

DUAL ENROLLMENT AND THE HEAVY EQUIPMENT OPERATOR
PROGRAM AT DEKALB TECHNICAL COLLEGE

By

William Edward Gohdes

(Under the direction of JAY W. ROJEWSKI)

ABSTRACT

A major challenge to Georgia technical colleges is the low number of students moving from secondary to postsecondary (two-year diploma/associate degree) education. Georgia Department of Education records indicate that in the 1998 school year, the latest for which data was available, 6.5% of graduating seniors entered Georgia public technical and adult schools. Dual enrollment is a state funded program that may have significant impact on increasing the percentage of high school graduates who enroll in technical college programs after graduating from high school.

This descriptive study illuminates the perceptions that students, faculty, and administrators at DeKalb Technical College and the high schools in the campus service area revealed during a series of interviews conducted in the spring, summer, and fall of 2001. The interview questions sought to bring understanding of the factors that motivate students to dual enroll in a college program of study.

Data from the study indicated that students, parents, faculty, and administrators had a general understanding of the definition, goals, and key practices of the dual enrollment program but better information must be developed to expand awareness of

this program to a broader audience including students and parents of college-prep track students.

INDEX WORDS: Dual Enrollment, Concurrent Enrollment, Postsecondary Options,
HOPE Grant, Articulation, Tech Prep, Collaborative Efforts,
Motivation, Career Expectations

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By

WILLIAM EDWARD GOHDES

B.S., The Pennsylvania State University, 1969

M.Ed., The University of Georgia, 1993

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WILLIAM EDWARD GOHDES

Approved:

Major Professor: Jay W. Rojewski

Committee: Thomas J. Clees
Helen C. Hall
Karen H. Jones
John L. Scott

Electronic Version Approved:

Gordon L. Patel
Dean of the Graduate School
The University of Georgia
May 2002

DEDICATION

This dissertation is dedicated to the memories of Dr. Conrad Gohdes, Dr. Clarence Gohdes, and Dr. Lawrence Hugo, three men and educators who served as role models and who inspired me to consider the possibility of higher achievement in what may be the world's most noble profession, education. And to all the educators who have helped me along the way, you are my heroes.

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CHAPTER I

INTRODUCTION

Background

Two-year postsecondary colleges have existed since the turn of the 20th century (Orr, 1998). From 1900 through 1950, community colleges evolved as they responded to the local educational needs of a growing urban population in towns and small cities across the United States. One factor in the growth of community colleges was that colleges and universities were readily available in larger cities, but travel to distant higher education institutions was costly and burdensome. At the same time, a desire developed for affordable and easily accessible higher education that would be responsive to local needs. A second factor propelling the evolution of community colleges was the growth of local public high schools into more sophisticated educational delivery systems. Orr reports,

There is evidence that by the early 1920s, high schools were adding a 13th and 14th year to curricula; technical and vocational schools were adding some collegiate-level instruction; and colleges and universities were beginning to distinguish between the first two years (as junior college) and the last two years (as senior college) of a four-year baccalaureate program. (p. 96)

The industrial revolution created a need for more technical skills resulting in craftspeople learning to operate and maintain manufacturing facilities. The community college addressed the need for skills that required postsecondary training but not a 4-year baccalaureate degree.

From 1950 through 1980, the growth of community colleges continued as states such as Virginia and Massachusetts developed complete state-wide systems.

The development of state systems contributed to the rapid expansion of community college populations. In fact, from 1920 to 1996 community colleges increased the percentage enrollment of all first-time college freshmen from 2% to 55% (Hickey, 1996). Programs were expanded from general education courses to include more vocational and technical training opportunities. During the 1960s a name change occurred with the emergence of the comprehensive community college that provided general education courses, preparation for college transfer, vocational training, and counseling and guidance. Technical colleges, DeKalb Technical College is an example, emerged as institutions that provided primarily vocational and technical training.

In the last three decades, community and technical colleges have continued to diversify and offer both technical training programs and academic preparation in math, English, and science to provide students a bridge from high school to four-year baccalaureate programs. However, Bragg (1998) noted that transfer rates from 2-year to 4-year postsecondary institutions remains low (only 20% to 25% transfer). Hickey (1996) explained that the percentage of students who intend to transfer remains high but the actual rate of transfer has declined since the 1970s.

Community colleges are a logical stop for an immigrant population that needs assistance in learning a new language, as well as obtaining technical training to move from low-skill, minimum wage jobs to better paying positions. The two-year colleges, because of their open-door admissions policies, have also increasingly become a magnet for people from lower socio-economic classes who are moving from welfare support to

work (Rodriquez, 1999). Community colleges also serve as a platform for retraining people who become unemployed because of corporate downsizing or technological change (Orr, 1998).

DeKalb Technical College, established in 1961, is an institution that has changed with the times. It was originally developed as a postsecondary unit of DeKalb County School System and is located in the northwest part of Georgia. From 1972 to 1986 DeKalb Tech, as it is commonly called, was a division and campus of DeKalb Community College. In July 1996, governance of the school was transferred to the Georgia Department of Technical and Adult Education (DTAE), a state agency, and operates under the guidance of the State Board of Technical and Adult Education. DeKalb Tech is part of a statewide group of 33 postsecondary technical colleges in Georgia that provide both academic instruction and technical training in a wide variety of occupational areas.

Demands for technical education in Georgia have spurred the creation of satellite campuses for many of the larger technical colleges located in the urban centers like Atlanta, Savannah, Rome, Columbus, and Albany. The three building, 65,000 square foot Covington campus of DeKalb Tech, is a satellite of the main campus located in Clarkston, Georgia, 30 miles west of Atlanta. Groundbreaking ceremonies for the Covington campus were held in June 1996, and construction began in July. Covington campus opened for classes fall quarter 1997 with an enrollment of nearly 400 students. The 2002 spring quarter saw enrollment exceed 1100 students.

On August 21, 2000, a ribbon cutting ceremony was conducted at the Covington campus. The cause for celebration was the initiation of a new program, the Heavy

Equipment Operator (HEO) program, the culmination of over a year of planning involving staff from public high schools in two county school systems, the Georgia Department of Education, the Georgia Department of Technical and Adult Education, and the strong interest and support of a local industry organization, the Georgia Utility Contractors Association (GUCA). The reason the new HEO program was especially significant was that almost all students enrolled in this program were high school seniors who were dual enrolled in high school and the Covington campus of DeKalb Technical College.

The initiation of the Heavy Equipment Operator program came about as a result of hard work from both educational professionals and industry partners. Just a few of the obstacles that were overcome included differences in public high school and postsecondary technical course schedules, lack of course numbers to satisfy Georgia Department of Education full time equivalent (FTE) reimbursement procedures, lack of a high school and technical college curriculum in heavy equipment operation, and the necessity of recruiting a qualified instructor to teach the course.

The HEO program is significant for many reasons but perhaps most important is the fact that 11 high school seniors made a career decision that may have a major impact on how secondary and postsecondary institutions in Northeast Georgia and their industry partners do business with one another in creating career pathways from school to work. The design of this program is perceived by many to be the model that industry and education can use to begin filling the critical need for trained technicians and craftspersons in occupations that pay very well, but require less than a 4-year baccalaureate degree.

Oversight of the HEO program is the responsibility of an advisory group. The Heavy Equipment Operator advisory committee includes five utility contractors with businesses in the Atlanta metropolitan area who report wages in excess of \$25,000 a year for operators with five years experience. Experienced operators with 10 or more years of operating equipment can earn \$50,000 to \$80,000 dollars annually depending on the equipment used and the type of operations performed. The shortage of trained operators has resulted in a continued upward pressure on wages.

High school students choose dual enrollment for a variety of reasons. Several themes emerge from the literature (e.g., Farar, 1999; Fincher-Ford, 1997; Greenburg, 1989; Hossler & Stage, 1992; Rodriquez, 1999) including student motivation, economic incentive, and social factors such as family influence and peer pressure. However, no comprehensive theory of students' decisions to choose dual enrollment exists (Greenberg; Marquez, 1999; McConnaha, 1996). Most studies generally agree that additional research is necessary to gather information that will help build theory. From a practical perspective high school and college faculty and administrators do not know precisely why students are motivated to participate in dual enrollment programs. The literature does not adequately explain why average achieving students choose dual enrollment as an option for completing classes in the junior and senior year of high school.

Purpose Statement

The purpose of this qualitative study was to examine the factors that impacted student's decisions to choose dual enrollment as an educational option at the Covington campus of DeKalb Tech. A major reason a qualitative approach was chosen was the difficulty of matching an existing theory with the author's research interests. Dual

enrollment in Georgia is a puzzle with many pieces seeming to not quite fit together. These include student motivation to enroll in postsecondary training, interagency cooperation and agreement that makes dual enrollment possible, and collaboration that provides high school and college agreement on curriculum, funding, and crediting. Merriam (1998) describes qualitative research as a means to “reveal how all the parts work together to form a whole” (p. 6). This study is an effort to examine how the parts of dual enrollment work together or, in some instances, do not fit well together.

The literature reveals different reasons for the success of dual enrollment programs in other states such as California, Texas, Arizona, and Utah (Farrar, 1999; Fincher-Ford, 1997; Marquez, 1999; McConnaha, 1996; Sagers, 2000). Rodriguez (1999) reports on programs in California that target at-risk and minority students and successfully move them into postsecondary education. McConnaha and Sagers each found that dual enrollment benefits gifted students. This study examined how local school counselors and administrators and DeKalb Tech faculty and administrators perceived the reasons why students were attracted to dual enrollment programs at the College in the 2000-2001 and 2001-2002 school years. Answers to the question of why students choose dual enrollment is important to understanding how DeKalb Technical College can strengthen particularly the afternoon programs. Afternoon attendance remains low to moderate because the majority of adult students work during the day. Currently, the percentage of high school graduates who exit directly from high school and enroll at technical colleges remains low (Georgia Department of Education, 1999a). Dual enrollment may be a way college day-time enrollment can be strengthened with increased numbers of high school graduates moving directly to postsecondary training. Increased

day enrollment benefits both the college and the student. Additional student enrollment creates increased state revenue for tuition. A larger daytime student body allows college staff to schedule an expanded list of course offerings, i.e., classes are less likely to be cancelled because of low student enrollment.

This qualitative study provided an opportunity to examine the many facets of dual enrollment and answered questions about the strengths and weaknesses of the Covington program. Answers to research questions provide the information for a better understanding why students chose dual enrollment. This knowledge can assist the Office of Student Services and staff in Instructional Services at the Covington campus market dual enrollment to students at local high schools. The use of a qualitative study provided the opportunity to explore the total context of dual enrollment, to holistically view the interplay of students, faculty, and administrative staff and the decision making factors students used when they selected dual enrollment (Merriam, 1998).

Research Objectives

The principal focus of this study was to discover what factors led high school students to choose dual enrollment in the Heavy Equipment Operator program as an educational option during the school years 2000-2001 and 2001-2002. It was important to know why HEO students chose dual enrollment over other educational opportunities and what their perceptions were of the positive and negative factors that affected them in the course of their studies. It was also was also important to inquire into the educational characteristics of students enrolled in the program, e.g., their academic history, career objectives, work experiences, and other background information that influenced them in deciding to come to the Covington campus. The targeted groups of the study were:

1. High school students who completed the HEO program in the 2000-2001 school year and a second group of students who enrolled in the program during the 2001-2002 school year.

2. Faculty, counseling, and administrative staff from both the high schools and college.

The interview questions differed somewhat between the students and adults. A summary of the similarities and differences in the questions follows:

1. Students, faculty, counselors, and administrators were all asked to define dual enrollment. The purpose for doing so was to ensure that all parties understood the basic tenets of the program and to determine if the student definition of the program matched that of the adults.

2. Students, faculty, counselors, and administrators were asked about parental understanding of the program. Hossler, Schmit, & Vesper (1999) indicated that family influence, particularly that of parents, is an important factor in a student's decision to enroll in postsecondary training. An important factor of this study was to determine if parents played a significant role in helping the HEO students choose dual enrollment. Parent interviews were not scheduled for this study because parental involvement is the subject for a future research project by the author.

3. Both students and the high school and college staff were asked how they viewed dual enrollment as an educational option to determine if the two groups, i.e. staff and students, shared common opinions about the program. This was deemed important because these opinions impact marketing of the program. Marketing is designed to offer a program that meets the needs and desires of the intended participants. A good

marketing program will occur if the adults, who possess the power to support or not support the program, deem it to be a worthy cause. If the needs and desires of the two groups are different, then separate marketing strategies are necessary.

4. The *Student Interview Guide* asked several questions specific to students. These included queries about how participation in a college program affected studies, employment, leisure time, and time spent with family and friends. Questions were also asked if dual enrollment changed student's attitudes towards school and learning. This question was significant because it may help determine if dual enrollment entices students to stay at the technical college after high school graduation.

5. The *Faculty and Staff Interview Guide* asked several questions that were not pertinent to students. A question asked was how the high school and college staff perceived dual enrollment compared to Advanced Placement programs and if the two programs targeted the same population of students. This question resulted from discussion among HEO industry advisory committee members who asked why more college-prep track students were not volunteering for the program. Excavating and grading contractors need employees with good math, reasoning, and problem-solving skills. Several contractors in the HEO advisory committee reported they were unhappy with the skill levels entry-level employees bring to the workplace in the core academic subjects of reading and math. The researcher asked faculty and administrators if they believed dual enrolled students were academically prepared for college work.

6. Faculty and administrators were asked what improvements needed to be made to dual enrollment programs at the secondary, postsecondary, and state department levels in Georgia. Responses from all were important since the integration of high school with

college requires close cooperation and coordination between all three levels of bureaucracy. A failure to provide needed guidance and resources at any one level can have a crippling effect on the others.

Conceptual Framework

This is a descriptive study that illuminates the perceptions that students, faculty, and administrators at DeKalb Technical College and the high schools in the campus service area revealed during a series of interviews conducted in the spring, summer, and fall of 2001. The interview questions seek to bring understanding about the factors that motivate students to dual enroll in a college program of study, in this instance, the Heavy Equipment Operator program. Davis (1993) referring to the work of Bligh (1971) and Sass (1989) wrote, “Many factors affect a given student’s motivation to work and to learn” (p. 193). Royse (2001) describes several reasons students enroll in classes including “girlfriends, boyfriends, roommates, or teammates have signed up or even because it is held at a convenient hour-either late in the morning or back-to-back with another course they require” (p. 218). A concern of the researcher was that students dual enrolled simply as a way to avoid attending afternoon high school classes. The interview questions were designed to bring understanding to the motivation behind dual enrollment and to see if the reasons behind student decision making to participate in higher education matched those of young men and women in other studies (Marquez, 1999; Rodriquez, 1999).

Motivation Defined

Chapter II, Literature Review, provides a wider perspective of how motivation impacts educational decision making of students but a brief description here will help to

define the conceptual framework of this study. Wlodkowski (1985) describes the way psychologists use the word motivation. He states that motivation is a process that arouses and initiates behavior while at the same time gives direction or purpose to behavior. Motivation results in persistence of behavior and contributes to choosing or preferring a particular behavior. He states that motivation is important because “we continuously realize that the *motives* people bring with them to the learning situation strongly affect how and what they learn” (p. 2). Motivation directs readiness to begin an activity and research indicates that learning and high levels of motivation are correlated (Csikszentmihalyi & Schneider, 2000; Wlodkowski).

Brown (1999) provides a somewhat simpler definition. He describes motivation as “Attempts by the body or mind to satisfy certain basic wants or needs” (p. 6). “It provides the direction and energy for behavior” (p. 7). This reflects Maslow’s (1971) hierarchy of motivation which includes five levels:

1. Physiological needs that include hunger, thirst, shelter, sex.
2. Safety needs that include security and protection from physical and emotional harm.
3. Social needs such as friends, belonging to the group, affection and acceptance.
4. Esteem which is divided into internal factors such as self-respect, autonomy and achievement; external factors include status, recognition and attention.
5. Self-actualization which is the highest level or highest drive that can only be realized when the lower needs have been met. Self-actualization is characterized by a person doing things. An example is the dual enrolled high school students who

participate in college classes to advance their career goals and receive credit towards high school graduation.

Brown (1999) states that body needs center around survival factors, the safety needs that Maslow describes. He defines the needs of the mind centering on self-determination, connectedness, and competence. Self-determination is reflective of Maslow's esteem category. "Self-image is at the highest level when people feel that they are making the critical choices that determine the direction of their lives" (p. 6).

Connectedness refers to the way people interact on a personal basis with one another. It is descriptive of Maslow's social needs category. Brown (1999) describes competence as people being effective in what they do. They accomplish tasks they set as goals and do so to the best of their abilities. To Maslow, satisfactory goal achievement through the completion of a meaningful task would be realization of self-actualization.

The Importance of Motivation

Wlodkowski (1985) writes, "there is substantial evidence that motivation is consistently positively related to educational achievement" (p. 3). He states that two people, given equal ability, will differ on academic performance and outcome based on the level of motivation each possesses. He further states that motivation mediates learning, i.e, learning more successfully occurs when students are interested in instruction and that creativity and other higher order thinking skills blossom when motivation is high.

Houle (1988) presented a typology that classified learning orientation into three groups: goal-oriented, activity-oriented, and learning oriented activities. Goal-oriented students "use education as a means of achieving some other goal" (Merriam & Caffarella,

1991, p. 83). Activity-oriented students are motivated to enroll in a class that includes lecture and/or laboratory sessions that create or enhance a particular skill. Learning-oriented students “seek knowledge for its own sake” (Merriam, p. 83).

The student interview questionnaire asked students if their parents wanted them to continue college, and if so, why. Escape/stimulation is also of interest. Merriam and Caffarella describe this factor as “indicative of learners who are involved as a way of alleviating boredom or escaping home or work routine” (p. 85). Was dual enrollment considered a way high school students could escape from boredom and the routine of high school? Interview questions revealed that several of the students did indeed express dissatisfaction with high school classes because they were boring and at least one student chose dual enrollment as a way of escaping school routine.

This is primarily a descriptive study and theory development was not the main goal of the study. However, if meaning is to be derived from the data, theory may emerge. Therefore, the research method used in this study is built upon grounded theory (Glaser & Strauss, 1967; Merriam, 1998; Strauss, 1987).

Grounded Theory Research Design

The term substantive theory is also sometimes used to describe grounded theory research methodology. Merriam (1998) describes substantive theory that “has as its referent specific, everyday-world situation” (p. 17). The specific everyday-world situation in this study was the classroom activities of HEO students. Merriam continued her definition of grounded theory with an explanation of the constant-comparative method of data analysis. Using the constant-comparative method, the data accumulated

from the HEO group was compared and contrasted with the results of the faculty/administrators interviews and data reported in the research literature.

For example, Rodriquez (1999) used the constant-comparative method to study the perceptions of staff and students towards the benefits and limitations of dual enrollment programs at two California high schools. Her intent “was to identify the unmet needs of community college-bound students so that strides may be taken to determine strategies to improve college preparation for this particular population of high school students” (p. 56). The perceptions of the high school students and staff were then compared with perceptions of community college administrators. She collected data from interviews with students, faculty, and staff at Malcolm and De La Guerra High Schools. She began analysis by collecting and categorizing data provided through the interviews into groupings that share something in common. The groupings were as exhaustive as possible and mutually exclusive, “meaning that a unit of data can be placed into only one category” (p. 56). She then compared the student data with the perceptions of the high school staff. She next compared the perceptions of the high school students and staff with those of the community college administrators. Merriam (1998) describes this process.

Basically, the constant comparative method involves comparing one segment of data with another to determine similarities and differences....Data are grouped together on a similar dimension. This dimension is tentatively given a name; it then becomes a category. The overall object of this analysis is to seek patterns in the data. These patterns are arranged in relationship to each other in the building of a grounded theory. (p. 18)

Results of this study may contribute additional data to assist other researchers in their development of themes and patterns that occur within the context of the group studied, i.e., moderate achieving high school students placed in a technical or community college environment.

Research Considerations

Easton, McComish, and Greenberg (2000) cite pitfalls that can occur in qualitative data collection, transcription, and interpretation. Three common problems that beginning qualitative researchers may encounter are equipment failure, environmental hazards such as poor sound quality on voice recordings, and transcription errors. To minimize the possibility of error several preventive measures were used. Audio recording equipment was tested to ensure quality of sound and back-up recording devices helped to protect against equipment failure. Hand written notes were taken during the course of the interviews to supplement recordings and serve as a cross-reference.

Steinitz and Solomon (1986), who studied upwardly mobile working-class youth, caution against misinterpretation of data that may occur when researchers harbor pre-conceived ideas about expected outcomes. Lack of qualitative research experience can result in inaccurate conclusions being drawn from the data (Borg & Gall, 1989). Researcher inexperience may result in missing key variables when forming research questions. Inexperience can also result in the simple mistake of not asking the right or obviously appropriate questions that should evolve during an interview; an opportunity that a skilled practitioner would be less likely to miss (Borg & Gall; Merriam, 1998). To this end, the aid of an experienced qualitative researcher was enlisted to assist with the

development of interview questions and provide guidance in planning, conducting, and interpreting the data collection process. The researcher, a retired adult education professor at the University of Georgia's College of Education, participated in many case study dissertation projects while on faculty of the adult education department. At the time of this writing, the retired professor remained active in consulting and research activities for a varied clientele. This person's guidance and advice helped shape the interview questions and the organization of Chapters I and III.

Assumptions and Delimitations

Qualitative research methodology presents several challenges "to producing valid and reliable information in an ethical manner" (Merriam, 1998, p. 198). For this study, time and the numbers of students involved pose limitations. An ideal research situation for a case study is to sample a large number of people, the literature review suggests 20 to 30, who would be observed and interviewed over a lengthy period of time. One dual enrollment research project (McConnaha, 1996) was conducted for four years. This study was restricted to a small number of students and a shorter length of time, approximately one year. Generalization of the results of this study to other situations in other institutions is not warranted because of the limited scope of the study. However, the interpretation of data is compared and contrasted with information available from other similar studies. Chapter V presents the results of study comparisons.

Definition of Terms

Postsecondary options, concurrent and joint-enrollment and dual-enrollment are defined in different ways in different places. The definitions for joint and dual enrollment in this study are derived from the Georgia Department of Education

(GADOE) and Department of Technical and Adult Education (DTAE) rules, regulations, and guidelines.

1. Postsecondary options: The program in which a student enrolls jointly in a high school program and a college or postsecondary technical/career preparation program (Georgia Department of Education, n.d.-a).

There are two types of postsecondary options:

a. Joint-enrollment (Postsecondary Credit Only Program [PSCOP]): A program of study in Georgia postsecondary institutions in which the student receives college or technical/career preparation credit from the postsecondary institution for courses taken through that institution. PSCOP is funded by the HOPE Grant program and DeKalb Technical College receives tuition assistance money from HOPE. The local high school does not receive reimbursement for students enrolled in a PSCOP program

b. Dual enrollment (Postsecondary Dual Credit Program [PSDCP]): A program of study in Georgia postsecondary institutions in which the student receives college or technical career preparation credit and high school Carnegie unit credit for courses taken through the postsecondary institution. This option has, for the most part, been replaced by the Dual enrollment/HOPE program.

2. Dual enrollment/HOPE: A program of study in Georgia postsecondary institutions in which the student receives both college and high school credit for courses taken at a technical college. The student's home high school receives Full Time Equivalent (FTE) funding for participation in the college course. The student receives the HOPE scholarship to cover the costs of books, mandatory fees, and tuition.

3. HOPE Grant: The HOPE (Helping Outstanding Pupils Educationally) Grant provides state funding assistance to Georgia residents who are attending a Georgia public technical college and who enroll to earn a certificate or diploma in an approved program of study.
4. Concurrent Enrollment: Referred to in the literature as the teaching of regular or adapted college classes by college faculty or high school instructors on college or high school campuses (Greenberg, 1989). Also referred to as joint enrollment.
5. ASSET Test: ASSET is the acronym for Assessment of Skills for Successful Entry and Transfer. ASSET is a placement test developed by American College Testing (ACT). The test defines correct placement of students in English, math and reading.

Significance of Study

A review of the literature revealed only one article (Johnson, 1983) in which joint enrollment in Georgia was discussed and evaluated. The Heavy Equipment Operator program at DeKalb Technical College offers an excellent opportunity to research the feasibility of creating and funding secondary/postsecondary collaborative programs that target the technology/career diploma student for enrollment in Georgia's 2-year college programs. The great advantage of dual enrollment for high school students is college courses may contribute directly to achievement of specific career goals (Fincher-Ford, 1997; Gray & Herr, 1995). Too often, high school technology/career electives are limited to Business Education, Family and Consumer Science, Technology Education, and one or possibly two Trade and Industrial programs or Agricultural Education. High school career/technology teachers complain about students who have no interest in a particular program being assigned to a class because the occupational area of interest to them is not available and the counselor or registrar assigns them the class because a seat is available.

Students are forced to choose among elective classes that have no real meaning for them and their participation in class, or lack thereof, works to the detriment of other students who enrolled in the course because they are genuinely interested in the occupational area that is the focus of instruction (Georgia Department of Education, 1999b).

