

A COMPARISON OF NEW RIVER COMMUNITY COLLEGE GRADUATES' AND LEAVERS'
VIEWS ON THE AMOUNT AND IMPORTANCE OF GENERAL EDUCATION
IN THE OCCUPATIONAL CURRICULUM

by

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(ABSTRACT)

This study determined and compared the views of New River Community College graduates and leavers of occupational programs on the optimal amount and importance of general education. Data were collected via mail and telephone surveys from a random sample of 400 New River Community College occupational graduates and leavers. Specifically, subjects were asked to provide information pertaining to: actual proportions of general education taken, optimal amount of general education desired, importance of general education competencies, importance and number of general education classes taken, and demographic variables influencing program completion.

Results suggested that actual amounts of general education differed from the optimal amount desired. All AAS and certificate graduates and leavers had taken proportionately more general education than desired, in particular certificate leavers. Analysis of the importance of general education competencies revealed that communication skills, critical thinking skills, mathematics skills, and vocational adjustment were rated high by all groups. Knowledge of arts and literature, knowledge of health and fitness, and ethical perspectives were rated as

least important. Low correlations were common between importance and number of general education courses taken.

The study identified sufficient consciousness among the groups surveyed to suggest that community college administrators should reevaluate required proportions of the general education component in the occupational curriculum. Focus should be placed on amount of general education required in occupational programs, necessary outcomes of general education, and need of general education courses for occupational students.

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CHAPTER 1

INTRODUCTION

Community colleges are experiencing declining enrollments in the traditional disciplines which contribute to a student's general education. Some researchers (Kissler, 1982; Knoell, 1976) speculate that many of these students have achieved their educational goals and that acquisition of a general education was never a part of their decision for attending a community college. Cohen and Brawer (1982, p. 59) claim that students who attend community colleges for only short periods of time and then leave without receiving a degree may be the pragmatic ones. That is, students and former students of community colleges recognize the diminished value of a general education. This is an ironic state for a curriculum that has traditionally been "touted on" as the answer to almost every educational and social problem (Boyer & Levine, 1981, p. 29).

Perhaps one positive outgrowth of this condition is a growing willingness within the academic communities to question the legitimacy of the general education curriculum: Who does the community college serve? How does the clientele value the total community college education? What competencies are essential to the vocational education graduate? What proportion of the curriculum should be devoted to general education? In times of declining enrollment these issues, which have perplexed educators for years, are in need of addressing.

Background

Much of the concern about general education within the community college curriculum focuses on whether vocational education students are in need of general education competencies upon graduation. When considering the design of the community college curriculum, Taba (1962) recommends that the development process include: (a) a theoretical framework stating aims and specific objectives, (b) valid content criteria, and (c) a program of evaluation.

Theoretical Framework

A basic rationale for having a general education program includes explicit statements of the competencies that general education can provide. For example, Miami-Dade Community College has identified five broad benefits to students:

1. A general education enables individuals to integrate their knowledge so that they may draw upon many sources of learning in making decisions.
2. A general education provides students with a beginning on a further commitment to a life-time of learning.
3. A general education enables students to intensify the process of self-actualization.
4. A general education enables students to find value in the activities and experiences of their lives, both those in which they engage because of obligations or commitments and those which are discretionary.
5. General education increases students' understanding of the

breadth and depth of ideas, the growth of society and institution, and the development and application of the scientific process in communities throughout the world. (Lukenbill & McCabe, 1982, p. 85)

By justifying, identifying, and reinstating general education competencies, many community colleges, like Miami-Dade, have structured curricular reform efforts such that students have limited choice with regard to course selection. This is the case with many of the program requirements in the vocational education curriculum.

Valid Content Criteria

Taba (1962) states that if curriculum development is to be a rational and scientific procedure, the decision about the statement of aims and objectives needs to be made on the basis of some valid criteria. "These criteria may come from various sources--from tradition, from social pressures, from established habits" (p. 10). Typically, the decisions concerning inclusion of general education in vocational education programs have been made by community college administrators and faculty members, four-year college and university representatives, and business and industrial employers. The justifications for the inclusion of general education in vocational education programs vary.

Vocational education developed over the years with the specific intent of preparing individuals for immediate employment. According to researchers, this early purpose should not imply that students' programs be void of other areas of education (Barlow, 1982). Accepting that specialization need not be at odds with liberal education, community colleges promote vocational education graduates as competent, for

example, in the use of language as symbols for ideas and channels of communication (Brawley, 1980, p. 5). Community college administrators and corporate employers expect vocational education graduates to have ". . . competence in the use of basic mathematical concepts as symbols for quantitative thought and develop reasoning skills in order to deal effectively with the world" as one finds it (Brawley, 1980, p.5). More specifically, Perkins (1985) determined that academic personnel and employers rank communication skills and critical thinking as the two most important student competencies upon graduation. The Perkins (1985) study revealed that mathematics skills, human relation skills, knowledge of science, and knowledge of economics are viewed by academicians and employers as being important student competencies for employability. In determining how much general education should be required of students, regardless of major, employers and academic personnel support the present accreditation requirements of approximately 33% of the student's program (Perkins, 1985).

Program of Evaluation

Curriculum as defined by Taba (1962) "is a way of preparing young people to participate as productive members in society" (p. 10). Therefore, constant evaluation is necessary to insure that the curriculum is a reflection of social needs. Numerous questions concerning general education are in need of assessment; among them are the following: (a) is there a consistency between the aims and objectives and what is actually achieved by students? and (b) does the curriculum provide experiences which offer optimum opportunities for all varieties of learner to attain independent goals? Providing the answers

to these questions, community college curriculum designers typically have looked to researchers, practitioners and employers for guidance.

Regardless of the importance that researchers, practitioners, and employers place upon general education, many community colleges are experiencing declining enrollments in disciplines which contribute to a student's general education. This is in contrast to full-time equivalency figures which, on an institutional level, have not experienced as sharp a decline (Cohen & Braver, 1982). Koltai (1982) contends that problems stem from the nature of the reform movements which typically concern curricular structure and subject matter and very rarely grant attention to students. Often ". . . students do not see the connection between the various general education disciplines they are studying and their life off-campus, which results in more and more leavers each semester" (p. 104).

Although not focusing on general education specifically, Willner (1981) investigated characteristics of student leavers and the importance of the general education curriculum. Willner contends that the percentage of leavers increases with the number of college semesters attended. Similarly, students who did leave were typically enrolled in the vocational education curriculum, did so at the end of the semester, usually took a full-time job, and left because they were not interested in the college studies. The data, although not conclusive, support that leavers attended community colleges to attain occupational skills as quickly as possible or they intended to satisfy their general education requirements at the university when they transferred (Willner, 1982). O'Banion and Shaw (1982, p. 66) state that many students are not

interested in obtaining the associate degree. They either plan to pursue a bachelors degree or they plan to get a job.

Beeken (1982) used analysis of student transcripts to investigate the amount of general education experienced by students. She makes the following observations:

1. General education programs for vocational education students differ from those for transfer students.

2. The amount of general education taken by leavers differs substantially according to curriculum.

Beeken also examined competencies by way of course selection. Although differences in course selection were observed, the differences were attributed to program requirements for vocational students.

Problem Statement

Reform of the general education curriculum is receiving a great deal of attention. Assessment efforts have been predominately determined by the views and perspectives of administrators, educators, and governing authorities. However, it is evident that students, both those who graduate and those who leave, are an important source of information for curricular planning. The problem of this study was to determine the optimal levels and importance of selected general education competencies as viewed by community college graduates and leavers of occupational associate and certificate degree programs.

Purpose Statement

The purpose of this study was to help improve the general education component of the community college curriculum for occupational students by identifying the optimal amount of general education and emphasis upon general education competencies. This was accomplished through completion of the following ancillary tasks.

1. This study reviewed the extant literature.
2. This study identified the optimal level of general education desired by vocational education leavers.
3. This study determined the importance of general education to vocational education leavers.
4. This study assessed whether general education is a deterrent for degree completion for vocational education leavers.
5. This study identified the optimal level of general education desired by vocational education graduates.
6. This study determined the importance of general education to vocational education graduates.
7. This study assessed whether general education is an influence on degree completion for vocational education graduates.

Research Questions

The following questions were addressed. The first four questions were addressed through a synthesis of the literature.

1. What is general education?
2. What are the classifications of general education in the

community college curriculum (e.g., disciplinary, integrated and/or competency-based)?

3. How are general education competencies measured within the vocational education curriculum?

4. What is the importance of general education to community college personnel, corporate employers, and community college students?

From survey analysis the following questions were addressed:

1. What proportion of the occupational curriculum was devoted to general education by (a) associate in applied science graduates, (b) associate in applied science leavers, (c) vocational certificate graduates, and (d) vocational certificate leavers?

2. What are the differences between the optimal levels of general education for (a) associate in applied science graduates, (b) associate in applied science leavers, (c) vocational certificate graduates, and (d) vocational certificate leavers?

3. What is the importance of general education courses to (a) associate in applied science graduates, (b) associate in applied science leavers, (c) vocational certificate graduates, and (d) vocational certificate leavers?

4. What are the differences in importance of general education competencies to (a) associate in applied science graduates, (b) associate in applied science leavers, (c) vocational certificate graduates, and (d) vocational certificate leavers?

5. What influences does the general education component have on program completion for (a) associate in applied science graduates, (b) associate in applied science leavers, (c) vocational certificate

graduates, and (d) vocational certificate leavers?

Definitions

The following definitions were employed in the study to maintain consistency of terms and set desired parameters.

Associate in applied science degree: certifies competence in technical and occupational fields enough to merit entry into employment or academic achievement that can be transferred to a four-year college. A.A.S. degree programs offered at New River Community College, Dublin, Virginia, include building construction, secretarial science, business management, community and social services, data processing, educational services, electrical/electronics technology, industrial technology, police science, and automotive technology.

Certificate degrees: awarded for completion of vocational training requirements linked closely with apprenticeship training or with the training needs of government and social services agencies. The certificate programs involve concentration in one field of study with limited additional general education or distribution requirements, outlined in the associate in applied science degree definition.

Community college graduate: refers to the student who received either an associate in applied science degree or a vocational certificate degree from New River Community College in June, 1985.

Community college leavers: refers to the student enrolled in either an associate in applied science or vocational certificate degree curriculum starting in Fall, 1983, and who did not graduate from New

River Community College and was not enrolled at New River Community College during the 1986 academic year.

Competence: will imply acquisition of cross-disciplinary skills within cited parameters of the general education curriculum. Competence will infer the lifelong learning needs of students graduating from community college programs. Relevant to the study of general education:

Competence will infer that parties will make reasonably objective judgments with respect to achievement or nonachievement of outcomes; that tends to conceive learning experiences in terms of these outcomes; and that certifies student progress on the basis of demonstrated achievements of these outcomes. (Grant, 1979, p. 6)

General education: for the purpose of this study, is what all individuals granted an associate or certificate degree have in common in terms of the development of knowledge, attitudes, values, and skills to enhance their participation in social, technological, and cultural environments. These courses carry a nonoccupational course prefix.

Optimal amount: refers to the proportion of the community college curriculum devoted to the general education component.

Public community college: is a two-year institution offering a variety of programs and awarding the associate degree and other sub-baccalaureate training in specific occupations for immediate job entry.

Vocational/occupational education programs: " . . . is a plan of study designed to prepare individuals for gainful employment as semiskilled or skilled workers or technicians or subprofessionals in recognized occupations, or to prepare individuals for enrollment in

advanced technical education programs, but excluding any program considered professional or which requires a baccalaureate or advanced degree" (Educational Amendment of 1972).

Delimitations

The study could have been extended to include currently enrolled students and graduates of many years. However, the study was delimited to 1985 graduates and leavers. This was done to maintain a manageable unit and also to reduce the risk of factors jeopardizing the internal and external validities, including instrumentation, maturation, and reactive effects of experimental arrangements.

The proposed study was further delimited by parameters set in Perkins' (1985) study with one alteration in methodology. Geographically, the Perkins survey used three publicly supported independent community colleges in southwest Virginia. The proposed study investigated occupational graduates and leavers from New River Community College, just one community college in the southwest Virginia region. The information pertaining to the sample's college attendance and location was provided by New River Community College.

Instrumental design and methodology approaches were an extension of the Perkins (1985) mail survey. The survey mailing process and statistical procedures complied with those accepted by Dillman (1977) and Koehler (1971).

Limitations

The research questions and definitions set the parameters with which this study was concerned. The scope of this study, then, may be stated in this way: The views of graduates and leavers of New River Community College vocational education programs were compared as to the optimal amount and importance of selected general education competencies.

It was recognized that there was no single list of competencies of the general education curriculum. It was the intention of the researcher to extend Perkins' (1985) methodology. Therefore, the cited 13 selected competencies are a replication.

It was also accepted that general education can be studied from a variety of perspectives (e.g., disciplinary, integrated). This investigation used a competency-based model to evaluate the curriculum.

General education was also studied and compared against selected variables. These variables were analyzed by way of demographic data collected with the survey instrument. The demographic information was obtained from graduates and leavers at New River Community College. See Appendix A for a copy of the instrument.

Finally, it was not intended that the proposed study gather national or regional data. Instead, the study focused on New River Community College graduates and leavers and should not be generalized further.

Need for the Study

The Virginia Community College system has determined that general education shall be, and will remain, a significant function within the community college curriculum. As analyzed by Beeken (1982), any program in the Virginia system has a minimum requirement of credit hours to be completed by the student in general education. The students enrolled in the Associate in Arts and the Associate in Science degrees are required to spend approximately 75% of the 97 credit hour program in specific components of general education. The Associate in Applied Science degree students are required to take 25% of the program in general education.

The program requirements and function of the general education curriculum are also recognized and supported by the faculty, administrators, and corporate employers. Mapp (1980), while investigating the need of general education in the vocational education curriculum, stated that faculty members desire students to master certain selected competencies. Of these competencies, values for humanities, decision-making, skills in communication, knowledge of political and social structures, and skills in interpersonal relationships are essential. Consistent is Perkins' (1985) contention that community college administrators and corporate employees agree that approximately 32% of a student's occupational program include general education. Of the most desirable competencies, the sample recommended that graduates be able to " . . . communicate purposefully and use the habits and skills of critical and constructive thinking in the

identification and solution of problems" (p. 128).

Few efforts, however, have delved into the views of community college graduates and leavers with regard to general education and desirable outcomes. As recognized by many researchers (e.g., Barlow, 1982; Kissler, 1982; Koltai, 1982) students enter community colleges for the main purpose of preparing for a job and they tend to elect courses that are related directly to that quest. As such, it is speculated that students' reactions to general education requirements often result in leaving the community college without receiving a degree. Unfortunately, the high levels of attrition typically found in the community college invite criticism that the institution is not providing programs and services in tune with students' needs.

The study was to improve the community college general education curriculum. Six important justifications were cited: (a) information pertaining to the views of community college administrators, faculty members and corporate employers regarding the proportion and character of general education may not be consistent with the views of the graduates and leavers; (b) the graduates and leavers of the community college are powerful agents of curricular changes; (c) levels of student attrition within the community college programs are linked to curricular content and requirements; (d) additional data pertaining to the optimal amount of general education curriculum is needed; (e) graduates and leavers may provide insight as to the desired outcomes of the general education component within the community college; and (f) evaluation of general education programs within the vocational education curriculum is required.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

The literature related to general education in United States community colleges dates back to the origins of education itself and forward to today. Though the literature can be organized in a variety of formats, it is deemed prudent for this study to view the literature from four major orientations. These orientations are (a) definition of general education, (b) classification of United States community colleges' general education structures, (c) assessment of the amounts of general education in the community college curriculum, and (d) determination of importance of the general education curriculum.

Definitions of General Education

Definitions of general education abound in the literature. There are almost as many definitions as there are research scholars. Analyses of 20 authors' definitions of general education yielded three distinct classifications: (a) descriptive, (b) prescriptive, and (c) operational (see Appendix B). Due to the nature and various interpretations applied to the operational definitions, only the descriptive and prescriptive definitions were dealt with. The common elements and the unique elements of the definitions were extracted to provide the basis for this study and offer an operational definition of general education (see Appendix B).

Selected Definitions

The literature search revealed numerous works, most of which offered operational definitions of general education. Thirteen descriptive and prescriptive definitions were selected from the literature. The authors of descriptive definitions include Barlow (1982), Boyer & Levine (1981), Harlacher (1982), Hillway (1958), McGrath (1972), Piland (1981), and Riley (1980). The authors of prescriptive definitions include Cobb (1983), Eaton (1982), Klein (1980), Marsee (1979), Martin (1983), and Roueche & Roueche (1982).

1. Barlow (1982) devoted attention to an intrinsic perspective. Students should obtain (a) "a sense of personal competence, (b) personal growth in an aesthetic expression, (c) personal growth in integrity, (d) personal growth in cooperativeness, and (e) growth in a heightened sense of altruism" (pp. 26-27). Barlow argued that a general education is, in fact, vocational depending upon the interests of the student. "In many respects these two areas of education [general education and vocational education] are miscible, each dissolves into the other" (p. 21).

2. Boyer and Levine (1981) defined general education as that which "concerns itself with shared life experiences and focuses on areas of interdependence" (p. 33). The authors proposed six broad components of a general education: (a) "shared use of symbols, (b) shared membership in groups and institutions, (c) shared producing and consuming, (d) shared relationships with nature, (e) shared sense of time, and (f) shared values and beliefs" (pp. 33-34).

3. General education, as defined by Harlacher (1982) "is responsible for the preparation of students for the obligations they

have in common as citizens in a democracy and enables them to participate in a wide range of life activities and enhances the overall quality of life in the community" (p. 100). Furthermore, the genesis of the curriculum "encases everything from traditional education to career training to coping with life" (p. 40).

4. According to Hillway (1958), general education is that which provides for the individual:

- (1) the ability to effectively use language and mathematics,
- (2) a comprehensive and usable knowledge of nature and science,
- (3) an understanding of the human society,
- (4) an appreciation of the fine arts,
- (5) ethically sound attitudes toward people,
- (6) deep loyalty to the worthwhile institutions of contemporary society, and
- (7) confidence in people's capacity for improving their world. (p. 98)

5. McGrath (1972) defined general education as that kind of education "which provides a common base of knowledge and which stresses behavior in a free society in terms of motives and attitudes" (p. 25). General education is further regarded as the "breadth or complement" component of the undergraduate curriculum.

6. Piland (1981) defined general education as "that aspect of the institutional program which has as its fundamental purpose the development and integration of every student's knowledge, skills, attitudes, and experiences so that the student can engage effectively in

a lifelong process of inquiry and decision-making" (p. 34). Furthermore, "students should be able to interrelate knowledge within a broad area and perceive the implications this integrated knowledge has for them and for the world in which they strive to survive" (p. 35).

7. Riley (1980) defined general education as that which
- (1) develops a student's critical and analytical intelligence,
 - (2) prepares the student for the entry into work,
 - (3) transforms the student within institutions,
 - (4) acquaints the student with classical knowledge,
 - (5) trains the student in moral, religious, social, and economic skills and values, and
 - (6) develops the whole person. (p. 300)

8. Cobb (1983) defined general education as ". . . that part of the curriculum which provides ample opportunity . . . to identify and address a common set of issues and questions about the world, both as it is and as it should be" (p. 354). There are three qualities essential as student outcomes: "to be able to think systematically, grasp ethical issues, and integrate differing perspectives" (p. 355).

