it within a semester.

H. Dislikes English Now, Although It Had Been One of His Best Subjects in High School

"In my education prior to college English has been one of my better subjects or should I say probably my best, but presently and it happened all of a sudden, I have lost interest in this field."

I. The Same or Greater Benefits Can Be Received by Taking "Regular" English and Receiving a Grade

"Even though I have not completed the PBC I feel that by taking regular english [sic] courses you will still reap the same benefits."

J. Material Covered Was Like a Review, Thus the Student Learned Very Little

"I fail to see what I have gained from it because the courses due [sic] taken I was well exposed to in High Schools." [sic]
K. The Time the Course Is Offered Is Not Always Convenient for Most Students

"... the program is only offered during certain times to accommodate [sic] instructors. Many times a student will have to sacrifice an important subject because he has a module at that time."

L. Too Much Time Is Required to Complete the Program

"The modules are too many broad fields to complete in one year."

M. Too Much Time Is Required to Complete One Module

"Many of the modules last much too long for the amount of material that is presented."

N. Felt Rushed to Complete the Program

"This type of English course is not good to me because it seems to put the student in a rush. Also, when I was in it, I felt that I had to hurry up and finish because if I didn't I would get an incomplete."

Consequences of Lack of Academic Success

A. Discouraged

"This is the kind of course where you never fail you just never pass."

"... I think this module business is very discouraging on the part of the students and should be done away with."

"The program has caused me more headaches than any other course I have taken."

"I am not the worst English student but since I have been enrolled in this program it makes me think I am."
"Really I feel like I am in a nightmare . . ."

"... to me this English [sic] module has been one big headache [sic] . . ."

B. Considered Taking English in Summer School at Another College

"I think it would be better to take it in the summer at another college or University."

C. Prevented from Taking Certain Courses and Seniors from Graduating

"This only prevent us from getting the hours we need in other classes plus we can take very few hours."

"We also have seniors who are not able to graduate because they have not completed this course."

D. Stopped Attending Classes

"... I was in one of the modules ... and I stop going not because I didn't like to attend classes, but students had told me the professor was taking the students thru some changes, so right then I decide not to attend her class."

"... it is only wasting time of most of the students, mostly everyone I've tooked [sic] to about the course feels the same. To me its not doing any good, students are beginning to just give up and quit."
Evaluation

A. Grading Policy Should Be Changed

"I stayed in sentence (module) for a semester, everytime I took the test the teacher said I needed two points to pass. Anytime you make 78% out of a possible 100% you should pass that modular, but at...you have to make 80% and that's not fair. In my spelling modular I have made 78% out of a possible 100% four times and I'm still in the spelling class."

B. Post-test Score Should Not Be the Only Criterion Used to Evaluate the Student's Progress in Each Module

"...a test does not measure ones knowledge of application but only ones ability to recall, and many teachers hold students back when they know the student has learned application even when he has missed the passing score by a few points."

Teacher-Related

A. Teacher-Student Conflicts

"Some of the instructors are hard to get alone [sic] with they give assignments and expect you to be able to do it perfect without mistakes."

B. Some Teachers Were Too Slow Giving the Post-test

"In some cases, the teacher would keep you for a very long time before she gave the test. I think there should have been certain amount of time in which the teacher should give the test to you."
C. Some Teachers Appeared to Be Disinterested in the Students' Progress and/or in Teaching in the Program

"My first class was confusing, discouraging as well as boring. The instructor seemed to have no great interest as to our feelings and needs in regard to completion to [sic] his portion of the module."

"Most of the instructors who teaches the courses seems as if they don't care about really helping the student. They don't even show interest in what they are teaching so naturally the student isn't interested. I'm not saying that all the instructors are like this, but most are."

D. Some Teachers Were Not Available, When Needed, to Help Students

"Getting help is a factor that I have found is hard to come by, it is kind of frustrating to me when you don't know where to turn for guidance."

E. Some Teachers Did Not Keep Accurate Records

"... others (instructors) don't take the time to even bother about checking to see how you have progressed or even to record it, and you may find yourself repeating a modular that you have completed as a result of their neglect."
APPENDIX F

DISPLAY OF RAW DATA
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a. ACT Eng = American College Test (ACT) English (score)
b. HS GPA = High School grade point average
c. HS Eng GPA = High School English grade point average
d. PBC Pre-T Sc = PBC Pre-Test Score
e. Eval. Tone Scr = Evaluative Tone Score
f. Eval. Tone Avg. = Evaluative Tone Average
g. PMN = Percentage of modules needed, as a result of the Pre-test
h. PMC = Percentage of Modules Completed
i. PNCP = Percentage (of modules) needed to complete the program
APPENDIX G