Results from this study provided additional needed data to facilitate the goal of enrolling a higher percentage of high school students directly into technical college programs after graduation from high school. Of particular interest were the factors for program selection. Students are required to achieve passing scores on a placement exam, the ASSET (Assessment of Skills for Entry and Transfer) test, to gain program admission. Test scores, then, were one of the factors that decided admittance into dual enrollment programs. Students' interest in the Covington campus programs was another factor. Transportation from high school or home to Covington campus was an issue and a disadvantage for enrollment for those students who did not own cars or lack friends or family who could drive them to classes. Two students in the 2001-2002 class required help from family to drive them from high school to the college for the dual enrollment classes.

Gray and Herr (1995) make a compelling argument for moving more high school students directly from high school to 2-year postsecondary diploma and associate degree programs. They describe the costs to society in terms of financial, social, and psychological damage that occurs when young adults drop out from either high school or 4-year college/university programs. This drop-out phenomena often occurs because students were inappropriately directed towards baccalaureate degree programs out of ignorance, apathy, or bad judgment on the part of parents, counselors, teachers, and

sometimes, family and friends. Peer pressure can be fierce as it plays a part in persuading young adults that a university program is the only avenue to success. DeKalb Technical College, like many other 2-year institutions in Georgia, continued to enroll reverse transfer students who have either completed a 4-year degree but have limited marketable skills for high wage, high tech employment or students who have dropped out of a four-year program because they discovered they were not academically prepared, or were not ready for the competitiveness of their programs of study. Hull and Parnell (1991) suggest the solution to the misdirection of students as they pursue postsecondary training is to redirect educational goals away from the baccalaureate to the associate (and diploma) degree for students who are not in the academic top 25 percent of their class.

Dual enrollment, if successful, may be a significant way to redirect students into more appropriate educational opportunities and reduce the casualties to which Gray and Herr (1995) speak. There are, however, formidable barriers to making this a major avenue for movement of students from high school to technical college.

Cross (1981) discussed the propensity of high school completers “to stop out, that is, to take a break between graduation from high school and entrance into college” (p. 12). Convincing some seniors whom are intent on taking a break from school that enrolling in postsecondary training immediately after graduation is a prudent course of action is a challenge (Cross; Rodriguez, 1999). Dual-enrollment, however, is an avenue to capture students and motivate them to continue studies immediately after leaving high school. The Covington campus experienced this situation when four dual-enrolled high school students graduated high school in the spring of 2000 and registered for the fall semester at DeKalb Tech. These four students chose college courses that were directly

related to their career objectives. They dual enrolled, rather than settle for general high school vocational courses with no direct link to a specific occupation of their choice. The student interviews revealed that participation in dual enrollment programs accomplished the goal of attaining knowledge and skills in an occupational area of interest to the student. The HEO program enrolled a small number of students compared to other programs at the Covington Campus. However, the marketing of the program to a specific interest group of high school students, i.e., students who have the construction industry as a career goal, is a change in organizational strategy from the laissez faire approach of the past few years when dual enrollment was the sole responsibility of the high school staff. If successful, the targeting of larger groups of students for specifically-designed and specially-arranged programs of study may increase the numbers of secondary students that move directly from high school to technical college.

A second major barrier to moving students to technical college is parent unwillingness to accept anything less than enrollment in a 4-year program of study (Gray & Herr, 1995; Rouse, 1998). DeKalb Technical College must be able to successfully market technical certificates of credit, diploma, and associate degree programs to students, but more importantly, to their parents. Parents may benefit from their child's enrollment in a two-year postsecondary institution through savings from tuition, books, room, board, and transportation. Gray and Herr report that parents of students who prematurely leave baccalaureate programs must continue payment on student loans despite the fact their child has not secured a degree. Graduation from a diploma or associate degree program at DeKalb Tech may save parents and students money while providing skills that provide high wages immediately upon graduation.

The initiation of the HEO program garnered a respectable amount of publicity through stories written in local newspapers (Fletcher, 1998; Morris, 2000; Thomas, 1999). If the HEO program succeeds and students are placed in well-paying jobs or if they successfully complete an additional two years of education as part of a 2 + 2 program, the college will gain an excellent marketing tool. This study provided DeKalb Tech faculty and administrators with data that identified the strengths and weaknesses of dual enrollment programs. Findings suggest ways that postsecondary programs can be marketed to students and parents, built around student, faculty, and administrator's response to the research questions. The study also addressed how deterrents to success can be overcome and ways instructional delivery may be strengthened. Perhaps most importantly, it provided a student perspective on the factors that were important to them as they considered a decision to participate in a dual enrollment course of study.

Bragg (1998), when discussing priorities for research, notes, "Whereas little attention was paid to secondary vocational education, even less was paid to the postsecondary level" (p. 88). One of the questions this research helped to address was, "What relationships exist between secondary and postsecondary vocational education" (p. 88). Dual enrollment is one part of a growing secondary/postsecondary relationship in schools throughout Georgia. Dual enrollment has the potential to become a major factor in increasing the percentage of high school students who choose DeKalb Tech as the next step in their education experience.

CHAPTER II

REVIEW OF LITERATURE

Historical Perspective on Development of Dual Enrollment

National Historical Perspective

A review of the literature reveals several agencies and authors that list the number of states that provide dual enrollment programs where secondary students earn both high school and college credit. The Education Commission of the States (1997) lists 20 states that offer high school students postsecondary options or dual enrollment opportunity. Eleven states, including Georgia, offer comprehensive programs at minimal or no cost to students. The Educational Commission (ECS) further defines a comprehensive program as one that allows credit towards high school graduation as well as credit for the college course completed. A comprehensive program offers few course restrictions.

ECS lists one state (Iowa) that is defined as having a moderately comprehensive program where there is minimal or no cost to students but students can apply credit toward high school graduation only.

The Commission lists six states that provide limited programs, that is, programs that require students to pay tuition costs of college courses. There are more academic restrictions in the limited category, and there are stringent criteria on eligible courses. Two states, Nevada and Oklahoma, are also listed but little was known about the details of the postsecondary options/dual enrollment at the time the article was published.

Henry (1997) cites a 1997 study conducted by the Statewide Higher Education Executive Officers Association where 41 of 44 states surveyed “approve of and promote

high school students taking postsecondary education course work, that is, concurrent or dual enrollment” (p. 3). The names of the 41 states were not provided. Clayton (1999) cites the ECS study and makes reference to the 11 states that have comprehensive dual enrollment programs.

Reisberg (1998) reports that 38 states have created dual enrollment programs. He states that saving money through tuition reduction is a major reason parents, college administrators, and politicians support dual enrollment programs. Dual enrollment, however, is not without its critics. The University of Virginia and Lafayette College are cited as two examples of postsecondary institutions with faculty and administrators who are not satisfied with the quality of dual enrollment courses. Professors at these institutions insist there is insufficient rigor in too many dual enrollment classes to permit freshman to bypass first-year core courses. Koelling (1997) lists Brigham Young, Notre Dame, Rice, Colorado College and the University of Southern California as examples of universities that do not accept dual enrollment credit. Koelling states “college students are considered adults responsible for their own actions; high school students aren’t” (p. 3). This reflects a criticism that high school students may not possess the maturity or motivation to handle the required high school work needed for graduation while simultaneously enrolling in challenging college classes (Clayton, 1999; Henry, 1997; Reisberg; Smith, 1999).

However, there are studies that refute this view. Mabry (1988) states that 85% of LaGuardia Community College’s Middle College dual enrolled students, many of whom are at-risk students, go on to college. Rodriguez (1999) reports this number at 75%. The Ford Foundation provided grants to expand the Middle College program to an additional

nine institutions including Shelby State Community College in Memphis, Illinois Central College in East Peoria, and Union County College in Cranford, New Jersey. Mabry lists the Maricopa Community College District in Arizona as an agency with agreements that cross high school, individual district college, state university, and private college boundaries. Business and industry are also an integral part of these interagency agreements. Rodriquez (1999) found that the Mathematics, Engineering, Science, and Achievement (MESA) program, established by the University of California, served approximately 15,000 California students in 1998. The program focuses on academic enrichment, group study, academic and financial aid advising, career exploration, and parent involvement for low-income students who are university bound. These students span grade levels from elementary to the University. In 1996, 1,360 students graduated from the MESA program and Rodriquez reports that “26 percent enrolled at UC campuses, 25 percent at CSU campuses, 23 percent at California community colleges, 12 percent at California independent colleges, and the remainder went to school out of state, joined the military or did not enroll in college” (p. 28).

Sagers (2000) divides concurrent or dual enrollment into three categories. The first category (Type I) includes high school students who take classes on a college campus. The HEO program at Covington campus is an example of a Type I category. The second category (Type II) occurs when college professors teach at a high school campus. Coweta County in Central Georgia supports a charter school devoted to technical/career education where college instructors from West Central Technical College teach classes at the high school campus. Category three (Type III) is defined as a situation when a qualified and specially trained high school instructor teaches college

courses at the high school. Santa Fe Community College, a Type I school in Gainesville, Florida, provides instruction at the college (Galloway, 1994). Salt Lake Community College, a Type II school, enrolled 5,400 students at 25 high schools in 3 counties (Smith, 1999). Advanced Placement (AP) classes (Type III) are traditionally taught at the high school by faculty who meet a certain criteria. For example, the Syracuse University Project Advance (SUPA) enrolled 3,900 high school students in five states - New York, New Jersey, Maine, Massachusetts, and Michigan - in 13 different freshman level courses. The University provides graduates with a transcript, and Reisberg (1998) reports that “91 percent of them have been able to transfer those credits to other four-year institutions” (p. 40). Teachers at these high schools must have a master’s degree and five years of teaching experience to qualify as AP teachers. They must also participate in a University-sponsored training program created specifically for AP teachers. SUPA, in existence since 1972, is a high-quality program that has received national recognition and was given a national award by the Carnegie Foundation for the Advancement of Teaching (Sagers, 2000). It has been widely copied by other school systems throughout the United States.

Florida is also home to the Partners in Progress program (PIP) sponsored by the Florida International University (Greenberg, 1989). In this Type I model students are brought to the University during summer break. Specially trained high school faculty teach first-year summer school students basic skills to help prepare them for the Scholastic Aptitude Test (SAT). Students who do well are selected to return a second summer where they may enroll in college courses and earn up to six college credits depending upon their success with the SAT. The program is financed through

scholarships and fees for books and materials that are covered by the University. The target population for the PIP program is minority students who attend inner-city schools. Similar to PIP, Kingsborough Community College, a unit of the City University of New York (CUNY), provides college-level courses taught by high school teachers (Greenberg, 1989). The teachers are employed as adjunct faculty by the College and teach at a high school campus. Students are invited to come to the Kingsborough campus once a semester to visit and tour the campus. The target population for this program is average-achieving students. Greenberg states the program is successful; in one year, 319 students “earned slightly under a B- average. Almost 70% made a passing grade” (p. 28).

In 1985 the Minnesota state legislature enacted a program titled The Post-Secondary Enrollment Options Program (PSEOP). PSEOP allows high school juniors and seniors to dual enroll, tuition free, at colleges in the state. Students may earn no more than two years of college credit, however, they cannot earn both high school and college credit. They must exercise a single option and if college credit is chosen, students must assume costs for tuition. If a student selects high school credit, and then enrolls in the college that offered them the course(s), the college is required to award credit for that course. Greenberg (1989) makes reference to a study of PSEOP by the University of Minnesota where “31% of the high school students received grades of A, while 60% received grades of A or B” (p. 31).

Dual credit was initiated by the Texas legislature in 1982. This program allows high schools and community colleges to work together through a program titled Advanced High School Program (AHSP). Fincher-Ford (1997) lists several community colleges and systems that implement the AHSP including Midland Community College,

Dallas County Community College System, Del Mar College, and Houston Community College System. Fincher-Ford also reports that in September 1988, the Virginia Department of Education and the Virginia Community College District created an agreement to provide dual-credit courses to high school students.

Greenberg (1989) cites another unusual dual enrollment program, Seattle University's Matteo Ricci College. Matteo Ricci provides a six-year program that begins with 9th grade in high school and culminates with a Bachelor of Arts degree six years later. Students attend both high school at the Seattle Preparatory School for three years, then matriculate to the Seattle University campus for the remaining three years. The issue of student maturity influences selection into the program. Students are carefully selected then mentored during their enrollment at both the prep school and the University. The major benefit to the program is the reduction in time and costs when two years are removed from the high school to college graduation time span. Greenberg cites one major disadvantage, i.e., credit transfer to other institutions is difficult because of the unique nature of the program. Matteo Ricci does have articulation agreements with other colleges and universities to help mitigate this problem but many postsecondary institutions will not accept transfer credit.

Cornett (1986) in a Southern Regional Education Board (SREB) research study stated,

Joint enrollment, also referred to as dual or concurrent enrollment, is the most popular type of college-school effort in the SREB states. Programs exist at well over three-fourths of the public two-year and four-year colleges and at more than half of the private institutions. Most joint enrollment programs

appear to have the following standards: the student must be a senior with at least a score of 1000 on the SAT and a 3.0 grade-point average. Required scores range from 940 to 1200 on the SAT and 23 to 30 on the ACT, with a 3.0 or 3.5 grade-point-average. (p. 16)

No discussion of dual enrollment would be complete without citing the relationship of dual enrollment with Tech Prep. Hull and Parnell (1991) and Hull (1993) defined a 2+2 model for moving students from 2-year high school vocational education programs into 2-year diploma or associate degree programs. This 2+2 approach is designed to provide students with an alternative to the 4-year baccalaureate program and targets middle quartile or average students. These adolescents traditionally choose not to pursue a 4-year degree or often are not academically qualified to be successful in a college or university program of study (Mabry, 1988). Gray and Herr (1995) speak of a growing need for workers in high-skill/high-wage areas of employment suggesting that many of the emerging high-paying occupations require specific technical skills found in 2-year diploma or associate degree. They suggest Tech Prep as a vehicle and argue,

A final incentive is an arrangement in which those who meet certain academic and technical education standards in their junior year and first semester of their senior year are allowed to begin their certificate or associate degree program as college student. (p. 137)

The dual enrollment programs at Covington Campus follow this model. Students who are academically qualified and have completed prerequisite courses in their freshman, sophomore, and junior years are admitted into DeKalb Technical College programs upon successful completion of the ASSET placement exam. For example,

students who complete Construction I, an articulated high school course offered at Social Circle High School, and pass the ASSET exam with qualifying scores, are admitted into the HEO advanced level classes.

In summary, dual enrollment has been in existence since the early 1970s but has accelerated through the 1980s to the present (Fincher-Ford, 1997) and has spread to a large portion of the United States (Education Commission of the States, 1997). There are several models of dual enrollment in existence including college courses taught to high school students at a college, at a high school by a college professor, and at a high school by a specially trained and qualified high school instructor (Sagers, 2000). A primary benefit of dual enrollment programs is the reduction of time and cost of obtaining a certificate, diploma, or degree at a postsecondary institution (Greenberg, 1989).

Dual enrollment can also eliminate duplication of courses and provide an academic challenge to students who are bored with a high school curriculum (McConnaha, 1996). The research literature indicates that dual enrollment can provide benefit to academically average students and perhaps most importantly, to economically disadvantaged young people who otherwise might not aspire to higher education achievement (Farar, 1999). However, disadvantages do exist. Students may suffer from increased demands placed on their schedules, economic difficulties encountered by tuition costs, and inability to transfer credit to colleges and universities that do not accept dual enrollment credit (Reisberg, 1998).

State of Georgia Perspective

One difficulty technical colleges in Georgia and throughout the United States encounter is overcoming student and parent preference for enrollment in four-year

college/university programs (Gray & Herr, 1995; Johnson, 1983). A recent educational innovation that holds promise for encouraging more high school students to pursue two-year programs is enrollment of high school juniors and seniors in postsecondary programs of study. There are two innovative programs currently in effect. The first is called Postsecondary Options (PSO) and provides two major options: Postsecondary Credit Only Program (PSCOP) permits a student to receive college credit from the college or university in which the student is enrolled. Tuition is paid through Full Time Equivalency (FTE) funding from the State Department of Education to a special fund that reimburses the college or university for student tuition. The second option, Postsecondary Dual Credit Program (PSDCP), provides for “a program of study in which the student receives college or technical career preparation credit and high school Carnegie unit credit for courses taken through the postsecondary institution” (Georgia Department of Education, n.d.-a). Again, funding for this option comes from the Postsecondary Dual Credit Program Grants Account, a special revenue source that is funded through FTE reimbursement. A major disadvantage to PSO funding is that the FTE reimbursement follows the student to the college or university and thus denies the local school system money that is associated with the support of the student enrolled in a PSO program. Superintendents of schools are reluctant to send large groups of students to PSO programs because of the loss of revenue to the local system.

In addition to PSO, students can take advantage of the Dual Enrollment/Hope Grant program, a second major revenue source for dual enrollment. A memorandum from the Georgia Department of Education, Office of the Deputy State Superintendent of Schools, (Nelson, 2000) stated that a committee of representatives from both DOE and

DTAE determined that “it was possible for secondary schools to receive FTE funding for students enrolled in a high school class taught by a postsecondary instructor, for postsecondary schools to receive funding from the Hope Grant, and for the students to receive dual credit for the course” (p. 2). The committee stated several stipulations to this finding.

1. Courses must be team-taught, i.e., there must be both a secondary and postsecondary instructor assigned the class. The postsecondary instructor is the lead instructor.
2. Reports submitted to DOE requesting FTE reimbursement must indicate a high school teacher and follow routine request procedures.
3. Both DOE and DTAE must approve the courses offered.
4. Courses were initially limited to the Certified Construction Worker, Certified Customer Service, Certified Manufacturing Specialist, and Heavy Equipment Operator programs. In 2001 these course offerings were subsequently expanded under a GADOE/DTAE agreement that outlined course eligibility. Secondary courses offered through dual enrollment are limited to Technology/Career courses, that is, academic courses are not eligible for HOPE/Dual Enrollment funding. The rules for offering these courses include:

- Course objectives correlate with state GADOE board approved Quality Core Curriculum (QCC) course objectives;
- A state-approved assigned course number has been assigned;
- Secondary core academic courses are not included;

- Course objectives correlate with the state GADOE board approved, state-funded Technology/Career QCC course objectives;
- Classes are monitored and supported by a secondary teacher or secondary staff person who may hold a position other than teacher, such as a counselor, vocational director, or part-time teacher who is Georgia certified, employed by the secondary school system, available during the time that the course is offered, and not responsible/assigned to another instructional activity at the same time.
(Georgia Department of Education, 2001, p. 1)

5. Colleges cannot offer courses that duplicate instruction at the high school.

6. Loss of credit for students and/or loss of funding may occur if procedures are not properly followed.

7. Approval for new dual enrollment programs must be submitted to DOE.

Temporary course numbers were assigned for the four approved courses and DeKalb Tech's Heavy Equipment Operator program was cross-referenced with the DOE Construction Technology IV program.

A second challenge to Georgia technical colleges is the low numbers of students moving from secondary to postsecondary (two-year diploma/associate degree) education. The Georgia Department of Technical and Adult Education (2000) figures indicate that in the 1998 school year, the latest year for which data is available, 6.5% of graduating seniors entered Georgia public technical and adult schools. Georgia Department of Education (1999a) figures indicate that 37.5% of 1998 graduating seniors entered Georgia public colleges and universities. Taken together, 44% of the class of 1998 decided to continue their post-high school education in Georgia. Statistics are not

available for the number of students who enrolled in out-of-state postsecondary institutions, private institutions, joined the military, or entered directly into the workforce. A cursory examination of these figures, however, lends credence to the idea that great potential exists for moving more high school graduates into two-year technical training programs. For example, the Covington Campus, DeKalb Technical College, would benefit from the enrollment of a higher percentage of particularly daytime students in trade and industrial programs.

McCarthy (1999) reports that 22 states allow joint or dual enrollment. The goals for these programs vary from state to state, but all share one common goal of moving students from high school to postsecondary education. Students are attracted to these programs for many reasons; however, one common thread found throughout the literature is that dual enrollment provides learning experiences not normally available at the high schools (Galloway, 1994; Koelling, 1997; McCarthy). Cornett (1986) surveyed approximately 300 two-year and four-year institutions and found that dual enrollment programs are infrequently initiated for underprepared or unmotivated students. Rodriquez (1999), however, found that the concurrent enrollment programs at South Bay Community College in Southern California “motivated nearly all of the average-achieving students to attend college because the courses provided information about their career goal and an understanding of how a college education contributed to this goal” (p. xi).

The faculty and staff of Covington Campus of DeKalb Tech currently have begun the process of addressing many of the major concerns and barriers to successful program implementation that are cited in the literature. Some of these concerns and barriers

include lack of basic core skills in reading, communication, and mathematics, student motivation to complete a demanding curriculum, and the difficulty of aligning various education agencies rules and regulations regarding schedules and credit for work completed.

The challenge facing DeKalb Technical College and local high school faculty and staff is increasing the number of students who graduate from high school and immediately enroll in two-year postsecondary programs of study. Until this problem is addressed, Georgia business and industry will continue to suffer from inadequate numbers of skilled technicians and craftsmen and women (Construction Education Foundation of Georgia, 1999; Georgia Department of Labor, 1996). Graduating seniors will continue to spend the early years of adulthood in employment that pays minimum wage and benefits. Georgia will continue to lose the potential tax revenue that higher paying skilled positions provide. Students who delay their post-high school education create a burden for themselves when they return to school and must balance education, employment, and family life.

Local Perspective

The Heavy Equipment Operator (HEO) program has received considerable attention in the local press. Covington Georgia, in Newton County, is the home city for the Covington Campus of DeKalb Tech. On October 24, 2000, The Covington News published a story written by one of the HEO students, Spencer Morris, a senior at Eastside High School, one of two high schools in Newton County. Mr. Morris described his career goals, his involvement with dual enrollment in the college, and his experience with the youth apprenticeship program. Youth apprenticeship is a DOE approved

curriculum where a student is given credit for classroom and work experience. State Board Rule 160-4-3-.13 (Georgia Department of Education, n.d.-b.) defines youth apprenticeship as “an individual career plan that provides articulated school-based and work-based components that lead to a postsecondary credential/diploma and Certificate of Occupational Skills” (p. 1). Youth apprenticeship is one aspect of dual enrollment and occurs when the apprenticeship student enrolls in college courses to satisfy the requirement for classroom training. Mr. Morris, for example, worked for a local construction company three afternoons a week and attended classes at DeKalb Tech two afternoons. He received a Carnegie Unit for each semester he attended HEO classes, 1/2 a unit for the HEO class and an additional 1/2 unit for participation in the youth apprenticeship program.

The Covington News also published a story on November 30, 1999, detailing the contributions of the Georgia Utility Contractors Association (GUCA) to the HEO program. The Association was a key partner in the creation of the HEO program and members support the Youth Apprentice Program in Newton and Rockdale Counties. The news story mentioned that students receive a Technical Certificate of Credit upon completion of the HEO program and starting salaries for HEO operators range from \$10 to \$16 per hour.

Several adult students enrolled in HEO after reading stories about the Covington campus program in the local newspaper. DeKalb Tech originally decided to maintain separate classes for adults but this proved impractical because of limited equipment and instructional resources. Beginning January 2001, the start of winter quarter, four adult

students joined the high school class, three of whom related that publicity surrounding the HEO program contributed to their enrollment at the college.

The literature review provided almost no references to dual enrollment from sources within Georgia. One reference cited was an article by Johnson (1983), an administrator currently employed by DeKalb Tech, who conducted a study “to determine the needs of gifted high school students in DeKalb County Public Schools” (p.1). At the time of Johnson’s study, DeKalb Tech (then called DeKalb Area Vocational-Technical School or DAVTS) was a unit of DeKalb Community College. DeKalb Community College is now called Perimeter College and has expanded into a four-year baccalaureate degree granting institution while DAVTS has evolved into the present day DeKalb Technical College. DeKalb Technical College is part of the Department of Technical and Adult Education system; Perimeter College is part of the Board of Regents system. DAVTS and other vocational-technical schools throughout the state offered technical courses in occupational areas including electronics, computer information systems, industrial maintenance, and other programs that required high levels of achievement in math, reading, and English. DAVTS’ Office of Research and Planning in cooperation with the Consultant for the Gifted (students) from DeKalb County School District conducted a study to determine what the “attitudes and interests of DeKalb Impact students towards a joint enrollment in DAVTS high technology programs” (Johnson, p. 5). Impact students are defined as intellectually gifted students and in this study, included economically disadvantaged students.

A questionnaire was developed to determine what interest Impact students had in five high technology programs: Bio-Medical Electronics Technology, Data Processing

Technology, Electronic Engineering Technology, Electro-Mechanical Technology, Mechanical Engineering Technology, and a category called None or no interest. The research team delivered 1,488 questionnaires and 592 were returned. Results of the study indicated that two programs, Data Processing Technology and Bio-Medical Electronics Technology had the largest amount of interest. Johnson (1983) concluded that three programs, Electronic Engineering Technology, Electro-Mechanical Technology, and Mechanical Engineering Technology “do not appear to be widely known or accepted by gifted students as viable high technology careers” (p. 24). The questionnaire also asked students for a preferred time period for attendance at DAVTS classes. Data from the study indicated that two class meetings per week scheduled in the 4-6 p.m. or 3-5 p.m. time periods were preferred by a majority of the students.