9. Eaton (1982) defined general education as that which is concerned with the ". . . development of a wide range of skills that assist individuals in leading productive, meaningful, and humane lives in complex social, technological, and cultural environments" (p. 73).

10. As defined by Klein (1980), general education is the courses "designed to afford students more efficient preparation for the responsibilities which they share in common as citizens in a free

society and for wholesome and creative participation in a wide range of life activities" (p. 4). General education is that which prepares men and women for a satisfying personal life, happy family and social relationships, and responsible citizenship in a free society, by acquainting them with our common cultural heritage, by helping them to integrate the subject matter of related disciplines, and by developing skills, abilities, attitudes, and values (Klein, 1980, p. 4).

11. Marsee (1979) defined general education as that part of the curriculum that "should help people live with themselves, develop wisdom and character, mature psychologically, and continue a program of life-long learning" (p. 2). He calls for general education courses that pertain directly to the lives of students, that encourage them to take responsibility for their own learning, and that provide them with an understanding of what scholarly work entails.

12. Martin (1983) defined general education as "that which prepares the student for a career as well as citizenship" (p. 36). The teacher and the student may define general education by way of specialized education; thus using the author's example, citizenship may be enhanced through vocationalism.

13. Roueche and Roueche (1982) defined general education "as a preparation for effective living in contemporary societies" (p. 31). An assumption in the authors' definition is that general education will provide for the students "the ability to read, write, study, and figure well enough to be successful . . ." (p. 31).

Common Elements in Definitions

Analysis of the 13 selected definitions yielded 23 elements common

to two or more of the definitions. These elements were grouped into three clusters dependent upon the frequency found in the definitions. The cited elements range from acquisition of survival or coping skills to the realization of one's potential as an individual. The varied elements center around a common theme: the development of the student as a person as opposed to the communication of traditional academic knowledge.

The cluster of most frequently stated general education elements, found in more than five of the definitions, was "enhancement of citizenship in a free society" and "instillment of critical thinking" (Boyer & Levine, 1981; Cobb, 1983; Harlacher, 1982; Hillway, 1958; Martin, 1983; McGrath, 1972; Piland, 1981; Riley, 1980; Roueche & Roueche, 1982). A second cluster of elements common in four or five of the definitions includes (a) development of knowledge necessary for lifelong learning, (b) development of attitudes, (c) integration of subject matter, (d) development of personal values, and (e) the cultivation of heritage (Barlow, 1982; Boyer & Levine, 1981; Cobb, 1983; Eaton, 1982; Harlacher, 1982; Hillway, 1958; Klein, 1980; Martin, 1983; McGrath, 1972; Piland, 1981; Riley, 1980; Roueche & Roueche, 1982).

A third cluster includes the following elements found in two or three of the definitions: (a) establishment of social relationships and cooperation, (b) enhancement of leadership abilities, (c) development of moral and religious training, (d) promotion of meaningful and humane lives, and (e) satisfaction of personal life and family (Barlow, 1982; Boyer & Levine, 1981; Cobb, 1983; Eaton, 1982; Harlacher, 1982; Hillway, 1958; Klein, 1980; Marsee, 1979; McGrath, 1972; Piland, 1981; Riley,

1980).

Unique Elements in Definitions

Several unique elements exist in the selected definitions. These elements were clustered into a single group. The criterion used to cluster the unique elements was the frequency in which the elements were found in the cited definitions. All unique elements were explicit in only one of the definitions. These elements were (a) enhancement of specialized skills, (b) promotion of basic skills, and (c) development of an appreciation for fine arts and recreation (Harlacher, 1982; Marsee, 1979; Roueche & Roueche, 1982).

Enhancement of specialized skills. General education is concerned with the development of skills or the acquisition of knowledge precisely for their applicability to a job, a career, or another specialization. It is through this vocational approach that integration of knowledge occurs. In this sense, general education focuses attention upon goals that are desirable for all persons. However, certain subject matter areas contribute more toward some of these goals than others, but it was never intended that general education consist of a defined list of subject matter areas. Straying from the concept that general education should provide students with a total education, certain scholars have associated the curriculum with a specialized function (Harlacher, 1982). Barlow (1982) and Harlacher (1982) state that the subject matter of vocational education can make real contributions toward achieving some of the goals of general education.

Promotion of basic skills. Roueche and Roueche (1982) reported that more than half of the entering freshman class reads below the

eighth grade level. As such, efforts are made to expand the function of general education to include developmental content. The authors state that no matter whose definition for general education one uses, a basic underlying requirement is that enrolling college students be able to read, write, study, and figure well enough to be successful in freshman courses. Arguing that if general education is to prepare learners for effective living in contemporary society, Roueche and Roueche contended that inclusion of basic skills programs is necessary.

Development of an appreciation for fine arts and recreation.

Harlacher (1982) contended that "citizens of communities want and need the general skills and values necessary for living their lives in harmony with others" (p. 48). General education must be comprehensive enough to permit citizens to broaden their interests and insights in diverse areas including the fine arts and recreation. Supporting this contention, Harlacher cites the general education programs at San Joaquin Delta College and Florida Junior College at Jacksonville. The programs' objectives are to do the following:

- (1) use training in the arts and recreation to allow students to interact effectively with the environment;
- (2) tap creative and artistic potentials of students in order to build self-confidence and overcome failure; and
- (3) present artistic, musical, dramatic, and other recreational performance as a means of educating citizenry (p. 49).

Summary: Operational Definition of General Education

An operational definition was drawn through a process of synthesizing and analyzing the common and unique elements in the cited

definitions. It was deemed necessary to draw from six common and two unique elements for the construction of the operational definition. The following is the operational definition of general education in this study: General education is what all individuals granted a degree have in common in terms of the development of knowledge, attitudes, values, and skills to enhance the student's participation in social, technological, and cultural environments.

Historical Perspectives of General Education

Despite the apparent simplicity of the elements describing general education, the nature and aims of the curriculum have changed over the years. As a means of analyzing the present curriculum, investigation of a historical perspective was necessary. The following concepts were reviewed: (a) origins of general education, (b) adaptation/adoption of general education in higher education, and (c) issues confronting general education in higher education.

Origins of General Education

Gaff (1980) has linked the origins of general education to the ancient Greeks, who regarded education not just as an individual pursuit, but as ". . . a communal activity by which a community preserves and transmits its physical and intellectual character" (p. 17). Conrad (1983) contends that Greek society founded the idea that education is ". . . culture and not simply the transmission of, or knowledge about, culture: (p. 1).

Furthermore, it was through this culture that only the freed man

had the privilege of being educated for citizenship. Thus, education had both a broad and common basis as well as a specialized training necessary for intellectual pursuits. Although each culture had its own definition of a generally "educated person," education was a moral activity valued for instilling national unity. For the Greeks, a liberal education was seen as a prerequisite for vocationalism. As such, the liberally educated citizen possessed competencies in the use of language, was widely knowledgeable about society, and had a sense of history.

During the Middle Ages, the liberal arts were formalized into the trivium--grammar, logic, and rhetoric--and quadrivium--arithmetic, geometry, astronomy, and music. Such practices were the foundations for contemporary programs of general education that involve the core approach (Gaff, 1980).

Adaptation/Adoption of General Education in Higher Education

Throughout the history of American higher education, changes in the course of study have been constant (Rudolph, 1977). The nature of these changes had a profound impact on the structure of general education in United States higher education. As a means of analyzing the adaptation and adoption of general education in higher education, an investigation of the changes in the courses of study, philosophical reform approaches, and the effects of the reform approaches will follow.

Changes in the courses of study. During the 17th and 18th centuries, colleges and universities in the United States offered curricula modeled after the English universities. While opinions and purposes changed somewhat, the expectations remained intact: ". . . to

make a man or woman more wise, more creative, more compassionate, more responsible, and more useful" (Rudolph, 1977, p. 2).

Changes in courses of study became a matter of need with the increased demand for specialization (Gaff, 1983). Rudolph (1977) observed that conflict increased between general education and the specialized curriculum, thus resulting in an unpredictable but constant change in emphasis from 1636 to the present. Gaff (1983), too, noted the pendulum swings of emphasis through the centuries.

Measures to invoke reform were called upon because of "three principle evils" discovered in the standard liberal arts programs (Hillway, 1958, p. 96):

1. Subject matter was being taught for its own sake rather than for what it might mean in the life of the student.
2. Every subject was taught as if it were an isolated body of knowledge with no relation to any other subject.
3. Classes were taught as if every student were a specialist.

Philosophical reform approaches. As an outgrowth to the initial change, four distinctive philosophical approaches to general education arose. Idealism is exemplified by the views of John Henry Newman who saw the university serving simply as a "setting for teaching and learning" (Gaff, 1983, p. 3). Newman, a humanist and promoter of liberal education, would not have considered research a function of the college. "The context within which teaching and learning ought to occur is a community of scholars" (Newman, cited in Gaff, 1980). The goal for Newman was a liberal education without direct practical or vocational application, but one that prepares individuals for all of life (Gaff,

1980).

It was the entry of the German research university in 1819 that appealed to a progressive sector within United States higher education. It was the rise of the research university that did much to cause a shift in the importance and vitality of the liberal arts curriculum (Cadwallader, 1983). Supporters of this progressive philosophy, such as Alfred North Whitehead, the philosopher and mathematician, saw ". . . no essential difference between general education and specialized education: both are integral parts of a full education" (Gaff, 1980, p. 18). Further, within the progressive camp, Bailey (1976) contended that education must serve three basic purposes:

(1) helping persons anticipate and increase their capacity for creative engagements with major predictable changes in their stages of development;

(2) helping persons to cope, to work, and to use their free time in ways that minimize neurotic anxiety and boredom and that maximize inner fulfillment and joyful reciprocities;

(3) helping individuals to learn the arts of affecting the enveloping polity in order to promote justice and to insure the blessings of liberty for others as well as for themselves. (p. 254)

This approach suggests a necessity for general education as a "supplement to specialization as a way of making the total education more useful" (Gaff, 1980, p. 18).

The theme of philosophy can best be represented by Robert Maynard Hutchins' view of general education within the American system of higher education. According to Hutchins, institutions should be responsible

for providing an essential core of knowledge. To accomplish this, a specific core within the curriculum should encompass the teaching of the "Great Books" (Gaff, 1983, p. 4). Likewise, Boyer and Levine (1981) insist on a particular content of general education that is rooted in the belief that ". . . individualism, while essential, is not sufficient" (pp. 32-34).

Gaff (1983) recognizes the work of Clark Kerr as best personifying the final philosophical perspective, pragmatism. The theorist defines a "multiversity" as "an institution comprised of many communities: the community of the undergraduate, the graduate, the humanist, the social scientist. . ." (p. 6). And general education plays a vital part within the total community.

The differing philosophical views of general education highlights the debates concerning the role and content of the curriculum during the 20th century. It was during the early decades of the century that the pendulum was temporarily "poised" (Perkins, 1985, p. 18).

Effects of reform approaches. One positive outgrowth during this period was a quest to restore common learning by way of reform movements. The first of these efforts resulted in a number of experimental courses. For example, at Amherst, under the direction of Alexander Meiklejohn, a course was constructed that integrated the social studies disciplines. Within the curriculum at Columbia, the Great Books colloquium was introduced (McGrath, 1976). Experimental colleges emerged at St. John's and Sarah Lawrence. An example of the goals and ideals of these experimental colleges is portrayed by the course descriptions found at Sarah Lawrence College:

The academic work of a single course must pass readily across conventional subject boundary lines as to the interests and needs of the individual students. The curriculum of Sarah Lawrence College consists, therefore, of the recognized formal disciplines of our time. The experimental element enters in trying out new approaches, fresh materials, untested methods for these departments of study . . . [to insure] the total development of the student. (Benezet, 1971, p. 68)

Reform measures were also implemented within the existing universities of Florida, Minnesota, and Michigan State (McGrath, 1976).

It was during the period of the 1920s and 30s that is described as the ". . . fullest flowering of the liberal education within higher education (Winter, McClelland, & Stewart, 1981, p. 3). This is not solely due to the many reform efforts but also to the expansion of student enrollments throughout the 20s and early years of the Depression. According to Benezet (1971) vast numbers of potential workers were unable to find work, prompting them to attend college upon graduation from high school. Both colleges and students agreed that the programs of learning should not stress training of specific skills or be just for investment purposes for making a living. The curriculum was to be a new general education with two common features: (a) "broad abstractions and basic principles; and (b) attention would be directed away from vocationalism and graduate education" (Winter, McClelland, & Stewart, 1981, p. 4).

An increased focus on general education continued into the 1940s. In 1945, a Harvard faculty committee released a report declaring that

the general education curriculum was a needed remedy to "class divisiveness and as a common bonding device for high school students destined for different futures" (cited in Rudolph, 1977, p. 258). Harvard's "Red Book," as described by Rudolph was an "act of public service" (p. 259) warning that American democracy and social stability were being threatened by a shift in political power, ". . . from the educated few to the unenlightened many" (p. 259). Unfortunately, the author notes that the movement had run its course by the late 1950s. McGrath (1976) viewed the Harvard reform movement as a much more viable and permanent agent. McGrath (1976) suggested that due to the curricular patterning of the 1940 decade as many as one-half of the American colleges had initiated reform measures in general education.

Gaff (1983) stated that where highly publicized general education competencies revamped the courses of study during the 1940s and 50s, ". . . less publicized erosion of those requirements took place in the 1960s and 70s" (p. 12). Rudolph (1977) contends that the breadth and distribution of general education courses became the "hobby horse" of new presidents, ambitious deans, ". . . the well meaning humanists of the sort who were elected to curriculum committees as a gesture of token support for the idea of liberal learning" (p. 253). More specifically, various authors cast blame for the present condition of general education on a number of occurrences throughout the decade; Winter, McClelland, and Stewart (1982) connect American involvement in the Vietnam War to the shift in curricular priorities. The authors agree that "some of the anguish, bitterness and cynicism aroused by the war rubbed off on the universities that had, in the minds of many, made it

possible" (p. 5). Kerr (1963) also noted that a connection had been made between higher education and national government and higher education had become a "prime instrument of national purpose" (p. 87).

Issues Confronting General Education in U.S. Community Colleges

In introducing some of the issues of the community college general education curriculum, no attempt is made to present a comprehensive list but only to highlight some areas of concern as expressed by a small but significant group of scholars. The issues have been categorized as external or internal depending upon their focus.

External Issues

American society includes various elements that warrant the inclusion of a general education curriculum. Although these elements are numerous there are an equal number that limit the growth of general education in the community college. As a result, many external issues exist; a few of the most potent ones are examined here. The external issues include (a) definitive goals, (b) common purposes, and (c) curricular reflection of social needs.

Definitive goals. As indicated, many definitions of general education may be given and all distinguish an important and positive value of the programs. However, this in part is cited as a reason for the failure of general education programs in higher education. As observed by O'Banion and Shaw (1982), general education has become "too general" and is often defined as "what it is not" (p. 60). As such, community colleges have been unsuccessful in designing appropriate and innovative programs. Monroe (1973) contends that numerous programs have been attempted but little agreement on outcomes has been reached.

O'Banion and Shaw (1982) stated that a general education is practical but "it somehow never comes out that way" (p. 64).

Eaton (1982) claimed that the general education curriculum has never fully been defined within the mission of the community college. In this sense, Cohen (1980) stated that colleges will continue to offer the general education curriculum but exclusively through the transfer courses. He warned that rapid change "is essential if the liberal arts are to survive in more than minuscule form" (p. 38).

Common purposes. During the 1960s, while attempting to adapt liberal education to the changing society, educators justified the curriculum by describing it as a "need for tolerance among men" (Harrison, 1973, p. 88). Unfortunately, the reform measures either failed or had no lasting effects. Thornton (1966) stated:

The data lead inescapably to the conclusion that junior colleges have made relatively little progress in developing well organized curricula for general education. Among the factors responsible for this was the lack of a compelling conviction that an adequate program of general education requires a conscious and systematic effort. (p. 209)

Concurring, Medsker (1960) wrote: "The fact remains that fewer than half of the colleges enforce any requirements beyond English, history, and physical education, and fewer than half organize and pattern courses specifically for general education" (p. 63).

As recognized by Case (1983), "community colleges speak for their general education programs, most of which can be termed nonprograms when correctly defined" (p. 103). A program should have "institutional

recognition, some form or organization, a set of goals and objectives, and the means to accomplish them" (p. 103). Instead, general education is typically a list of courses categorized by departments or divisions and regulated by a body of policy and requirements (Case, 1983). The evidence is conclusive that the community colleges have not, in practice, accepted general education as one of the primary purposes.

Curricular reflection of social needs. Another problem stems from a cultural attack on authority. Bell (1966) has explored the factors that furthered the erosion of general education during the 60s and early 70s. The underlying theme of Bell's work suggests that society was not in control of determining solutions to the cultural problems.

In continuation of Bell's work, Rudolph (1977) wrote of the many forces and adversities that had plagued general education during the previous decade. He found important sources of influence in the changing social order as a dominant issue. "The challenge of the curriculum today is to create an environment that is friendly to the production of social critics and that is responsive to a concern with values and the human experience" (p. 288). The author stated:

The general education is the artificial respiration of a lifeless ideal. Recent efforts to develop specific courses in values have a synthetic quality about them: unless the entire institutional environment is recognized as making conscious and unconscious statements of value, courses will run the risk of being irrelevant to social needs. (p. 288)

Internal Issues

In addition to being influenced by factors that have shaped general

education in all postsecondary institutions, general education in the community college has been shaped by factors peculiar to itself. These internal influences include (a) curricular offerings, (b) specialization of content, and (c) goals of students.

Curricular offerings. Friedlander (1983) examined the issue of curricular offerings as it related to student attrition. The author observed that a common issue of the general education curriculum involves the types of course offerings. Typical throughout community college offerings, no precollege courses in the social sciences are designated especially for students who need some assistance in basic skills. Thus, students who are weak in reading, math, or science have no choice but to enroll in courses for which they are not prepared. This raises a concern as to what types of general education courses and competencies ought to be offered.

Parnell's The Neglected Majority (1985) recognizes the importance of a revised general education curriculum. Supporting a "two plus two" arrangement, Parnell stated that community colleges will have to remain comprehensive. Expressing a need for general education, the author wrote, "In today's technological society colleges simply cannot have first-rate technical-education programs unless they are integrated with liberal programs" (p. 95), which presently they are not.

Specialization of content. Hill (1981) suggested that the increase in specialization, while guided by the principle of comprehensiveness, did little more than produce a "social irrelevance" (p. 130). The curricular offerings had minimal coherence and students seldom shared academic experiences. As a consequence, students "may have graduated

with high honors, but in complete ignorance" (Hill, 1981, p. 130).