ACADEMIC CAPABILITY SCORES
FOR THE FOURTEEN LOW SCORING FEMALES
### ACADEMIC CAPABILITY
**SCORES FOR THE 14 LOW SCORING FEMALES**

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APPENDIX H

INSTRUMENTS USED IN THE STUDY
ROTTER'S SCALE OF INTERNAL VERSUS EXTERNAL CONTROL OF REINFORCEMENT

This is a questionnaire to find out the way in which certain important events in our society affect different people. Each item consists of a pair of alternatives lettered a or b. Please select the one statement of each pair (and only one) which you more strongly believe to be the case as far as you are concerned. Be sure to select the one you actually believe to be more true rather than the one you think you should choose or the one you would like to be true. This is a measure of personal belief: obviously there are no right or wrong answers.

Please answer these items carefully but do not spend too much time on any one item. Be sure to find an answer for every choice. For each number, circle the letter, a or b, indicating the statement which you choose as the one more true for you.

In some instances you may discover that you believe both statements or neither one. In such cases, be sure to select the one you more strongly believe to be the case as far as you are concerned. Also try to respond to each item independently when making your choice; do not be influenced by your previous choices.

1. a. Children get into trouble because their parents punish them too much.
   b. The trouble with most children nowadays is that their parents are too easy with them.

2. a. Many of the unhappy things in people's lives are partly due to bad luck.
   b. People's misfortunes result from the mistakes they make.

3. a. One of the major reasons why we have wars is because people don't take enough interest in politics.
   b. There will always be wars, no matter how hard people try to prevent them.

4. a. In the long run people get the respect they deserve in this world.
   b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
5. a. The idea that teachers are unfair to students is nonesense.
   b. Most students don't realize the extent to which their grades are influenced by accidental happenings.

6. a. Without the right breaks one cannot be an effective leader.
   b. Capable people who fail to become leaders have not taken advantage of their opportunities.

7. a. No matter how hard you try some people just don't like you.
   b. People who can't get others to like them don't understand how to get along with others.

8. a. Heredity plays the major role in determining one's personality.
   b. It is one's experiences in life which determine what they are like.

9. a. I have often found that what is going to happen will happen.
   b. Trusting to fate has never turned out as well as for me as making a decision to take a definite course of action.

10. a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
    b. Many times exam questions tend to be so unrelated to course work that studying is really useless.

11. a. Becoming a success is a matter of hard work, luck has little or nothing to do with it.
    b. Getting a good job depends mainly on being in the right place at the right time.

12. a. The average citizen can have an influence in governmental decisions.
    b. This world is run by the few people in power, and there is not much the little guy can do about it.

13. a. When I make plans, I am almost certain that I can make them work.
    b. It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune anyhow.

14. a. There are certain people who are just no good.
    b. There is some good in everybody.
15. a. In my case getting what I want has little or nothing to do with luck.
b. Many times we might just as well decide what to do by flipping a coin.

16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
b. Getting people to do the right thing depends upon ability, luck has little or nothing to do with it.

17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
b. By taking an active part in political and social affairs the people can control world events.

18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
b. There really is no such thing as "luck."

19. a. One should always be willing to admit mistakes.
b. It is usually best to cover up one's mistakes.

20. a. It is hard to know whether or not a person really likes you.
b. How many friends you have depends upon how nice a person you are.

21. a. In the long run the bad things that happen to us are balanced by the good ones.
b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.

22. a. With enough effort we can wipe out political corruption.
b. It is difficult for people to have much control over the things politicians do in office.

23. a. Sometimes I can't understand how teachers arrive at the grades they give.
b. There is a direct connection between how hard I study and the grades I get.

24. a. A good leader expects people to decide for themselves what they should do.
b. A good leader makes it clear to everybody what their jobs are.

25. a. Many times I feel that I have little influence over the things that happen to me.
b. It is impossible for me to believe that chance or luck plays an important role in my life.
26. a. People are lonely because they don't try to be friendly.
   b. There isn't much use in trying too hard to please people, if they like you, they like you.

27. a. There is too much emphasis on athletics in high school.
   b. Team sports are an excellent way to build character.

28. a. What happens to me is my own doing.
   b. Sometimes I feel that I don't have enough control over the direction my life is taking.

29. a. Most of the time I don't understand why politicians behave the way they do.
   b. In the long run the people are responsible for bad government on a national as well as on a local level.
The Course Description

Melvin L. Silberman

Jerome S. Allender

Please write for 15 minutes in response to the following situation:

Imagine that another student said to you,

"I'll probably have to take your (Performance-Based Composition next semester. Could you tell me what it's been like for you?"

How would you respond?
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