Johnson’s (1983) study is important and valuable in several respects. He identified a need in the community for reaching out to intellectually gifted students who because of economic circumstances might not consider enrollment in postsecondary education. He also recommended that technical programs be promoted among those students who possess the talent to be successful at the college level but who have aspirations for completion of a baccalaureate degree. Informal discussions with Covington Campus faculty reveal that the rigor of courses offered in the Industrial Technology department demands high-level skills in mathematics, reading, and science. High school students who choose Advanced Placement (AP) classes are of great interest to both DeKalb Tech faculty and industry advisory committee members. The employers seek technicians who possess mastery of math and problem solving skills; the faculty

would like to see more students enroll who can move through the curriculum without excessive remediation in reading and mathematical concepts.

Both diploma and associate degree programs require competency in college level math. Unfortunately, many students are required to take remedial math, reading, and English prior to program admission.

High School/College Articulation

The HEO program is built around a secondary/postsecondary articulation agreement. The Georgia Department of Education and the Georgia Department of Technical and Adult Education (1999) jointly published a document titled Statewide Tech Prep Articulation Agreement. A letter from the State Superintendent of Schools in the introduction to the document states,

Statewide articulation is designed to coordinate the efforts of instructional, student services, and administrative personnel of public school systems and technical institutes and colleges. This process encourages students to pursue postsecondary education and assists them in making a smooth transition from secondary schools into postsecondary technical institutes, avoiding entrance delays, duplication of course content, or loss of credit. As a result of this statewide agreement, students who move throughout Georgia will have improved opportunities to transfer credits between institutions while completing their secondary and postsecondary education plans. (p. 1)

The document provides statewide articulation agreements in seven occupational areas including business, English, mathematics, marketing, health occupations, construction and related fields, and environmental horticulture. The HEO program at Covington

Campus is articulated with the construction program offered at Social Circle High School.

Trends

The collaboration between DeKalb Tech and the local high schools in the college's service area is indicative of a growing national trend. Mabry (1988) cites low community college enrollment, poor test scores in national exams such as the Scholastic Aptitude Test (SAT), unacceptable dropout rates, and growing business and industry pressure for qualified technicians and craftspeople as reasons community colleges seek cooperative efforts with high schools. Orr (1998) reports that recent legislation has strengthened secondary/postsecondary coordination and cooperation. Three policy initiatives, Goals 2000, The School to Work Opportunities Act (STWOA), and the Carl D. Perkins Applied Technology and Vocational Education Act of 1990 are given as examples of legislation that promotes interagency collaboration. Orr concludes,

What emerges in an analysis of these three policies is a national concerted attempt to redefine educational priorities and the role of educational systems - raised academic and occupational standards of what is necessary education, a broadened definition of who should benefit, a redefinition of the importance of postsecondary education generally rather than for select individuals and career fields, and a focus on articulation and transition activities to integrate K-12 and postsecondary education. (p. 110)

Hull and Grevelle (1998) believe that the next few years will see Tech Prep move

beyond the original four goals of articulation, strengthening academics, preparation for high skill/high wage employment, and keeping educational and career options open.

They propose new Tech Prep goals that will help define trends to include,

Design the new curriculum structure for workforce education . . . based on high academic standards and tied to industry standards. Break the mold in teaching and learning . . . Ensure that employers are teaching at the worksite. Establish a new role for employers in education . . . Insist on excellence in meeting rigorous academic and technical standards. Encourage family and community support for Tech Prep programs and students. (p. 27)

The HEO program is being shaped by these new goals. For example, student program placement test scores were raised beginning summer quarter 2001 and now require higher skill levels in math, English, and reading. HEO industry advisory committee members continue to teach at the work site and the Newton county youth apprenticeship coordinator evaluates the quality of this instruction. The HEO industry advisory committee continues to evaluate the academic and technical skill achievement of HEO students. The Covington campus each quarter publishes an information brochure for parents of students enrolled in Newton county high schools. The brochure, which provides information about dual enrollment programs, is also mailed to community groups such as the local chamber of commerce.

Gray and Herr (1995) present data from the 1972 National Longitudinal Study as compiled by the National Center for Educational Statistics. One data set includes the percentage of high school seniors in 1972 and 1992 who expected to attend various types of postsecondary institutions by gender. For two-year technical community colleges, the

figures for all seniors show 18% of 1972 seniors selected technical community college as a choice for postsecondary education. In 1992, the percentage had dropped to 10.8%.

The figures are also presented by gender. For males, the 1972 figure is 17.4%, for females 18.6%. The 1992 figures are 11.8% for males and 9.9% for females. Gray and Herr, again using the National Longitudinal Study, also present occupational choices by gender. The figures for craftsperson/trade category include: 7.5% for all seniors in 1972 and 3.5% in 1992. For males the figures include 15.1% in 1972 and 5.2% in 1992. The figures for females are startling. Five tenths of one percent of females in 1972 chose the crafts and trades while only 0.3% did so in 1992. These figures indicate a move away from trade and industrial programs and appear to reflect the concern of HEO advisory committee members that the future appears bleak for filling manpower needs. The Construction Education Foundation of Georgia (1999) reported total annual openings for the six major construction occupations. The figure for Georgia's carpenters, electricians, painters, welders, plumbers, and heating and air technicians is 3,226. The figure for the Atlanta Metropolitan Area is 1,796. The Georgia Department of Labor (1996) estimates total annual openings for grader, dozer and scraper operators at 90 per year for the years 1996 through 2006.

These figures present a challenge to the educational community. CEFGA and GUCA staff projects significant shortages of trained entry-level construction workers in the next several years. It should be noted that at the time of this writing the Covington Campus HEO program is the only postsecondary program in Georgia providing heavy equipment operator training. The existing program cannot begin to meet the 90 persons per year operator labor demand.

A positive trend, however, is the increases in postsecondary enrollment in Georgia. At the Covington Campus, the 1999 to 2000 percentage increase in Fall Quarter enrollment was 40.30%. The Georgia Department of Technical and Adult Education annual report (2000) states that “technical colleges have set a new enrollment record every quarter for more than 35 consecutive quarters - with a total of almost 235,000 enrolled this fiscal year” (p. 1). The trends toward increased enrollment at technical colleges and cooperative efforts between secondary and postsecondary institutions that result in innovative programs such as dual enrollment may help alleviate the projected shortage of trained technicians, crafts and tradespersons.

Collaborative Efforts

Rodriquez (1999) examined secondary/postsecondary partnerships including the Upward Bound program, the MESA program, the LaGuardia Community College’s Middle College High School program, and Kingsborough Community College’s College Now program. She concludes there are several lessons that can be learned from these programs.

1. Specific groups of students are targeted by partnership administrators, usually either high-achieving or at-risk students. Moderately achieving students do not receive the attention of high achievers or at-risk students. However, in instances where these students were involved in collaborative programs, students generally did well.

2. Rodriquez (1999) makes reference to Greenberg’s (1991) Power of Site theory that postulates that high school students “benefit from the role modeling provided by college students” (p. 33). Rodriquez states that college support services such as career

counseling and labs, tutoring, computer labs, and library resources all contribute toward retaining dual enrolled students.

3. Dual enrollment programs where tuition is waived make college affordable to students who might otherwise not consider postsecondary education because of financial need. The open door policy of community colleges accommodates students with a wide variety of needs, for example, remediation, career counseling, advanced placement, or interest in courses that are not provided at the home high school.

Duplication of courses is a recurring theme that appears in dual enrollment literature (Greenberg, 1991; Sagers, 2000). Greenberg argues that course duplication occurs when college freshmen repeat classes taken in the junior and senior year of high school with a resultant financial penalty that impacts taxpayers, students, and parents. Collaboration works to eliminate paying twice for instruction because a planned program of study between high school and college results in courses that are specifically targeted for elimination when overlap occurs. Greenberg lists the benefits to high schools to include “solutions to senioritis, productive interaction with the college community, improved faculty status, and enhanced community standing” (p. 16). He further lists benefits to colleges to include expanded recruitment opportunity, high school/college faculty collaboration, and increased community relations.

McConnaha (1996) suggests that dual enrollment is a means of accelerating education of secondary gifted students. Junior and senior year high achievers benefit from college programs when high school resources do not permit advanced placement classes. Smoothing the transition between high school and college, avoiding duplication of curricula, and shortening the time to degree completion are also listed as benefits of

collaboration. Collaboration plays a central role in educational reform. Farar (1999) states,

Collaboration can address issues that neither the public school systems, nor the higher education communities, have been successful in addressing alone. By working together, it is believed that schools and colleges can accomplish significantly improved student achievement, better access to and preparation for college, and increased financial productivity. (p. 26)

Farar cites a U.S. Department of Education study that concluded collaboration among schools, family, and community results in better student performance in grades, tests, graduation, and enrollment in postsecondary education.

The research literature indicates that collaboration is a valuable tool for students, high school and college faculty and administrators, and the community because academic achievement is raised, cost savings occur when duplication of instruction is eliminated, and motivation to enroll in postsecondary education is enhanced. Institutional agreement is the cement that binds articulation and provides for cross-institutional needs. Well-conceived and implemented collaboration readily provides for institutional agreement.

Critical Issues in High School/College Articulation

Collaboration between high schools and colleges does not occur without some challenges. Rodriguez (1999) lists four critical issues that high school students must address in the college decision-making process: parent involvement, academic ability, counselor encouragement, cost, and financial aid availability. Gray and Herr (1995) and Hull (1993) describe the desire of parents to see their children graduate with a four-year degree. Gray and Herr present data that indicates many students are not sufficiently

prepared for college but enroll anyway. These students generally spend several semesters in remedial math, English, and science classes before becoming program ready.

Counselors play a critical role in two respects: they are responsible for properly guiding students and parents to an appropriate level of postsecondary training (Cornett, 1986; Gray & Herr; McCarthy, 1999) and they are key players in motivating economically disadvantaged students to seek higher education (Farar, 1999; Fincher-Ford, 1997; Rodriquez). Counselor training is a critical factor in assuring that proper information is provided students and parents (Osipow & Fitzgerald, 1996). When articulation agreements are put in place, counselors are responsible for directing students through the agreed upon programs of study. Counselors often participate in tech prep articulation teams and are responsible for assisting in developing these secondary/postsecondary programs of study.

Financial considerations are a challenge for economically disadvantaged students. Farar (1999) states,

Recent research shows that high-achieving students from low-income families are five times less likely to attend college than high-achieving students from high-income families. They are often unaware of sources of financial help for college and do not know how important it is to take rigorous academic classes to be fully prepared for education beyond high school. (p. 20)

The Education Commission of the States (1997) identified 12 states with comprehensive programs that provide tuition assistance to students. Students living in states without comprehensive programs continue to encounter a financial challenge. Good counseling is

essential to guide economically disadvantaged and middle-income families to available resources.

McCarthy (1999) identifies lack of information as a continuing issue in dual enrollment and articulation efforts. School districts need to provide timely information to families to include course prerequisite information, appropriate college courses, enrollment procedures, and timelines for enrollment. For example, Covington Campus is on a quarter schedule, local high schools schedule 18-week semesters. Start times for dual enrollment classes at the College are confusing to parents who do not understand the differences in scheduling.

Content acceleration occurs when students can learn material above their grade level. Most dual enrollment programs target juniors and seniors but McCarthy (1999) argues that content acceleration has not been directed to earlier grades to students who are ready for and will be successful in advanced classes. McCarthy further suggests that dual enrollment can “serve as a catalyst to develop accelerated opportunities in earlier grades” (p. 5). This is a challenge to principals and curriculum directors who must lead the way in channeling scarce resources of teacher and counselor time to create new opportunities for children in middle school and the freshman year of high school.

Another challenge is the issue of course credit and grades. The Carnegie Unit is the standard for course credit in Georgia secondary education and is based upon seat time. This is not true for postsecondary courses where instructional time varies. McCarthy (1999) notes “dual enrolled students, enrolled and earning credits in both institutions, find inconsistencies, confusion, and sometimes inequity” (p. 5). The transfer issue is of particular concern. Some colleges and universities are reluctant to accept

transfer credit (Orr, 1998). In Georgia, credit transfer between technical colleges and Board of Regents schools is problematic. Several universities accept transfer credit while others do not. This is confusing to students, parents, and to some high school faculty and administrators.

McCarthy (1999) notes that dual enrollment legislation does not adequately deal with transferring letter grades. In instances where the college awards a pass/fail grade, a dual enrolled student is at a disadvantage because the local high school grade point average (GPA) is affected. This, in turn, may affect class rank and impact application to a college or university. Pass/fail grades do not meet National Collegiate Athletic Association (NCAA) course requirements.

Also at issue is how and by whom money is provided to pay for dual enrollment tuition. In Georgia, the Post Secondary Options fund receives money from K-12 appropriations. The Dual Enrollment/HOPE funding option permits payment to both high school and the technical college, i.e., K-12 funds go to the local high school and HOPE Grant money pays college tuition, fees, and book expense. McCarthy (1999) reports that some states divide K-12 money between high schools and universities; in other states the K-12 funding follows the student to the university. High school administrators find fault with losing money to the university because the local school districts retain costs associated with administration of dual enrolled students. The funding issue becomes a political issue.

Sometimes, strenuous efforts were exerted on legislators to abandon, or severely dilute, the law. Unwilling to kill dual enrollment as an option, some states' legislators agreed that, while K-12 dollars would pay the college tuition, these

monies should support only a K-12, and not college, education. Thus, when a student completes a college course that meets the high school requirement, the school pays the tuition, and the student receives high school credit. In this way, K-12 dollars pay for K-12 credit and do not purchase a college education. In many states, the college credit will be available retroactively, but only if the student later enrolls as a college student at that particular institution. (p. 7)

McCarthy criticizes the retroactive payment policy because low-income families are treated unfairly when they cannot pay tuition costs for college courses their child has completed. Funding dual enrollment will continue to be a critical issue for states and school districts that have not solved the problem of deciding money sources for both high school and college program costs.

McCarthy (1999) also talks about seamless transition between high school and college. Students move easily and effortlessly between grades in primary, middle, and high school. Facile movement should also be the norm when students move from grade 12 to grade 13 but organizational and administrative differences between K-12 and higher education institutions get in the way. Solutions to these differences require leadership. For example, high school seat time in a course does not necessarily equate with mastery of the material. McCarthy states “for dual enrolled students, earning credit should be based on a standardized, measurable outcome—student mastery of content” (p. 9). Creating standardized and measurable outcomes requires the time and talents of faculty, curriculum specialists, and administrators. Articulation cannot occur without the provision of resources to make collaboration occur. Leadership from secondary and postsecondary levels is essential; and college deans of instruction, department heads, and

high school principals bear primary responsibility for budgeting, scheduling, and encouraging faculty to attend work sessions where articulation agreement is created.

The Covington campus faculty and staff are working to address these critical issues. Counseling students is of paramount importance. Not all students who wish to become dual enrolled at the College are academically or socially ready, and counselors are the key players in the decision making process of who attends and who cannot. Counselors are also key players in directing students to the College who are excellent candidates for technical college training but have been convinced by parents or peers that a four-year program is the only way to succeed. Counselors have first access to parents and can be influential in educating mothers and fathers about the many different educational and employment opportunities that are available for their children (McCarthy, 1999).

Counselors, parents, and teachers all have responsibility to ensure that students are prepared with the proper courses for postsecondary training. College student services staff and deans and directors of instruction are responsible for getting good information into the hands of students. This requires a concerted effort by college staff to meet with their high school colleagues and provide them with written and visual materials students and parents need to assist in the postsecondary decision making process.

The Board of Regents in Georgia has increased the requirements for admission to the States' universities. Additional math, English, science, and language courses have been added to the curricula for college-bound students. Consequently, the numbers of elective courses students may take have decreased and the Board's preference for fine arts credits as opposed to career/technical courses has squeezed available time for

electives. A major challenge is providing sufficient Carnegie units earned from college courses to satisfy high school graduation requirements. Student failure in dual enrollment courses can result in a student not graduating on time. Again, good counseling and a strong, well researched and crafted admissions policy are key factors to ensuring student success in dual enrollment courses. Student motivation to succeed in both high school and college course offerings is an important factor in the decision-making process.

Motivation to Enroll in Higher Education

A key focus of this study was to discover the factors that led to student participation in the dual enrollment program at DeKalb Technical College. Student motivation to enroll in postsecondary education is affected by many forces, some coming from within the student and some, like parents, friends, teachers, are outside influences. This section of the literature review examines the internal and external forces that contribute to a student's motivation to enroll in higher education.

Internal Motivation Factors

Internal motivation factors are those forces that come from within the student. They are tied to the student's personality, aspirations, hopes, and dreams the student has for education and a career.

Academic achievement. Hossler and Stage (1992) conducted an extensive literature review of student ability as it relates to aspirations for enrollment in higher education. They concluded,

The cumulative weight of the results in these reviewed studies demonstrates that student ability and student achievement have a significant and direct impact upon

the postsecondary plans of high school students. As ability and academic achievement rise, students are more likely to aspire to attend a PSI and they are more likely to follow through with those plans. (p. 430)

Hearn (1984) analyzed a sample of college freshmen enrolled in colleges and universities in the U.S. in 1975. Data was taken from the SISFAP-A 11th and 12th grade Freshman Longitudinal File. He found that “in the high-school-to-college transition, the academically and socioeconomically rich become richer, i.e., attend schools having superior intellectual and material resources while the academically and socioeconomically poor become poorer” (p. 28). However, Hossler and Stage (1992) found that parents of minority students had high postsecondary expectations for their children even though their children had lower grade point averages (GPAs). Counselors in the Covington Campus service area report that parents of academically average and below students, minority and majority, insist their children enroll in the college prep sequence of courses, despite low or average GPAs.

A key component of academic achievement is study skills. Pollock and Wilkinson (1988) state that study skills “are probably the most important skills students require for success at university and college levels” (p. 76). Their investigation of a study skills program at Brock University determined student achievement is measurably improved when interventions are introduced to students who are not proficient in their study habits. They found academic underachievers and students with poor study skills are motivated to enroll in the program. Program completers achieve more C and B grades than is expected of academically at-risk students and less D and failing grades than would normally be expected. The results of this study suggest that students with

average academic achievement can be successful in college but intervention is often necessary.

King (1996) found that for low income but academically qualified students, high academic self-confidence results in a high rate of college attendance. Low-income students who are strong in math and science enroll in college at higher than average rates. Conversely, Swager (1995) in a study of reasons community college students withdrew from courses suggests core courses in English, math, and science are difficult for academically unprepared students and that students “may find themselves overwhelmed with the difficulty of those courses” (p. 22). Hossler et al. (1999), in a study of how economic and educational factors influence decision-making of high school students, found the higher the grade-point average, the more likely a student aspired to a college education. However, they found that 90 % of 5,000 juniors in high school in their sample indicated they planned to go to college. This would indicate that academic preparation is not necessarily a deciding factor in career aspiration. During the fall 2001 school year, Covington campus student services personnel attended the student/parent night devoted to college enrollment at a local high school. The students and their parents were asked to form two groups in the auditorium. Group A consisted of parents and students who wanted information about four-year baccalaureate programs. Group B constituted the two-year diploma/associate degree interest group. Group A was twice the size of Group B. Conversations with high school counselors during Tech Prep articulation meetings indicate that low to moderate academic achievers clearly intend to continue their education and most at a four-year college or university. This reflects Hosler, et al.’s findings. There may be a disconnection between student aspirations for postsecondary

education and academic achievement as a realistic determinate for college level success. Swager's finding that student withdrawal from math and science courses in community colleges supports this view.

Career expectations. Paa and McWhirter (2000) examined high school student's perceptions of the influences on career expectations. They provided descriptive data from 464 high school mostly White and middle class students from two mid-west high schools and tested two hypotheses. "Boys and girls would perceive same-sex role models as more influential on their current career expectations than different-sex role models. Participants would rank the influence of both the background and the environmental variables." (p. 31).

The first hypothesis was based on work by Bandura (1986) and the importance of role model similarity; the second on Farmer's (1985) study that found "the influence of personal variables on career motivation was three times greater than the influence of background and environmental factors" (Paa & McWhirter, 2000, p. 32). They also examined adolescent perceptions of specific ways role models are used to influence career development. They found that personal, background, and environmental factors influence career expectations. Under the Personal Influences category, Amount or Type of Education Needed to Get a Job in That Career, scored fifth behind My Interests, My Values, My Personality, My View of How Important the Occupation Is. For the category Background Influences, My Ability and Seeing People Like Me in Specific Careers scored highest.

Parents, peers, and teachers were rated as the most influential role models impacting career choices. Surprisingly, counselors were rated very low in the

environmental category. Paa and McWhirter (2000) cite limited time with counselors and the high student-to-counselor ratio as reasons counselors are not helpful in influencing career decisions in a significant way. Students in the Covington Campus HEO class corroborate this finding. Informal discussions with the students indicate that school counselors are not perceived as being particularly helpful in career decision making for the reason stated by Paa and McWhirter, i.e., HEO students spent very little time with counselors.

Values, beliefs, attitudes. Paa and McWhirter (2000) included values and attitudes as part of the variable Personal Influences in their study of influences on current career expectations of mid-western high school students. My Values scored second highest after My Interests. My Attitudes About Whether Women Should Work Outside the Home and Being Lucky or Unlucky scored lowest for both boys and girls.

Griggs and Copeland (1992) examined the factors that influence academic and vocational choices of African American and Latino students. Thirty-six undergraduate college and university students were selected from a summer research mentoring program at the University of Illinois. A written questionnaire and structured interviews provided data for this study. Results of the study indicate that attitude towards school and grades were significant. Griggs and Copeland report, “Most indicated confidence in their ability to do well; however, many said that they had not put forth much effort. Failure to get grades for which some aspired was attributed to lack of effort, self-discipline, and poor time management” (p. 10). When asked what they would do differently, students replied they would study more frequently, manage time more wisely, enroll in different courses, attend extracurricular activities, involve parents, and attend a different high

school. Students were also asked about the difference between themselves and others who possessed similar academic ability but who did not choose higher education as an option. Students reported that strong self-confidence and self-esteem as well as personal motivation are important factors in pursuing postsecondary education. Other traits listed include willingness to persevere, determination, control of personal destiny, willingness to break with family history of dependence, parent and family support, and information about vocational choice and job opportunities. For African American and Latino students, Griggs and Copeland (1992) concluded,

The respondents expressed confidence in their academic ability; however, frequently their perceptions of their academic ability were not consistent with the level of their performance. Many of the respondents reported they did not work up to their ability. In such cases, they attributed this to lack of motivation and self-discipline, involvement in extracurricular activities, not wanting to put themselves under too much pressure to achieve at a higher level, lack of feeling pushed by teachers, and not interested in subjects. (p. 15)

It is interesting to note that many of these attitudes were shared by the HEO students at Covington Campus, most of who were from white, middle class families. A frequent complaint of the HEO group was that work assigned was too hard; there was too much reading involved; and time for study was limited because of part-time jobs and work assignments from other high school teachers. The outstanding students in the class exhibited a better work ethic and were much more motivated toward academic success. However, of the 13 students who finished the 2001 winter semester, all but two planned to continue their postsecondary education.

External Motivation Factors

The literature review provides information about those influences that impact student motivation to enroll in higher education that comes from outside the student. Money, family, friends are frequently a part of the decision making process.

Socioeconomic values. Hossler and Stage (1992) conducted a review of the literature to determine how socioeconomic status (SES) impacts the decision to enroll in higher education institutions. The results of literature review indicated that predisposition to attend college was impacted by family background and high school experiences. They found that, generally, SES is “positively associated with a predisposition to attend a postsecondary educational institution” (p. 428). They cite several studies (Jackson, 1986; Leslie, Johnson, & Carlson, 1977; Tuttle, 1981; Yang, 1981) where SES was not determined to be a major factor in explaining postsecondary attendance rates. Hossler and Stage note that some studies show that SES may indirectly affect predisposition in that SES affects high school achievement and academic success that, in turn, affects decisions about college enrollment (Carpenter & Fleishman, 1997; Tuttle).

Griggs and Copeland (1992) report that minority students who enroll in postsecondary education are a minority themselves. They represent a very small percentage of their peers, most of whom have “dropped out, done poorly academically even if they graduated, or gone directly from high school into the labor force” (p. 12).

Freeman (1997) reviewed studies that correlate SES with college enrollment. She notes an indirect relationship between family income and financial decision-making; low family earnings and educational levels result in less information for financial

decision-making. An interesting side note to this finding is that African Americans are more likely to enroll in college than Whites, when SES is held constant.

Freeman (1997) conducted 16 group interviews with 70 African American students in the cities of Atlanta, Chicago, Los Angeles, New York, and Washington, DC. The students discussed their high school experiences in regard to making decisions about higher education.

When the students who were interviewed in this study discussed instilling an awareness of possibilities early, they appeared to be saying that the problem is more than lack of information. Their responses could be interpreted as meaning that if schools are not going to provide information through teachers and counselors, then, at a minimum, educators should not take away students' passion for achieving higher education by instilling in them the idea that because of their social and cultural background, they cannot aspire to attain it. (p. 546)

This advice to high school counselors and administrators could be expanded to include not only African American students, but all children who are academically at-risk.