As observed by Gaff (1983), this shift towards specialization is also attributed to the attitudes of the "faculty culture" (p. 13). The author stated that higher education witnessed an academic revolution led, for the most part, by faculty members who had interests contrary to the existing offerings in higher education. Consistent with the demand of the nontraditional student, faculties required support for graduate programs and research. Priorities and emphasis were placed "on graduate programs more than undergraduate; advanced courses more than introductory or survey courses; and the interests of the departments more than the institutions" (p. 13). Thus, undergraduate general education was considered the least important of the curricular activities.

Instructors of community colleges, regardless of reform measures, "went ahead and taught what they knew and wanted to teach by methods that were already familiar to them" (Case, 1983, p. 106). This condition resulted in course content becoming structured around the instructor's choice and specialization. And despite departmental measures to implement change, when innovations were made, they were typically made in the form of experiments that had no lasting effects.

Goals of students. Rudolph (1977), McGrath (1976), and Winter et al. (1981) cited the growth in the number of nontraditional students attending the traditional programs as having an impact on the general education curriculum. This body of students voiced concerns of accountability and teaching skills. Furthermore, students' needs directed the curriculum towards "a reemphasis on graduate studies and

research, at the expense of general education" (McGrath, 1976, p. 27). According to Cross (1977) the new students preferred "to learn what others have said rather than to learn through intellectual engagement" (p. 58). They likewise "tended to possess a more pragmatic, less questioning, more authoritarian system of values than traditional students" (p. 159).

Cohen and Brawer (1982) also point to the changing student demographics as an issue to consider:

Confronted on the one side by universities wanting better prepared students and on the other by secondary schools passing through marginally literate captives of their own rhetoric to provide programs to fit anyone's desires, the community college erected a curriculum resembling more a smorgasbord than a coherent educational plan. (p. 311)

The increase in nontraditional students contributed to the instability of general education in other ways. For example, community colleges experienced a decline in literacy throughout the 1960s (Cohen & Brawer, 1982; Roueche, 1981). Faculty members became concerned about teaching basic skills. And as observed by Cohen and Brawer, faculties could not often link the teaching of basic skills with "critical thinking, values, and cultural perspectives," which were a part of the general education curriculum (p. 32). As such "general education was shunted aside by those who failed to understand that the curriculum could be taught to everyone" (p. 32).

Summary: Historical Perspective of General Education

General education has become the most misunderstood curriculum

concept in higher education, because of the changing role and focus of the curriculum dating back to the Greeks. Numerous reform measures have likewise occurred during general education's adoption into western higher education. Four philosophical approaches to general education exemplify the attempts made to adopt general education in American higher education. These approaches are expressed by the views of Newman, Whitehead, Hutchins, and Kerr.

Presently, although most community colleges commit themselves to the general education function, numerous issues exist. These issues include defined goals, common purpose, social needs, curricula offerings, specialization of context, and goals of students. Many solutions to these issues can be found in the literature. The solutions are derived from the perspectives of researchers, college administrators and faculty, and corporate and industrial employers; and require substantial change and continued evaluation. There is a notable absence of literature related to students' views of the amount and importance of general education.

United States Community Colleges' General Education Structure

Curricular disorders and a lack of curricular uniformity existed in 20th century higher education (Rudolph, 1977). As a means of implementing an effective general education curriculum in transfer and vocational education programs, community colleges have implemented various curricular approaches. This section will describe the (a) discipline, (b) integrated, and (c) competency-based approaches in

relation to implementation of the community college education curriculum.

The Discipline Approach

With the decline of the 19th century, classical education was tied to the success of the industrial revolution, with its demand for technically and managerially trained workers (Conkright, 1982, p. 5). A related cause was the need for faculties to create themselves professionally by "claiming ownership of a set of specialized skills quite distinct and separate from those of their colleagues in other disciplines" (p. 5). The next steps were the assignment of credit for courses, the creation of majors, and the formulation of interdepartmental alliances to set distribution requirements. The discipline-centered curriculum, according to Cohen and Brawer (1982) "became so entrenched and so politically important to faculty survival that the rationale for its existence was rarely questioned" (pp. 284-285). As such, the discipline approach was adopted in the community college curriculum.

The term core is used in several different ways. According to Taba (1962), a large portion of curricula that are designated by this name represent "nothing more than a method for distinguishing the portions of curriculum required of all students from those which have specialized functions or electives" (p. 407). Albery (1953) describes six different program designs as core programs:

(1) The core consists of a number of logically organized subjects that are taught independently of one another.

(2) The core consists of a number of logically organized subjects,

some or all of which are correlated.

(3) The core consists of broad problems or unifying themes that are chosen because they afford the means of teaching effectively the basic content of certain subjects.

(4) The core consists of a number of subjects that are unified or fused. Usually one subject serves as the unifying center.

(5) The core consists of broad, preplanned problem areas, from which are selected learning experiences in terms of the psychological and societal needs, problems, and interests of students.

(6) The core consists of broad units of work planned by the teacher and the students in terms of needs as perceived by the group.
(pp. 119-120)

Conkright (1982) offers various advantages of the discipline-centered curriculum. It is convenient to schedule for the college administration and the faculty; it makes few demands of the staff for curriculum development; it fosters a sense of unity among students exposed to the same courses; and it forces students to sample a variety of fields through distribution requirements (p. 6).

The limitations of discipline-centered courses also are clearly evident. Students receive no direct help in integrating their diverse experiences; they lack any common intellectual experience; and they seldom see any models of integrative scholarship (Conkright, 1982).

The Integrated Approach

In recent years, integrated courses have become a vital part of the community instructional process (Curtis, 1983). According to Martin (1983), an integrated program stresses teaching that is rooted in

academic disciplines. Furthermore, "knowledge does not come organized in disciplines, but is pursued and learned through them" (p. 12). At Dallas Community College, the Skills for Living program was designed to help students equip themselves for effective living and for responsible citizenship. Three categorical relationships were formulated: living with the developing self, living with others, and living with the environment. Each of these areas included a goal for the college to address and a set of competencies for students that defined the goal (Shaw, 1983).

The disciplines of art, history, science, literature, and related courses were analyzed through the study of the "Great Books." The content was conveyed by a historical method "so that a student has some chronological sense of how the ideas had evolved" (Monroe, 1973, p. 72). Boyer (1980) stated that students should come to understand that there exists a shared common heritage (p. 279). Thus, all students must be introduced "to the events, individuals, ideas, texts, and value systems that have contributed to all human gains and losses" (p. 279).

The integrated model as recognized by Conrad (1978) is also committed to program integration. However, the primary focus of this model is on a variety of subject disciplines, not just one. As argued by Sbaratta (1982), in this era of specialization this type of design is essential to end fragmentation. We must implement a more holistic approach to course content and teaching methods in order to broaden and deepen our students' knowledge of their past and better prepare them for survival and growth in the future (p. 34). Similarly, Hursh, Haas, and Moore (1983) stated that education should be more than a diverse

knowledge base from which students leap toward areas of specialization (p. 43). As such, the integrated approach requires students to take courses outside of their major, "usually drawn from disciplines representing central areas of knowledge" (Hansen, 1982, p. 251).

Within the past decade, a number of cultural factors have led to an increased interest in integrated programs. In the community college, legislative support for occupational courses, students' need for extensive remedial courses, the emphasis on personal development courses, and the students' rights movement all contributed to the use of the integrated model (Conkright, 1982). Increased adult enrollment in academic and community service programs also contributed to using the integrated model. Conkright stated that both the cognitive types and the developmental tasks of adults are more consistent with the integrated than with the disciplinary mode (p. 8). The integrated approach "deemphasizes processing acquisition of large amounts of new information, emphasizing instead the cognitive functions calling for integration, interpretation and application of knowledge" (Cross, 1981).

The interdisciplinary model can best be exemplified by the approach used at Los Medanos Community College. There, a project was sponsored by the National Endowment for the Humanities (1980) to develop an inter- and intra-disciplinary general education program that would (a) develop among students an awareness of major social issues of the late 20th century, (b) help them analyze social problems and inquire into the options for resolving them, (c) broaden their world view and encourage intellectual autonomy, and (d) bring a more humanistic emphasis to the general education program. The resulting model consisted of three

tiers. Its base consisted of six required intradisciplinary courses in social science, behavioral science, physical science, biological science, language arts, and humanistic studies. Serving as capstones to these courses were two tiers of integrated courses; one dealt in breadth with four or five social issues, and the other involved an in-depth study of one societal issue.

The Competency-Based Approach

Cross (1972), while referring to the changing clientele, contended that the form and organization of education would soon change because classroom practices were no longer consistent with purposes. According to Beitler and Lieberman (1980), attempts at educating the masses adheres to the problem. Presently, 99% of the community colleges and 40% of four-year colleges have open doors. Therefore, the purpose of education "is not to select students who will be successful, but to make successful those students who enroll in college" (p. 45). As such, the curriculum model that has emerged out of these circumstances is referred to as competency-based. Outcomes are expressed as competencies or "abilities to perform in an observable and verifiable way" (Carnegie, 1984, p. 124). Winter, McClelland and Stewart (1981, p. 124) described the approach as a "catch all" for a wide variety of programs. However, most of the programs have three features:

(1) A curriculum is divided into units or competencies that are defined in terms that are narrower, sharper, and more operational.

(2) Attainment of competencies is measured by performance tests.

(3) Flexibility in the preparation is required before competency attainment is verified. (p. 7)

The Carnegie Foundation (1984, p. 125) further characterizes competency-based programs as (a) acceptance of competencies wherever achieved, (b) no time schedule for completion of programs, and (c) assessment of not only cognitive aptitudes but psychomotor and affective domains as well.

The American Association of Community and Junior Colleges (AACJC) (1986) has as one of its curricular recommendations the need for competency-based education. Specifically, the association suggests that all components of the AAS degree requirements should become outcome oriented. Justifying this stance, the AACJC states that common practice in community colleges is to define course and program requirements in terms of subject matter topics. Instead, faculty and academic officers from all components of the program should develop and disseminate a statement of the course and program outcomes that students must achieve. While not all of the course and program outcomes can be measured, there remains a responsibility to define the knowledge, skills, and attitudes students are expected to attain. It is expected, according to the Association, that this outcome orientation will apply to all components of the degree, including general education.

Cohen and Brawer (1982) contended that general education must lead to the ability to do and to act. People who have had a general education are supposed to be able to display certain competencies. To be successful, a general education program not only makes explicit the skills and understandings to be attained, but also relates those competencies to external referents, to what people are doing when they have achieved them. Accordingly, general education is defined by Cohen and Brawer (1982) as the following:

(1) exercising the privileges and responsibilities of democratic citizenship;

(2) developing a set of sound moral and spiritual values by which the person guides his life;

(3) expressing thoughts clearly in speaking and writing and in reading and in listening with understanding;

(4) using the basic mathematical and mechanical skills necessary in everyday life;

(5) using methods of critical thinking for the solution of problems and for the discrimination among values;

(6) understanding the cultural heritage so that one may gain a perspective of time and place in the world;

(7) understanding one's interaction with the biological and physical environments that one may adjust to and improve the environment;

(8) maintaining good mental and physical health for self, family, and community;

(9) developing a balanced personal and social adjustment;

(10) sharing in the development of a satisfactory home and family life; and

(11) taking part in some form of satisfying creative activity and in appreciating the creative activities of others. (pp. 318-319)

Of the attempts to operationally define and measure general education outcomes, some of the American College Testing Program's studies are noteworthy. As revealed by Warren (1982), the program has defined the competencies in terms of the "ability to apply knowledge,

skills, and aptitudes to adult roles which is assessed by means of oral and written communications, objective performance tasks, and a self report inventory of activities" (p. 282). This type of an approach resembles the earlier attributes of the "truly educated person" and has received much attention within the community college.

According to Conrad (1978) competency-based programs are as diverse as the traditional types of general education programs. There is also considerable variation in the competencies identified. For instance, Seymour (1974) stressed the need for attention of the following competencies: personal relationships, use of leisure, work situation, logic and clear thinking, law and order, and current affairs. At Alverno College, eight competencies must be achieved if a person is to be able to manage life effectively, make decisions, develop initiatives, and be responsible and confident:

- (1) develop communication skills;
- (2) sharpen analytical capabilities;
- (3) develop problem-solving skills;
- (4) develop facilities for independent value judgments;
- (5) develop abilities for social interaction;
- (6) understand relationships between individuals and the environment;
- (7) develop awareness and understanding of the world; and
- (8) develop appreciation for the arts and humanities. (Conrad, 1978, p. 80)

Although these competencies are intended to be implemented across all curricula, there is an obvious connection with general education.

However, the fact remains that an integration of the two has raised some issues and challenges. Some educators may think that few assessment problems exist in competency-based instruction because performance is stressed (Grant, 1977, p. 495). But at the foundation of the problem, according to Winter et al. (1981), is the nature of the general education content. In principle, the goals of general education can be expressed as observable outcomes. However, in terms of assessment, criteria for successful performance are typically subjective. Grant et al. (1977) cited as an example the competency-based program at Alverno. Terming the approach as a "humanistic" delivery (p. 83) the faculty emphasized holistic performances that offered few means for quantitative evaluation.

Assessment of outcomes has been achieved through criteria-referenced evaluations. However, applying these measures to the general education curriculum has some technical problems. Warren (1982, p. 282) stated that this method of testing uses "cut-off scores" that are arbitrary and without reference to any norm group. Thus, the techniques lack "the body of statistical theory that assures validity and reliability as norm-referenced measures" (p. 280). Supporting this criticism, Conrad (1978, p. 81) contends that since it is nearly impossible to measure a liberally educated person, the approach may lead to "trivialization" instead of true liberal learning.

More specifically, the following criteria are suggested for the adoption of assessment procedures for the verification of competencies:

- (1) The assessment task should be comprehensive and include both objective and subjective rating criteria.

(2) Assessment procedures should be sensitive to the development of past skills.

(3) Assessment tasks should resemble real life. (Peterson, 1981, p. 172)

Regardless of the lack of normative criteria, a number of institutions have implemented competency-based programs with differing approaches. Grant and his fellow researchers (1973) stated that some of the competency-based programs have been heavily behavioristic. The authors cited the curriculum at Mt. Hood as an example. The college faculty focused on specific behaviors that could be measured and replicated. Other colleges used a more functional method through analyzing "major functions, typical operations, and skills comprising a role" (p. 4).

Evaluating the vocational education curriculum at Pensacola Community College, Walker (1980) stated that employers expected graduates to have a wide range of competencies. The author's research determined that the corporate employer wanted "safety-minded persons . . . someone who understood customer relations . . . and someone who could communicate" (p. 6). The direct job skills (welding, typing, surveying, cooking) equipped the graduate to begin the job. The related skills (safety, human relations, communications) equipped the new worker to keep the job.

In terms of general education, it was assumed that the most important competence is decision-making. Therefore, the focus of general education became deciding scientific issues, deciding political issues, deciding cultural issues, and ultimately, deciding scientific-

political-cultural issues.

Summary: United States Community Colleges' General Education Structure

General education presents several problems to community college academic planners and designers whose responsibility it is to devise effective approaches to the general education component of the curriculum. Problems involving the approaches to general education include general education's traditional tie with the discipline approach, effectiveness of the integrated approach, and the expansion of the competency-based approach.

These problems have become heightened in recent years due to changes in higher education. According to various authors (Beitler & Lieberman, 1980; Cross, 1971), attempts at mass education at higher levels create significant concerns--concerns that directly affect the organization and structure of the general education curriculum. The demands for accountability and observable outcomes, typically a part of the vocational education curriculum, have now been carried over into the general education component. Furthermore, society is now demanding that colleges recognize student priorities and respond to the perceptions they bring, predicated on past educational experiences. Under these new conditions, the traditional learning theories, including discipline and integrated approaches, have limitations. Researchers (Benoist & Gibbons, 1980) suggest that an updated approach based upon a set of competencies expressed in terms of measurable skills, clearly defined assessment tasks, and levels of performance is required. Although the competency-based approach has been supported by many community college

administrators and curricular planners for general education, little is known regarding the acceptance of the approach by students.

Justification for General Education in the Community College Occupational Curriculum

Junior colleges were actually the first collegiate institutions in America to introduce the general education core into a program of study (Harrison, 1973). Such courses as those in the humanities, surveys of science, and surveys of social studies, received popular support by community colleges, which peaked during the 1930s. According to Hillway (1958), at Pine Manor Junior College in Chestnut Hill, Massachusetts, the entire course of study consisted of a two-year program of general education. The belief was that courses "should be developed in occupational programs as integral parts of a body of knowledge essential to personal competence and intelligent community living" (Hillway, 1958, p. 102). This section will include an analysis of the justification for general education in the occupational curriculum.

Occupational Curricula

In 1947 the Truman Commission focused on implementing vocational education programs throughout higher education. The Commission also stressed the importance of meshing semiprofessional learning with general education to provide students with a combination of social understanding and technical expertise. Although vast changes have occurred in both programs, the mesh still remains. It now seems imperative to determine the value of a general education within the vocational education curriculum.

In terms of the occupationally competent student, Perry (1982) offered another perspective on desirable outcomes of the general education curriculum. According to the author, occupational competence must include the objective of marketability: the skill must be of such a nature that an employer is willing to pay for performance. Competencies, therefore, "are the skills and sets of knowledge which an employer looks for in an employee who hopes to obtain and maintain employment" (Perry, 1982, p. 5). Furthermore, these sets of skills may or may not be directly related to the individual's primary job function, suggesting inclusion of the general education curriculum.

Harris (1967) recommended that all occupational students enrolled in an associate degree program take approximately equal proportions of specialized skill training, technical and theory courses, and general education. Weigman (1969) called for the design of special general education courses in economics, social sciences, humanities, science, communication, physical education, and health for occupational students. The author states that courses of this nature were essential to acquaint students with the best in "aesthetic literacy, and intellectual areas of living and should prepare students for use of their leisure time" (p. 4).

Answering the question "Must job conscious college students be forced to choose between the highly touted advantages of a liberal education and the practical appeal of a specialized curriculum?" Stark (cited in Jacobson, 1986) of the University of Michigan suggests no. Stark bases her response on the data drawn from faculty members of professional programs at four-year colleges and universities. She

concludes that courses traditionally within the province of the liberal arts core are being absorbed into the professional or specialized programs to ensure relevance to the changing nature of professional practice (p. 26).

The AACJC (1986) has undertaken a continuing study to make the Associate in Applied Science degree more applicable to students' goals for immediate employment without foregoing the opportunity for further education and advancement. Noted in the recommendations, and relevant to this study, is support for inclusion of the general education curriculum. The Association suggests that this technical specialty component should constitute 50% to 75% of the course credit. However, the general education component of AAS degree programs should constitute a minimum of 25% of the course credits with the combination of general education and related studies constituting up to 50% of the course credits. The justification behind this recommendation is an increased recognition of the importance of general education and related studies as integral components of occupational education. Increasingly, the ability to "think, reason, compute, and communicate and adapt to change" (AACJC, 1986, p. 1) are essential if workers at all levels are to remain employable and cope with the expanding knowledge base.

The AACJC (1986) has stated that learning in the humanities is particularly critical in two-year colleges. This is the case because of the strong interest on the part of students in practical education. However, according to the Association, it is important that students become economically self-supporting. It is equally important for them, however, to "broaden their horizons so they may participate willingly

and wisely in a fuller range of human activity" (p.1).