Peer influence. Hallinan and Williams (1990) used the High Schools and Beyond (HSB) longitudinal study to examine "the extent to which the characteristics of close friends affect a student's college plans and college attendance" (p. 125). They found that friends who are similar in background and school experiences have more impact on one another when making decisions about postsecondary enrollment. Race, gender and academic track were examined. They found,

1. College plans and attendance were positively affected by best friends, i.e., a best friend's higher aspirations and educational outcomes led to higher aspirations and outcomes for the respondent to the survey questionnaire

2. African American students had higher aspirations than White students but were less likely to have attended college two years after graduation from high school.

3. Cross-race friendships between African Americans and Whites, while rare, resulted in White students having higher college aspirations when their African American friend planned on college attendance, more so, than White students with same race friendships. The reverse was not true for African Americans, i.e., African Americans with White best friends did not have higher aspirations for college attendance.

4. Students in the academic track had higher college aspirations than students in the vocational track and students in the academic track who had best friends in the academic track had the best rate of attendance and highest college aspirations.

5. Seniors were less like to have college plans than were sophomores. Seniors are more influenced by a friends influence regarding college than are sophomores.

6. Males had higher college expectations when a female was the best friend as opposed to a male best friend. For females, there is no effect for gender.

Hallinan and Williams' study indicate that peer influence does have an affect on motivation to enroll in higher education. Race and gender benefit White males when best friends are female or African American.

Hossler et al. (1990) found that "ninth grade students with friends who planned to continue their education after high school were more likely to have college plans" (p. 24).

However, the correlation between peers and aspirations for college is small when compared to parental influence and academic achievement.

McDonough (1997) notes that discussion about college among high school friends is common when the students belong to upper-middle-income families. There is an expectation among family, friends, teachers and counselors that students will continue their education after high school. These discussions can have a negative influence when students feel pressure from friends and family to make a decision they are uncomfortable with. Cost of tuition, academic achievement, and choice of a college that contravenes the student's choice are cited as causes for anxiety in teens who are unsure of their willingness to follow friends' and families' advice on when and where to go to college.

Family influence. Hossler et al. (1999) state that "the single most important predictor of postsecondary educational plans is the amount of encouragement and support parents give their children" (p. 24). They are quick to add that parental support alone does not result in postsecondary enrollment. They did find that high school students with brothers or sisters in college were more likely to aspire to enrollment in higher education than students with no siblings or siblings who did not attend college. Hossler and Stage (1992) found that parental level of education along with their expectations for postsecondary enrollment might be the most significant predictor of their child's higher education plans.

Parental support includes much more than simply encouraging students to attend college. Besides the obvious financial support, McDonough (1997) and Hossler et al. (1999) list assisting students with help through college visitations, completing college application forms, providing support for entrance examination preparation, and enforcing

rules that guarantee sufficient study time to academically qualify for a chosen college program of study.

Schmeck and Nguyen (1996) studied the effects of family characteristics on college students' attitudes towards education. They divided families into six categories based on backgrounds of effort and work, family cohesion, non-directive or practical support, directive, mercenary, and authoritarian. They used the Family Characteristics Questionnaire and the Inventory of Learning Processes to test the students for self-efficacy, self-esteem, academic motivation, academic self-esteem, and academic self-assertion. They tested 83 students from a large mid-western university and found,

the family emphasizing effort and work seems to give rise to a student who is less concerned with form and appearance. The non-directive family seems to raise the student's efficacy. The directive family lowers the student's efficacy. In addition, the latter family contributes to lowered assertion and elaborative processingThe mercenary family contributes to a lowering of academic motivation but also raises pragmatic work habits....The authoritarian family lowers methodical study and raises elaborative processing. (p. 4)

Simply put, directive family influence appears to lower the efficacy and assertion of students with the reverse being true for non-directive students. Students from mercenary families appear to suffer from lowered academic interest but are more task focused. Students from authoritarian families use rebellion as a method of achieving independence from their parents.

The significance of this study for school administrators is the recognition that students will behave in different ways when they reach college, sometimes in

contradiction to the academic and social credentials they bring with them. Counselors at both the high school and college levels can better help students make intelligent postsecondary choices if they are aware of the family influences at work in shaping a student's learning styles and attitudes towards education.

CHAPTER III

METHOD

Introduction

In qualitative studies researchers typically act as participant observers (Borg & Gall, 1989). The researcher's official duties and responsibilities as Assistant Dean of Instruction at the Covington campus of DeKalb Technical College required participation in various activities associated with the Heavy Equipment Operator (HEO) program including part-time teaching and supervision of selected hands-on student activities. Direct involvement with students was necessary because the HEO Advisory Committee established safety rules that required a minimum 5 to 1 student-teacher ratio and Covington Campus employed a single HEO instructor. Therefore, the researcher assisted with the laboratory classes to ensure that sufficient supervision was provided to comply with advisory committee safety recommendations.

The students were aware the researcher was conducting a formal research project and all the high school students in the program during the 2000-2001 and 2001-2002 school years agreed to participate. A case study was conducted. Merriam (1998) defines case study as "an examination of specific phenomenon such as a program, an event, a person, a process, an institution, or a social group" (p. 9). The dual enrollment of HEO students was the focus for this study. Perceptions of the students, faculty, counseling staff, and administrators towards dual enrollment formed the foundation for research questions and data collection.

Merriam (1998) notes that a key philosophical assumption of qualitative research is that “researchers are interested in understanding the meaning people have constructed, that is, how they make sense of their world and the experiences they have in the world” (p. 6). A qualitative approach was appropriate because the researcher was interested in the thought processes behind students’ decisions to embark on a dual enrollment program, i.e., what it meant for high school students to be part of an HEO college program. McConnaha (1996) and Stuber (1991) chose the qualitative method for research projects on dual enrollment and attitudes of secondary administrators toward gifted programming respectively. McConnaha, referring to the work of Stuber said,

There is little existing literature regarding the relationship between program components and the attitudes of secondary school students who are involved in dual enrollment. Qualitative studies are most appropriate when little is known about a phenomenon and when appropriate variables for study are conjectural. (p. 53)

A qualitative study of the HEO dual enrollment program was appropriate for the reasons stated by McConnaha and because the focus for this study was on the meanings, feelings, and perspectives of students towards dual enrollment. Qualitative methodology provided the depth and scope required for my questions of interest.

This study can also be described as a particularistic or bounded study in that close attention was devoted to a specific (particular) group of 10 HEO students. Merriam (1998) describes a bounded system as one where “I can ‘fence in’ what I am going to study” (p. 27); where one can contain the boundaries of the project. While the primary object was on the dual enrollment phenomena, the context for the study was the HEO

class and laboratory experience and how that experience impacted the lives of students. Observations and interviews were limited to the HEO group and associated college and high school faculty and staff. The time period for data collection was approximately nine months. Interviews were conducted over a six-month period beginning in May and ending in October of 2001.

Participants

Students enrolled in the HEO program at DeKalb Tech, Covington campus comprised the social group for this study. On August 20, 2000, the first class of HEO students was enrolled at Covington Campus. Enrollment was a complicated process because high school and college schedules did not align. Local high schools register students for 18 week semesters, while the college quarter system allows for 10 week time blocks. The start times for the high schools and the college are also different. High schools start in the first two weeks of August while the college summer quarter begins the first week of July. The HEO program was designed so that part of DeKalb Tech's summer quarter and all of the fall quarter of 2000 would equal one high school semester. The 2001 winter quarter and part of spring quarter comprised the second high school semester.

Another complication resulted when students prematurely exited or dropped out and new students entered the program during the first year of HEO classes. Local school districts often enroll students in new classes at the beginning of the second semester. The HEO program lost two students who dropped classes before the end of the first semester. The program gained an additional high school student at the beginning of the second semester or winter quarter when it began in January 2001.

For convenience sake, and to maintain anonymity, the researcher labeled the students by assigning each a fictitious name. The names for students in the 2000-2001 class are Art, Bob, Cal, Don, Elvin, Fred, and George. The names for the students in the 2001-2002 class are Ted, Van and Will.

The class of 2000-2001 was the first students enrolled in the HEO program in the first semester of their senior year in high school. The second group of students, Ted, Van, and Will, likewise began dual enrollment in their senior year. A third group of students who was not part of this study began enrollment in the Post-secondary Options program on January 2002. These were both juniors and seniors from Madison county high school with three seniors enrolling in the HEO program and six juniors enrolling in the Certified Construction Worker program. Post-secondary options students receive college credit only.

The students traveled to Covington Campus from three local high schools located in Newton and Rockdale counties and the city of Social Circle in Walton County. Conversations with the HEO students revealed that almost all the participants intended to begin their high school careers as college-prep track students. However, most finished as career/technology program students when they opted to not continue college prep studies that required language courses and advanced levels of math and science.

Description of Students

The first semester group of HEO students met for the first time on August 21, 2000. The beginning registration roster showed 12 students with 8 dual enrolled high school seniors and four adult students. One registered high school student never appeared. A second student was enrolled from an alternative school and was

experiencing academic and family problems. He dropped out of both the HEO program and alternative school and as of this writing, has not resumed his education. One of the adult students, a recent graduate from high school, also soon dropped out of the program when he realized he wanted to pursue a different program of study.

One month into the program, nine students remained. Of the six remaining dual enrolled students, two were from Heritage High School in Rockdale county, three were from Eastside High School in Newton county, and one student was enrolled at the Sharp Alternative High School that is part of the Newton county schools system.

The second semester enrollment began in January, 2001 with the addition of another dual enrolled high school student who came from Social Circle High School located in Walton county, approximately 20 miles from the Covington Campus. This student had completed the first part of an articulated program of study between Social Circle High School and the Covington Campus. He completed his core HEO curriculum subjects at the high school in his first semester, senior year. The HEO curriculum taught at Covington campus and construction technology classes taught at Social Circle High School are identical and use the National Center for Construction Education and Research (NCCER) Construction and Maintenance core curriculum. Registration for the college Winter Quarter or the second high school semester is much easier because high school and college start times are the same.

Thus, the second half of the HEO program began with seven high school students enrolled. Three new adult students also joined the original three adults bringing the class total to 13 students. The reason for combining adults with high school dual enrolled students is logistics. Faculty and staff at Covington campus originally planned to

maintain separate adult and dual enrolled classes but there was not sufficient adult enrollment to warrant a separate class so these older students were folded into the high school class.

The number of students required to form a class is dependent upon credit hours and HOPE scholarship money that is generated by credit hours. The State Board of Technical and Adult Education establishes the credit hour reimbursement that colleges receive from the HOPE grant. For the HEO program, the HOPE grant reimburses DeKalb Tech at a rate of \$35 per credit hour. The salary of an adjunct faculty member who would teach an adult class is approximately \$4,000 a year. There are 16 credit hours in the first year of the HEO program. Since the HOPE grant generates \$560 per student per year, a total of seven students are needed to pay the cost of an instructor. In this instance, only four adults originally enrolled and rather than not admit them to the program, they were allowed to join the group of high school students.

It should be noted that three of the six adult students were recent high school graduates (within one or two years of spring 2000 graduation) who were employed but seeking a career change to heavy equipment operation. One of the older adult students admitted to the program in January 2001 was a recent graduate of DeKalb Tech's fatherhood program offered to adult men who are required by the courts to complete a parenting program. This individual was a full-time student and enrolled in academic classes in addition to the HEO class.

All the 2000-2001 HEO students worked part- or full-time, mostly at service industry jobs. Two of the high school students participated in youth apprenticeship programs (YAP) where they worked part-time under the supervision of a Youth

Apprenticeship Coordinator and attended their home high school to complete academic classes and qualify for graduation. One apprenticeship student was employed by DeKalb Pipeline Company, a key member of the Georgia Utility Contractor's Association (GUCA) and an important DeKalb Tech Industry Advisory Committee member. GUCA members comprise the industry advisory committee for the HEO program.

Youth apprenticeship students are required to enroll in career/technology courses to fulfill YAP elective requirements. The HEO apprenticeship student chose technical college courses to fulfill this requirement. This is important because the legislation that created the YAP program stipulates postsecondary education is a requirement for enrollment. This student accelerated his program of study by enrolling early in postsecondary training.

Youth apprenticeship students are different from their HEO peers in one respect; YAP students must work in an industry directly related to their chosen profession, in this instance, the construction industry. The apprentices who attended Covington Campus worked for construction firms and thus fulfilled this requirement.

Students in the HEO program chose dual enrollment in response to a solicitation effort of Covington campus faculty and staff who visited Newton and Rockdale county schools and the single high school in Social Circle city. The campus staff actively recruited students for the program. The four 2001 winter quarter adult members enrolled as a result of public announcements in local newspapers that promoted the adult non-credit program. Eight adults were required for the class but only six applied. Therefore, the decision was made by Office of Student Services staff to quickly provide the ASSET admissions test to the four adults whose work schedules could be adjusted to allow

participation in the afternoon class. All four passed the test and enrolled in the program as credit program students. The advantage for doing so was the tuition assistance provided through the Georgia HOPE grant. Non-credit courses at the college are paid for by out-of-pocket expense with no financial assistance available.

The combination of adult and high school students in the same class yielded substantial positive results. The more mature adult students were serious about their studies and completed their reading and homework assignments on time. Their test scores usually exceeded 80%. The HEO instructor believed that the positive influence of particularly one adult student motivated several of the high school students to higher levels of performance. Generally, test scores of the high school students improved after the adults joined the program in January 2001.

Selection of Participants

HEO students were selected because they represent a group of interest to the researcher, i.e., they were enrolled in career/technical education programs in high schools located in the college's service area. Almost all the students initially indicated they had no interest in pursuing a baccalaureate degree program and a review of high school transcripts showed grade point averages that ranged from low C to high B averages.

Most professed a desire to obtain employment in the construction trades after high school or have construction as a backup option should their career aspirations meet a barrier. Two students indicated interest in baccalaureate degree programs while most of the others either planned to enter a two-year program or were unsure of the program of study they would pursue after graduation from high school.

Cooperation of Participants

With the exception of one 17 year old, all students were 18 years of age or older and all agreed to participate in the study. The Institutional Review Board (IRB) for Research Involving Human Subjects (University of Georgia, 2000) published guidelines for investigators that outlines procedures to be used when people are involved in a research study. Category 6 of Section 1.b. requires that IRB approval be granted for “collection of data from voice, video, digital, or image recordings made for research purposes” (p. 6). Voice recordings were taken during the interview process. Therefore, IRB Category 6 guidelines concerning voice recordings were followed.

Category 7 of Section 1.b. requires IRB approval for “research on individual or group characteristics or behavior including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior” (p. 7). Perceptions of students towards motivation, communication, cultural beliefs, and social behavior were examined, therefore, Category 7 guidelines concerning motivation and communication were also followed.

Section II, “Materials Required for Submission” to the IRB required an application with the signature of the investigator and the investigator’s supervisor. These signature pages were submitted to and approved by the IRB. The research protocol as required by paragraph B. of Section II, Paragraph D. of Section II, and Paragraph A. of Section VIII, Informed Consent: General Requirements requires consent forms was submitted. These consent forms (see Appendix) were approved by the IRB.

The single 17 year-old student required a “Parental Consent for Minors” form in accordance with Paragraph E. of Section VIII. All items required by Paragraph E. of Section VIII including the reason/purpose for the study; benefits, procedures; discomforts or stresses; risks; deception; confidential, anonymous, or public; further questions, and final agreement and consent for copy were included in my request for approval from the IRB. All sections of the Guidelines for Investigators were read and followed. All participants signed consent forms with one copy provided to the interviewee and one copy held for my files. Approval was granted by IRB to conduct the study. Transcribed manuscript from the audio-tapes will be kept on file for five years, i.e., until July of 2002.

Student Background Information

The students as a group agreed they would be willing to share their academic history provided that anonymity was maintained. Academic history was retrieved from high school transcripts forwarded to the Office of Student Services by high school registrars and college transcripts of HEO course participation.

Art is an African American male, 18 years old at the time of the interview, who enrolled in the HEO program from the Newton County Alternative School. He was having difficulty with the pressure of large and impersonal classes in his senior year and was moved to the alternative program. During the interview with Art, his progress in alternative school was discussed. He was doing very well academically and he attributed this success to smaller class sizes, more attention, and a closer relationship with his teachers. His grade point average (GPA) at the time of admission to Covington Campus was an 81.896 which was a B average. His program of study in high school was technology/career preparation (T/CP). He was strong in literature/composition, social

studies, math, and the sciences, maintaining a B average with the exception of pre-algebra and one semester of applied problem solving. He was (and remains) a good student at the Covington Campus maintaining a 3.16 college GPA, also a B average.

Art was the first of his generation in his family to attend college and, until he participated in the dual enrollment program, thought that college was not a possibility for him. He works to help support his family but has successfully completed the basic HEO program and has changed majors to industrial systems technology. He was employed by the public works department for the City of Covington and worked in the maintenance department. His goal is to become an industrial electrical technician, an occupation that is highly recruited by local industry and which pays very well with ample opportunity for promotion through well-established career ladders.

Bob was an African American male who came to the Covington campus from Social Circle High School, a small city school located in Walton County. Walton County is located to the immediate north and east of Covington and is primarily an agricultural area. Bob was also 18 years old at the time of the interview. He was a better than average student with a GPA of 78.629 which would translate to a high C average. He did well in math and science classes but struggled with lit/comp and history. His high school program of study was career/technology and his enrollment in the construction technology class at Social Circle High School allowed him to enter the HEO program in January, 2001 with credit for articulated courses between the high school and DeKalb Tech. Bob could be described as a “typical” Tech Prep student in that his high school program of study was designed to prepare him for a postsecondary technical program of

study. He did not have aspirations for continued education in a four-year college or university.

Bob performed well, concluding his winter and spring quarter HEO classes with a 3.66 DeKalb Tech GPA. He was an excellent machine operator as evidenced by his high performance evaluations, receiving grades of A on all his hands-on exams. Bob also worked part time at a local warehouse facility and helped support his family by contributing a part of his wages to household expenses.

Cal was a white male, 19 years old at the time of entry to the program, one of two HEO students from Eastside High School in Newton county. He was quiet, and somewhat unorthodox, sporting a new hair color every week. He was a B student who was on track with a high school college preparatory (CP) program of study until he encountered difficulty with his second semester language and third semester science classes. He finished high school in the T/CP program. He did well in the HEO program graduating in Spring 2001 with a 3.16 college GPA. He cannot be described as being particularly adept with the machinery; he had difficulty mastering particularly the backhoe operating controls. His performance exams were satisfactory, however, and he passed the backhoe operations course with a B. During our interview Cal stated that dual enrollment was an opportunity for him to escape the boredom of high school and to avail himself of the opportunity to work during those afternoons he was not taking classes at the college. He was very serious about his part-time work at a local supermarket and placed a high priority on attending work for as many hours as he could squeeze from a busy week. During the interview, he was asked if he thought his parents wanted him to continue attending college after completing dual enrollment at Covington campus. He

answered, “Yes they do, and then, they drill that into my head. Because they know once I stop, I won’t go back. I’ll go to work.”

Cal was typical of the HEO students who worked primarily to pay for their vehicles and provide money for recreational pursuits. He was somewhat interested in HEO as a career but realized during the year that his talents would be better applied in another direction. After graduation from high school, he began full time work in the grocery business starting as a manager for the dairy section. He was then promoted to store manager and, at the time of this writing, has not continued with his college education.

Don was a white male, one of two students from Rockdale county schools in Conyers, Georgia. He joined the HEO program because his career goal was to be a heavy equipment mechanic and he reasoned that equipment operation would provide him with some background information that would be helpful when he studied maintenance. His high school GPA was 2.531 and he did well in lit/comp but struggled somewhat with math and science classes. His high school transcript showed grades of C for these subjects and he repeated one math class. He participated in cooperative education and received a grade of 90 of 100 for the work-study part of the course. He did well in the HEO class earning a 3.66 college GPA. Dual enrollment was attractive to Don because it provided him an opportunity to work while going to school. He was skilled with the equipment and scored high with grades of A on his performance exams

Elvin can best be characterized by saying he was different from the other students in his class in several major ways. Although he was academically advanced, he was a year younger than his peers, the only 17 year old in the class. He was a young man who

questioned the orthodoxy of the instruction and who was quick to vent his frustration at the HEO instructor and high school and college administrators when problems came his way. For example, during his interview he was asked if dual enrollment had either a positive or negative effect on high school activities. He answered, "Yes it did. I spent the whole time at Eastside just waiting for the senior homecoming and the parade and all and I had to take a test and on that day Ms. Grant would not let me off for it so I missed homecoming." Two months after the event, he was still angry. Elvin did well in his high school and college courses graduating with a high school GPA of 85 which is a B average. His college GPA was a 3.66, also a B average. He was skilled in the use of the equipment as evidenced by scores of 90, which is an A, on his performance exams. After graduating from high school he enrolled at Covington campus in the industrial systems technology program. His comments during the interview tended to be somewhat negative about his high school experiences and particularly the Youth Apprenticeship Program in which he was briefly enrolled. For example, his answer to the interview question, do you feel more positive taking college classes now that you have almost completed your courses at Covington-Newton campus was, "Yea. I can definitely do them, once I can get out of this Youth Apprenticeship thing where I don't have Mr. Davis looking over my shoulder all through the apprenticeship." However, Elvin was responsible for recruiting two students in the 2001-2002 HEO class so his words did not necessarily match his behavior. His main interest outside of class appeared to be work, his girlfriend, and his truck. He worked at several part-time jobs in succession, moving restlessly about from one job to another until finally deciding that full-time enrollment in college was his best course of action. His father, who was very instrumental in helping

him make that decision, has been very involved in all the major educational decisions Elvin faced while at Covington Campus. The researcher had the opportunity to meet with Elvin and his father to discuss educational options available to him after he graduated from the HEO program. Elvin's father was very supportive of his son's continued enrollment at DeKalb Tech and motivated his son by giving him the option of either going to work full time or going to school as a regular daytime student

Fran's transcript does not list him as belonging to either CP or T/CP programs but his educational goal was to attend a four-year program in engineering or related field. He completed the prerequisite math, science, and language courses to qualify as a CP student. He is a white male with a high school GPA of 82.5 which is a B average, and a DeKalb Tech GPA of 3.16, also a B. He was one of two students that participated in the Newton County Youth Apprenticeship Program and worked for a local pipeline construction company while attending classes at the college. He could also be identified as a Tech Prep student because he was enrolled in an identified Tech Prep program of study and he planned to attend either a two-year or four-year postsecondary program after graduation from high school. His career/technical electives included four semesters of drafting as well as a semester of keyboarding and a semester of computer applications. His on-the-job experience was not operating equipment, rather, his employer created a work-study program around the office management part of construction including some engineering and planning duties. Fran did reasonably well with equipment operation, scoring B grades on his performance exams. Motivating him to complete the theory part of the course was at times difficult for his instructor who complained that Fran did not

finish reading assignments on time. At the time of this writing, Fran was working part-time and attending class part time at Perimeter College.

George was the last of the 2000-2001 class. This 18 year-old rather quiet white male was from Rockdale county schools and had a 2.086 high school GPA in the spring quarter of 2001. His high school grades were average, Cs and Bs, and he struggled with math in both high school and in the HEO curriculum. He was one of the few career/technology students who elected, as a rising ninth grader, a career/technology rather than college prep program of study. George scored well on the math section of the ASSET test, developed by ACT to measure writing, numeric, and reading skills. George qualified for Math 103, the first level algebra course at the college. He was an excellent machine operator and did extremely well with hand and power tools earning A grades in all his performance exams. His goal was to complete high school and immediately enter the workforce. In classroom activity, he appeared to be somewhat indifferent to lecture and reading assignments. His instructor reported that she was having difficulty keeping George on task and current in his assignments. He talked about one day returning to school and enrolling in a heavy equipment mechanic program. At the time of this writing, he was working as a welder in a local manufacturing plant.

The pseudonyms used for the 2001-2002 HEO students are Ted, Van, and Will, two of whom were enrolled at Newton county schools and one from Social Circle High School. All are white males, 18 years of age, and are different from the first group of students in that none held part-time jobs.

Ted's scores on the ASSET test qualified him for program admission and he scored As and Bs in both the lecture and lab parts of his HEO classes. His near future

goal is to continue in college after graduating high school and study for a career in the construction industry, possibly in an engineering program.

Van entered the HEO program with a 77.088, a C grade for his high school GPA. He recently tested for the Navy and plans to go through college in the Naval Reserve program. His goal is to become a naval aviator. During his interview Van said, “Well, I wanted to fly jets, to be a jet pilot in the Air Force and I was gonna (sic) let them pay for my college and I was going to get an engineering degree.” He was asked why he chose dual enrollment and the HEO program. “Just so I would have something to fall back on, like if the Air Force didn’t work out I could be certified and go right into it.”

Will’s father owns a grading and excavating company and Will has worked in the family business intermittently through his teenage years. He is familiar and skilled with the skid-loader and mini-backhoe equipment because he used this equipment during his part-time work. His high school GPA is a 75.86, which is a C, and he is passing his HEO courses with scores in the 80s on his exams. His educational goal is to complete either a two-year or four-year college program and begin a career in construction with his father’s contracting service. His intention is to eventually own and operate the family business.