Associating the worth of a humanities education with technology, the AACJC (1986) states that the development of advanced technologies requires not only higher order processes of intelligence, but also a keen appreciation of the impact of technology on the human environment. The humanities concentrate in direct ways on skills of the mind and skills of language, while the abilities to reason clearly and communicate well should be a goal of all branches (p. 1). Furthermore, the study of the humanities nurtures the imagination and offers individual and private pleasure. It encourages the best habits of mind; fosters disciplined approaches to questions that do not have necessarily correct answers; enhances ability to make value judgments; and inculcates a sense of common culture, encouraging civic purpose and citizenship practices (p. 2).

Morgan (1978) examined the administration of general education programs in two-year vocational institutes. Noting that conflict between general education instructors and vocational teachers places the general education staff on the defensive, Morgan argues that (a) general education should be considered in the curriculum planning process, (b) general education instructors should work together with vocational staff in developing instructional materials so as to increase communications, (c) general education instructors should find additional ways of making these courses relevant to students, and (d) employers should be reminded that general education produces well-rounded workers.

Still a concern is the role and delivery of general education in community college vocational programs. Bartkovitch (1981) argues both

for and against the inclusion of general education in vocational curricula. Arguing for general education, he noted the importance of providing humanistic, pragmatic, and theoretical concepts in a holistic sense to the student, who would otherwise be exposed to only specific technical skills. Bartkovitch's basis for exclusion of general education focused on the students' desires for additional technical courses, the students' lack of desire for and interest in general education courses, the lengthening of vocational education programs due to general education requirements, and the belief that students' personal and social skills can be improved without general education.

Summary: Justification for General Education in the Community College Occupation Curriculum

There is widespread belief that community college programs of general education are in need of review. Boyer and Levine (1981) maintained that many colleges have never reached agreement regarding the substance of general education within curricular programs.

In determining the value of a general education within the vocational education curriculum, numerous opinions can be cited supporting or refuting the joining of the two. Of those arguments against the inclusion of general education in vocational programs points have been made describing conflict between curricula instruction. Similarly, many students are not in favor of required general education courses due to personal goals or abilities. The arguments cited in favor of a general education inclusion include: (a) occupational competence must include general education skills; (b) occupational advancement is contingent upon general education proficiencies; and (c)

less specific technical skills are needed in non-occupational settings. Since it can be assumed that general education will remain a part of the vocational education curricula, justification of the inclusion should be delivered from the community college clientele, including graduates and leavers.

Amount and Importance of General Education in the Community College Occupational Programs

The Virginia Department of Community Colleges authorizes the award of three types of degrees: associate in arts, associate in science, and associate in applied science. Each of these degrees requires a minimum of 97 credit hours, of which a certain proportion must be devoted to general education. The associate in arts and the associate in science degree recipients are required to spend approximately 75% of the 97 or more course credits in specific components of general education. The associate in applied science degree recipients must devote at least 25% of their program to general education courses (Beeken, 1982).

The specific courses that may serve the general education function for all three degree programs are not identified in the college catalogs (Beeken, 1982). To determine which courses are appropriate to fulfill the general education requirements, students consult the departments offering their majors, counseling services, or the universities to which they will transfer. The required and desired amounts of general education in vocational programs differ.

Amount of General Education in the Vocational Education Curriculum

Faculty in occupational education as well as employers and

consultants have expressed a need for general education as it inculcates students with competencies essential for career satisfaction. Perkins (1985) determined that community college personnel and corporate employers agreed that approximately one-third of the students' programs should consist of general knowledge, skills, and attitude competencies. More specifically, communication skills and critical thinking were the most highly favored. Furthermore, "capability for vocational adjustment, mathematics skills, knowledge of science, and knowledge of economics" (p. 120) comprised a second set of competencies believed to be important (p. 120).

Despite the recommendations, most community colleges continue to offer traditional general education courses to the occupational students. For instance, according to Mapp (1980) slightly over one-third of the colleges investigated included a wide range of general education requirements of occupational students. However, the institutions did not always support the goals. Competencies such as citizenship, communication skills, and use of leisure time and social science courses with little fluctuation for the vocational students. As a result, students have been "conditioned to dislike or disregard the importance" of the general education curriculum. Furthermore, the idea of being forced to take the general education requirements tended to keep potential occupational students out of community colleges (Crandall, 1975, p. 62). Unfortunately, a tight relationship between general education and vocational education has not occurred. "Some students enter community college programs of vocational education for the sole purpose of preparing for a job and they elect only courses that

are related directly to such preparation" (Barlow, 1982, p. 24). Kroeger and Brace (1971) also argued that occupational students do not want to take general education courses. As a result many of the most skilled occupational students often flunk out of their programs for failing general education programs. Also, many students ignore the potential for developing competencies in other areas.

Kroeger and Brace (1971) found that occupational students were required to take too many general education courses. Their study indicated that writing courses were required more often than any other. Occupational students are in need of courses that improve their reading, speaking, and listening skills more than their writing skills. They recommend that general education courses be optional for all students.

Importance of the General Education Curriculum

A 1973 study reported by Rudolph (1977) determined that many colleges and universities had a difficult time maintaining the general education core. Analyzing a national study, Blackburn et al. (1976) revealed a gradual decline in the proportion of general education in the undergraduate course of study during the 1960s. They observed that in 1967, 43% of the curriculum constituted general education.

However, by 1974, this figure was reduced to 33%. Furthermore, the "character" of general education programs also changes. Four-fifths of the four-year institutions decreased their proportion of "prescribed" general education courses.

Other program personnel, particularly those in the mechanical/engineering technologies, desire a greater amount of technical education and less general education than do liberal arts/general education

personnel (p. 131). Similarly, with regard to general education competencies, mechanical/engineering faculty value critical thinking and mathematics very highly, while liberal arts/general education faculty emphasize much more than technical faculty a knowledge of art and literature.

Perkins' study (1985) revealed other disparities with administrative views of general education. He determined that certain groups of competencies were regarded as more important than others. Two competencies were valued more highly than any others: communication skills and critical thinking. Judged least important among the competencies were three that appeared to be linked by "humanistic or cultural context" (p. 13): (a) employment of fine arts and literature; (b) perspective of economic, political, and cultural issues; and (c) appreciation of cultural heritage.

Corporate Employers' Views of the Importance of General Education

Perkins (1985) determined that there is consensus among employers and academic personnel with regard to the amount of general education. The corporate employers agreed that about one-third of a total program should be devoted to general education. Further, they agreed that the greatest amount of emphasis within the general education component should be on insuring that graduates demonstrate competence in communication and critical thinking. When the responses of employers were examined on the basis of affiliation with manufacturing, merchandising, or nonprofit enterprises, no differences were found in the amount of general education.

Consistent with Perkins, Meyer (1983) analyzed the views of 28

corporate managers regarding essential and desired general education competencies. Her study found that employers believe that general education competencies are critically important in getting a job and being successful on that job. More specifically, the respondents agreed that the essential competencies include factual communication skills, cognitive skills, inquiry skills, arithmetic skills, communication skills, critical reading skills, technical writing skills, and self-directed skills. Consistent with Perkins' study, Meyer determined that historic awareness, cultural background awareness, and literature skill were less important in associate degree programs. Generally the following conclusions were drawn from Meyer's data.

(1) General education competencies must be identified and incorporated in every occupational program.

(2) General education should be a prescribed program of study for all students from a corporate point of view.

(3) Technical graduates should recognize that employers are looking for the adaptive skills of general education, and these skills are necessary for success (p. 96).

Students' Views of the Importance of General Education

Most of the debate on general education is from the perspectives of administrators, faculty, and employers concerning curricular philosophy, structures, and subject matter. The revision of general education is often conducted by faculty members and administrators without the meaningful involvement of students (Gaff, 1980). Therefore, few efforts have delved into students' views of general education.

Cross (1971) stated that students are positively attracted to

careers and prefer to learn things that are tangible and useful. They tend not to value the academic model of higher education that is "prized by faculty but prefer instead a vocational model that will teach them what they need to know to make a good living" (p. 159). Thus, they select the nonacademic activities and competencies from among the lists that are presented to them.

Using transcript analysis as a research methodology, Beeken (1982) investigated student course-taking patterns in general education at three community colleges in Virginia. The purpose was to discover the number and kinds of general education courses actually taken by community college students. The data indicated that the programs of many students were out of balance, specifically lacking in mathematics and science. Two types of general education were evident in student transcripts: one kind of general education was taken by the occupational-technical student; another, by the transfer student. The number of courses taken in different curricular areas of general education was generally related to enrollment status, age, and gender.

Beeken (1982) observed that about three-fourths or more of the credit hours taken by transfer students were in general education. Nontransfer students also either met or exceeded the minimum general education course requirements. Both completers and noncompleters of programs took an average of 13 or 14 courses in general education even though the minimum requirement was about eight for associate degrees. Beeken noted that the majority of the extra courses above those required in general education were most likely taken to fulfill specialized course requirements in nontransfer programs.

Of the five groups in Beeken's study (transfer completers, transfer noncompleters, nontransfer completers, nontransfer noncompleters, and noncurricular), noncurricular students took the smallest proportion of general education (37.8%) while transfer completers took the most (85.5%).

London (1978) devoted a great deal of attention to this issue. The author's analysis of male, female, and older students offers a different view of students' perceptions of general education competencies. Generally, all three groups made reference to the need for a "good education," including a strengthening of general education skills. Recognizing the value of general education, the students were primarily concerned with other issues connected to the curriculum: peer pressure, failure to succeed, and financing. Further discrepancy of the students' perceptions of general education competencies is revealed by Seymour (1974). The author, after requesting students to rank order a list of competencies, determined that students favored "the broadening of outlook, encouragement of critical thinking and increasing general knowledge, over the advancement of technical and specialist skills" (p. 9).

Gaff and Davis' (1981) study revealed similar findings. The researchers determined that a vast majority of students subscribe to the goals of general education. That is, a broad general education was viewed as very important. Furthermore, four clusters of competencies were ranked by students based upon importance. The rankings determined that the following were considered "most important" competencies to obtain while attending college:

- (1) to understand one's self concept, motivation, and personality;
- (2) to get along with people;
- (3) to obtain a variety of communication skills; and
- (4) to identify and solve problems. (pp. 114-115)

Summary: Amount and Importance of General Education in Community College Vocational Education Programs

Shifts in enrollments have resulted in expansion of the vocational education curriculum. Today as much as 70% of the total student body is enrolled in occupational programs. Thus, the traditional purposes of general education are being challenged and the issue of what type of general education can best serve the occupational student is being debated.

O'Banion and Shaw (1982) stated that "students' attitudes, including resistance to curriculum prescriptions and an overweening vocationalism" (p. 66) are not supportive of general education. Students tend not to view general education as a means of providing the needed skills necessary for employment upon graduation. Focusing on vocational education students, only a small percentage of those enrolled in a liberal arts course did so to acquire or improve occupational skills. Similarly, very few students were participating in a general education course to develop basic learning skills, such as English or math. In fact, students who were academically underprepared were less likely to enroll, and placed little importance on a general education.

It is accepted that the amount and importance of general education varies. Presently, community college associations and governing boards recommend that one-third of the students' education should consist of

general education. To comply with this recommendation, administrators and faculties require a minimum number of general education courses. However, not concerned with numbers of courses, corporate employers look for desirable general education competencies. Little is understood how the graduates and leavers' views compare to the accreditation requirements of the state, the goals of community college personnel, and the needs of business and industry.

CHAPTER 3
METHODOLOGY

Introduction

This study was designed to survey the views of graduates and leavers of community college vocational programs as to the importance and amount of selected general education competencies. The methodological procedures for the study were an extension of Perkins' (1985) investigation of the views of academic personnel and corporate employers regarding the desired amount and character of general education in two-year occupational programs.

Perkins' study expressed the desired amount of general education as a proportion of the total number of student's credit hours required for the associate degree. The desired character of general education was determined by academicians and employers' ranking of selected general education competencies. In this study, importance of selected general education competencies and the optimal amount of general education were explored using an adapted Perkins' instrument.

This chapter describes the methodological procedures for the study and includes the research questions, the subjects, the data gathering instrument, the data gathering procedures, and analytic treatment of data.

Subjects

The investigation focused on the views of occupational-technical

graduates and leavers of New River Community College. Information on the following data elements was obtained from New River Community College: name, address, sex, age, race, last quarter status (full-time/part-time), total number of hours completed at New River Community College, and student's curriculum in last quarter enrolled (see Appendix C). As a means of controlling threats to internal and external validities and reliability factors, a randomization process was used.

A minimum of 100 subjects were randomly selected for each of the following four cells: (a) AAS graduate, (b) AAS leaver, (c) certificate graduate, and (d) certificate leaver. The sampling was restricted to New River Community College graduates and leavers, as limited by the definitions. This sample size appeared possible considering there were 162 AAS graduates and 102 certificate graduates from New River Community College in June, 1986.

Data Gathering Instrument

Permission was obtained to modify and implement the Perkins' instrument. The instrument was modified to negate information pertaining to the demography of community college personnel and corporate employers. The modified instrument provided instructions concerning objectives and intention of the study and instructions for completion of the instrument. The survey instrument requested subjects to respond to five areas of information: (a) nature of the general education background, (b) amount of general education, (c) importance of general education competencies, (d) importance and amount of specific

general education courses, and (e) demographic information (see Appendix A).

Information was collected regarding the nature of the subjects' general education background. Areas of investigation included general education credits received, class size, and instructional techniques employed in the general education courses. In addition, the subjects were asked to judge the quality of instruction for general education courses completed. This information was obtained through use of a Likert-type scale. It was not intended that this study include quality of instruction as a primary target.

The subjects were asked to determine the optimal amount of general education in occupational programs. The New River Community College graduates and leavers rated the following three curriculum components on a percentage scale: specialty courses, general education courses, and related courses. The three curricular components and the brief descriptions of each were consistent with those outlined by the Carnegie Foundation (1984) and published in the 1984-85 New River Community College student catalog. Subjects were also reminded to check the accuracy of the sum on the ratings of the components to yield a total of 100%.

A Likert-type scale was employed to determine the importance of general education in occupational programs. According to Isaac and Michael (1983) the Likert-type or "summated rating scale" seems to be the most useful in behavioral research. The respondent is presented with a statement in the questionnaire and is asked to indicate whether he or she "strongly agrees," "agrees," "disagrees," or "strongly

disagrees." The literature (e.g., Babbie, 1979) indicates that the above Likert-item response categories have about the same degree of intensity as the rest. The varying degrees of intensity for each of the separate competencies were summed and averaged to yield an overall score.

The overall scores were not the final product; rather, they were used for purposes of an item analysis resulting in selection of the best items. Caution was observed in that while a greater variance is obtained, there "is a vulnerability of the variance to biasing response sets" (Isaac & Michael, 1983, p. 142). Through this procedure, subjects ranked the competencies on a numerical scale that was given a "strongly agreed" response.

The Perkins study offered 13 competencies which employers and academicians viewed as essential student outcomes for graduation. Verification of these competencies was met through review of the extant literature, critical analysis by experts in the field, and by satisfying four subjective criteria: (a) discreteness; (b) similar meanings in the minds of readers; (c) the aspect of comprehensiveness; and (d) observable outcomes (Perkins, 1985, p. 56). The 13 competencies cited in the Perkins study and modified in the proposed study are listed below.

1. Explain basic scientific principles as one foundation for civic life.
2. Explain the personal skills and behaviors which are identified with successful vocational employability.
3. Explain the cultural heritage and history of the United

States.

4. Explain practices which are thought to promote the maintenance of personal health and fitness.

5. Explain the economic principles which affect the roles of producer and consumer goods.

6. Explain economic, political, and cultural issues from a world perspective.

7. Explain the ethical or value dimensions of public policy issues and questions.

8. Explain the primary tenets of American government.

9. Demonstrate the skills which provide a foundation for enjoyment of the fine arts and literature.

10. Use interpersonal skills which promote the achievement of personal and group goals.

11. Use skills of critical and constructive thinking in the identification and solution of problems.

12. Use quantitative skills including the performance of simple algebraic operations in common setting.

13. Communicate purposefully: listen and read with understanding; speak and write with organization.

In the instrument was a list of general education courses offered at New River Community College. Subjects were allowed to complete a Likert-type scale indicating the importance placed on an occupational program student taking each of the selected courses. The set of courses was determined by AAS and certificate program requirements as outlined in the 1984-85 New River Community College student catalog.

Also incorporated was a section to determine the specific amount and kinds of general education courses. The subject was asked to state the number of courses taken in each of the given areas. It was intended that the responses in this section be correlated with the previous two regarding numbers of general education courses taken and importance of selected general education courses. Also, authenticity and insight to course taking patterns was determined.

Specific information referring to the graduates' and leavers' background characteristics was requested, including purpose upon entry to the community college, reasons for taking general education courses, employment status, enrollment status, and socioeconomic status. Measures were taken to ensure proper coding of specific demographic characteristics obtained from New River Community College (see Appendix D).

Pilot Test

A pilot test was conducted to detect weaknesses in the instrument. The instrument was mailed to selected students and graduates of New River Community College. The students and graduates were asked to complete the survey instrument and provide reactions and suggestions for revision. All subjects involved in the pilot test were interviewed. In addition, input from the researcher's committee was obtained.

Data Gathering Procedures

The survey instrument was mailed directly to the randomized sample

of New River Community College's graduates and leavers of occupational programs. The researcher established and used a mailing sequence in accordance with Dillman's (1978) general recommendations. Participants were advised in a cover letter that the survey instrument was coded so that the investigator could undertake a second mailing to initial nonrespondents (see Appendix E).

One month after the initial mailing, a post card was sent to each of the subjects of the study to serve as a reminder for nonrespondents and a thank you note for respondents. At the end of the second week 92 questionnaires had been returned.

A second mailing of 308 questionnaires accompanied by a reminder of the nature of the investigation was conducted seven days later. Seventy-two additional completed questionnaires were returned by the end of the initial six-week period.

At the end of the seventh week, telephone calls were made to the 236 nonrespondents. Thirty-four percent of the nonrespondents were contacted and asked to participate in the study. The 34% were mailed additional surveys which also included a letter stating the purpose of the study (see Appendix E). At the end of the eighth week 28 additional usable surveys had been obtained, for a combined usable total of 192.

A series of telephone calls were once again placed to the remainder of the nonrespondents. For convenience, the subjects were asked to either participate in the study by the original mailing process or via telephone. Using Dillman's (1978) guidelines for telephone surveys, 2% of the sample provided the information via telephone. An additional 1.25% of the sample provided the information using the mail survey. By

then, 219 (54.75%) surveys had been obtained; 205 (51.25%) proved to be usable.

Analytic Treatment

A series of descriptive measures were used for computation and analysis of the constructs. Means and standard deviations were computed for the "amount" and "importance" variables. Further analysis of the optimal amount component involved computation of group means and standard deviations of the independent variables. Mean values representing the views of the groups of participants were then used to rank the competencies. Differences were tested using the mean values assigned by the three curricular components and general education competencies.

Means and standard deviations were also calculated on the general education course-taking patterns and the importance of specific general education disciplines. Spearman Rho correlations were calculated on the importance of each specific discipline to the number of courses taken within that discipline.

Factorial analyses of variances (ANOVAs) were used to test for interactions of selected independent variables as they related to dependent measures in the investigation. Scheffe multiple group comparative tests were conducted to determine where differences existed.

Summary

In this study, the investigator prepared and distributed a five-

page survey instrument to 400 possible participants. The purpose of the survey was to determine and compare the views of New River Community College graduates and leavers about the importance and optimal amount of the general education curriculum. The survey employed was an extension of Perkins' (1985) investigation of the views of academic and corporate personnel regarding the desired amount and character of general education in two-year occupational programs.

Dillman's (1978) mail and telephone survey guidelines were used during the nine week data collecting process. A total of 205 (51.25%) usable surveys were obtained from the four combined cells: AAS graduates, certificate graduates, AAS leavers and certificate leavers.

Mean percentages were calculated to reflect the amount of general education desired by the identified groups of respondents. Means were also calculated to reflect the desired emphasis on the stated 13 general education competencies. Additional means were determined on the numbers of general education courses taken and importance of specific general education disciplines. Spearman Rho correlations were determined between importance of specific general education disciplines and the number of general education courses. Factorial analyses of variance (ANOVAs) were used to test for interactions of selected independent variables as they related to dependent measures in the investigation.

CHAPTER 4

RESULTS

Introduction

The underlying purpose of this study was to help improve the general education component of the community college curriculum for occupational students through the identification of the optimal amount of general education and emphasis placed upon general education competencies. The following definitions were employed in the study to maintain consistency of terms and set desired parameters. Community college graduate refers to the student who received either an associate in applied science degree or an occupational certificate degree from New River Community College (NRCC) in June, 1985. Community college leaver refers to the student enrolled in either an associate in applied science or occupational certificate degree curriculum starting the Fall Quarter, 1983 and who did not graduate from New River Community College and was not enrolled at New River Community College during the 1986 academic year. General education is what all individuals granted an associate or certificate degree have in common in terms of the development of knowledge, attitudes, values, and skills to enhance their participation in social, technological and cultural environments. These courses carry a nonoccupational course prefix.

The population consisted of 262 graduates and 677 leavers of associate in applied science or vocational certificate programs at New River Community College. Selected demographic information was provided

on all of the graduates and leavers by New River Community College (see Appendix D). These data were coupled with data collected using a survey instrument (see Appendix A). One hundred subjects were randomly selected for each of the following cells: (a) AAS graduates; (b) AAS leavers; (c) certificate graduates; and (d) certificate leavers.

Using Dillman's (1978) mail survey technique, a 54% return rate was obtained during the nine-week data gathering period. It was determined that 3.75% of the returns were not usable, thus resulting in a 51.25% usable rate. The respondents included 55 (26.6%) AAS graduates, 49 (23.9%) AAS leavers, 54 (26.3%) certificate graduates, and 47 (22.9%) certificate leavers. Goodness of fit tests were employed using Chi-square and One-way ANOVAs to compare the population and the respondents, and between the nonrespondents and respondents. No significant differences were found at the .05 level for the following demographic variables: age, gender, race, grade point average, and enrolled curriculum. Therefore, it was concluded that a representative sample of respondents was obtained.

This chapter reports data related to the following concepts: (a) a profile of subjects, (b) proportions of curriculum devoted to general education, (c) differences between optimal levels of general education, (d) importance of selected general education courses, (e) differences in importance of selected general education competencies, and (f) influence the general education component has on program completion. These sections align with the study's research questions instrumentation. Each of the selections includes a narrative description of findings, a tabulation display of data, and a report of statistical tests employed.

Summary, conclusions, and recommendations follow in Chapter 5.

Profile of Subjects

Demographic information was collected on the graduates and leavers of occupational programs. These demographic variables included age, race, gender, and GPA. The purpose upon entry to the community college, reason for taking general education courses, enrollment status, and program enrollments were also collected.

Data pertaining to age, race, gender, and GPA are reported in Table 1. The sample group of AAS graduates was comprised of 58.2% male and 41.9% female. In contrast, certificate graduates were 31.4% males and 68.6% female. Likewise, graduate groups had a higher mean value for GPA than did the two leaver groups.

Table 2 displays data related to purpose of enrollment, reason for taking general education courses, and enrollment status. Percentages were computed on the purpose of enrollment upon entry to the community college. Approximately 94% of the AAS graduates entered the community college intending to complete the AAS degree. The AAS leavers group reported 10.2% dropping from one-year certificate programs to the two-year. Certificate degree students had the highest amount of transfer from two-year AAS degrees to the one-year certificate degrees. 62.7% of certificate graduates stated that their original intention was to graduate with an AAS degree; 34.1% of the certificate leavers had reported the same. Approximately one-third of certificate leavers dropped from the two-year occupational degree program to the one-year.

Table 1

Comparison of Selected Profile Characteristics by Occupational Students

Profile Characteristics	AAS Graduates ($N = 55$)		AAS Leavers ($N = 49$)		Certificate Graduates ($N = 54$)		Certificate Leavers ($N = 47$)	
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
Age	22.98	7.38	28.0	7.29	30.96	8.27	27.92	7.16
Race	1.00	.000	1.04	.204	1.03	.169	1.07	.264
Gender	1.58	.498	1.48	.505	1.31	.469	1.41	.499
GPA	3.26	.505	2.83	.812	3.09	.607	2.66	.767

Table 2

Comparison of Program Enrollments, General Education Courses Taken,
and Enrollment Status by Occupational Students

Occupational Students	Purpose of enrollment		Reason for taking general education courses			Enrollment status		P-value
	<u>AAS</u>	<u>Cert.</u>	<u>Required</u>	<u>Personal interest</u>	<u>None taken</u>	<u>Full time</u>	<u>Part time</u>	
AAS Graduate (<u>N</u> = 55)	94.5	5.5	87.3	7.3	3.6	80.0	20.0	.001*
AAS Leaver (<u>N</u> = 49)	79.6	10.2	75.5	10.2	8.2	46.9	53.1	
Certificate Graduate (<u>N</u> = 54)	62.7	29.4	74.5	11.8	7.8	47.1	52.9	
Certificate Leaver (<u>N</u> = 47)	34.1	51.2	68.3	17.1	9.8	43.9	56.1	

*Significant at .05

The majority of respondents stated that the reason for taking general education courses was due to program requirements; 87.3% of AAS graduates took general education courses to fulfill requirements. In contrast, 68.3% of certificate leavers stated that general education courses were taken due to program requirements. Certificate graduates and AAS leavers took general education courses because of personal interest, 11.8% and 10.2% respectively. However, 17% of the certificate leavers responded that enrollment in the general education courses was because of personal interest.

The data support that AAS and certificate leavers reported the highest percentage of no general education courses taken, 8.2% and 9.8%. Only 3.6% of AAS graduates stated that none of the courses were completed.

Information on enrollment status was collected. Percentages were computed on enrollment status in terms of full-time and part-time attendance. Three of the four groups, consisting of AAS leavers, certificate graduates and certificate leavers were enrolled part-time. In contrast, only 20% of the AAS graduates were enrolled mainly part-time.

Data were collected on program enrollments of occupational graduates and leavers (see Table 3). The largest percentages of AAS graduate enrollments were in electronics and instrumentation, respectively. The second largest group of AAS graduates was in secretarial science and business. The largest AAS leaver enrollments were in business programs. Accounting, drafting, and machine technology constituted the second largest group for AAS leavers.

Table 3

Percentage of Program Enrollment by Occupational Students

	AAS Graduates (<u>N</u> = 55)	AAS Leavers (<u>N</u> = 49)	Certificate Graduates (<u>N</u> = 54)	Certificate Leavers (<u>N</u> = 47)
	%	%	%	%
Business	10.9	32.7	5.9	2.4
Secretarial	10.9	4.1	11.7	9.7
Instrumentation	18.2	4.1	8.0	0.0
Electronics	27.3	4.1	2.0	2.4
Accounting	3.6	10.2	4.0	2.4
Drafting	3.6	8.2	3.9	0.0
Machine Technology	3.6	8.2	0.0	0.0
Computer Machine	1.8	0.0	7.8	53.7
Career Studies	0.0	0.0	35.3	0.0
Child Care	3.6	6.1	2.0	2.4
Welding	0.0	0.0	3.9	4.9
Other	16.5	22.3	23.5	22.1

Programs of enrollment for certificate graduates and leavers also varied. Certificate graduates were primarily enrolled in career studies, secretarial science, computer machines, and business, respectively. In contrast, the largest group of certificate leavers was in computer machines. Enrollments in secretarial science, welding, child care, business, electronics and accounting, constituted the next largest group of program enrollments.

Proportion of Curriculum Devoted to General Education

Actual amounts of general education completed were examined to determine if any differences existed within the AAS and certificate degrees. Respondents were asked to provide the number of total hours completed and the number of general education hours completed. Proportions of the curriculum in general education were subsequently calculated.

Means and standard deviations of subjects' total credits and general education credits were compiled and are illustrated in Table 4. A breakdown of the four groups indicates that high proportions, ranging from 31.6% to 40.6%, of general education were taken by each of the occupational groups. The two AAS groups of students completed approximately one-third (32%) of their course work in general education. In comparison, the certificate graduates and leavers reported completing a higher percentage of general education credits with respect to total credits. Certificate graduates indicated that 34.4% of the credits taken were classified as general education credits. Certificate leavers

Table 4

Comparison of Total Credits and General Education Credits
Completed by Occupational Students

Credits Completed	AAS Graduates (<u>N</u> = 55)			AAS Leavers (<u>N</u> = 49)			Certificate Graduates (<u>N</u> = 54)			Certificate Leavers (<u>N</u> = 47)		
	\bar{X}	(%)	SD	\bar{X}	(%)	SD	\bar{X}	(%)	SD	\bar{X}	(%)	SD
Total credits completed	109.2		40.4	80.2		56.9	68.0		39.9	41.8		34.5
General education credits completed	34.8	(31.6)	24.9	25.4	(32.1)	18.0	23.4	(34.4)	21.4	17.0	(40.6)	22.3

reported completing an even higher percentage (40.6%).

Differences Between Optimal Levels of General Education

Subjects were asked to indicate the optimal amounts of the associate and certificate program requirements by three curricular components including specialty courses, general education courses, and related courses. As a means of distinguishing the optimal amounts, all respondents assigned a percentage value to the three areas. Means and standard deviations were computed (see Table 5).

The percentages for specialty requirements ranged from 50.6% for certificate graduates to 59.9% for AAS graduates. In contrast, certificate graduates placed more emphasis (29.4%) on the amount of general education than the other three groups. AAS graduates indicated that approximately one-fourth of their program requirements should be in the general education component. Percentages of related courses ranged from 20% for certificate graduates to 15.6% for AAS graduates. Using an ANOVA, no significant differences were determined between the four groups on the amount of specialty, general education, and related course requirements for occupational programs.

Importance of General Education Courses

Participants in the study were asked to rate the importance of selected general education courses in occupational programs. A three-point Likert-type scale was used as a means of determining the degree of intensity (see Table 6). To illustrate differences and consistencies in

Table 5

Comparison of Desired Curriculum Percentages Assigned by Occupational Students

Curriculum Components	AAS Graduates (<u>N</u> = 55)		AAS Leavers (<u>N</u> = 49)		Certificate Graduates (<u>N</u> = 54)		Certificate Leavers (<u>N</u> = 47)		P-value
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	
Specialty courses	59.9	16.9	54.7	18.8	50.6	17.5	54.5	18.3	.063
General education courses	24.6	14.0	28.5	14.9	29.4	15.6	26.4	14.5	.344
Related courses	15.6	10.2	17.6	8.6	20.0	12.1	19.2	9.4	.147

Table 6

Comparison of Importance of General Education Courses by Occupational Students

	AAS Graduates (<u>N</u> = 55)		AAS Leavers (<u>N</u> = 49)		Certificate Graduates (<u>N</u> = 54)		Certificate Leavers (<u>N</u> = 47)		P-value
	Importance \bar{X}	SD	Importance \bar{X}	SD	Importance \bar{X}	SD	Importance \bar{X}	SD	
Art	1.74	.479	1.33	.477	1.32	.474	1.54	.558	.184
Biology	1.60	.603	1.65	.482	1.82	.608	1.86	.585	.122
Chemistry	1.88	.627	1.58	.498	1.71	.502	1.81	.569	.052
Drama	1.78	.764	1.82	.806	1.83	.696	1.75	.683	.970
Economics	2.05	.772	2.19	.619	2.39	.562	2.46	.555	.018*
English	2.56	.608	2.66	.562	2.57	.617	2.63	.633	.837
General Studies	1.51	.644	1.58	.748	1.76	.786	1.76	.675	.241
Geology	1.72	.701	1.84	.631	1.84	.666	1.86	.578	.646
Government	2.17	.767	2.30	.591	2.12	.640	2.33	.621	.262
Health	1.84	.607	1.97	.614	2.10	.729	2.18	.563	.148
History	1.90	.806	1.97	.657	2.08	.725	2.18	.563	.248
Mathematics	2.78	.507	2.65	.677	2.63	.698	2.43	.718	.152
Music	1.32	.550	1.32	.560	1.29	.504	1.56	.728	.176
Religion	1.41	.606	1.56	.583	1.39	.536	1.50	.604	.495
Physical Education	1.65	.653	1.91	.812	1.76	.598	1.73	.652	.335
Physics	2.26	.751	1.76	.673	1.85	.684	1.73	.644	.003*
Psychology	1.86	.687	2.15	.666	2.06	.626	2.07	.587	.094
Sociology	1.72	.666	2.04	.665	1.91	.613	2.05	.655	.050

*Significant at .05

in the ratings of general education courses, the courses were grouped on the basis of their mean scores. A scale was arbitrarily devised which distinguished levels of intensity by a .50 margin and are as follows: 2.5 - 3.0, highest level of intensity; 2.0 - 2.49, upper middle; 1.50-1.99, lower middle; and 1.00 - 1.49, lowest level of intensity. The occupational students' ratings of general education courses by the levels of intensity are displayed in Table 7.

The four groups were consistent in rating English as the most important course. Mathematics was grouped with the highest third of important courses by all respondents, except certificate leavers. Government and economics were rated by all subjects within the upper middle group. Although all respondents rated economics within the upper middle group, AAS graduates rated the course significantly lower (2.05) than the other three groups. The majority of the courses were categorized within the lower middle group. Certificate graduates rated eight courses within the same scale. Art and music were consistently within the lowest division for all respondents except certificate leavers who had no ratings in the 1.00 - 1.49 scale.

Importance of Selected General Education Competencies

Participants in the study were asked to indicate the emphasis that should be placed on each of thirteen general education competencies. The competencies are student learning outcomes of a two-year occupational curriculum. Respondents rated the competencies via a four-point Likert-type scale to indicate the degrees of intensity. In this context, the data in Table 8 illustrate the emphasis given to each of

Table 7

Comparison of Ratings on Importance of General Education Courses by Occupational Students

Scale	AAS Graduates (<u>N</u> = 55)	AAS Leavers (<u>N</u> = 49)	Certificate Graduates (<u>N</u> = 54)	Certificate Leavers (<u>N</u> = 47)
2.5 - 3.0 highest importance	Mathematics English	English Mathematics	Mathematics English	English
2.0 - 2.49 upper-middle importance	Physics Government Economics	Government Economics Psychology Sociology	Economics Government Health History Psychology	Economics Mathematics Government Health History Sociology Psychology
1.50 - 1.99 lower-middle importance	History Chemistry Psychology Health Drama Sociology Physical Ed. Geology Biology General Studies	Physical Ed. Health History Geology Drama Physics Biology Chemistry General Studies Religion	Sociology Physics Geology Drama Biology Physical Education General Studies Chemistry	Geology Biology Chemistry General Studies Drama Physics Physical Education Music Art Religion
1.00 - 1.49 lowest importance	Religion Art Music	Art Music	Religion Art Music	

Table 8

Comparison of Importance of General Education Described by Competencies by Occupational Students

Competencies	AAS Graduates (N = 55)		AAS Leavers (N = 49)		Certificate Graduates (N = 54)		Certificate Leavers (N = 47)		P-ratio
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	
Knowledge of Science	2.72	.732	2.56	.655	2.78	.737	2.73	.693	.442
Vocational Adjustment	3.31	.609	3.41	.498	3.50	.647	3.40	.545	.451
Knowledge of History	2.63	.778	2.62	.789	2.66	.798	2.77	.698	.744
Knowledge of Health & Fitness	2.90	.646	2.83	.724	2.80	.857	2.64	.778	.886
Knowledge of Economics	3.05	.750	3.06	.697	2.93	.747	3.26	.742	.184
Global Perspective	2.81	.722	2.89	.729	2.80	.808	2.89	.882	.690
Ethical Perspective	2.65	.775	2.67	.701	2.62	.780	2.80	.758	.716
Political Awareness	2.90	.727	2.93	.633	2.67	.774	2.92	.755	.182
Knowledge of Art & Literature	2.30	.836	2.51	.718	2.60	.782	2.64	.778	.217
Human Relation Skills	3.20	.650	3.35	.729	3.20	.535	3.27	.452	.273
Critical Thinking Skills	3.37	.623	3.58	.498	3.44	.577	3.58	.499	.131
Mathematical Skills	3.32	.640	2.91	.710	3.08	.752	3.22	.759	.027*
Communication Skills	3.61	.623	3.64	.483	3.64	.598	3.68	.610	.982

*Significant at .05

the competencies.

Analyses of means and standard deviations revealed that all respondents rated communications skills and critical thinking skills within the most important group of competencies. AAS graduates also placed high importance on mathematics skills, vocational adjustment, and human relation skills, ranging from 3.20 to 3.32. A second group of less important competencies (2.81 - 3.05) included knowledge of economics, political awareness, knowledge of health and fitness and global perspectives. A third group of competencies including knowledge of science, ethical sensitivity, knowledge of history, and knowledge of art and literature were rated as lowest (2.30 - 2.72).

AAS leavers rated human relation skills within the group of the most important competencies. Likewise, in only two ratings did the level of importance vary among the four groups. Mathematics skills were viewed as less important to AAS leavers than to AAS graduates. Similarly, knowledge of science was rated as a less important competence in contrast to the ratings of AAS graduates.

Computation of means and standard deviations of responses from certificate graduates revealed similar results. Also within the group of highest rated competencies was vocational adjustment (3.50). Although mathematics was rated as important (3.08), the mean score was more consistent with AAS leavers than with AAS graduates. The three competencies rated the lowest by certificate graduates were knowledge of art and literature, ethical perspective, and knowledge of history (2.60 - 2.66). Political awareness was viewed as a less important competence to certificate graduates than to AAS graduates and leavers.

The rankings of certificate leavers were similar to those of AAS leavers. The group ranked as most important the same four competencies as the AAS leavers with communication skills and critical thinking ranked one and two, respectively. The ranking of mathematics skills was given higher importance, consistent with AAS and certificate graduates, as opposed to AAS leavers. The three competencies ranked lowest by certificate leavers and consistent with the other three groups of students were knowledge of history, ethical sensitivity and knowledge of art and literature.