Review of Student Background Information

The dual enrolled students share common characteristics. Almost all began ninth grade in a college prep program of study but dual enrolled at Covington Campus as career/technology students. They are average to slightly better than average in math and English with grades of Cs and some Bs but did well on other academic and elective courses such as history, social studies, physical education, and technical courses to raise their grades in the mid to high B range. Their GPAs would place them in the upper

middle quartile of academic achievement in their schools. The HEO instructor noted they are dependent on the use of calculators when doing math. Several struggled with writing assignments. As a group, their spelling ability was also below standard for freshman year college students. The first group of students spent considerably more time in the construction math part of the curriculum than provided for in the learning module. A major priority for most of the students was a part-time job to help pay for transportation and recreation. Despite their modest academic success in high school, most all consider completion of a postsecondary program of study important and planned to continue their education as time and resources permitted.

Data Collection and Analysis

Data for this study reflects perceptions of dual enrollment gleaned from interviews with HEO students, and college and high school faculty and staff. A set of interpretive questions was created to facilitate a semi-structured interview process. Merriam (1998) defines an interpretive question as one that “advances tentative interpretation of what the respondent has been saying and asks for a reaction” (p. 77). Creswell (1994) wrote that an interview would be useful in gathering historical information. In this case, historical information about the factors that influenced the HEO student’s to choose dual enrollment was critical to answering the research questions. Creswell also noted that an interview permits researchers to control the line of questioning, allowing discussion to move in promising directions that yield data that may not have been originally planned for or anticipated. The threads of the interview questions for this study and responses to them provided additional information that was not originally considered. Chapter IV details these findings.

Merriam (1998) suggests that “a ruthless review of your questions to weed out poor ones before you actually conduct an interview is highly recommended. This review followed by a pilot interview will go a long way to ensure that you are asking good questions” (p. 78). To ensure that questions were clear, concise, and understandable a draft set of interview questions was initially created. An adult education professor who is an experienced qualitative researcher and teaches doctoral students proper interviewing techniques assisted in refining the draft and added valuable insight into the conduct of case study procedures. The professor’s critique helped with the modification of several questions to correct for ambiguity and/or lack of clarity. The interview questions were not piloted on a test group because of the small number of dual enrolled students at Covington campus. However, a pilot test is indicated in the literature (Merriam, 1998). Researchers wishing to replicate this study may find a pilot test useful particularly if a larger number of students are available for interviews.

Semi-Structured Interview Guide

A review of the literature revealed several studies (e.g., Marquez, 1999; McConnaha, 1996; Rodriquez, 1999) that explored dual enrollment programs in two- and four-year college programs. These studies provided a general outline for the questions created for the interview guide. Merriam (1998) suggests using a semi-structured method in instances where it is desirable to describe “the emerging worldview of the respondent” (p. 74). Of interest was the worldview of the HEO students toward dual enrollment and the interview questions became a starting point for a broader discussion with participants of “how” and “why” dual enrollment occurred. These open-ended questions caused students to reflect on their dual enrollment decision and revealed new ideas about their

experience with the college program. All students, faculty, and staff were asked a pre-developed set of questions, but other questions that resulted from initial interviews were added. The following questions comprised the pre-developed student interview guide:

1. Do you know what dual enrollment is? If yes, can you describe the dual enrollment program?
2. Did someone at your school explain to you what dual enrollment is? If yes, who was that person?
3. Do your parents understand what dual enrollment is? If so, do you they support your participation in a dual enrollment program?
4. Do your parents want you to continue attending college after you have completed the dual enrollment program? If so, why do you think they want you to continue (or not continue) your college education?
5. Do any of your friends know what dual enrollment is? Do you think they support your participation in a dual enrollment program?
6. Have you encouraged any of your friends, brothers or sisters, or high school-age relatives to consider dual enrollment as an educational option? What advice would you give a friend or relative who is considering enrolling in a dual enrollment college class?
7. Has your participation in the dual enrollment program impacted your high school studies in any way? If so, how would you describe the effects of dual enrollment on your studies?
8. Has your participation in the dual enrollment program had either a positive or negative effect on high school activities such as sports, band, and social activities such as dances and pep rallies?

9. Has time spent in the dual enrollment classes impacted in any way, good or bad, your social life, for example, time spent with family and friends?

10. If you are employed, has dual enrollment affected your employment in any way? If yes, can you please describe how your job has been affected?

One additional question was added during the course of the student interviews as a result of the first conversation with Art. He talked about his positive class experience at Covington campus.

Ms. Grant, if you don't talk at all, she talks to you to see if there's something going on. She will talk to you; she understands that everything is not happy.

Sometimes obstacles come up and sometime you need somebody to talk to.

That's what the attitude that's neat about this school; I can't relate to my two teachers back at Newton.

After the interview with Art, question 11 was added because he caused the researcher to reflect upon the graduate school experience. Participation in the masters and doctoral programs at the University of Georgia changed this researcher's view of education. Art stimulated a desire to know if a similar experience occurred to the HEO students during the course of their studies at Covington campus. A last question was added.

11. Has dual enrollment changed the way you think about education in any way?

The review of literature, particularly research by Farar (1999), Marquez (1999), Rodriquez (1999), and Sagers (2000) suggested interview questions that parallel the researcher's interests in dual enrollment. Hallinan and Williams (1990) and Hossler and Stage (1992) write that family, teachers, and friends are often major influences in high school students' decisions to pursue postsecondary education. The interview guide listed

questions that provided useful information in the researcher's daily work. For example, each spring the faculty and staff from Covington campus visited local high schools to recruit students for dual enrollment programs. Data provided by this study will now assist the recruiting team in identifying students who may be attracted to our programs. The data also yields information that can be provided prospective dual enrollment candidates about the positive and negative effects dual enrollment has on time for work, study, family, and friends. This may enable students to make more informed decisions and hopefully reduce the potential for dropping out of the HEO program, an important consideration because of the costs involved to both the college and our industry sponsors.

Investigator Training and Bias

The researcher's training consists of four years of military service, an undergraduate degree in parks and recreation administration, 18 years in the construction industry and postgraduate work in career/technology education including the awarding of a master's degree in technology education. Most of the researchers work as an educator has involved curriculum development and administration at the university, state department, and most recently, technical college levels. Almost all that time has been spent working with adults in the past 10 years with the exception of one semester when the researcher taught high school technology education at Green/Taliaferro High School in Greensboro, Georgia. Working with the dual enrolled high school students was challenging because of the difference in maturity levels between the technical college adults and their younger classmates. The researcher was biased because of expectations of adult behavior from high school students who were not yet fully matured and who had not yet made the transition into the adult world.

The HEO high school students often behaved in ways that are typical for adolescents. Both Ms. Grant, the HEO instructor, and the researcher were frustrated by the student's indifferent attitudes towards classroom activities and homework. The adult students in the class were much more serious about completing assignments and coming to class prepared and on time. The adults read the text assignments and followed the course syllabus; the high school students had to be continually prodded to do their work. For example, Ms. Grant spent several minutes of each class period reminding students that assignments were due and castigating them when assignments were not completed. The high school students were lax about getting assignments completed on time. College staff held higher expectations towards the dual enrolled students' motivation to work than they were capable of providing. Gray and Herr (1995) state that high school students often enroll in college when they are not academically prepared. At times, several of the dual enrolled students were deemed to be socially or emotionally unprepared for the rigors of postsecondary work. These feelings were corroborated by one of the Office of Student Services personnel who commented during their interview that "teaching techniques and the socialization plays a great deal." It was her perception that college classroom management and academic expectations are different from what is practiced in the high schools

Osipow and Fitzgerald (1996), however, state that counselor training is of utmost importance to ensure that students are properly placed in dual enrollment programs. In the future, the college recruiting team will review issues of personal maturity with high school students, counselors and administrators to ensure that students understand the expectations in regards to assignments and testing.

Students and School Personnel Interviewed

Students from Rockdale and Newton counties and Social Circle High School were interviewed in April of 2001. Faculty and staff of both the Covington campus and the participating high schools were interviewed over a period of two months beginning in August and ending in September. A second group of three students, Ted, Van, and Will, were interviewed in October of 2001. Table 1 shows the faculty and staff interviewed.

Table 1

Faculty and Staff Interviewed

Agency	Personnel interviewed
Rockdale county schools	No positive responses for interview
Newton county schools	Youth apprenticeship director
	Vocational supervisor
	Sharp alternative school counselor
Social Circle high school	Vocational supervisor
DeKalb Technical College	Assistant Dean of Student Services
	HEO instructor
Georgia Department of Education	Tech prep director for state of Georgia

Interviews were requested with high school counselors, one from Newton County and several from Rockdale County. The Rockdale County counseling staff declined to be interviewed stating that they were not familiar enough with dual enrollment to speak comfortably about it. The Youth Apprenticeship Coordinator for Rockdale county was

the one person most responsible for advising Heritage and Salem high school students about dual enrollment opportunities. The Rockdale county vocational supervisor who worked with the youth apprenticeship coordinator on dual enrollment activities, retired and declined to be interviewed. Interviews were requested with both Newton and Rockdale county youth apprenticeship coordinators. The Rockdale county coordinator failed to respond to an initial letter of invitation and subsequent E-mails that requested an interview. Several phone calls were also not returned. The Newton County apprenticeship director accepted the invitation to be interviewed. Apprenticeship coordinators are important because they are key people in recruiting students for dual enrollment programs. For Rockdale county, the apprenticeship coordinator was the person directly responsible for moving students from Heritage High School located in that county to our dual enrollment program.

Permission was requested and received to interview the counselor at Sharp Learning Center, the Newton County alternative school. The school district's curriculum director who also served as the vocational supervisor for the two high schools in Newton county was also interviewed. Both the vocational supervisor and the youth apprenticeship director are extremely knowledgeable and supportive of dual enrollment and are directly responsible for moving students from the Newton County High School and Eastside High School to the college program. Both serve as members of the local Tech Prep consortium and are instrumental in establishing policy for secondary/postsecondary coordination and cooperation. The Social Circle High School vocational supervisor, who also serves as both a teacher and as the vice principal for the school, was interviewed. Covington campus interviews included the Assistant Dean of

Student Services for Covington Campus and the HEO instructor. The Georgia Department of Education staff representative responsible for oversight of dual enrollment policy was interviewed

Semi-structured Interview Process

A semi-structured interview process was used (Borg & Gall, 1989). Interviews were tape-recorded and all participants agreed to this process. Initial questions came from the interview guide and responses to the open-ended questions generated additional inquiry. The purpose of the interview guide was to assure that all students discussed similar topics, and information was gathered in a systematic way (Merriam, 1998). Field notes and memos were used to record information gathered in non-interview situations. For example, the HEO program includes 30 contact hours of seat time on the backhoe, the primary piece of heavy equipment used for training. The researcher acted as a safety instructor and personally observed students using the equipment. Other laboratory experiences included instruction in surveying, grading, and soil testing all of which require outdoor activity. Recording devices are ineffectual in lab settings because of high noise levels so field notes were necessary to record student activities. The researcher was also responsible for conducting performance exams and graded students on their use of the machinery according to a checklist prepared as part of the curriculum materials. Therefore, I was responsible for recording grades for hands-on activities. The researcher's primary interest in participating in lab activities, apart from duties as a safety backup for the instructor, was to get to know the students on a personal basis and talk with them in an informal and relaxed atmosphere. A topic of interest was to know if the

answers students provided through the interview process matched information and observation of their behavior in the field.

Time, place, and activities were noted for all interviews with high school and college faculty and staff. Data from the two groups was compared and contrasted with the information provided through the literature review to ascertain if emerging themes in the DeKalb Tech program matched those developed by Rodriquez (1999) and other researchers. One particular theme that emerged from the literature and one that the researcher looked for in this study was the relationship of the perceptions of high school students with the perceptions of high school and college faculty and staff towards dual enrollment. A topic of interest was to know if students and faculty/staff shared a similar view of the program's worth; if the goals of the high school students correlated with the goals of the college and high school staff. Another important factor was to understand the strength of student commitment to the HEO program; to know if there was a sincere student interest in dual enrollment and the HEO program, or if the students simply used the program as a way of bypassing afternoon high school classes. A third factor was to understand the depth and strength of commitment to dual enrollment from the high school administrator's perspective. This is important because of DeKalb Tech's commitment of manpower and money to a program with relatively low student enrollment and high operating costs. The college needs sufficient numbers of reasonably motivated high school students to continue the program. A primary mission of the technical college is to prepare individuals for the workplace; therefore, if students enrolled in a particular program of study do not find employment in that occupational area, it is difficult to justify program continuation.

The data analysis approach used was structured around a model described by Merriam (1998). Interviews were conducted, the responses recorded and the tapes transcribed to create a written manuscript. This raw data, i.e., written transcripts and field notes, were then reviewed and like responses from students, faculty, or staff were grouped together to create categories.

The categories were reviewed to discern recurring patterns that emerged from the data. Merriam (1998) explains,

Categories and subcategories (or properties) are most commonly constructed through the constant comparative method of data analysis...at the heart of this method is the continuous comparison of incidents, respondents' remarks, and so on, into groupings that have something in common. (p. 179)

Data distilled from interviews with students, faculty, and staff were compared and contrasted to identify similar bits of information to look for "recurring regularities in the data" (p. 180). Categories were named, charted, and analyzed and are found in tables 2 – 28. Data was also compared and contrasted to results found in past studies. The results are presented in Chapter V. Student transcripts from both high schools and DeKalb Tech were used to supplement the information provided by the interviews. Papers completed by the 2000-2001 class of students that were part of assignments given to the students at the beginning and conclusion of the program were also referred to. At the beginning of the school year, HEO students were asked to tell something about themselves, write about their expectations for the program, and to explain why they had chosen this program. At the conclusion of the program, they were asked to reflect upon the things they learned and what they liked and disliked about the HEO program. Their papers

provided information concerning the factors that motivated them to choose dual enrollment as an educational option. Their writing also provided insight into their priorities in life including girlfriends, hanging-out with friends, cars, and recreational activities that comprises life for a teenager in North Georgia. Their papers augmented the data recorded through the interview process.

Relational Aspects of the Research Process

The relationship of data from this study to data from other studies rests upon the construction of interview questions, the analysis of data that results from answers to those questions, and interpretation of the data into a cogent set of conclusions (Merriam, 1998). The literature review identified questions that have been asked by other researchers about dual enrollment and are of interest to me, particularly the work of Rodriguez (1999).

One difficulty with conducting this study was the dearth of literature about dual enrollment (McConnaha, 1996), and the lack of information about student motivation as it relates to dual enrollment. Grieve (2001), however, provides information about motivation in general. He states that “students are motivated by different reasons: individual improvement, intellectual curiosity, needed employment competencies, career change or advancement, employment requirement, or the completion of degree or certificate requirements” (p. 38). Eppler and Harju (1997) write “Learning and performance goals proved to be useful constructs for examining differences in achievement motivation and academic performance for non-traditional students” (p.568). They found that “students may shy away from academic challenges because they believe that making mistakes or exerting too much effort both reflect low ability” (p.571). Cross (1981) reports that “there seems to be only one consistent trend in the reasons people

have given for taking courses over the past decade: a steady increase in the proportion taking courses for personal or recreational reasons” (p.94). Aslanian and Brickell (1980) found that adults are motivated to enroll in postsecondary training as a result of job changes, birth of children, and retirement. Csikszentmihalyi and Schneider (2000) talk about sources of student motivation. They found that job preparation and living up to parental expectations were strongly valued by students. “They believe that if they work hard, they will gain material benefits and social recognition as well as the rewards of a job well done” (p. 110).

Only a few researchers (Marquez, 1999; McConnaha; Rodriquez, 1999; Sagers, 2000) have studied the reasons students choose dual enrollment as an educational option. This places limitations on the conclusions of this research project in that findings cannot be generalized beyond the limited findings of these other studies.

The researcher biases in participant observation are a concern in qualitative research. Merriam (1998) asks, “Then what *is* being observed in qualitative research, and how does a researcher assess the validity of those observations?” (p. 203). It was the researcher’s intent to interpret the world-view of the students in this study, and to understand the perspectives they presented towards dual enrollment. The interviews, participation in classroom and lab activities, and a review of student academic records all combined to provide a clearer picture of how students perceived the dual enrollment program.

Merriam (1998) states,

the applied nature of educational inquiry thus makes it imperative that researchers and others have confidence in the conduct of the investigation and in the results of

any particular study. Assessing the validity and reliability of a qualitative study involves examining its component parts, as you might in other types of research. (p. 199)

Merriam offered six basic strategies that can be used to enhance validity. They include,

1. triangulation or using multiple sources of data;
2. member checks, i.e., returning data to the people “from whom they were derived and asking them if the results are plausible” (p. 204);
3. Long term observation, i.e., gathering data over a long period of time;
4. peer examination whereby colleagues comment on the findings as they emerge;
5. participatory or collaborative modes of research where the subjects or participants in the study participate in all phases of the research;
6. researchers’ biases that requires a clarification of the “the researchers assumptions, worldview, and theoretical orientation at the outset of the study” (p. 205).

Triangulation was employed in this study. Data from three sources - students, faculty and administrators from the high schools and college - was compared and contrasted. The use of member checks for the class of 2000-2001 was made difficult in that most of the students did not return to college after graduation. However, member checks with the three students from the 2001-2002 classes were accomplished. A follow-up group meeting with the three students resulted in their review of the findings. They corroborated conclusions drawn from the data they provided.

Peer examination was partially used. Discussions about emerging findings occurred frequently with Ms. Fox and Ms. Grant from the college staff, usually at least once or

twice a week. Discussions also occurred with Mr. Davis, Youth Apprenticeship Coordinator for Newton county schools, but less frequently, perhaps once every two months. Several phone calls and E-mails were conducted with Ms. Evans, Georgia Department of Education Tech Prep coordinator, during the course of the study. Conversations with Mr. Adams from Social Circle, Ms. Barnes from Sharpe Learning Center, and Ms. Clark, the vocational supervisors for Newton county schools, occurred only during the interviews.

Participatory or collaborative modes of research were not used in this study because of limitations of time and access to participants, particularly the off-campus adults whose schedules did not permit extended involvement with the research.

Researcher bias was employed and is outlined in the Investigator Training and Bias section of this chapter. A major researcher bias in the study was the expectation that high school students would behave in an adult manner. Students behaved in typical adolescent fashion, much to the annoyance of both the researcher and Ms. Grant, the HEO instructor.

Lincoln and Guba (1985) write that reliability can be enhanced with qualitative research, primarily through training and practice. Analysis and triangulation also enhances reliability. Lincoln and Guba use the words dependability and consistency to describe reliability. Merriam (1998) writes “the question then is not whether findings will be found again but *whether the results are consistent with the data collected*” (p. 206). Merriam lists several techniques that can be employed to enhance dependability:

1. The investigators position, i.e., the investigator explains his/her assumptions and position with regards to the study group.
2. Triangulation

3. An audit trail whereby “independent judges can authenticate the accounts of a study by following the trail of the researcher” (p. 207).

An example of an assumption for this study was that students enrolled in dual enrollment to allow them to leave afternoon high school classes early. Results from the interviews indicated that this was true for only one of the ten students in the study. The position of the researcher in regards to the groups interviewed was explained earlier in this chapter, i.e., the researcher interacted with students as a part-time instructor and observer. The researcher is a colleague of the college staff and interacts in an official capacity, as Assistant Dean of Instruction, with administrators from Newton county schools, Social Circle High School, and the Georgia Department of Education. This interaction occurs on a frequent basis with college staff and an occasional basis with non-college administrators.

Triangulation was discussed earlier. The use of an audit trail was not employed in this study, i.e., no independent judge was employed to “authenticate the findings of a study by following the trail of the researcher” (Merriam, 1998, p. 207). In this regard, reliability of this study is limited to the corroboration of findings in this study with that of other research. Chapter V compares and contrasts results of this study with the findings others (e.g., Farar, 1999; Marquez, 1999; McConnaha, 1996; Rodriquez, 1999; Sagers, 2000).

CHAPTER 4

FINDINGS

This qualitative study describes the perceptions of high school students and high school and college faculty, counselors, and administrators towards the dual enrollment program provided by the Covington campus, DeKalb Technical College. Ten high school students were interviewed, one group of seven students in May, 2001 and a second group of three students in October, 2001. The first group of students comprised the Heavy Equipment Operator (HEO) class of 2000-2001. Interviews occurred at the end of the students' training program and shortly before their graduation from high school. The second group of three students comprised the HEO class of 2001-2002. These students were interviewed in their eighth week of training during the 2001 fall quarter.

Seven adults were interviewed including two vocational administrators who also served as vice principals for their high schools, the counselor for Sharp alternative school located in Newton County, the Youth Apprenticeship Coordinator from Newton County, the Tech Prep Director for the Georgia Department of Education (dual enrollment is part of her professional duties and responsibilities), the Assistant Dean of Student Services at the Covington campus and the Heavy Equipment Operation and Construction instructor. These adults were the people most responsible for recruiting and advising high school students for the dual enrollment program. Repeated attempts to schedule interviews with administrative staff at Rockdale County schools were unsuccessful because of the retirement of a key administrator who promoted dual enrollment and the busy schedule of

the Youth Apprenticeship Coordinator who failed to respond to letters and e-mail requesting an interview time. Rockdale County did send two students to Covington campus to participate in the dual enrollment program.

Purpose of the Study

This study examined the factors that had an influence on 10 high school students' decisions to choose dual enrollment as an educational option. To this end, two sets of interview questions were designed, one for students and a second for faculty, counselors, and administrators. A student interview guide was designed to collect data to determine the reasons these 10 students chose dual enrollment and to ascertain the influences on their decisions. The faculty/administrator interview guide was designed to provide answers about how students were made aware of the program and how parents, faculty, and counseling staff promoted and encouraged students to choose dual enrollment as part of their programs of study. Comparing and contrasting the answers provided by students with those of adults and similar data found in the research literature provides Covington Campus staff and other interested educators in other high schools and colleges with suggestions about how dual enrollment programs may be strengthened and promoted.

Student Interview Results

The student interviews were audiotaped and transcribed into print. Participant responses were grouped together to create categories and to determine if “recurring regularities in the data exist” (Merriam, 1998, p. 180).

Question 1 – Do you know what dual enrollment is?

Counselors and youth apprenticeship coordinators for Newton and Rockdale counties recruited students in the 2000-2001 class. College faculty and staff met with

students for no more than one or two hours during visits to the Eastside, Newton county, Sharpe alternative, and Heritage High Schools. DeKalb Tech staff knew dual enrollment would be a new experience for them and they would not know much about the program. Interviews were conducted in the spring of 2001. The students had completed almost two full semesters of the HEO program. The researcher wanted to know if their two semesters experience provided them with an understanding of the program. It is important to note that during the year, no college faculty or staff provided specific information about dual enrollment, i.e., the subject of dual enrollment was not part of instruction. Interview results indicated that almost all the HEO students understood and could define dual enrollment. Table 2 reports the responses to question 1.

Table 2

Do you know what dual enrollment is?

Category	Students									
	Art	Bob	Cal	Don	Elvin	Fred	George	Ted	Van	Will
Don't know		X	X							
Attends college	X				X	X	X	X	X	X
Attends high school					X	X	X	X	X	X
Receives college credit				X		X				
Receives high school credit	X			X		X				
Credit during school hours	X			X						

Student responses defined the categories in Table 2, i.e., the researcher did not ask about each element that resulted in a category. However, students tended to give one-sentence answers to questions that required follow-up inquiries by the researcher to ascertain if they possessed a deeper, broader understanding of the subject under investigation. For example, Don was asked if he knew what dual enrollment was. He replied simply, yes. The researcher then asked Don to briefly describe what he thought dual enrollment was. He then replied, "It's where I, as a high school student have a

chance to go to high school for half a day and get credits I need and then take a first step in college and get some credit.” The same was true for Elvin. When asked what dual enrollment was, he replied, “for the most part, yes.” Again, a follow-up question was required to determine if he possessed more in-depth knowledge about the subject. He replied, “It’s when you go to this school and you go to high school at the same time.”

Another anomaly occurred in reporting data when students answered no to a question but then contradicted the negative answer by providing information in later questions that indicated they did know something about the topic in question. For example, Bob and Cal replied they did not know what dual enrollment was. However, both stated they were present when the program was explained to them by a counselor or a visiting staff member from DeKalb Tech (see Table 3). One possible explanation for this anomaly is that students received information about the program but did not understand what was being said.

Therefore, the researcher reported that two students did not know what dual enrollment was based on their answers to question 1 even though they contradicted the negative answer later in the interview. Bob was from Social Circle High School and entered the program in the second week after the 2000-2001 HEO class started at Covington campus. Counselors at Social Circle were not queried but it is the belief of the researcher that they may not have had ample opportunity to fully explain the program to this student in their efforts to quickly get him enrolled at the college. A second student, Cal, from Newton county schools, when asked about his lack of knowledge about the program, stated that it was “explained a little bit but I wasn’t sure exactly what the whole deal was. I just wanted to get through high school and make some money at the same

time.” The researcher interpreted “I didn’t know what the whole deal was” as a negative answer. Cal also enrolled late and did not participate in any of the college staff presentations or briefings given to interested groups of students by their counselors. The remaining eight students understood the definition for dual enrollment including the aspect of college attendance. Several categories emerged from their responses. Six students indicated that attending high school while attending college was part of dual enrollment. Two students mentioned receiving college credit and three students mentioned receiving high school credit in their definition of dual enrollment.