Results of ANOVAs revealed a significant difference for only one competence. Importance placed on mathematics skills was significant at .05. A Scheffe multiple comparative groups test was used to determine differences between the four cells. Difference in the importance of mathematics skills exists between AAS graduates and AAS leavers.

Influence of General Education on Program Completion

This study sought to determine whether the general education component in occupational programs had an influence on program completion. The respondents' views on additional variables that could affect program completion were examined including: (a) class size, (b) instructional activities, and (c) instructional quality. Additional analysis focused on (d) a comparison of elective and required general education credits completed, (e) a comparison of actual amounts taken and desired amounts of general education credits, and (f) relationships between importance and number of general education courses taken.

Class Size

Respondents were asked to estimate the average class size of general education courses completed. A breakdown of the data in Table 9 indicates that the majority of associate degree respondents experienced class sizes of 20-29 students. Certificate graduates and leavers responded that the general education courses completed had fewer students, with similar averages between 10-19 and 20-29.

Instructional Activities

Using a five-point Likert-type scale, participants in the study were asked to indicate the frequency of instructional activities employed by the instructor. Means and standard deviations were computed on the thirteen cited activities displayed in Table 10. The data indicate that lecture was used more than two to three times per week in the general education courses by all four groups. Class discussion was the second most frequently used activity, followed by quizzes/examinations, use of audio visual aids, and student presentations. The least frequently used activities consistent throughout the four groups were field trips, peer teaching, and use of simulation and games.

An analysis disclosed that AAS leavers experienced class discussions less frequently than the other three groups. Secondly, the use of individualized instructional techniques were employed less frequently with AAS leavers. Furthermore, certificate graduates encountered individualized instruction about once per week in contrast to the associate degree students and certificate leavers who stated that individualized instruction was used less than once per week. Finally,

Table 9

Comparison of General Education Class Sizes by Occupational Students

Class size	AAS Graduates (<u>N</u> = 55) %	AAS Leavers (<u>N</u> = 49) %	Certificate Graduates (<u>N</u> = 54) %	Certificate Leavers (<u>N</u> = 47) %
1 - 9	1.8	0.0	7.8	2.4
10 - 19	20.0	32.7	35.3	41.5
20 - 29	60.0	51.0	39.1	41.5
30 - 49	10.9	10.2	5.9	7.3
50 or more	3.9	0.0	2.0	4.9

Table 10

Comparison of Frequencies of Instructional Activities in
General Education Courses by Occupational Students

Instructional Activity	AAS Graduates (N = 55)		AAS Leavers (N = 49)		Certificate Graduates (N = 54)		Certificate Leavers (N = 47)		P-value
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	
Lecture	4.52	.652	4.24	.802	4.34	.834	4.24	.983	.301
Guest Lecturers	1.68	.629	1.60	.623	1.82	.644	1.79	.946	.657
Student Presentation	2.48	.930	2.24	.743	2.51	.970	2.63	1.160	.248
Class Discussion	4.23	1.140	3.73	1.120	4.18	.794	4.25	1.030	.049*
Audiovisual Aids	2.91	1.030	2.71	.843	2.81	1.020	2.65	1.110	.646
Simulation/Games	1.73	.976	1.65	.782	1.73	.860	1.84	.939	.857
Field Trips	1.38	.534	1.25	.492	1.50	.647	1.45	.794	.353
Quizzes/Examinations	2.97	.675	2.91	.626	2.97	.801	3.08	.770	.631
Laboratory Experiments	2.47	1.360	1.95	1.080	2.56	1.330	2.12	1.160	.170
Individualized Instruction	2.44	1.310	2.17	1.170	3.00	1.370	2.78	1.340	.021*
Computer Assisted Instruction	1.57	1.110	1.63	1.080	1.62	1.100	2.43	1.450	.003*
Peer Teaching	1.82	1.010	1.68	.780	1.84	1.040	2.26	1.100	.093
Project/Term Papers	2.14	.608	2.07	.469	2.05	.837	2.24	.872	.838

*Significant at .05

computer assisted instruction was used in general education courses less than once per week for AAS graduates, AAS leavers and certificate graduates. However, certificate leavers indicated that the same mode of instruction was employed approximately once per week.

Instructional Quality

Using a five-point Likert-type scale, subjects were asked to rate the quality of instruction in the general education courses completed. The courses were categorized by divisions: social sciences, humanities, physical sciences, behavioral sciences, and fine arts. The data in Table 11 reveal that all groups rated the divisions above the "fair" range. Significant differences were found among the groups in rating instruction in the physical sciences.

Results of ANOVAs and Scheffe multiple comparative groups test identified that significant differences existed between the ratings of instructional quality of AAS leavers and certificate graduates. Significant differences ($p < .05$) were also found between the ratings of AAS graduates and certificate leavers regarding the physical sciences. The ratings of the AAS leavers and certificate graduates were lower (3.85 and 3.92, respectively).

Elective and Required General Education

Participants were asked to distinguish how many of their general education courses were taken due to program requirements or electives. Table 12 displays the computed means and standard deviations. The breakdown of the groups indicates that each group completed general education courses, ranging from 17.5 credit hours for certificate leavers to 36.2 credit hours for AAS graduates. Further, the majority

Table 11

Comparison of Instructional Quality in General Education

Divisions by Occupational Students

Divisions	AAS Graduates (<u>N</u> = 55)		AAS Leavers (<u>N</u> = 49)		Certificate Graduates (<u>N</u> = 54)		Certificate Leavers (<u>N</u> = 47)		P-value
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	
Social Sciences	4.10	.795	3.97	.753	4.12	.927	4.26	.667	.390
Humanities	3.92	.917	4.05	.780	4.18	.882	4.42	.573	.405
Physical Sciences	4.20	.729	3.85	.525	3.90	1.290	4.20	.561	.035*
Biological Sciences	4.18	.750	3.85	.854	3.92	1.110	3.92	1.070	.534
Fine Arts	4.23	.664	3.41	.870	3.90	1.190	3.83	1.030	.210

*Significant at .05

Table 12
 Comparison of Elective and Required General Education
 Credit Hours by Occupational Students

	AAS Graduates (<u>N</u> = 55)		AAS Leavers (<u>N</u> = 49)		Certificate Graduates (<u>N</u> = 54)		Certificate Leavers (<u>N</u> = 47)	
	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
Required	33.16	23.10	24.10	17.90	22.80	20.30	14.60	19.30
Elective	3.12	7.12	3.00	6.74	3.41	10.00	2.91	5.50
Total	36.28		27.10		26.21		17.51	

of general education courses completed by each group was required, ranging from 14.6 credit hours for certificate leavers to 33.16 credit hours for AAS graduates. Although all respondents completed elective hours in general education (ranging from 2.19 to 3.41 credit hours) fewer elective credit hours were taken by the leaver groups than the graduate groups.

General Education Amount

Percentages were computed on the actual amount of general education courses taken and the amount of general education desired in relation to total program requirements of occupational students. The comparison involved the use of a dependent T-test. The procedure eliminated all respondents who had missing data in either of the two variables, "actual amount taken" or "optimal amount." Therefore, the number of respondents within each cell and the proportions of actual amount of general education taken varied from earlier analysis.

Table 13 shows that the four groups of respondents took more general education than they desired. The certificate graduates (38%) and leavers (42%) completed a higher percentage of general education courses than associate degree graduates (30.8%) and leavers (35%). Certificate graduates completed more than one-third of their work in general education while desiring approximately 29%, resulting in a 5% difference in program requirements. Certificate leavers, in contrast, completed over 42% of the total credits in general education while desiring 26%, a 16% difference. Thirty-one percent of AAS leavers' courses were within the general education component while desiring only 28.5%, a 3% dispersion. Consistent with the actual percentage of

Table 13

Comparison of Actual Amounts of General Education Completed
and Optimal Amounts by Occupational Students

	AAS Graduates (<u>N</u> = 55) %	AAS Leavers (<u>N</u> = 49) %	Certificate Graduates (<u>N</u> = 54) %	Certificate Leavers (<u>N</u> = 47) %	P-value
Actual amount of general educa- tion completed	31.800	31.000	38.500	42.200	.1920
Optimal amount of general education	24.900	28.500	28.600	26.100	.3438
<u>P</u> -value	.053	.329	.030*	.016*	

*Significant at .05

general education courses taken by AAS leavers, AAS graduates completed 31.8% although desiring less than one-fourth of the same requirements, resulting in a 7% difference.

Importance of General Education

The subjects were asked to rate the importance of selected general education courses, scored on a three-point Likert-type scale. Also information on the actual numbers of specific courses completed was given. The Spearman Rho technique was used to calculate correlations between the two values. Table 14 displays the means on importance and numbers of general education courses completed and the correlations between the two variables. Table 15 shows the ranking of specific general education courses.

The data indicate that mathematics, English, and economics were the most frequently taken general education courses. An ANOVA revealed no significant differences at the .05 level on the number of mathematics, English, or economics courses taken among the four groups. Correlations with importance, however, revealed that little relationship exists with the importance of general education courses and the number of general education courses completed.

Additional breakdowns revealed similarities between importance and number of courses taken. Responses of AAS graduates showed that psychology, health, general studies, and government were within a second group of frequently taken courses. Psychology and health were rated less important, thus they received a low to no correlation coefficient (.00 to .19). The courses that were least taken by AAS graduates were music, chemistry, art, and geology. These courses were also rated low

Table 14

Correlation on Importance of General Education Courses
and Numbers of General Education Courses Taken by Occupational Students

Course	AAS Graduates (N = 55)			AAS Leavers (N = 49)			Certificate Graduates (N = 54)			Certificate Leavers (N = 47)		
	Impor- tance \bar{X}	# \bar{X}	Corr. \bar{X}	Impor- tance \bar{X}	# \bar{X}	Corr. \bar{X}	Impor- tance \bar{X}	# \bar{X}	Corr. \bar{X}	Impor- tance \bar{X}	# \bar{X}	Corr. \bar{X}
Art	1.34	.314	.215	1.33	.167	.001	1.32	.159	.213	1.54	.457	.100
Biology	1.60	.370	.012	1.65	.488	.135	1.82	.333	.073	1.86	.371	.335
Chemistry	1.88	.259	.266	1.58	.186	.485	1.71	.227	.097	1.81	.114	.335
Drama	1.78	.725	.006	1.82	.537	.012	1.83	.395	.015	1.75	.400	.020
Economics	2.05	1.090	.016	2.19	.932	.115	2.34	.936	.175	2.46	.743	.000
English	2.56	1.580	.135	2.66	1.530	.010	2.57	1.210	.243	2.63	1.110	.404
General Studies	1.51	.885	.297	1.58	.884	.483	1.76	.717	.141	1.76	.514	.369
Geology	1.72	.278	.398	1.84	.273	.125	1.84	.267	.170	1.86	.229	.277
Government	2.17	.889	.381	2.30	.930	.030	2.12	.778	.130	2.33	.600	.370
Health	1.84	.889	.089	1.97	.651	.031	2.10	.659	.001	2.18	.486	.351
History	1.90	.574	.035	1.97	.605	.424	2.08	.644	.308	2.18	.429	.403
Mathematics	2.78	1.640	.000	2.61	1.630	.270	2.63	1.290	.002	2.43	1.000	.053
Music	1.32	.226	.060	1.32	.233	.098	1.29	.244	.214	1.56	.286	.284
Religion	1.41	.315	.004	1.56	.349	.005	1.39	.156	.257	1.50	.171	.365
Physical Education	1.65	.925	.053	1.91	1.000	.013	1.76	.565	.012	1.73	.400	.475
Physics	2.26	1.010	.000	1.76	.302	.113	1.85	.156	.150	1.73	.086	.252
Psychology	1.86	.849	.004	2.15	.884	.000	2.06	.917	.007	2.07	.600	.054
Sociology	1.72	.519	.002	2.04	.548	.083	1.91	.521	.180	1.05	.429	.036

Table 15

Comparison of Correlation on Importance and Numbers of
General Education Courses Completed by Occupational Students

	AAS Graduates (<u>N</u> = 55)	AAS Leavers (<u>N</u> = 49)	Certificate Graduates (<u>N</u> = 54)	Certificate Leavers (<u>N</u> = 47)
Correlation Coefficients	Courses	Courses	Courses	Courses
Lower high positive and above .60 - 1.00				
Positive .40 - .59		Chemistry General Studies History		Physical Ed. English History
Upper low positive .20 - .39	Geology Government General Studies Chemistry Art	Mathematics	History Religion English Music Art	Government General Studies Religion Health Chemistry Biology Music Geology Physics
Low positive .03 - .19	English Health Music Physical Ed. History	Biology Geology Economics Physics Music Sociology Health Government	Sociology Economics Geology Physics General Studies Government Chemistry Biology	Art Psychology Mathematics Sociology
No systematic	Economics Biology Drama Religion Psychology Sociology Physics Mathematics	Physical Ed. Drama English Religion Art Psychology	Drama Physical Ed. Psychology Mathematics Health	Drama Economics

in importance.

The second most frequently taken courses by AAS leavers were psychology, government, physical education, and general studies. General studies was rated with an equally high level of importance. This resulted in a positive correlation. However, no relationship existed between importance and number. The fewest number of courses taken by AAS leavers were chemistry, music, geology, and physics. Correlations between importance and number were from .03 to .59.

Computations on certificate graduates resulted in similar findings. The groups of the second most frequently taken general education courses consisted of psychology, government, general studies, health, and history. However, the ratings of importance varied. As such, psychology, government, general studies, and health had no to low relationships (.00 to .19). History was given an above average rating of importance and had a stronger relationship than the other (.30). The least taken courses by certificate graduates were chemistry, physics, religion, music, and art. Generally, these courses also tended to receive low ratings on importance, with .03 to .39 surfacing.

The group of second most frequently taken courses by certificate leavers was comprised of government, psychology, and general studies. The three disciplines had stronger correlations with the number of courses taken ranging from .05 to .37. Physics, chemistry, geology, music, and biology were taken less frequently. The correlation between number and importance was relatively high, ranging from .20 to .39.

Summary of Findings

The intent of the study was to determine and compare the beliefs about the amount and importance of general education in occupational programs. As a means of accomplishing this, six areas of concentration were investigated: (a) profile of students, (b) proportions of curriculum devoted to general education, (c) differences between optimal levels of general education, (d) importance of selected general education courses, (e) importance of selected general education competencies, and (f) influence general education has on program completion. The findings within the six areas are outlined below.

1. AAS graduates were primarily enrolled in electronics and instrumentation while AAS leavers were in business and accounting.

2. Certificate graduates were predominantly enrolled in career studies and secretarial sciences programs. Certificate leavers were primarily enrolled in computer machines programs.

3. Certificate degree students experienced the highest level of program transfer and frequently moved from degree programs to certificate programs.

4. Fifty percent of AAS leavers, certificate graduates and certificate leavers were enrolled as part-time students for the majority of their attendance. This is in contrast to 20% of AAS graduates.

Analysis of the four sample groups on the proportion of the curriculum devoted to general education revealed the following findings:

1. The two AAS degree groups completed approximately one-third of their course work in general education.

2. Certificate graduates and certificate leavers completed a higher proportion of general education than AAS students.

Findings on differences between optimal levels of general education are as follows:

1. The percentages for optimal requirements for the specialty component ranged from 50.6% for certificate graduates to 59.9% for AAS graduates.

2. Certificate graduates placed more emphasis on the optimal amount of general education than the other three groups.

3. Percentages of related course requirements ranged from 15.6% for AAS graduates to 20% for certificate graduates.

Participants in the study were asked to rate the importance of selected general education courses. The findings are as follows:

1. English, mathematics, government and economics were rated within the highest third of important courses.

2. Courses within the fine arts division including art and music were consistently rated low by all groups.

3. Science courses, including biology, geology, physics, and chemistry, were rated low in importance.

4. Mathematics was viewed as less important by AAS leavers than by AAS graduates, certificate graduates and certificate leavers.

5. Significant differences were identified on the ratings for economics. Certificate leavers viewed economics as important while AAS graduates rated it less important.

6. Significant differences were found with the importance of physics. AAS graduates rated the discipline significantly higher than

the other three groups.

Chapter 5

Findings, Conclusions, and Recommendations

Introduction

General education in the past few years has received serious attention in community colleges. The Virginia Community College System has determined that general education will remain a significant component within the community college curriculum. As a result, numerous steps have been taken to determine desirable outcomes and program requirements in terms of general education within occupational programs. However, assessment efforts have predominantly focused on the views of college administrators, educators, and governing authorities. Few attempts have been made to investigate the opinions of community college students with regard to general education as an occupational program requirement. Therefore, this study sought to determine the views of community college graduates and leavers of associate in applied science and certificate degree programs regarding the optimal amount and importance of general education in the occupational curriculum.

The research questions posed in this study included:

1. What proportions of the occupational curriculum were devoted to general education by AAS graduates and leavers and certificate graduates and leavers;
2. What are the differences between the optimal levels of general education for AAS graduates and leavers and certificate graduates and leavers;

3. What is the importance of general education courses to AAS graduates and leavers and certificate graduates and leavers;

4. What are the differences in importance of general education competencies to AAS graduates and leavers and certificate graduates and leavers; and

5. What influence does the general education component have on degree completion for AAS graduates and leavers and certificate graduates and leavers.

This chapter includes a synthesis of the findings, conclusions, and recommendations as outlined by the research questions.

Findings

Findings derived from the study are related directly to answering the research questions. Further, in order to understand more fully the views of graduates and leavers, an additional section, entitled "Profile of Students," is presented.

Profile of Students

Examination of demographic variables of subjects revealed that differences existed between the groups regarding gender and grade point average. In terms of purpose of enrollment upon entry to the community college, the majority of AAS students transferred less often between AAS and certificate programs as opposed to certificate students. Stated reasons for taking general education courses were predominantly due to program requirements. Analysis of enrollment status of AAS graduates and leavers and certificate graduates and leavers revealed differences

with AAS students registering for full-time status more frequently. The majority of associate degree students were enrolled in electronics, instrumentation and business programs while certificate degree students were enrolled in career studies and computer machines.

Proportion of Curriculum Devoted to General Education

Findings of this study revealed that occupational students in AAS and certificate degree programs exceeded the general education requirements established by the college under the VCCS guidelines. Both AAS graduates and leavers devoted approximately 32% of their total credit hours to general education. In contrast, the two groups of certificate degree students completed a higher proportion of general education with respect to total hours. Certificate graduates completed 34% while certificate leavers had completed an even higher proportion, 40%.

Analysis of the findings indicated that the large proportions of general education completed by the four groups were due to program requirements. More than 87% of AAS graduates stated that the primary reason for enrolling in general education courses was because of program requirements. The same was true for 75% of the AAS leavers. The proportions given by certificate graduates and leavers tended to be lower than AAS students because approximately 8% had chosen to take no general education courses.

Additional analysis determined that AAS graduates and leavers completed 32 and 24 credit hours of required general education, respectively. This is in contrast to 23 credit hours completed for certificate graduates and 15 credit hours for certificate leavers.

Fewer elective credit hours in general education were taken by the two groups of leavers.

Optimal Amount of General Education

The optimal amount of specialty, general education, and related courses as viewed by graduates and leavers of occupational programs was determined in the study. The findings indicate that the optimal amounts of the three program requirements differ according to degree programs and graduation status.

AAS graduates stated that approximately 60% of the program requirements should be within the technical realm. AAS leavers and certificate leavers indicated that 54% of specialty requirements was desired. Certificate graduates revealed that 50% of the requirements was sufficient.

The optimal amount of general education was approximately equal across the four groups. AAS graduates and certificate leavers desired the least amount, ranging from 25% to 26% respectively. The percentages determined by AAS leavers and certificate graduates were also similar, averaging approximately 29%.

The optimal amount of related course requirements varied among the groups. Both groups of AAS students requested less of an emphasis of the related course component. Certificate degree students stated that roughly one-fifth of total course requirements should be devoted to related courses.

Importance of General Education Courses

Several patterns were observed with the ratings of occupational graduates and leavers on the importance of general education courses.

Most interesting are the consistencies in ratings of the highest and lowest important courses.

Mathematics, English, government and economics were rated as the most important general education courses by all four groups of respondents. The lowest rated courses on importance were generally those courses within the sciences and fine arts. Chemistry, geology and biology were given low ratings by all four groups. Significant differences were determined on the rating of physics. AAS graduates placed more importance on the study of physics than the other three groups. Art and music were consistently regarded as the least important general education courses. Significant differences were also revealed with the higher rating of economics by certificate leavers in contrast to the rating by AAS graduates.

Importance of General Education Competencies

Selected general education competencies including communication skills, critical thinking skills, and vocational adjustment were rated in the highest third of competencies by all groups. Knowledge of art and literature, knowledge of health and fitness, and ethical sensitivity were rated among the one-third of least important competencies.

The ratings of several competencies varied among the four respondent groups. Knowledge of science was viewed as a less important competence to AAS leavers as opposed to the other groups. Significant differences were determined on the rating of knowledge of mathematics. The mean value of AAS leavers was significantly lower than the other respondent groups.

Influence General Education has on Program Completion

Two groups of data were analyzed to determine the influence general education has on program completion, including indirect and direct influences. Indirect influences consisted of class size, instructional activities and instructional quality. No significant differences were found for class size. Analysis of frequencies of instructional activities indicated that differences existed among groups with ratings on class discussion, individualized instruction and computer assisted instruction. In terms of instructional quality, significant differences existed in the physical sciences disciplines.

Direct influences on program completion included comparison of elective and required credit hours, comparison of actual amounts taken and desired amounts of general education in occupational programs, and correlations between importance and number of general education courses taken. Means and standard deviations showed differences between elective and required general education credits taken by the sample groups. All groups reported having taken more general education credits due to program requirements as opposed to elective. Both groups of leavers took less general education credits as electives than the two groups of graduates. Similarly, all groups of respondents indicated that more general education credits were taken than desired. The two groups of certificate students had more differences between actual amounts and desired amounts. Certificate graduates took 38.5% of total hours in general education while desiring 28.6%. Certificate leavers completed 42.2% of total hours in general education while determining 26.1% as the optimal amount needed.

Analysis of the number of courses taken revealed that English, mathematics, and economics were the most frequently taken general education courses. The fewest courses taken among the four groups were in the sciences and fine arts. The correlations on the importance with amount of general education courses taken ranged from no relationship to low (.03 to .19). Positive correlations (.40 to .59) were computed for AAS leavers and certificate leavers, with English consistent among the two groups.

Conclusions

Conclusions derived from the study are related to the specific findings of the research questions. Also presented is a synopsis of related research for each of the research areas.

Proportions of Curriculum Devoted to General Education

The guidelines set by the Virginia Community College System (1986) state that AAS recipients devote at least 25% of their programs to general education courses. However, the findings of related literature suggest that occupational students tend to take more than the 25% minimum requirements. Beeken (1982) observed that non-transfer completers took 40.5% of total program hours in general education. The non-completers of occupational programs had completed an even higher proportion, 41.8%. Beeken (1982) noted that both degree completers and non-completers of occupational programs took an average of 13 or 14 courses in general education even though the minimum requirement was eight courses for AAS programs. The conclusions drawn from this study

on the proportion of the occupational curriculum devoted to general education are as follows.

1. The findings of this study support other research efforts that suggest that occupational students tend to take more general education courses than are required by state guidelines.

2. The general education component in occupational programs is well established with each study group exceeding the VCCS requirements.

3. Occupational students take few general education courses as elective hours and consequently do not exercise personal interest in selecting courses.

4. Certificate degree students take proportionately more general education than AAS degree students.

Differences in the Optimal Amount of General Education

The optimal amount of general education requirements has been studied from a number of different perspectives. Perkins (1985) determined that community college administrators and corporate employers would devote 32% of two-year occupational programs to general education. In practice, this would amount to 30-33 quarter hours in most programs. A study by the VCCS (1986) on general education as an occupational degree requirement reveals that the views of faculty members differ from administrators and corporate personnel. The investigation suggests that general education should amount to 25 to 27 quarter hours.

The VCCS (1986), in accordance with criteria set by the AACJC, recommended that AAS degree requirements should be limited to 97 to 108 total credit hours. The specialty requirement should constitute 30% to 50% of the course credits while the technical or related component

should amount to no more than 25% to 45% of the total credit hours.

The findings of this study reveal differences in the optimal amount of general education as determined by occupational graduates and leavers. The conclusions on the optimal amount of program requirements are as follows.

1. The views of graduates and leavers of occupational programs regarding the amount of curricular components differ from existing requirements and for the views of academicians and corporate employers.

2. AAS students desire more emphasis on specialty course requirements than are presently followed.

3. Certificate students request less emphasis on specialty requirements.

4. Occupational students request less general education requirements than presently taken.

5. All occupational students desire more emphasis on related courses.

Importance of General Education Courses

The VCCS has mandated that AAS programs include a number of distribution course requirements. Applied to the general education component, the distribution requirement suggests that students have some degree of freedom in terms of course selection within five broad curricular areas. The areas include English or communication skills, the humanities or fine arts, social or behavioral sciences, natural sciences or mathematics, and health or physical education. The number of specific general education course requirements for Virginia suggests that English and social science disciplines are the most important

because these areas require nine hours in the program. Health, physical education, or recreation, and orientation courses are the only other disciplines noted, with three and one hour requirements stated, respectively.

The findings on importance placed upon selected general education courses by occupational graduates and leavers support the following conclusions.

1. English, mathematics, and economics were consistently viewed as important courses by all groups of respondents.

2. Fewer general education courses were ranked as important by certificate students than by AAS students.

3. Courses within the fine arts division were viewed as less important than other courses.

4. Disciplines within the natural sciences were viewed as less important by all groups of respondents than non-natural sciences.

5. Disciplines that were skill-oriented were viewed as important.

Importance of General Education Competencies

The Association of American Community and Junior Colleges (1986) states that all components of occupational degrees should be outcome oriented. In terms of the general education component, the abilities to think, reason, compute, communicate, and adapt to change are considered as essential competencies. Similarly, Meyer's (1983) study demonstrates that employers of occupational graduates believe that general education competencies are critically important in getting a job and being successful on the job. Meyer (1983) determined that communication skills, critical thinking, writing skills, and ethics appear important

from the perspectives of employers.

Perkins (1985) indicated that consistencies exist between the views of academic administrators and corporate employers with regard to desirable student outcomes. Academic personnel and employers ranked communication skills and critical thinking skills as the first and second most important competencies. The capabilities for vocational adjustment, mathematics skills, human relations skills, knowledge of science, and knowledge of economics constituted a second cluster of competencies believed to be important. Judged least important were competencies linked to humanistic or cultural content.

Findings in the present study support the following conclusions.

1. Communications skills, critical thinking skills, vocational adjustment and human relations skills were viewed as the most important competencies.

2. Competencies that were rated as highly important tended to be integrative and adaptive in nature; that is, general education skills that could be used in occupational settings were rated high.

3. Knowledge of mathematics varied according to program completion and enrollment curriculum.

4. Competencies related to the fine arts and sciences tended to be less important to occupational students.

5. Competencies rated with high importance tended to be adaptive to the technical domains.

Influence of General Education on Program Completion

Many research efforts have been devoted to the study of general education as an influence on student attendance. Related topics under

discussion include the following: reasons for enrolling in general education courses, reasons why students do not enroll in general education courses, student enrollment status as a factor for general education attendance, and number of required general education courses taken.

Friedlander (1983) highlighted a number of reasons why students enroll in general education courses. The student responses include the following: (a) solely to fulfill a general education requirement; (b) to acquire or improve occupational skills; (c) to satisfy counselor or faculty requests; (d) to develop basic skills; and (e) to gain personal enrichment. According to Friedlander, the most frequently stated reason for not taking general education courses was that they were not required. Lack of interest in the courses was the second most stated reason.

Gaff and Davis (1981) reported that the vast majority of students surveyed subscribe to the goal of general education. The authors concluded that 50% of the respondents studied stated that a broad general education was very important.

In terms of enrollment status, Barlow (1982) contended that the large body of part-time students have goals that differ from those of full-time students. The part-time student is primarily interested in courses that up-grade and up-date occupational skills. Therefore, general education requirements serve little or no use.

Beeken (1982) determined that occupational students tended to follow the general education programs designed for them. The author revealed that occupational students primarily took a general education

program that consisted primarily of English, social science courses, and humanities and fine arts. The programs did not include many courses in natural sciences and physical education and health. Further, occupational students tended to take the minimum number of required courses and did not enroll in courses not specifically required.

Findings of the present study resulted in the following conclusions.

1. Part-time enrollment encourages leaving the community college before degree completion.

2. The influence of general education varied within certain programs. Higher percentages of students enrolled in computer machines and business programs leave the community college before degree completion. Higher percentages of students in electronics and career studies graduate from the community college.

3. Quality of instruction within the general education course was not an apparent influence to program completion.

4. General education faculty frequency use lecture and discussion as instructional techniques.

5. Occupational students tend to take courses outlined by the college's distribution requirements, including English, mathematics, and economics.

6. Few occupational students take general education courses outside the distribution requirements, such as fine arts and sciences.

Recommendations

Numerous conclusions were drawn from the findings on the amount and importance of general education in occupational programs. This section will include recommendations directly related to the conclusions and research questions. As a means of organization, the research questions have been grouped into three primary areas, including (a) amount of general education; (b) importance of general education; and (c) the influence general education has on program completion.

Amount of General Education

Various conclusions were noted on the amount of general education in occupational programs. The conclusions were based on observed differences in the actual amount taken and the amount desired by graduates and leavers. It was determined that general education constituted a substantial proportion of the total amount of credits completed by all occupational students. There was agreement that general education should remain a part of the occupational program requirements. However, the optimal amount of the curriculum differed from the actual amount taken. All occupational students tended to take more general education than what was required and desired.

Occupational students classified the majority of general education courses as required, with very few taken due to personal interest or elective credit hours. As such, all groups of respondents requested less of a general education requirement. AAS students indicated that a reportioned curriculum should include more of an emphasis on specialty and related course requirements. Certificate students, while

noting the importance of general education requirements within the one-year degree program, stressed the need for more related courses.

Based upon these conclusions, the following recommendations have been determined on the amount of general education within occupational programs.

1. General education requirements should continue to be substantial proportions within the two-year occupational program.

2. Program requirements for one-year degree programs should include a general education component.

3. The guidelines set by the VCCS program requirements should be reevaluated in terms of considering the views of occupational students on the amount of general education.

4. Counseling and faculty advising of students into additional general education courses beyond established VCCS guidelines should be carefully monitored and evaluated.

5. Community college administrators should review the amount of general education that is required in AAS and certificate degree programs and consider decreasing the amount to bring it more in line with the views of students.

Importance of General Education

The conclusions of this study suggest that occupational graduates and leavers value selected general education competencies and courses. A core of courses, including English, mathematics, and economics, was recognized as being important with little variation among the respondents groups.

Further, there were competencies that graduates and leavers agree

should be emphasized. Communication skills, critical thinking skills, vocational adjustment skills, and human relations skills are central. These competencies tended to be integrative in nature and easily adaptive to many kinds of courses, whether humanistic or technical. The importance of mathematics as a competence varied among the groups. Competencies related to the fine arts, sciences, and ethical sensitivity were viewed as of less importance.

The findings and conclusions of this study are the basis for the following recommendations.

1. Distribution requirements should be reviewed in terms of integrating the courses that were viewed as important by students.

2. The general education component should become outcome oriented to include integrative and adaptive competencies.

3. Less important general education courses and competencies should not be eliminated but should be given less attention.

4. Mathematics, as a requirement, should be regulated according to degree programs.

5. The general education component should consist primarily of courses from the social and behavioral sciences, communications, humanities, and mathematics disciplines.

6. General education courses should be numerous to allow for some degree of choice by students.

Influence of General Education on Program Completion

Various conclusions were reached on the influence general education has on program completion. Indirect factors affecting completion rates were observed. Grade point average and enrollment status of

occupational groups were noted as hindrances in completion.

Substantial numbers of AAS leavers were enrolled in business and accounting courses. These programs typically required courses in English, mathematics, economics and communication. Certificate leavers were primarily enrolled in a computer machines major which required various general education courses, including human relations, sociology, English, and mathematics. The set of general education courses required for students in computer machines strayed somewhat from the set of courses deemed most important by certificate leavers. The majority of AAS graduates and certificate leavers enrolled in electronics and career studies, respectively.

All groups of respondents encountered lecture and discussion techniques the most frequently used instructional methods. The frequency of individualized instruction and computer assisted instruction varied among the respondents. Quality of instruction did not seem to be a concern in terms of program completion, although the physical sciences were the lowest rated division.

Direct general education influences related to program completion were observed. Substantial numbers of certificate graduates and leavers had originally entered the community college with the intention of obtaining an associate degree. The transfer in degree programs, from two-year to one-year, implies that the respondents were concerned about the number of hours required.

In addition, all groups of respondents took large amounts of English, mathematics and economics as outlined by program requirements. Little variation in course taking patterns existed. Few courses were

taken in the fine arts and science disciplines.

Low correlations existed for the majority of general education courses with respect to number of courses taken and importance. Typically, the courses rated as moderately high in importance were taken less frequently. High correlations existed with the views of AAS leavers and certificate leavers which generally were rated low in importance and low in number taken.

The following recommendations were derived from the above conclusions.

1. Prescribed general education courses should be determined for certificate programs, including English, mathematics, and economics.

2. The progress of AAS students enrolled in business and accounting and certificate students in computer machines should be evaluated. Information should be obtained on the students' academic performance and career goals. Judged on the basis of this information, counselors should prescribe a general education component consisting of the desired core, basic skills, or none at all.

3. Community colleges need to initiate on-going dialogue with students regarding the number of courses taken and importance placed upon these courses.

4. Community college students can be very helpful as members of curriculum development committees and should become an integral part of the advisory committee.

Recommendations for Future Research

It was the underlying purpose of this study to provide to community college curricular planners information on the importance and amount of general education from the views of occupational graduates and leavers. However, due to the nature of this study, a number of additional questions arose which were outside the scope of this study.

The present study investigated the views of New River Community College graduates and leavers of occupational programs. A similar study might determine the views of students in a large urban community college or, if feasible, draw a sampling on a statewide or national basis. The opinions of amount and importance might differ substantially in areas with various industrial bases and senior institutions.

This study focused on the views of recent occupational graduates and leavers of the community college. It is recommended that the views of graduates and leavers of many years be determined on the value of a general education in occupational programs.

Evaluation of the content of general education courses was beyond the scope of the present study. It is assumed that few occupational students view their participation in general education courses as a means to develop job-related skills. However, findings in this study suggest that a surplus of general education credit hours are taken by occupational students. Additional information is needed to determine if content areas within general education are technically oriented, thus fulfilling specialized degree requirements.

Typically, high proportions of students are entering the community

college with deficiencies in reading, writing, mathematics, and study skills needed to succeed in upper level general education courses. This study determined that AAS leavers and certificate leavers took proportionately more general education than graduate groups. Further, grade point averages of the leaver groups were significantly lower. It is assumed that large amounts of the general education courses taken included basic skills. Additional information is needed to determine whether counseling students into basic skills courses influences program completion.

Finally, additional information is needed to investigate the patterns of student course taking in terms of student requirements and student goals. Various general education models are presently under evaluation; the most notable is provided by Miami-Dade Community College. An important feature of the Dade model is that students, regardless of enrolled programs, encounter the general education core requirements at the beginning of their degree program. The logic behind this is that all students will have participated in general education courses regardless of program completion. With the limitations in this study, it is not understood whether general education courses provide the skills necessary to complete AAS and certificate degree programs more successfully or if satisfying substantial amounts of specialty requirements first serves as an incentive to complete general education requirements.

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APPENDIX A

Survey Instrument

A. GENERAL EDUCATION BACKGROUND

Directions: Please respond to the following questions:

1. How many total quarter credits did you complete while enrolled at New River Community College (most courses have 3 quarter credits each)?

2. How many general education credits did you complete (most courses have 3 quarter credits each)?

3. How many general education credits (usually 3 quarter credits per course) were:

_____ elective credit hours
 _____ required credit hours
 _____ other, please specify: _____

4. What do you estimate to be the average class size of your general education classes?

_____ 1-9
 _____ 10-19
 _____ 20-29
 _____ 30-49
 _____ 50 or more
 _____ other, please specify: _____

5. As a rule, of the general education courses you completed, what type(s) of instructional activity did the instructor employ?

	every day	2/3 times per week	about once per week	less than once per week	never
lecture	_____	_____	_____	_____	_____
guest lecturers	_____	_____	_____	_____	_____
student presentation	_____	_____	_____	_____	_____
class discussion	_____	_____	_____	_____	_____
audio visual aids	_____	_____	_____	_____	_____
simulations/games	_____	_____	_____	_____	_____
field trips	_____	_____	_____	_____	_____
quizzes/examinations	_____	_____	_____	_____	_____
laboratory experiments	_____	_____	_____	_____	_____
individualized instruction	_____	_____	_____	_____	_____
computer assisted instruction	_____	_____	_____	_____	_____
peer teaching	_____	_____	_____	_____	_____
projects (term papers)	_____	_____	_____	_____	_____
other, please specify: _____	_____	_____	_____	_____	_____

A. GENERAL EDUCATION BACKGROUND (Continued)

6. How would you judge the quality of instruction in the
- general education courses
- that you completed?

<u>Course areas</u>	<u>very poor</u>	<u>poor</u>	<u>fair</u>	<u>good</u>	<u>very good</u>	<u>N/A</u>
social sciences	_____	_____	_____	_____	_____	_____
humanities	_____	_____	_____	_____	_____	_____
physical sciences	_____	_____	_____	_____	_____	_____
biological sciences	_____	_____	_____	_____	_____	_____
fine arts	_____	_____	_____	_____	_____	_____
other _____ (specify)	_____	_____	_____	_____	_____	_____

B. AMOUNT OF GENERAL EDUCATION

The items below concern your beliefs about how much of a two-year occupational degree program should be GENERAL EDUCATION. Please assume that the basic reading, writing, and arithmetic skills have been mastered before admission into the degree program.

QUESTION: What percentage of an occupational program should consist of the following three curriculum components?