From the answers to the first question it seems that students have a basic understanding dual enrollment. The issue of students receiving both high school and college credit is very important because of funding implications, as well as the critical necessity of receiving Carnegie Units towards high school graduation. Again, it should be noted that the students’ responses to this question were brief. For example, Fred answered, “It’s being enrolled in both high school and college.” I asked Fred about credit and he responded, “I don’t know too much about credit. I know you get both high school and college credit for it.” The brief and somewhat uncertain answers about credit from three students along with no mention at all about credit from the other seven students, indicated that they may not have received all the information they needed. They may not have totally understood the significance of this important issue.

Question 2 – Did someone at your school explain dual enrollment to you?

The researcher wanted to discover who the key providers of dual enrollment information were at the high schools. Some of the counseling staff and the youth apprenticeship coordinators were known to be involved because of personal

communication and meetings the researcher attended during the student recruitment process. Information about other potential high school level supporters of dual enrollment was unknown. Table 3 reports responses to question 2.

Table 3

Did someone at your school explain dual enrollment to you?

Category	Students									
	Art	Bob	Cal	Don	Elvin	Fred	George	Ted	Van	Will
Career day	X									
Visit by DeKalb Tech faculty and staff	X	X						X	X	
Counselor explained program	X	X	X	X			X	X		
YAP Coordinator explained program			X		X	X				X
High school faculty member										X
Wanted to make money			X							

One person, unknown to the researcher, helped promote the program. A ninth grade science teacher at Newton county high school was responsible for explaining dual enrollment to Will.

As listed in Table 3, the following categories emerged from the responses to this question.

1. DeKalb Tech faculty and staff visited Sharp Alternative School and Social Circle High School during career day opportunities. These recruiting trips included the HEO instructor, a staff member from the Office of Student Services and researcher. The purpose of the visits was to explain dual enrollment and assist interested students in beginning the college application process.

2. Students indicated that counselors and the Newton county youth apprenticeship coordinator were the key people providing information about dual enrollment. Mr. Miller, the ninth grade science teacher at Newton County High School, talked to Will about the program. Will was asked if Mr. Miller was a counselor. He

replied, “No he’s not. He’s a wonderful person; everybody who knows him, well, I call him old dude. That’s my personal name of mine; he calls me juvenile and I’ve known him since ninth grade and he’s just one of the teachers that really impacted me in my life.”

3. One student simply stated he wanted to work while finishing high school. He heard from other students that dual enrollment provided an opportunity to be released from afternoon classes to attend college. His classes were conducted on Tuesdays and Thursdays. On Monday, Wednesday, and Friday afternoons he was able to work at his job.

Art, who attended Sharp Alternative School, mentioned that he learned about dual enrollment at the DeKalb Tech faculty and staff presentation. Bob also attended that presentation but did not mention his participation in that event in his response to this particular question. The two Social Circle students who began classes in the 2001-2002 year stated that the DeKalb Tech presentation at their school was responsible for their knowledge about the dual enrollment program.

For Newton and Rockdale county students, the key people marketing dual enrollment were the counselors and youth apprenticeship coordinators from each school system. The Newton County apprenticeship coordinator was very active in promoting the program and conducted student tours of the Covington campus to students in grades 10, 11, and 12 two or three times each quarter. In addition, he was a key player in the program planning and execution of a summer technology camp for rising 9th graders conducted every June on the college campus. Six of the 10 students learned about dual enrollment from their counselors. Counselors announced information meetings for

interested students and explained dual enrollment to the small groups that attended the meetings. Several counselors met with students on an individual basis, for example, the counselor at Sharp talked with both Art and Bob about the program and encouraged them to enroll. Four students indicated the Youth Apprenticeship Coordinator reviewed the program with them during information meetings convened for the purpose of explaining YAP and early enrollment at DeKalb Tech.

Question 3 – Do your parents understand what dual enrollment is?

Hallinan and Williams (1990) and Hossler and Stage (1992) write that parents may play a particularly important role in helping students make decisions about enrollment in higher education. The researcher wanted to know if the parents of dual enrolled students were familiar with the program and, if so, how parents received information about dual enrollment. Also of interest was the communication between students and their parents when dual enrollment was discussed, i.e., did students talk to parents about the program or was information parents received coming mostly from educators. Table 4 summarizes answers to question 3.

Everyone but Will answered that their parents understood what dual enrollment was including Bob and Cal who stated at the beginning of the interview that they did not know what dual enrollment was. Some disparity, then, exists between Bob and Cal's answers to questions 1 and 3. No parents of students in the study were interviewed so an explanation of this disparity remained unexplored. Parents of five students talked with school staff; therefore it appeared that school personnel played a direct role in helping parents understand the program. The parents of two students, Fred and George, critically examined the program to determine if college enrollment would have a negative effect on

their son's high school studies. Cal, Will, and Van's parents appeared to strongly support the program.

Table 4

Do your parents understand what dual enrollment is?

Category	Students										
	Art	Bob	Cal	Don	Elvin	Fred	George	Ted	Van	Will	
Yes	X	X	X	X	X	X	X	X	X		
Encouraged me to enroll	X	X									
Father encouraged me to enroll			X							X	
Parents didn't want negative effect on work or high school				X	X						
Parents talked with YAP director						X					
Parents talked with counselors					X		X				
Parents strongly support program									X		

Art, an alternative school participant, was encouraged by his counselor to pursue dual enrollment. His mother, a Covington campus part-time student, was initially unaware that her son could participate in the program but became very enthusiastic about his participation in dual enrollment when he explained the program to her. Both mother and son were the first in their family to pursue college careers.

Cal and Will stated that their fathers strongly encouraged them to participate in the program. Both fathers were heavy equipment operators, and Will occasionally worked part-time for the family-owned construction business. He hopes one day to operate the business when his father retires.

Don's and Elvin's parents supported their sons' decisions to dual enroll but were concerned that participation in the program would negatively effect either high school studies or part-time jobs. Elvin's parents talked at length with Newton county counselors and the Youth Apprenticeship Coordinator about the program so they were very well informed about the consequences should their son not be able to successfully meet the

academic challenges of both college and high school. They had some concern that enrollment in the program might be too large a burden for their son to carry.

One of the interesting pieces of information that came from student interviews was the importance of part-time employment from both parent and student perspectives. For Art, part-time employment helped to directly support his family. A portion of his wages were given to his mother to help with living expenses. For several other students, family expectations were such that students were obligated to work in order to cover car payments and insurance and money spent for leisure activities.

Parents of Elvin, Fred, and George talked with either the counselor or the Newton county Youth Apprenticeship Director. The Youth Apprenticeship Director strongly believed in the rules requiring parental involvement in decision-making about work and education choices. The Youth Apprenticeship Director supervised approximately 25 students and had more time to pursue conversations with parents than counseling staff who were overburdened with advisement, scheduling, and paperwork. Therefore, he was particularly effective in informing parents about the dual enrollment program.

The interviews suggested that students felt their parents were reasonably well informed about dual enrollment and strongly supported the program. The high school staff accommodated those parents who came to counselors and the Youth Apprenticeship Director to inquire about the program. Some parents learned about dual enrollment from their sons indicating that college and high school staff needs to continually support students who are interested in the program with promotional materials that can be carried home to parents.

Question 4 – Do your parents want you to continue attending college after you have completed the dual enrollment program? Why do you think they want you to continue your college education?

Gray and Herr (1995), Hossler et al. (1999), Hossler and Stage (1992), Hull and Grevelle (1998), and Rodriquez (1999) found that parental support was an important factor when students make postsecondary educational plans. Hull and Grevelle write that educators need to “realize that it is difficult for some parents to understand the value of continuing education and the place of technology in the world when they have little education themselves and little exposure to or understanding of technology” (p. 350). Did parents of the HEO students value continuing education and would they support their child’s post-high school participation in technical training at DeKalb Tech? Attracting students to college programs through dual enrollment may be a first step. Keeping students college enrolled after high school graduation is a potentially more difficult second step and positive parental influence could help with this task. Therefore, obtaining information about the level of parental support appeared necessary. Table 5 summarizes answers to the parental support question.

Table 5

Do your parents want you to continue attending college after you have completed the dual enrollment program?

Category	Students									
	Art	Bob	Cal	Don	Elvin	Fred	George	Ted	Van	Will
Yes	X	X	X	X	X	X	X	X	X	X
First in family to go to college	X									
Parent is enrolled in college	X		X							
Leaving it up to student				X						X
Opportunity for better career					X	X	X	X	X	
Maintain momentum							X			
College education is free			X							

Without exception, students reported that all parents expressed a desire for their children to continue college upon completion of the dual enrollment program and graduation from high school. Don's and Will's parents said they would support their sons with whatever decision the boys made even if that decision was to go directly to the workforce after high school. The overwhelming majority of parents viewed college as an opportunity for their children to create meaningful and satisfying careers. Parents of several students had left high school early or graduated and immediately began work in the local textile mills. They wanted their children to have what they perceived to be better lives and more fulfilling careers that may result from a college education.

Two students, Art and Cal, mentioned that their parents had attended college. That experience influenced parents to encourage their children to continue a college education. In the instance of Art, both he and his mother are the first in their family to attend college, so both are strongly motivated to continue their education. Cal mentioned that college is free. The HOPE Grant pays for tuition, books, and other fees so both he and his mother were able to take advantage of a low cost education opportunity.

Conversations with counselors, administrators, and the Youth Apprenticeship Director indicated that parents wanted their children to pursue a college education. Parents believed that completion of a college degree was a prescription for a better life. This common belief corroborates findings by Gray and Herr (1995) who write, "Parents are intimately involved in the present pressure on youth to go to a 4-year college" (p. 120). Paa and McWhirter (2000) found that parents were highly rated by high school students as influential role models who impacted career choices.

Question 5 – Do any of your friends know what dual enrollment is? Do you think they support your participation in the program?

Peer influence played a significant part in at least three HEO students' decision to participate in the dual enrollment program. Hallinan and Williams (1990) found that college plans were positively affected by best friends and that peer influence does have an affect on motivation to enroll in higher education. A conversation with Mr. Davis, the Newton county youth apprenticeship coordinator, revealed that Ted and Will learned about dual enrollment from their friend Elvin. Ted and Will later explained that they first became interested in the program because of the positive way Elvin talked about their experience at DeKalb Tech. Table 6 provides a summary of responses to the question of peer influence.

Table 6

Do any of your friends know what dual enrollment is?

Category	Students									
	Art	Bob	Cal	Don	Elvin	Fred	George	Ted	Van	Will
Yes		X		X	X	X		X	X	
No	X		X				X			X
Friends think dual enrollment is a good idea			X	X		X			X	X
Friends know nothing about the program	X			X			X	X		
Friends know a little about the program		X			X	X				
Friends participated in the program									X	

Four students answered that their friends did not know what dual enrollment was.

Art and Will had older friends who had already graduated from high school and dual enrollment never became a topic of conversation.

Five students thought that their friends believed dual enrollment was a good idea. There was no indication that any negative peer pressure was experienced by any of the program participants when they considered enrolling in the program. Fred's response

was typical. When asked if his friends approved of his participation he responded, “Most of them think I’m kinda smart for doing it.” Three students had friends that knew a little about dual enrollment and most of the information they received came from the three students enrolled in the program.

Peer group communication about the program has occurred to the extent that friends of the participants appear to be forming favorable impressions of dual enrollment. However, interviews with high school and college faculty/staff indicated that the newness of the program might result in a lack of information about the program. Based upon conversations with both students and school administrators, the researcher believes that not all students who may be interested in dual enrollment have received information that would help them to consider participation in the program.

Question 6 – Have you encouraged any of your friends, brothers or sisters, or other high school age relatives to consider dual enrollment as an educational option?

Farar (1999), Hallinan and Williams (1990), Hossler et al. (1999), and McDonough (1997) found that peer influence does have an effect on motivation to enroll in postsecondary education. Paa and McWhirter (2000) found that parents, peers, and teachers were rated as the most influential role models impacting career choices. Farar found that “Word of mouth was considered...as a good way to communicate and disseminate information about the benefits of being involved with a program” (p. 71). The researcher wanted to know if the HEO students, acting in the capacity of a role model for a relative, were actively promoting dual enrollment. Table 7 depicts a summary of answers to question 6.

Table 7

Have you encouraged any of your relatives to consider dual enrollment as an educational option?

Category	Students									
	Art	Bob	Cal	Don	Elvin	Fred	George	Ted	Van	Will
Yes		X	X	X	X	X	X		X	X
No	X							X		
Family is older and finished high school.	X									
Plan for the future	X	X		X						
Opportunity to try a new thing	X									
Fairly easy to go to college			X							

Two students did not encourage other friends or relatives to consider dual enrollment. One student stated that his friends and acquaintances were older and already graduated from high school. Another stated that he was the youngest in his family and all his siblings had also graduated. The part of the question that asked for advice for someone considering dual enrollment elicited responses that centered on practical considerations such as Carnegie Unit attainment towards graduation, transportation to classes, and careful planning of schedules. Cal liked the program because it opened three afternoons a week for earning money at his part-time job. Students were positive about the program but cautioned that the additional academic work-load was a consideration. For example, Don gave this advice, “Don’t put too many things on your schedule. I have high school, college, and work and I have other activities in my life; stuff at home, friends, and family.” Fred stated, “Make sure you can handle both college and high school because it’s a tough thing to do.”

Several of the students encountered difficulty with record keeping at either the college or local high school. Elvin was unable to graduate a semester early (January, 2001) because he did not receive sufficient Carnegie Units from his dual enrollment

courses to allow him to meet graduation requirements. Van and Will encountered financial problems when their HOPE Grant money for textbook reimbursement was delayed. They learned the hard way that it's the student's responsibility to ensure that the registrar's office has the necessary and proper documentation required for admittance and financial assistance. In high school, record keeping is mostly accomplished through the work of administrative staff with little student involvement in obtaining textbooks and requesting financial assistance. The HEO students found that college staff expected students to assume responsibility for completion of all registration requirements. Art found his registration for winter quarter, 2002 on hold because he did not follow through with paying penalty fees that resulted from late registration. The paperwork involved in college admission was a source of frustration to Art, Van, and Will.

Question 7 - Has your participation in the dual enrollment program impacted your high school studies in any way? If so, how would you describe the effects of dual enrollment on your studies?

This question was prompted by student complaints, early in the dual enrollment program, that work assignments were too hard, that there was too much reading involved, and time management was becoming difficult because of the necessity of juggling school and work. College faculty/staff were very concerned that the added responsibility of the dual enrollment classes would negatively impact high school studies. Table 8 summarizes answers to question 7.

The picture that emerged from answers to question 7 is that dual enrollment did not have a major impact on high school studies. Two students answered "yes" to the question but both agreed that the college classes inspired them to work harder in their

Table 8

Has your participation in the dual enrollment program impacted your high school studies in any way?

Category	Students									
	Art	Bob	Cal	Don	Elvin	Fred	George	Ted	Van	Will
Yes	X						X			
A little bit				X		X				
No		X	X		X			X	X	
Need to find time to study both high school and college	X									
High school work is a job you have to do			X					X		X
Dual enrollment makes you want to study harder						X			X	
Must pass high school class to be dual enrolled								X		
Made high school better because I learned to study									X	

high school classes. Two students claimed that time spent on Covington Campus may have slightly impacted high school work but five stated that the HEO class had no impact on their high school work at all.

During the interviews students stated that high school work was just a part of their life. One student described it as a hoop he had to jump through to complete a part of his education. Three students echoed these words by explaining that high school is simply something they had to do. Two students did claim that participation in the college classes made them want to study harder in their high school subjects. Another student said that failure to pass high school courses eliminated the possibility of dual enrollment so he worked more diligently in high school to stay eligible for enrollment at DeKalb Tech. One student said that he had to find extra time to do both high school and college homework, but the majority of the students seemed to take the added burden of the HEO classes in stride. None of the students indicated that the HEO class and homework assignments were excessively burdensome or disruptive to their high school academic

responsibilities. This most likely was an accurate reflection because HEO students' high school grades for the last two semesters of their senior year did not fall. College staff received no feedback from high school counselors of any negative impact college participation had on high school grades.

Question 8 - Has your participation in the dual enrollment program had either a positive or a negative effect on high school activities like sports, band, and social activities such as dances and pep rallies?

During the spring of 2000, high school and college staff discussed appropriate times for scheduling dual enrollment classes. The concern was that participation in athletics, co-curricular activities such as Skills USA-VICA, and other extra-curricular activities would be negatively impacted by dual enrollment because of time conflicts between social activities and college late afternoon schedules

Only two students said that dual enrollment negatively impacted their high school activities. Elvin was angered because he had looked forward to the homecoming festivities for the entire year. The homecoming parade was scheduled for the same time as an HEO exam. He asked to be excused from the test or have the test postponed but the instructor did not consent to his request. He missed most of the festivities and was still angry at the time of his interview. Don did not mention any specific activities missed, rather he spoke about the time period in general terms. "At the time of class, for dual enrollment, would be right around the end of high school, around 3:30 p.m. Around 7th period and that's the time pep rallies are." Table 9 summarizes answers to question 8.

This question was poorly worded in that students were asked to respond with either positive or negative effects that may have occurred as a result of participation in

Table 9

Has your participation in the dual enrollment program had either a positive or negative effect on high school activities such as sports, band, and social activities like dances?

Category	Students									
	Art	Bob	Cal	Don	Elvin	Fred	George	Ted	Van	Will
Yes				X	X			X		
No	X	X	X			X	X		X	X
Dual enrollment classes compete with extra-curricular activities					X					
Missed homecoming because of HEO test					X					
Would rather go to work than attend activities						X				
High school activities not a priority						X				
Dual enrollment competes with sports								X		X
Social activities occur outside of school								X		
Job was affected									X	

the dual enrollment program. The researcher was primarily interested in negative effects and the question should not have included reference to possible positive effects. All of the responses provided cited negative effects despite the fact that seven students initially answered no to the question. Further investigation revealed that most of the students were more concerned with work as a time issue. Both Fred and Van stated that given a choice they would go to work rather than attend a scheduled activity. Ted stated that pep-rallies were eliminated at his school because of bad student behavior. “Pep-rallies, our school doesn’t have them. We’ve had batteries thrown around; we’ve had toilet paper thrown around. I mean, something always happens at our pep-rallies.”

Several students did mention a potential conflict with high school sports events. Practice times for football, basketball, wrestling, and other athletics normally conflicted with the HEO class periods that didn’t end until either 4:30 or 5:30 p.m. depending upon block or standard school schedules. Ted and Will both competed on athletic teams until injuries ended their participation. It was their opinion that taking part in sports most

likely was a determining factor in at least some of their teammate's decision to not consider dual enrollment as a high school academic activity.

The data indicates that after-school activities did not appear to be a major consideration for most of the dual enrolled HEO students. This is not to say that after-school activities are not a significant factor. There may be students who would have considered dual enrollment had there not been conflicts with athletics or other programs. Additional research is needed to ascertain if the time schedule is a significant factor impeding consideration for dual enrollment.

Data from the interviews also suggested that, for the HEO students, social life revolved around a circle of friends who were not well connected with mainstream high school social events. In addition, the importance of jobs was a recurring theme. Part-time work played a significant role in determining how non-school hours were spent by the HEO group.

Question 9 - Has time spent in dual enrollment classes impacted in any way, good or bad, your social life, for example time spent with family and friends?

Several research studies (e.g., Hossler et al., (1999); McDonough, 1997; Schmeck & Nguyen, 1996) indicate that family, friends, and social life influence attitudes towards higher education. McDonough notes there is an expectation among family and friends that students will continue their education after high school. He states that discussions about postsecondary enrollment can have a negative influence when students feel pressure from friends and family to make a decision they are uncomfortable with. Did dual enrollment negatively impact time spent with family and friends? A negative

feeling towards dual enrollment could carry-over to the decision to pursue higher education. Table 10 summarizes responses to question 9.

Table 10

Has time spent in dual enrollment classes impacted your social life?

Category	Students									
	Art	Bob	Cal	Don	Elvin	Fred	George	Ted	Van	Will
Yes	X						X	X		X
No		X				X			X	
A little bit			X	X	X					
Has had a positive effect							X			X
Impacted time with family	X									
Impacted time with friends								X		
I spend only a few hours at DeKalb Tech			X							
Affected high school life more				X						
Would work if not in HEO class						X				
Spends more time with grandparents							X			
Spends more time with friends										X
Family doesn't return from work until after 6:00 p.m.							X			

Art, George, Ted, and Will believed that participation in the dual enrollment program did influence their social life. Art spent less time with his family. The HEO classes were conducted until late afternoon. The Monday/Wednesday class consisted of students coming from high schools with block schedules. HEO participants were released from high school at 2:30 p.m. and the two and a half hour class concluded about 5:00 p.m.

These students did not arrive at home until sometime between 5:30 and 6:00 p.m., as opposed to 3:30 p.m. during the normal school schedule. Therefore, they spent less time with parents or siblings who were home during the afternoon. For example, Ted stated, "Actually, yes, very, because I used to get out of school at 3:30, go home and hang out....I get out at six o'clock, you know, I get home at 6:00 or 6:30....Tuesday and

Thursday I really can't do anything because I just go home, do my homework, and go to sleep."

Bob, Fred and Van stated there was no impact on their social life at all. Fred, who worked about 20 hour per week, stated he would be at work if not at school. Van stated that none of his family arrives home until after 6:00 p.m. Cal, Don, and Elvin stated that dual enrollment had only a small impact on their social life. Cal mentioned that his Tuesday/Thursday class is only a few hours long, not enough to have a major impact on time spent with friends and family. Don stated that time spent at DeKalb Tech had more impact on high school activities. Elvin, like Ted, stated he went home, ate, did homework, and went to bed.

None of the students appeared to be concerned by the late afternoon class hours or time spent away from friends or family. Class scheduling was a topic of discussion at the conclusion of the 2000-2001 year when the HEO instructor polled students on their opinion of the best time to schedule dual enrollment for the next year's program. The students agreed that while the current schedule was somewhat inconvenient for some participants, particularly for those with part-time jobs who had to adjust work schedules, the afternoon class times did work. Johnson (1983) asked a similar question of students located in the Clarkston campus service area and received a similar answer, i.e., college classes offered after 3:00 p.m. would work best for high school students who were interested in taking college classes at the Clarkston campus. No one recommended any other time periods that would better accommodate high school classes, work schedules, or leisure-time activities. Therefore, the data suggests that negative impact on time spent

Discussions with the Newton County YAP director prior to beginning the dual enrollment program revealed that student part-time work would become a major issue. This supposition was reinforced by the interviews with both students and high school counselors and administrators. The students in the 2000-2001 class worked between 15 and 20 hours per week at their part-time jobs so it was expected this question would elicit a fair amount of discussion. Surprisingly, four of the seven students in the 2000-2001 class answered “no” the question. Bob was not currently employed, George’s hours remained the same in spite of the disruption to his afternoon schedule two days a week. Fred was employed as part of his Youth apprenticeship so his employer designed his hours around HEO class times. Cal’s change in schedule worked to his great advantage in that his employer assigned him from an evening manager to a day manager’s position in the dairy section of a local supermarket. Will stated, “Luckily, I found a nice boss whose mother works in my school, and I work for him, and he was real understanding of when we’re doing a lot of book work. I told him, I was like (sic) I need Tuesdays through Thursdays off...I’ll work for you all weekend.”

It appeared that for most students, employers were very accommodating in flexing hours to allow for changes in work schedules. Art, however, lost his part-time job and had to find a new job. He was still positive about the experience. He explained, “I had to find a new job, and I probably won’t work on Tuesdays and Thursdays, but a lot of jobs, if they find your going to school, something like that, and your on (student) aid, a lot of places will help you. They know you’re still in high school and taking college at the same time, they will help you out.” Only Don had to cut his work hours but he appeared to take the reduction in stride. No one complained about dual enrollment negatively

impacting part-time work; the students and most of their employers simply adjusted to the new situation.

Question 11 – Has dual enrollment changed the way you think about education in any way?

Question 11 did not result from discussions with high school and college faculty and staff, nor did it come from a review of the literature but rather was a question the researcher was personally interested in knowing more about. The genesis for Question 11 emanates from experiences in graduate school and the way the researcher's perceptions toward education have changed over the years through exposure to higher education. The question resulted from a discussion with Art who very eloquently described the way his view of postsecondary education changed as a result of his participation in the dual enrollment program. Art never considered college to be an option because of personal financial limitations and difficulty with academic and social experiences in high school. He harbored a negative view towards higher education based upon unfortunate past experiences. Completion of his HEO technical certificate transformed him and his excitement about continuation at Covington campus caused the researcher to add question 11 to the student interview guide. Table 12 summarizes answers to question 11.

Question 11 elicited the most responses of all the questions. Students became more animated when they talked about their experience at Covington campus. Only two students, Elvin and Will, answered "no" to the question, but when asked to expand on their views, contradicted their negative answers. There was a wide range of comments on how the dual enrollment college experience impacted the way they thought about

Table 12

Has dual enrollment changed the way you think about education in any way?