Directions: As a means of determining how much of a two-year occupational degree program should consist of general education, rate the three curriculum components listed below on a percentage scale. Make sure that the percentages you assign to the three curriculum components are equal to 100%.

1. SPECIALITY COURSES: The set of courses in the occupational program content area which directly support technical competence. _____ %
 2. GENERAL EDUCATION COURSES: The set of courses all students working toward an associate degree have in common in terms of the development of knowledge, attitudes, values, and skills which will enhance participation in social, technological, and cultural environments. _____ %
 3. RELATED COURSES. The set of technical and nontechnical courses which the student may choose from any area of the total college curriculum. _____ %
- TOTAL _____ 100%

C. IMPORTANCE OF GENERAL EDUCATION

The items below concern your belief about the relative importance of thirteen general education competencies as possible student learning outcomes of two-year occupational degree programs.

QUESTIONS: (I) How important is it that the student of a two-year occupational program command each of the competencies described below?

Directions: To complete the items below, rate (by circling) each of the thirteen competencies using the following scale: SA = Strongly Agree; A = Agree; D = Disagree; and SD = Strongly Disagree.

(II) How would you rank the most important competencies?

Directions: For all items marked SA, please rank the importance. A ranking of 1 is most important. Do not rank items marked A, D, or SD.

It is important that the student of a two-year degree be able to:

	<u>(I) Scale</u>
1. Explain basic <u>scientific principles</u> as one foundation for civic life.	SA A D SD
2. Explain the skills and behaviors which are identified with successful <u>vocational employability</u> .	SA A D SD
3. Explain the <u>cultural heritage</u> of the United States and its people.	SA A D SD
4. Explain practices which are thought to promote the maintenance of <u>personal health and fitness</u> .	SA A D SD
5. Explain the <u>economic principles</u> which affect the roles of a producer and consumer of goods.	SA A D SD
6. Explain <u>economic, political, and cultural issues</u> from a world perspective.	SA A D SD
7. Explain the <u>ethical or value dimensions of public policy issues</u> and questions.	SA A D SD
8. Explain the primary tenets of <u>American government</u> .	SA A D SD
9. Demonstrate the skills which provide a foundation for employment of <u>fine arts and literature</u> .	SA A D SD
10. Use <u>interpersonal relation skills</u> which promote the achievement of personal and group goals.	SA A D SD
11. Use skills of <u>critical and constructive thinking</u> in the identification and solutions of problems.	SA A D SD
12. Use <u>quantitative skills</u> including the performance of simple algebraic operations in common settings.	SA A D SD
13. Communicate purposefully: <u>listens and reads with understanding, speaks and writes with organization.</u>	SA A D SD

B. SELECTED GENERAL EDUCATION COURSES

The items listed concern your belief about the relative importance of selected general education courses as part of the requirements for completion of a two-year occupational degree program.

QUESTIONS: (I) How important do you think it is that a student of a two-year occupational program take courses in each of the areas listed below?

Directions: To complete the items below, rate the importance of the listed general education courses using the following scale: LO = Low Importance; AVG = Average Importance; and HI = High Importance.

(II) How many of these general education courses did you take?

Directions: Indicate the number of courses completed in each of the given general education areas.

	(I)			(II)			
	Importance			Number of courses completed			
	HI	AVG	LO	0	1-2	3-4	5+
1. Arts	—	—	—	—	—	—	—
2. Biology	—	—	—	—	—	—	—
3. Chemistry	—	—	—	—	—	—	—
4. Economics	—	—	—	—	—	—	—
5. English	—	—	—	—	—	—	—
6. General Orientation	—	—	—	—	—	—	—
7. Geography	—	—	—	—	—	—	—
8. Government	—	—	—	—	—	—	—
9. Health	—	—	—	—	—	—	—
10. History	—	—	—	—	—	—	—
11. Mathematics	—	—	—	—	—	—	—
12. Music	—	—	—	—	—	—	—
13. Philosophy and Religion	—	—	—	—	—	—	—
14. Physical Education and Recreation	—	—	—	—	—	—	—
15. Physics	—	—	—	—	—	—	—
16. Psychology	—	—	—	—	—	—	—
17. Sociology	—	—	—	—	—	—	—
18. Speech and Drama	—	—	—	—	—	—	—
19. Other _____	—	—	—	—	—	—	—
20. Other _____	—	—	—	—	—	—	—
21. Other _____	—	—	—	—	—	—	—

Z. BACKGROUND

Directions: Please respond to the following questions:

1. What was your purpose upon entry to the community college?
 - occupational certificate program
 - associate in applied science program
 - other, please specify _____

2. What was your primary reason for taking general education courses?
 - required for my program
 - due to personal interest
 - did not take any
 - other, please specify _____

3. What was your enrollment status during most (over 1/2) of your community college experience?
 - full-time student (12 enrolled hours or more)
 - part-time student (less than 12 enrolled hours)

4. What is your current employment status?
 - student attending a four-year institution
 - employed full-time
 - employed part-time
 - unemployed
 - other, please specify: _____

5. What was your yearly gross salary for 1985?

<input type="checkbox"/> none	<input type="checkbox"/> \$15,000-\$19,999
<input type="checkbox"/> less than \$1,000	<input type="checkbox"/> \$20,000-\$29,999
<input type="checkbox"/> \$1,000-\$4,999	<input type="checkbox"/> \$30,000-\$39,999
<input type="checkbox"/> \$5,000-\$9,999	<input type="checkbox"/> \$40,000-\$49,999
<input type="checkbox"/> \$10,000-\$14,999	<input type="checkbox"/> \$50,000 or more

THANK YOU FOR YOUR ASSISTANCE.

PLEASE RETURN THIS FORM IN THE PRE-PAID ENVELOPE AS SOON AS POSSIBLE.
SEND TO:

L. Pendleton Armistead
Community College Education
University City Office Building
Virginia Polytechnic Institute
and State University
Blacksburg, Virginia 24061

APPENDIX B

Criteria for Definition Selection

Criteria for Definition Selection

Authors	Definitions		
	Descriptive	Prescriptive	Operational
1. Barlow (1982)	X		
2. Boyer and Kaplan (1977)			X
3. Boyer and Levine (1981)	X		
4. Burke (1980)			X
5. Cobb (1983)		X	
6. Cohen and Brawer (1982)			X
7. Eaton (1982)		X	
8. Gaff (1983)			X
9. Harlacher (19820)	X		
10. Hillway (1958)	X		
11. Johnson (1952)			X
12. Klein (1980)		X	
13. Lukenbill and McCabe (1978)			X
14. Marsee (1979)		X	
15. Martin (1983)		X	
16. McGrath (1972)	X		
17. Piland (1981)	X		
18. Riley (1980)	X		
19. Rouech and Rouech (1982)		X	
20. Warren (1982)	—	—	<u>X</u>
TOTAL	7	6	7

Frequency of Selected Elements in Definitions

Elements	Authors												Total	
	Barlow (1982)	Boyer & Levine (1981)	Cobb (1983)	Eaton (1982)	Harlacher (1982)	Hillway (1958)	Klein (1980)	Marsee (1979)	Hartlin (1983)	McGrath (1972)	Piland (1981)	Riley (1980)		Roueche & Roueche (1982)
1. Satisfy personal life and family		X				X	X							3
2. Establish social relations and cooperation		X			X		X					X		4
3. Enhance citizenship in a free society		X	X		X	X	X		X	X	X		X	9
4. Cultivate heritage		X		X			X			X				4
5. Integrate subject matter		X	X				X			X				4
6. Develop personal skills	X						X					X		3
7. Develop knowledge	X	X								X	X	X		5
8. Develop attitudes	X	X								X			X	4
9. Develop values	X	X				X	X							4
10. Develop leadership	X										X			2
11. Maintain meaningful lives		X			X									2
12. Maintain humane lives				X	X									2
13. Succeed in a complex society		X			X					X				3

(Continued on next page)

Elements	Authors												Total	
	Barlow (1982)	Boyer & Levine (1981)	Cobb (1983)	Eaton (1982)	Harlacher (1982)	Hillway (1950)	Klein (1980)	Horsee (1979)	Hartin (1983)	McGrath (1972)	Yiland (1981)	Riley (1980)		Roueche & Roueche (1982)
14. Enhance specialised skills					X									1
15. Develop decision-making abilities	X	X			X		X	X						5
16. Enhance critical thinking	X	X	X	X	X		X		X	X	X	X		10
17. Develop morale			X			X						X		3
18. Train religious skills										X		X		2
19. Secure basic skills													X	1
20. Cultivate cooperation	X									X				2
21. Promote lifelong learning		X	X					X			X		X	5
22. Develop appreciation of fine arts and recreation					X									1
23. Enhance psychological maturation								X				X		2

APPENDIX C

Letters of Approval to Conduct Research



VIRGINIA COMMUNITY COLLEGE SYSTEM

ASSISTANT VICE CHANCELLOR
RESEARCH AND PLANNING

July 17, 1986

Mr. L. Pendleton Armistead

Dear Mr. Armistead:

Your letter requesting information to support your doctoral dissertation work at Virginia Polytechnic Institute and State University was received June 23. (Since then, we have had numerous discussions.) Your dissertation topic "A Comparison of Virginia Community College Graduates and Leavers' Views on the Amount and Importance of General Education in Transfer and Occupational Curricula" appears to be an interesting sequel to the dissertation (VPI&SU) by David R. Perkins. See attached letter to community college presidents regarding Perkins' study.

Your data collection requirements did pose a number of difficulties.

- Unlike the Perkins' study which dealt with college and business-industry views on the general education, the population for your inquiry includes (1) college transfer program graduates and early leavers, and (2) occupational/technical graduates and early leavers. We could, with the permission of each of the 23 Virginia community college presidents, provide you with the names of graduates; and by your definition of leavers, we can provide you with the names of early leavers. The problem is that addresses can be inaccurate for at least two reasons: (1) graduates and leavers are a very mobile and (2) our Student Information System has been in flux and many addresses are not present in the files.
- I can think of nothing more burdensome to colleges than to have them provide or verify the addresses of former students. Through no fault of your research design, you have encountered a very "sticky wicket" concerning the collection of the dissertation data.

Mr. L. Pendleton Armistead
July 17, 1986
Page 2

I ask that you inform your doctoral committee about the problems of collecting data on community college graduates and early leavers. It is not appropriate for me to suggest that a doctoral committee change its study procedures. It is appropriate, however, for me to indicate that building a sample of graduates and early leavers for the 23 Virginia colleges (for follow-up purposes) is bound to entail expense and a work effort of considerable magnitude.

Yesterday, I heard from _____, Dean of Management Services at New River Community College. He indicated that you had, with the approval of your doctoral committee, changed your research design and that New River students and graduates will be the sole population for your study. The data elements which Dr. Lewis described to me and your method for collecting data represent a reasonable approach to obtain and process the information you need.

Your proposal study design was quite well done, and the results would be of interest to VCCS academic planners and evaluators. Let me hear from you in the near future.

Sincerely yours,

ER/h

Attachment

cc:

July 17, 1986

Dear

This letter is to confirm my request for the demographic data pertaining to occupational-technical degree graduates and leavers of New River Community College. This data is necessary as a means of studying the sample's views on the amount and importance of general education in the occupational curriculum.

Since the direction and scope of the study has changed substantially, I have contacted each of my committee members for discussion and approval. All members agree that the changes are justified and see no need for further delays. Dr. Dan Vogler, Committee Chairman, has also been kept informed of all proceedings and have given me the "green light".

Therefore, it would be appreciated if your office could provide the following data elements:

- 1) names
- 2) addresses
- 3) sex
- 4) age
- 5) race
- 6) FT/PT status of Quarter last enrolled
- 7) hours completed at NRCC
- 8) curriculum last quarter enrolled, and
- 9) sequences # or ID #;

restricted by the following definitions:

1. community college graduates: refers to the student who received either an Associate in Applied Science degree or Occupational-technical Certificate degree from New River Community College in June 1985; and

2. community college leaver: refers to the student enrolled in either an Associate in Applied Science or Occupational-technical Certificate degree curriculum from Fall, 1983 and did not graduate from New River Community College.

July 17, 1986
Page 2

Thank you very much for your continued support and assistance. I will be in touch with you in the near future. Should any concerns arise I can be reached at

Sincerely,

Pend Armistead

cc: Dr. Dan Vogler
Committee Members



NEW RIVER COMMUNITY COLLEGE, DRAWER 1127, DUBLIN, VIRGINIA 24084, PHONE

August 6, 1986

Mr. L. Pendleton Armistead

Dear Pend:

The demographic data pertaining to the occupational degree graduates and leavers at New River for June of 1985 and Fall of 1983, respectively, are ready for release to you. These data are confidential and sensitive and should be used only for the research purposes stated in your letters to me of July 8 and 17.

A layout of the records and a data element dictionary are enclosed. Please review these definitions carefully to make sure that we have interpreted your request accurately. The data are in report form and also on magnetic tape. You will need to arrange through Dick Bratcher, Coordinator of Computing Services, to pick up the tape from our regional computing center located at Virginia Western Community College in Roanoke. I would suggest that you review the reports very carefully before making the trip to Roanoke just in case an error has been made and we have to rebuild the tape.

Dick Bratcher personally programmed and prepared these data for you, so please direct any questions or concerns about this information directly to him.

Upon the completion of your study, we would like to have a copy of your findings. We would also appreciate a copy of your survey data, on magnetic tape if possible, to support further study at New River.

Please let me know if I can be of further assistance.

Sincerely,

v Dean of Management Services

CW

Enclosures

cc:

APPENDIX D

Survey Instrument: Data Element Dictionary

Data Element Dictionary

General Education Category

1. "Elective"
2. "Required"
3. "Other"
4. "Both 1 and 2"

Size

1. "1-9"
2. "10-19"
3. "20-29"
4. "30-49"
5. "50 or more"

Instructional Methods

1. "Never"
2. "Less than once/week"
3. "About once/week"
4. "2-3 times/week"
5. "Everyday"

Instructional Quality

1. "Very poor"
2. "Poor"
3. "Fair"
4. "Very good"
5. "N/A"

Importance of General Education Competencies

1. "Strongly disagree"
2. "Disagree"
3. "Agree"
4. "Strongly agree"

Importance of General Education Courses

1. "Low importance"
2. "Average importance"
3. "High importance"

Number of General Education Courses Completed

0. "None"
1. "1-2 completed"
2. "3-4 completed"
3. "5 or more completed"

Purpose upon Entry to Community College

1. "Occupational Certificate"
2. "Associate in Applied Science"
3. "Other"

Purpose for Taking General Education Courses

1. "Required for my program"
2. "Due to personal interest"
3. "Did not take any"
4. "Other"

Enrollment Status

1. Full-time
2. Part-time

Employment Status

1. Student in 4-year college
2. Employed full-time
3. Employed part-time
4. Unemployed
5. Other

1985 Gross Salary

0. None
1. Less than \$1,000
2. \$1,000-\$4,999
3. \$5,000-\$9,999
4. \$10,000-\$14,999
5. \$15,000-\$19,999
6. \$20,000-\$29,999
7. \$30,000-\$39,999
8. \$40,000-\$49,999
9. \$50,000 or more

Gender

1. "Female"
2. "Male"

Race

1. "Caucasian"
2. "Black"
3. "Hispanic"
4. "Other"

APPENDIX E

Initial and Follow-up Letters

August 27, 1986

Dear Vocational Education Affiliate:

As a former student, New River Community College is interested in how well the college curriculum met your needs. This inquiry focuses on your beliefs of the importance and desired amount of general education within various program areas. The only way we know to find out about the general education component is to ask you. For the purposes of this study, the general education curriculum is defined as the set of courses all students working toward an associate degree have in common in terms of the knowledge, attitudes, values, and skills that will enhance their participation in social, technological, and cultural environments. The information you provide will be made available to Virginia community college administrators as a means of improving programs for fellow students.

This is an opinion questionnaire; there are no "correct" answers. Please read the instructions for Sections A, B, C, and D; and then provide the background information in Section E.

You may be assured of complete confidentiality. The questionnaire has an identification number for mailing purposes only. This is so that we may check your name off the mailing list when your questionnaire is returned. Your name will never be placed on the questionnaire itself.

You may receive a summary of the results by writing "copy of results requested" on the back of the return envelope, and printing your name and address below it. Please do not put this information on the questionnaire itself. I would be most happy to answer any questions you might have. Please write or call. The telephone number is

Thank you for your assistance.

Sincerely,

L. Pendleton Armistead

/lpa

Daniel Vogler

Enclosure

September 8, 1986

Dear New River Community College Affiliate,

Last week a questionnaire seeking your opinion about the general education curriculum in the community college was mailed to you. Your name was drawn in a random sample of individuals from New River Community College.

If you have already completed and returned it to us please accept our sincere thanks. If not, please do so today. Because it has been sent to only a small sample it is extremely important that yours also be included in the study if the results are to accurately represent the opinions of the New River community.

Sincerely,

L. Pendleton Armistead

September 23, 1986

Dear New River Community College Affiliate,

About three weeks ago we wrote to you seeking your opinion on the importance and desired amount of the general education curriculum in various occupational programs at New River Community College. As of today, we have not received your completed questionnaire.

We have undertaken this study because of the belief that the opinions of former students of NRCC should be taken into account in the evaluation and formation of program requirements.

We are writing to you again because of the significance each questionnaire has to the usefulness of this study. Your name was drawn through a sampling process in which all area residents, who have attended NRCC, had an equal chance of being selected. This means that only about one out of every 400 people in NRCC's service community is being asked to complete this questionnaire. In order for the results of this study to be truly representative of the opinions of all area residents, it is essential that each person in the sample complete and return the questionnaire.

In the event that your questionnaire has been misplaced, a replacement is enclosed.

Your cooperation is greatly appreciated.

Cordially,

L. Pendleton Armistead

Daniel E. Vogler

Enclosure

October 2, 1986

Dear NRCC Affiliate,

Several weeks ago we wrote to you seeking your opinion on the importance and desired amount of the general education curriculum in various occupational programs. As of today, we have not received your completed survey form. Therefore, we are writing to you again to ask that you please complete the survey and mail it to us as soon as possible. If we have not received the completed survey by October 13, we will phone you sometime in the near future.

Thank you for your cooperation. Your opinions on this matter are of great importance to the significance of this study.

Sincerely,

Pendleton Armistead

October 26, 1986

Dear NRCC Affiliate,

We apologize for the persistence. However, we have been unable to obtain enough of the surveys to halt the data collection process. Therefore, if we are to generalize our findings to a much larger scope, it is essential that your completed survey is returned.

By way of the phone calls, which were made to you or a member of your family last week, several inquiries were raised concerning the purpose of this study. This project is a curricular study intended to investigate how the general education component fits into two-year occupational programs. The opinions of faculty, administrators, and employers have already been analyzed. However, the views of students and former students of NRCC have not been obtained.

We hope that you will take the 8-10 minutes necessary to complete the enclosed survey. A self-addressed, stamped envelope is also enclosed for your convenience.

Thank you for your cooperation. The information that you provide will be very important to the success and significance of the study. We would appreciate it if you could return the completed survey as soon as possible, preferably by Saturday, November 1.

Sincerely,

Pend Armistead

Enclosures

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the scanned document**