Category	Students									
	Art	Bob	Cal	Don	Elvin	Fred	George	Ted	Van	Will
Yes	X	X	X	X		X	X	X	X	
No					X					X
I think college is now a possibility	X						X			
I can do college work		X			X		X		X	X
College work is “tough”			X			X				
College is better than high school				X						
I look at things more realistically				X						
College is a “higher step up”					X					
I regret not working harder in high school						X				
College has been a good/positive experience							X		X	X
College classes are smaller								X		
I receive more personal time from my college teacher								X		
I know my fellow students better						X		X		
I have more freedom in college								X		
This is what teens need	X									
College helps with jobs & your personal life	X									
College is something to feel proud about	X									
College serves as an example for family	X									
College motivated me to go to school	X									
College “opened my eyes to education”			X							
College gave me confidence			X							
College was initially intimidating						X				
I’m not worried about college classes because now I know what to expect							X			

education. Art was the most animated in his response when asked if the HEO experience changed his thinking. “Absolutely. I know now that I have a teacher that already has (helped) map out for me what I want to do....business and management. I never thought about college. I never heard about it, but when I had the opportunity the door was open.” Art stated that dual enrollment was a turning point for him in his educational career and that dual enrollment has been a major motivating factor in his life. He said, “I’d say this is what most teens need, something like this. The ones that don’t have all they need, the ones that...don’t have a plan for education, this is what they need. Something like this,

to help them get on that right path, to jump on the boat.” Art went on to say that he is proud of his accomplishments and that, “there’s some that motivates you and can motivate a lot of other people like my mother and my sister.” His experience has had a carry-over effect to other members of his family who now plan to pursue college, where before they thought postsecondary education was beyond their reach.

Cal struggled with his studies at times but came away from the experience convinced that “Yea, I could definitely get through college. I didn’t think I could ever do it before, but when I was working...coming here kinda (sic) opened my eyes to a bunch of things and I think I’ll take a business class, probably.” He went on to say, “It’s smart to go through the program. I really had no confidence in myself whatsoever, and just taking the time to do it, anybody can do it, and you need to do it for sure, cause it really helped out.”

Don echoed Cal’s statements, “I look at things more realistically than I did. High school seemed so boring and inconsequential until I started taking dual enrollment. Now everything has more impact than it did.” Dual enrollment worked to give students confidence in academic achievement they did not have coming into the program.

Summary of Emerging Themes – Student Interviews

Student interviews provided information that was grouped into categories and the categories supported the emergence of several important themes. Themes resulted when a preponderance of information indicated consensus on a particular subject. For example, when six or more students responded to a question in a similar manner, the researcher concluded that the data was supportive of an emerging theme. The strength of a theme was determined by the numbers of students mentioning a particular topic. Nine of 10

students stated that their parents understood what dual enrollment was. The researcher concluded that this strong response by a majority of the students was truly indicative of an emerging theme. Six of 10 students stated that dual enrollment involved students attending college and high school at the same time. The researcher concluded this was also a theme but not quite as strong a one as that which emerged from the question concerning parents understanding of dual enrollment. Table 13 depicts themes and their relative strength that emerged from the student interviews.

Students have a general understanding of what dual enrollment is but their knowledge is incomplete. The people most responsible for providing information about dual enrollment, i.e., the college faculty/staff and the high school counselors, have not been able to fully convey the total meaning and significance of dual enrollment to students. The researcher concluded from the interviews that students should have known more about the program than they did. Part of the problem appears to be the lack of direct one-on-one time spent counseling students, as well as a general absence of good literature about the program. Currently, the only information provided by the college is a very simple one-page flyer that describes dual enrollment in very general terms.

Farar (1999), when discussing the characteristics of effective early outreach to increase postsecondary options for disadvantaged students in California, found that, "The importance of accurate dissemination of information to those served by the program emerged as a characteristic of effective early outreach programs. Attitudinal change by the participants in the program was a crucial part of information dissemination" (p. 70). Farar indicated that changing mindsets towards postsecondary enrollment of first generation college families is a necessary goal of college administrators that must be

Table 13

Summary of Findings, Student Interviews

Strength of Theme	Description
Medium	Students possessed a basic understanding of dual enrollment. They did not have the depth of understanding that college and high school administrators possessed.
Medium	Students learned about dual enrollment from a variety of sources. The most common were high school counselors and the youth apprenticeship coordinators with visits from college recruiters also contributing to information about the program.
Strong	Parents were involved in student decisions to participate in dual enrollment. Parents wanted their children to continue their college education after graduation from high school.
Medium	Peer influence played a role in promoting the dual enrollment program.
Medium	Participation in dual enrollment did not appear to have a significant negative effect on high school academics, or social activities with friends, family, and other school activities.
Strong	Part-time work was an important factor when students considered participation in dual enrollment.
Strong	Students were positive about the dual enrollment program.

directed towards both students and parents. The provision of more and better information to students and parents may increase dual enrollment at Covington campus. The benefit for doing so includes moving greater numbers of high school graduates into college daytime enrollment while reducing stop-out. Stop-out occurs when students spend several years working at low-wage, low-skill jobs before continuing their postsecondary education (Gray & Herr, 1995). The researcher believes it is important to provide students and parents with information that shows the difference in income potential for technically trained individuals compared to low-skilled people.

Students reported that their parents seemed to be only generally informed about the program but were enthusiastic about dual enrollment because it provided an opportunity for their child to pursue a better career through attendance in a college program of study. Friends and siblings, for the most part, were informed about and supported participation in dual enrollment but peer pressure to enroll in a postsecondary program did not seem to be as pronounced for this group as occurred with college prep group of students (Hallinan & Williams, 1990). Dual enrolled students were universally enthusiastic about the program and encouraged friends and family to pursue this opportunity. Experience taught them that consideration must be given to scheduling. Record keeping was very important and became a student responsibility when they moved from high school to the college.

Dual enrolled students in the HEO program achieved postsecondary academic success with no major negative impact on their high school studies. Most students had completed the program or were receiving grades of at least B. All the HEO class of 2000-2001 graduated from high school. High school work was considered by most

students to be a necessary obligation, something that they had to do. Almost all spoke favorably about dual enrollment stating that college work is more satisfying because it provided them with a feeling of accomplishment and was directly related to an interest or career objective. Other categories that emerged from student interviews indicated that small class size and personal attention from the instructor helped make college classes more appealing than the average high school class. A question for future study is to ask students to compare the college classes to high school career/technical classes. The researcher was not sure if students were comparing and contrasting general academic high school classes with dual enrollment classes or if they included their technical/career classes in their assessment concerning class size and individualized attention from their HEO instructor.

Another theme that emerged from student discussions was that this group of students focused more on work than on high school activities such as athletics and other co-curricular and extra-curricular activities. Dual enrollment did not seem to have any major negative impact on leisure time and time spent with family and friends because time devoted to their part-time jobs was a priority. The data suggests that time available for work was a major consideration when students considered participation in dual enrollment.

Work has implications for the YAP program in that apprenticeship is a vehicle that can successfully combine learning with work and can be used as a model to properly guide students toward jobs that will complement their career aspirations. It was interesting to note that when dual enrollment disrupted an existing work pattern, students

and their employers adjusted. Only one student had to surrender a job in order to participate in the program.

Finally, the dual enrollment experience has positively impacted the way students view higher education. For most, participation in the program was a positive and uplifting experience that gave them confidence toward academic achievement that they did not previously possess. All admitted that college work was difficult but realized at the completion of the program that certificate, diploma, and associate degree attainment was within their grasp. Most students indicated that it was now their intention to continue postsecondary training after graduation from high school. Post-graduation interviews with several students who did not continue at Covington Campus indicated they are spending a year in the work force to earn money. It was their intention to return to classes and complete a program of study, not necessarily in the HEO program but perhaps in business and office technology or the management and supervisory development programs. For example, Art continued his studies after graduation from high school.

Faculty and Staff Interview Results

Seven adults were interviewed for this study. They were the key people directly responsible for the creation and recruitment of students into the DeKalb Tech dual enrollment program. Two were vocational administrators who also served as either a vice principal for a high school or the curriculum director for a school district. One was a high school counselor, another a YAP coordinator. The Georgia Department of Education administrator directly responsible for oversight of dual enrollment at the state department level, the Covington campus Assistant Dean of Student Services who is directly responsible for college implementation of dual enrollment, and the HEO

instructor who successfully guided the 2000-2001 class through a year of study were interviewed. To maintain anonymity, the six administrators and one faculty member received fictitious names; Mr. Adams, vocational administrator from Social Circle High School; Ms. Barnes, counselor from Sharpe alternative school; Ms. Clark, vocational supervisor for Newton county schools; Mr. Davis, youth apprenticeship coordinator for Newton county schools; Ms. Evans, Tech Prep coordinator for the Georgia Department of Education; Ms. Fox, director of the Office of Student Services at Covington campus; and Ms. Grant, HEO instructor.

Question 1 - How would you define dual enrollment? What are the key practices of this program? What is the goal of the program? What is the greatest benefit of this program to (a) students and to (b) counselors and administrators?

It was important to know if administrators/faculty agreed on a definition of dual enrollment that included their perceptions of key program practices, program goals, and benefits to students and staff; to know if their definitions matched those of the dual enrolled students, as well as other practitioners and researchers as found in the literature. The reason for comparing definitions among the several groups was to determine if the communication efforts initiated by the Georgia Department of Education and DeKalb Tech staff including the Tech Prep coordinator, were successful in explaining dual enrollment to college high school partners. If there is disagreement on what the fundamental concept and purpose is for the program, then efforts must be made to realign both communication strategies and the message that is being sent to students and high school faculty/staff about the strengths and weaknesses and value of the dual enrollment program. Table 14 summarizes answers to question 1.

Table 14

How would you define dual enrollment?

Category	Faculty and staff						
	Adams	Barnes	Clark	Davis	Evans	Fox	Grant
Student is enrolled in both high school and college simultaneously	X	X	X	X	X	X	X
Program of study is articulated; course progression is seamless	X					X	
College courses are advanced level courses	X		X		X		
Student receives both high school and college credit	X	X	X	X	X	X	
Credit counts towards graduation for both high school and college						X	

During the compilation of the data, the researcher noticed that respondents generally answered each of the sub-questions in Question 1, but not necessarily by distinct category. For example, a response about the goal of the program may be recorded in a category that falls under the question, “What are the key practices of the program.” Duplicate categories that emerged from two or more sub-questions were not repeated but rather responses from one or more questions were placed in a single location.

The first sub-question asked, “How do respondents define dual enrollment?” All seven people explained that students are enrolled in both high school and college at the same time. All but one person stated that students receive both high school and college credit. Three people mentioned that the college courses are advanced level courses. Other answers (one each) touched on FTE funding, Carnegie Unit credit towards graduation from high school, and program articulation that is part of a seamless education process.

The next sub-question asked, “What are the key practices of the program?”.

Table 15 summarizes responses to the key practice question.

Table 15

What are the key practices of the program?

Category	Faculty and staff						
	Adams	Barnes	Clark	Davis	Evans	Fox	Grant
Ability of high school and college to articulate the courses	X				X		
Ability to bring awareness to student of both high school & college requirements for achieving credit for both institutions	X						
Educate parents to requirements for dual enrollment program, e.g., policies & procedures, enrollment procedures, courses that receive credit	X					X	
Achieve close communication between high school counseling staff, teaching faculty, and college administrators	X						
Credit earned at both institutions is counted toward a particular diploma or graduation requirement			X	X			
Courses are career related and they relate to student's career goals			X	X	X		
Both high school and colleges receive funding for dual enrollment			X	X	X		
Credit is transferable across institutions				X			
Early entrance allows enrollment in advanced level courses in postsecondary					X		
Provides students with hands-on experience in addition to theory						X	X

Three people believed that courses are career related. Three people responded that both high school and college receive funding for the program. Two people said that hands-on activities constitute a key practice, while two people included articulation as part of the dual enrollment program. Single mentions of other categories also emerged including educating parents, achieving communication between secondary and postsecondary faculty and staff, credit is transferable across institutions, and early

entrance allows enrollment in advanced level classes later in postsecondary training. Mr. Davis, the person who worked most frequently with college staff, stated that dual enrollment “let students know what they are getting into as far as taking a high school course and a college course at the same time and getting credit for both of the courses they successfully complete.”

The adults were asked to talk about their perceptions of program goals. Table 16 summarizes their responses.

Table 16

What is the goal of the program?

Category	Adams	Barnes	Faculty and staff			Fox	Grant
			Clark	Davis	Evans		
Moving high school students from secondary to postsecondary training	X			X		X	
Motivating high school students to pursue postsecondary training	X			X			
Provide sufficient education that ensures students will be successful in technical careers				X			X
Expand opportunities for students through articulated programs of study beyond limitations imposed by high school curriculum & facilities					X		

Three people focused on moving high school students from secondary to postsecondary training. Two of those three also said that dual enrollment should motivate students to pursue postsecondary training. Two people believed that dual enrollment should provide sufficient education that ensures student success in technical careers. One person spoke of a need to provide courses that enable local schools to offer students opportunity for technical/career training beyond the limitations of existing high school curricula.

The last sub-question, “What is the greatest benefit of this program to students, counselors and administrators?” elicited the greatest response. Table 17 summarizes the benefits of the program.

Table 17

What is the greatest benefit of the program?

Category	Faculty and staff					
	Adams	Barnes	Clark	Davis	Evans	Fox
Expose students to college so they learn what to expect in postsecondary training	X					
Establish closer working relationship between colleges and high schools	X					
Provide students with more options for courses	X	X	X	X	X	
Provide students with competitive edge in marketplace						X
Provide students with job skills that can be effectively used while they pursue additional higher education						X
Dual enrollment must be cost effective for student				X		
Program is career related				X		
Progression through courses is seamless				X		X
Opens counselors/admin staff eyes that technology is more important because skilled worker requirements have tripled in last 50 years						
Allows a counselor to provide a program of study that is faster than students might otherwise do on their own				X	X	X
Allow counselors to provide variety of postsecondary educational experiences			X	X	X	
Allow counselors to provide counseling and career services to a majority of students under their supervision						
Helps counselors determine career paths for a student					X	

The strongest category of perceived benefit that emerged was that dual enrollment provides students with more options for courses. Five of the seven interviewees mentioned this as a benefit of the dual enrollment program. Three people gave a similar answer by stating that dual enrollment allows counselors to provide a variety of postsecondary educational experiences to students. Three people mentioned that dual

enrollment allows counselors to provide a program of study for students that moves them chronologically faster through a diploma or degree than they might do on their own. This is in contrast to the adult Covington campus students who are in their mid- to late-twenties and are upgrading skills after several years of minimum or low wage work. In a similar vein, two people mentioned that students can use the job skills they gain in dual enrollment to support themselves while they continue to pursue additional higher education options. These same two people noted that completion of a dual enrollment program may provide graduates with a more competitive edge in the marketplace than their peers.

Other opinions about program benefits included seamless education (two responses) and a response each for closer working relationship between colleges and high schools, students being exposed to college so they learn what to expect in postsecondary training, and counselors/administrators become more aware that technology is important because skilled worker requirements have tripled in the last 50 years.

Question 2 – How do students enrolled in your school find out about dual enrollment programs? Why do high school students choose dual enrollment as an educational option? Why would students choose not to participate in dual enrollment programs? How do you think dual enrolled students view this program? How do you think the general student population (not dual enrolled) views this program?

The second series of questions sought to learn how faculty and staff perceived the “how and why” students became involved in dual enrollment. A question of interest was why so few students initially volunteered for the program. The researcher was also curious to know if there were negative perceptions of dual enrollment in the general

student population or if low participation is more a matter of students simply not knowing about the program. Did faculty and staff share similar views of dual enrollment with the students?

The first in this series of questions asked “How do students receive information about the program?” Table 18 summarizes answers about how students receive information about dual enrollment.

Table 18

How do students enrolled in your school find out about dual enrollment programs?

Category	Faculty and staff						
	Adams	Barnes	Clark	Davis	Evans	Fox	Grant
High school faculty and staff pass along information to students	X	X	X				X
Prepare literature about the program and give to students and parents	X					X	
Prepare posters and place on bulletin boards and walls		X					
Visits to postsecondary education institutions				X			
Faculty and staff from postsecondary institutions visits schools				X		X	X
DOE sends information to superintendents and tech prep coordinators					X		
DOE sends information to vocational supervisors and presidents of colleges or their designee					X		

The two major sources of information were high school teachers/administrators/counselors who passed along information to students and college recruiters, including faculty and student services staff who visited local schools. College recruiting was mostly accomplished through visits to career days and special presentations arranged by counselors at the local high schools. A second but most important technique was to bring prospective participants to the college for a tour of campus and a presentation by faculty and student services staff. The youth

apprenticeship coordinator for Newton county schools brought students from Eastside and Newton County High School to the Covington campus at least two or three times each quarter. The college campus visits allowed students to see the dual enrollment programs in action with their high school peers actively participating in a lecture or lab class.

Four of the seven adults interviewed, when asked how students received information about dual enrollment, mentioned passing along information to students while three mentioned the college faculty and staff visits to local high schools. Two people prepared literature for distribution to students. One was a high school vocational supervisor and the other a Covington campus staff person. Other means of providing information to students included the preparation of posters for bulletin boards and student visits to the college. Another source of information comes from the Georgia Department of Education. Department staff provided information about dual enrollment statistics, rules, and regulations to superintendents of schools, tech prep coordinators, vocational supervisors, and college presidents. This is accomplished through periodic mailings and at regional workshops that superintendents, vocational administrators, and tech prep coordinators attend. At the state agency level, the Georgia Department of Education and Department of Technical and Adult Education also meet several times a year to determine policy and establish protocol for conducting dual enrollment programs. This information filters down to the high school and college levels through letters and memorandum that are then passed along to students and parents. The fact that only two of the adult interviewees mentioned the preparation of literature was a surprise. Staff from both the high school and college did mention that not enough was being done to

promote the program to more students, particularly those enrolled in the college- prep program of study.

The second sub-question asked faculty and staff why they thought high school students chose dual enrollment. Table 19 summarizes answers to the question of why students chose dual enrollment.

Table 19

Why do high school students choose dual enrollment as an educational option?

Category	Faculty and staff						
	Adams	Barnes	Clark	Davis	Evans	Fox	Grant
H.S. faculty and staff encourage students to participate	X						
Faculty and staff connect careers to postsecondary training	X						
Program is promoted by dual enrolled peers	X						
Program is promoted by industry representatives		X					
Students need and desire courses that are not offered by high school			X		X		X
Dual enrollment helps students achieve career goals				X		X	X
Dual enrollment accelerates postsecondary training				X	X	X	
Dual enrollment allows students to get away from high school				X			
Loner or independent students not tied to womb of high school experience				X			
Dual enrollment results in student obtaining a competitive edge						X	X

Answers to this question were a bit more varied with three people indicating that students desire courses that are not currently offered at the high school. Three believed that dual enrollment helps students achieve their career goals, and three mentioned that dual enrollment accelerates movement through postsecondary training.

Two people stated that completion of dual enrollment provides students with a competitive edge. One of these two was a staff member of the college and was familiar with several students who graduated from high school and used their skills to support themselves as they continued their education at DeKalb Tech.

Mr. Davis, Youth Apprenticeship Coordinator for Newton county schools, identified three additional reasons students choose dual enrollment, i.e., high school faculty and staff actively promote the program, they connect career aspirations to available postsecondary training, and dual enrolled students promote the program to their peers. Student responses indicated Mr. Davis' observations of the reasons students chose dual enrollment were correct. Art, Bob, Ted, and Van stated that a visit by DeKalb Tech faculty and staff helped them understand dual enrollment. Elvin, Fred, George, Ted, and Van stated that dual enrollment programs lead to opportunities for a better career. Art believed that college helps with jobs as well as with your personal life. Mr. Davis' remark that dual enrolled students promote the program to their peers is substantiated by the fact that Elvin recruited Ted and Will. Eight of the ten students answered yes to the question, have you encouraged any of your friends, brothers or sisters, or other high school age relatives to consider dual enrollment as an educational option? A reasonable conclusion is that the HEO students were in agreement with Mr. Davis' identification of reasons students chose dual enrollment.

Mr. Davis also stated that several students were persuaded to join the program as a result of promotion by industry personnel. This happened when members of the Georgia Utility Contractors Association (GUCA), at the invitation of Mr. Davis, visited Newton county and Sharp alternative high schools and made a presentation to students

about careers in the utility construction industry during career day. Students were shown a video titled “Trying to Make Sense of Your Future” that depicted career opportunities for heavy equipment operators. A GUCA contractor brought a large crawler excavator to Sharp alternative school to show students a piece of equipment that is used in heavy equipment operation. He explained how youth apprenticeship and employment in his company would benefit them in meeting their career aspirations. Two HEO students mentioned this visit and explained that the GUCA presentation helped them decide to dual enroll.

The faculty/administrators identified two additional categories that may explain why students chose dual enrollment. One was some high school students simply wanted to get away from high school and dual enrollment was a way of getting out of school early. Another was the experience of what Mr. Davis termed the loner or independent student who was not really interested in the culture of high school, i.e., the part of high school experience that is attractive to students above and beyond academic preparation. These students see high school attendance and completion as something that had to be done; it was a hoop that had to be jumped through as part of growing up. Sports, clubs, and social activities at high school were not a priority for them. Student interviews revealed that part-time work and friends outside of the school environment were more important than school activities. College enrollment was a choice for them because there was no competition from these types of high school activities.

The next question asked, “Why would students choose not to participate in dual enrollment?” Table 20 summarizes answers to the question of why students chose not to participate in dual enrollment.

Table 20

Why would students choose not to participate in dual enrollment?

Category	Faculty and Staff						
	Adams	Barnes	Clark	Davis	Evans	Fox	Grant
Lack of transportation (no car or no license; no transportation provided by school district)	X		X				
Conflict with high school schedule	X				X		
Student felt uncomfortable in class with older people (two students)		X					
Rule about taking so many courses to be eligible for extra-curricular activities			X				
Part time jobs conflict with postsecondary class schedules			X				

Ms. Evans stated that the college prep group is not interested in dual enrollment because it is viewed as a vocational program and will do nothing to assist them in their goal of pursuing a four-year degree. She said,

I think those students that don't have a longitudinal view of education and their personal goal...their view of education is self-contained in their high school years with friends, with their program of study that doesn't really focus on a realistic career. It focuses on going to high school or it focuses on going to college.

The student interview responses support this statement. The HEO students did not view themselves as belonging to the in-crowd who focused on high school academics and extra-curricular activities and general preparation for entrance into four-year postsecondary enrollment. And as noted earlier (see Student Interview section) there were no student athletes among the population of dual enrolled students.

Other reasons faculty and staff thought students would not choose dual enrollment included a lack of transportation, conflict with school schedules particularly for small schools with limited class section offerings, and part-time work. Also mentioned was a

school rule that stated a certain amount of high school classes must be taken to provide eligibility for extra-curricular activities. Two students dropped dual enrollment because they felt uncomfortable being the only high school students in an adult class. Ms. Fox mentioned that some students simply don't wish to take one more test either to qualify for program admittance or to satisfy requirements for receiving dual enrollment course credit. She provided a hypothetical conversation between a prospective dual enrolled student and a college counselor.

You know, if I test in this course, I've already had Accounting 101. Now your going to make me take an exam to prove that I'm knowledgeable? That's all well and good, but I've got an 80 in it; how come my A, B, C can't stand, or transfer in as it stands?

This scenario may be particularly perplexing for college-prep students who are candidates for a joint-seal diploma from high school and who are interested in taking an advanced level technical course not offered by the high school. This is an important consideration for college faculty/staff who are trying to recruit college-prep students into programs like electronics and computer information systems technology that require high ASSET reading and math scores. The thought of taking additional tests may be not worth the trouble to adolescents when they simply can take an easy elective at high school and still be on track for enrollment in a baccalaureate program.

The next question asked how the high school and college faculty and staff thought the dual enrolled students viewed the program. Table 21 summarizes answers to how faculty and staff perceived that dual enrolled students viewed the program.

Table 21

How do you think dual enrolled students view this program?

Category	Faculty and staff						
	Adams	Barnes	Clark	Davis	Evans	Fox	Grant
Students are very positive about the program	X	X	X	X	X	X	X
Students never thought they could go to college	X	X					
Program enhances self-esteem	X	X				X	X
Parents are proud of dual enrolled student's achievement		X					
Carnegie units can become an issue			X				
Satisfies need to get out of high school				X		X	
Program meets expectation about technical education that is career related				X		X	
Students are surprised that study at postsecondary requires self-motivation and self-direction				X		X	
Socialization process is different						X	

The feedback they received from students indicated unanimous agreement that students are positive about the program. Students may complain about irritations like registration and slow to materialize book subsidy checks but they uniformly spoke highly of their experience at the college to their teachers and high school administrators. Several students told counselors and staff that they never thought they could or would go to college. Four of the adults mentioned that *successful* participation in dual enrollment had increased student self-esteem. Two people stated that dual enrollment helps students meet their expectations about technical education that is career-related. However, these same two mentioned that students are surprised at the amount of self-motivation and self-direction that is required with the change from a high school to college learning environment. Both mentioned that dual enrollment is an avenue to escape the tedium and boredom of high school and that dual enrollment satisfied a need to get out of classes.

One person made mention of the Carnegie Unit issue and how it can influence the way students view the program because of the necessity of having sufficient credit for graduation. Dual enrollment can jeopardize graduation should a student fail a class or not receive sufficient Carnegie Units from the college classes.

One final theme that helped explain perceptions of student's thoughts was a single response related by Ms. Barnes.

The parents were also excited because some of these parents were just praying that their child would just finish high school and when they found out that there was an opportunity for their child to not only finish high school but also to earn some college credit they were very proud of their child.

Students related how proud parents were of their child's achievement. Art explained that his mother was very proud of his accomplishments and he felt really good about his ability to please her when he successfully completed his college classes.

The final question of this series asked respondents to talk about their perceptions of how students in the general student population who were not dual enrolled viewed the program. Table 22 depicts a summary of faculty/staff perceptions of how the general student population viewed dual enrollment.

Adult opinions were again quite varied. Mr. Adams and Ms. Evans stated that feedback they received indicated that most students viewed the program favorably. Ms. Barnes and Ms. Fox said that college-prep students looked at dual enrollment as a program that will not help them with their postsecondary aspirations. Three people stated that most of the general population simply doesn't know much about the program at all

Table 22

How do you think the general student population views this program?

Category	Faculty and staff						
	Adams	Barnes	Clark	Davis	Evans	Fox	Grant
Non-dual enrolled view program positively	X				X		
More wish they could participate in dual enrollment	X						
College prep students view program as not necessary to their postsecondary aspirations		X				X	
Some students lack motivation to enroll in postsecondary		X					
9th & 10th graders are looking forward to participating in program		X					
Many do not know enough about dual enrollment programs because program is new and has not been well-promoted			X	X		X	
Postsecondary recruiters are not given access to college prep students						X	
Even when program is promoted some students still do not understand how dual enrollment applies to their career interests				X			
Some students view technical/career education as preparation for low paying jobs with no career advancement							X

because they haven't received sufficient information to form an opinion. Particularly interesting was the comment from the HEO teacher who stated that some high school students do not see career/technical preparation as a way of achieving high skill, high wage jobs in spite of statistics to the contrary. The YAP director was frustrated in that some students do not see the value of the program even after it is well explained to them. Ms. Fox was perplexed because college staff did not have access to all the students at some of the high schools. College staff was invited to speak to only those students who were enrolled in career/technology programs of study while the college prep group received presentations from university recruiters and the military. Ms. Fox stated,

“We’re not given the opportunity to speak to the masses. When we go in, they select the students that we need to speak to meaning they, the counselors, the principal; they segregate the audience.”

Ms. Barnes related her experience with students who were burned-out at school. These students had to be prodded to simply finish their classes and not drop out. Their motivation for enrollment in the postsecondary was nonexistent. They could not see beyond graduation let alone two or three years in the future. For them, education had been a bad experience and their immediate goal was to finish their classes and move directly into the workforce to make money.

A last comment by Mr. Davis related that several students had come to him and stated they wished they could have participated in the program. Scheduling difficulties, bad grades, insufficient ASSET placement scores, and transportation difficulties had made it impossible for them to participate despite their willingness to do so. More students would apparently dual enroll if these barriers could be removed.

Dual enrollment for most students who have received information about the program appears to have merit but doesn’t necessarily meet their immediate educational needs for the many reasons faculty, counselors, and administrators provided. It appears from this discussion that information about dual enrollment is not reaching a majority of the students in the schools served by Covington campus. College-prep students in particular, did not receive information about the program.

Question 3 – Do you have advanced placement classes at your school? If yes, can you compare the dual enrollment program to the Advanced Placement (AP) classes, that is, do the two programs share similar goals? Do the two programs target the same student population? Does one program have an advantage for students the other one does not? Do you believe the students who enrolled in the HEO dual enrollment program were academically prepared for college work?

This third series of questions developed as a result of two considerations. Several members of the HEO advisory committee asked why college-prep students are not attracted to the dual enrollment program and to construction occupations. This discussion resulted from a report by the HEO instructor that the math portion of the ASSET placement exam was eliminating students from program admission. It was important to know if high school administrators could provide an explanation of why more academically high achieving students were not drawn to dual enrollment programs at the technical college.

A second source for this question came about as a result of the study completed by McConnaha (1996). His research identified the characteristics of students at the University of Chicago Laboratory High School who selected dual enrollment as an option. McConnaha assumed that “those high school students electing to accelerate further through the option of dual enrollment were both academically superior and highly motivated, even when compared to their talented peers” (p. 127). He found “Students who select dual enrollment as an acceleration option came from backgrounds, and possessed characteristics, which exhibited strong motivation” (p. 119). A comparison of

high school administrator's perceptions of academic motivation of students enrolled in AP classes with that of HEO students appeared to be warranted.

These questions were important for several reasons. The HEO Advisory Committee required an answer to their question of why more academic high achievers are not motivated to participate in dual enrollment. Other program areas such as electronics and computer information systems would also benefit from the inclusion of high achievers moving from high school to technical college programs rather than those students pursuing four-year degrees after graduation from high school.

Three of the administrators interviewed had AP classes at their high schools while four did not. One of those four was the career counselor for the Newton county alternative school where no AP classes were offered. Of the remaining three who answered no to the question, one person represented the Georgia Department of Education and the other two were employed by DeKalb Technical College. However, all interviewees were asked to respond to the question because the researcher was interested in knowing their perceptions of how AP differed from dual enrollment. Table 23 presents a summary of interviewees' answers to the question, "Can you compare the dual enrollment program to the advanced placement (AP) classes, i.e., do the two programs share similar goals."

All but one person stated that there is no overlap between dual enrollment and AP classes. Two people observed that the goals for AP and dual enrollment are such that they serve students at different levels. Mr. Adams stated,

I would think that a dichotomy exists here in that you would tend to have an AP class of those students who are A students or in the upper 10th of their class and

Table 23

Does AP and dual enrollment classes share similar goals?

Category	Faculty and staff						
	Adams	Barnes	Clark	Davis	Evans	Fox	Grant
School(s) has AP classes	X		X	X			
School does not have AP classes		X			X	X	X
AP classes enroll upper 10% of class	X						
No overlap of students between dual enrollment and AP	X		X	X	X	X	X
Dual enrollment provides opportunity for college courses in lieu of AP		X					
Goals for programs are that they serve students at different levels, i.e., AP for students focusing on 4 year; dual enrollment for technical career	X		X				
Focus for AP is different – taught on high school campus and uses college level textbook			X				
Focus for AP is college prep students whose career goals are the professions such as doctors, lawyers, and managers				X			
Goals have similarity but target groups are very different					X		
Parents are pushing them towards four year higher education and AP	X						

in the dual enrollment program, I don't think in my limited knowledge of students enrolled in the AP courses here, I don't think there is any overlap...so I would say that differentiation among students exists here very much so.

Mr. Adams went on to say that parents of AP students push their children towards four-year degrees and enrollment in AP as means of achieving that goal.

Other categories that emerged from this question were varied. One person stated that the focus for AP classes is different. AP is taught on the high school campus while dual enrollment involves movement of students from the home high school to a college campus. A second person believed that AP students have career goals that aspire toward professions such as doctors, lawyers, and managers rather than technical careers.

Another person suggested that the goals of the program are similar, that is, pursuit of higher education beyond high school, but the target groups are very different. It is interesting to note that a counselor said that dual enrollment provides opportunity for college courses in lieu of AP courses. This comment corroborates a finding of McConnaha (1996) who reported that students who do not have AP courses available to them will select dual enrollment when AP is not available.

Respondents perceived dual enrollment and AP as not sharing a common goal. AP was a program that met the needs of the highest academic achievers while dual enrollment provided opportunity for those that fall below the top 10 to 15 percent in class rank. The researcher asked specifically if the two programs target the same student population and the answers corroborated statements given in answer to the question about the AP and dual enrollment sharing the same goals. Table 24 presents these results.

Four people directly stated the programs do not share the same student population with two of these four respondents replying that dual enrollment serves the middle percentiles of academic achievers. However, three people did make note that there are notable exceptions to this factor. They related stories about college-prep students who chose dual enrollment and attendance at a technical college when the expectation by counselors and parents was that they would focus exclusively on participation in a four-year program of study.

One story in particular stands out. Mr. Davis related the experience of an exceptional young woman from Newton county schools.

A young lady who was at Eastside high school who wanted to be an electronics technician, an electronics engineer, and possibly an electronics technician as a

Table 24

Do the two programs target the same student population?

Category	Faculty and staff						
	Adams	Barnes	Clark	Davis	Evans	Fox	Grant
Programs do not target the same student population	X		X		X	X	
Programs do target the same student population							X
Dual enrollment serves middle percentile of student population	X				X		
Rarely but with some notable exceptions			X	X	X		
Counselors view AP and dual enrolled as two different audiences				X		X	
Counselors marketed AP more than dual enrollment				X			
Counselors track students in 9th grade as college prep or career/technical and AP students are early identified and treated differently						X	
They target the same population but the AP is geared towards college prep declared group of students							X
College prep students move to career/technical when they realize technology related careers may be more financially rewarding							X

career goal from a junior in high school when I first started working with her. We did some career development...She was clearly college-prep, followed a college prep program of study, took some AP classes but came on dual enrollment to DeKalb Technical College. She was also in the apprenticeship program so she was really an exception because she combined work-based learning at a large firm in Conyers area working in their electrical/electronics maintenance department learning all kinds of electronics things that one would do. She also came over to the Covington campus and took the electronics program of study. That was an exception. She was a very, very mature young lady and I think her reasoning was she could get that two-year associate degree in electronics and she just wasn't

sure that she wanted to go off and compete at a four-year college away from this area. She didn't have the need for the socialization side of a four-year college and that wasn't part of her motivation for going to college. She also felt comfortable with her work-based learning activity so that was another draw to keep her here, to stay with the program at DeKalb Tech.

The industrial systems technology instructor at Covington campus related the story of a second exceptional student. This young man was a class Salutatorian and had been accepted at several universities in Georgia and neighboring states. He enrolled in the industrial systems technology program at DeKalb Tech after graduation from high school and completed a diploma program. He was hired by a Fortune 500 company as an electronics-troubleshooting technician and traveled throughout the southeast working on challenging maintenance and repair problems in a variety of manufacturing settings. His instructor related that after three years with the company, the young man was earning approximately \$50,000 a year with a full benefits package and a company vehicle for travel. He clearly could have continued his education with a four-year program but chose instead a two-year technical program of study that provided him with a salary in excess of what most baccalaureate completers would earn after three years in the workforce. Again, this young man was an exception.

Several people commented on the role of counselors in this decision making process. Two people stated that counselors view AP and dual enrollment students as two distinctly different audiences and one of these two said counselors market AP more than dual enrollment. Mr. Davis said,

Our counseling staff does not seem to have a grasp on dual enrollment so it's not marketed by the counseling folks with any degree of regularity and effectiveness....My personal observations is that AP is marketed out of a day at least 1/8th of every day. Dual enrollment might be marketed one a year.

One of the college staff noted that counselors track students starting in the 9th grade as college-prep or as career/technical students. AP students are identified early and treated differently in that they receive more attention from counselors. This same person observed that some college-prep students may move to technology/career courses and dual enrollment when they realize technology related careers may be more financially rewarding than careers that follow a liberal arts program of study.

The next question asked was, does one program have an advantage for students the other does not. Table 25 summarizes interviewee's responses.

The question about one program having an advantage the other does not elicited a wide range of responses. Two people mentioned that dual enrollment at a technical college provides hands-on training that is highly valued in the workplace. Other single responses included

1. One does not have an advantage of the other.
2. Selection of dual enrollment or AP depends upon student's career goals and objectives.
3. AP classes are offered at the high school, dual enrollment at the college.
4. Enrollment in AP is more prestigious.
5. Dual enrollment may be offered at four-year institutions but is not extensively used.

Table 25

Does one program have an advantage the other does not?

Category	Faculty and staff					
	Adams	Barnes	Clark	Davis	Evans	Fox Grant
One does not have an advantage over the other	X					
Selection of program depends upon student's career goals and objectives	X					
AP classes are offered on high school campus, dual enrollment requires travel to college			X			
Enrollment in AP offers more prestige than dual enrollment			X			
Dual enrollment can be located at four year institutions but generally is not extensively employed			X			
Taking AP classes provides advantage in test scores, i.e., completing AP classes usually results in higher SAT, ACT, and other test scores				X		
AP classes usually are taught by the best academic instructors and classes are viewed as elite				X		
Education community needs to get over the vision that AP classes are exclusive, top level class and that dual enrollment classes may be a lower level vocational class					X	
Both allow opportunity to accelerate and pick up opportunities in advanced level classes					X	
Dual enrollment serves a broad spectrum of students, AP does not, i.e. dual enrollment can take the votech students as well as the college prep student where AP will only take top level college prep students						X
Dual enrollment has an advantage by providing hands-on training where AP classes provide theory			X			X

6. Taking AP classes provides advantage in test scores. AP students usually have higher SAT, ACT and other test scores.

7. The best academic instructors usually teach AP students. Classes are considered to be elite by students and parents.

8. The education community needs to get over the vision that AP classes are exclusive, top level classes, and that dual enrollment classes may be a lower level vocational class.

9. Both AP and dual enrollment allow students the opportunity to accelerate and pick-up opportunities in advanced level classes.

10. Dual enrollment serves a broad spectrum of students and AP does not. Dual enrollment is available to all students when AP is available to only the academic elite.

The final question in this series was, “Do you believe the students who enrolled in the HEO dual enrollment program were academically prepared for college work?” This question reflected the concerns of HEO advisory committee members who believe high quality students are needed in dual enrollment and in the workplace because the challenging nature of technical occupations particularly with regards to math and problem solving skills. Pollock and Wilkinson (1988) found that academic underachievers and students with poor study skills, despite these challenges, are motivated to participate in dual enrollment programs. The researcher wanted to know if the high school and college faculty and staff believed that the dual enrolled students were ready for college level work. Table 26 summarizes answers to the question about students being academically prepared for college work.

Four people, all representing the high schools, stated directly that they believed the HEO students were academically prepared for college work. One person from the college disagreed. This person was asked how the students were deficient. The response was, “Actually, in the math. In the math and they can’t spell and they don’t do much reading....from what I see, they are not interested in reading. Their spelling is

Table 26

Do you believe the students who enrolled in the HEO program were academically prepared for college work?

Category	Faculty and staff						
	Adams	Barnes	Clark	Davis	Evans	Fox	Grant
Yes	X		X	X	X		
No							X
Juniors who dual enroll may not have received everything they need academically to be totally prepared for college work	X						
Dual enrolled students did not realize and weren't prepared for the different academic lifestyle that's taught at the technical college				X			
College enrollment motivated academic average students to higher achievement				X			
Students must be program ready by passing minimum score on college ASSET test					X	X	
Some students who are admitted as provisional students (at some colleges) may not be academically prepared					X		
Socialization may be different because students may be immature in dealing with reality of a college schedule						X	
Students were deficient in math and spelling and don't do much reading							X

horrendous.”

Additional categories emerged. Two people made note that students must be program ready by passing minimum qualifying scores on the ASSET test indicating that students possess basic academic skills. The Georgia Department of Education staff member mentioned that some students in other technical colleges in Georgia are allowed to dual enroll in some programs as provisionally admitted students meaning that they can enroll in some courses without minimum qualifying ASSET scores in English, reading, and math but only for a select few programs. The Certified Customer Service technical certificate of credit is one example. Students who enrolled in this program were not

necessarily academically prepared because their ASSET scores fell below minimal requirements found for most certificate, diploma, and associate degree courses.

One of the high school administrators observed that while dual enrolled students didn't realize they were not prepared for the different academic lifestyle found at the college, college enrollment motivated academic average students to higher achievement. Mr. Adam's school sent students, including juniors, to several technical colleges in addition to DeKalb Tech. He made note of the fact that some of the juniors will not be totally prepared for college work because of lack of completion of basic math and English courses. For example, the HEO class includes algebra and geometry in the surveying and soils and grades part of the curriculum. Students without knowledge of math are at a distinct disadvantage. This is a primary reason that DeKalb Tech excludes juniors despite the recommendation of the HEO advisory committee to begin the program of study in the junior year.

Finally, one of the college staff explained that socialization might be different. Some students may be immature in dealing with the reality of a college schedule. Ms. Fox said,

Now socialization may be a little different. They may be kind of immature to deal with what comes forth on a day-to-day basis in a college (with our) instructor versus a high school instructor, your classmate is not a traditional 16,17, 18 year old; it could be a 35, 40, 50, 60. So academically, they are supposed to be in much more of a sound situation to tackle those courses. But then again, we're back to the socialization skills.

In summary, all but the HEO instructor felt that the dual enrolled students were academically prepared based primarily on satisfactory attainment of ASSET program admission scores. Academic performance for the HEO class of 2000-2001 was satisfactory; all students who completed the program passed with scores of B or better and all graduated from high school. Over a decade ago, Pollock and Wilkinson (1988) found that program completers earned more C and B grades than expected of academically at-risk students and fewer D and failing grades than expected. The academic achievement of the 2000-2001 class seems to corroborate this previous finding.

Question 4 – How would you characterize your faculty’s view of dual enrollment? Do they comment on it and if they do, are their comments favorable or not?

Administrators were asked to reflect on their perceptions of how they thought their faculty viewed dual enrollment. Was there was general support between teaching faculty for the program? What feedback did high school and college administrators’ receive from teachers who were familiar with dual enrollment? One unknown was how much information high school teachers had received about the program. This was important because lack of information and familiarity with the program by high school faculty would indicate that additional time and resources should be committed to marketing dual enrollment to this group. High school students spent more time with teachers than with counselors and administrators so teachers could have been primary recruiters for dual enrollment programs providing they approved of the program and enthusiastically supported it.

Table 27 depicts a summary of how high school and college administrators perceived their faculty’s view of dual enrollment.

Table 27

How would you perceive your faculty's view of dual enrollment?

Category	Faculty and staff					
	Adams	Barnes	Clark	Davis	Evans	Fox Grant
College faculty is positive about dual enrollment						X X
High school faculty is positive about dual enrollment	X	X		X	X	X
Faculty support articulation between high school and college	X					
Faculty speak positively about dual enrollment	X	X				
Faculty wants to see dual enrollment thrive and expand	X					
Faculty support students who are dual enrolled	X	X				
Dual enrollment provides opportunity for courses not available at H.S.	X					
Faculty (and counselors) needs more solid information about dual enrollment to better promote the program			X			
The faculty view is probably a view of happiness because these students aren't in their classrooms				X		
Counselors are very concerned about making mistakes with dual enrollment because they do not know enough about it				X		
Counselors and administrators are not as devoted or have commitment to the program						X
Reception from general faculty is better now that secondary teacher responsibility requirements for dual enrollment have been modified						X

The two interviewees from DeKalb Tech reported that college faculty is positive about dual enrollment. Since the HEO program began in August, 2000 dual enrollment has expanded to the heating and air conditioning technology, computer information systems, and the certified construction worker programs. The DeKalb Tech staff reported they have received positive feedback from instructors who teach dual enrolled students in these programs.

The high school administrative staff and the representative from the Georgia Department of Education also answered positively to the question. Most of the Newton and Rockdale county and Social Circle high school faculty are familiar with Tech Prep and articulation between high school and college. The numbers of dual enrolled students is small but comments during the interviews indicated that information about dual enrollment was reaching teachers. Mr. Adams said,

I think all the faculty members are very positive about our student's ability to enroll in dual enrollment types of courses. They are totally behind articulated programs between high schools and colleges whether they be a two-year technical college or a four-year college and university. They want our students to go on further with their education beyond high school and they have nothing but positive comments about the program and they will see more courses available to our students so we can provide them many types of offerings and courses and programs that we can.

Mr. Adams noted that dual enrollment provides opportunity for courses not available to high schools with small student enrollment and limited teaching staff and resources.

Several additional comments were made. A vocational supervisor stated that faculty and counselors need more solid information about dual enrollment to better promote the program. One high school administrator somewhat sarcastically said that teachers who have dual enrolled students in their high school class, in some cases are glad to see them go to the college so they don't have to deal with them. This comment most likely was made in reference to one or two students who Mr. Davis said "tended to be low motivated in that class and thus were learning and behavior problems." It's

interesting to note that the HEO instructor reported that with the possible exception of students talking out of turn, classroom discipline was not a major problem. These problem students seemed to do well in their dual enrollment classes.

Mr. Adams also made a second important observation. Counselors are very concerned about committing students to dual enrollment when they don't know enough about the program. He said,

Their frustration comes and their suspicions and their lack of use of dual enrollment comes from the fact that they don't know it, they don't understand it and they don't feel like they can control it and nobody knows what this dual enrollment puppy looks like. And they are absolutely terrified if they make a wrong call, it's going to come back to haunt them.

One college staff member echoed this concern with the comment that high school counselors and administrators are not as devoted or committed to the program. It appears that lack of information about dual enrollment is problematic.

In summary, the theme that emerges from this question is that while teachers and counselors positively viewed dual enrollment, more information about the program must be provided to these two constituencies. The responsibility for getting more information to high school staff rests with both the Georgia Department of Education and the technical college faculty and student services personnel.

Question 5 – Have you talked to any parents about dual enrollment? If so, what is their opinion of the program?

Hossler et al. (1999) stated that “the single most important predictor of postsecondary educational plans is the amount of encouragement and support parents

give their children” (p. 24). McDonough (1997), Schmeck and Nguyen (1996) also found that parental support plays a critical role in motivating students to pursue postsecondary education. Table 28 depicts answers to the question concerning faculty/administrators talking to parents about dual enrollment.

The researcher wanted to know if the high school and college faculty and administrators perceived parental support to be a factor in motivating students to participate in dual enrollment programs. Six of the seven people interviewed stated they had talked with parents about the dual enrollment program. Three people stated that parents were very enthusiastic about their child being enrolled. Two people commented on the difficulty of changing parent perceptions that higher education may include more than attendance at a four-year college, and that it takes parents a long time to realize their child doesn't necessarily need a four-year degree.

Mr. Davis talked about his observations. He noted that parents want their child's education to be cost effective and those who are realists and understand their child will have academic difficulty in a four-year program, support technical college and dual enrollment. Some of the parents took a hands-off approach to their child's education and supported whatever decision the child made in regards to postsecondary education. These parents encouraged their children to become self-supporting and independent because after high school graduation, the expectation was that the child will “be on their own.”

During the summer of 2001, the researcher met with Elvin who recently graduated from the HEO program and his father who brought his son to register as a full-time adult student for the summer quarter. Elvin was wrestling with the decision to

Table 28

Have you talked to any parents about dual enrollment?

Category	Faculty and staff						
	Adams	Barnes	Clark	Davis	Evans	Fox	Grant
Yes, I have talked with parents	X	X	X	X		X	X
I have rarely talked with parents						X	
Parents are unaware of the program						X	
Parents need more information about the program						X	
Parents are informed about tests (ASSET) and financial arrangements	X						
Parents of college prep track students feel GPA should not be wasted on a technical college program of study						X	
Parents have many questions to ask about the program	X						
Parents have high expectations about their child's participation in dual enrollment	X						
Parents are very enthusiastic about their child being enrolled		X			X		X
Parents actively support dual enrollment by providing transportation for their children and they make sure students attend the program							X
Parents have been very supportive of the program		X					
Parents wish they had opportunity to dual enroll when they were in high school		X					
Every parent wants his or her child to go to college			X				
It takes parents a long time to realize that everybody doesn't need to go to college (to a four year program) but a four-year program is their perception of what higher education means			X	X			
It's hard to change parents perceptions that higher education means attendance at a four year college			X	X			
Parents want their child's college education to be cost effective				X			
Parents who are realists and realize their child will have difficulty with a four-year program of study tend to support technical college and dual enrollment				X			
Some parents are hands-off parents and tend to say that whatever my child wants to do, that is fine with me				X			
Hands-off parents encourage their children to become self-supporting and independent because the children, after graduating from high school, will be own their own				X			

continue his education or go directly to work. The conversation between the father and

son fully corroborated the observation of Mr. Davis. The father explained to his son that the decision to continue college was up to Elvin and whatever decision he made would be fully supported. However, if Elvin chose not to go to college, he would be expected to assume full responsibility for all facets of his daily life including transportation and living expenses. Elvin's father asked him to consider continuing his education because the investment made now would have benefits later in life particularly in regards to future employment. Elvin decided to stay in school and at the time of this writing was enrolled as a full-time student.

Some additional answers to this question included the fact that parents wished they could have participated in a dual enrollment program, parents supported dual enrollment by providing transportation to college for their child, parents have high expectations about their child's participation in dual enrollment, and parents have many questions about the program.

The general theme that emerged from Question 5 is that respondents reported that parents support dual enrollment. Most parents want their children to attend college and dual enrollment is one path a student may follow to achieve that goal. The responses to the question indicate that parents also need to be provided with better information about the program.

However, answers to Question 5 were numerous and varied. It was difficult to discern a strong theme because no category elicited the same response from all seven respondents. A safe conclusion that can be drawn from the data presented is that parents are involved in their child's decision to participate in postsecondary education. Additional research can provide answers to the question of how DeKalb Tech staff and

college partners can better communicate with parents to more effectively involve them in their children's postsecondary education decision-making process.

Question 6 – What can we do to improve the dual enrollment program, that is, what can be done at the secondary level, the postsecondary level, and the state department level to make this a better program for high school students. What additional resources do we need?

The purpose of this last series of questions was to provide interviewees with an opportunity to suggest ways and means that dual enrollment can be improved at the three levels of program service, i.e., the high school, college, and state department level. The question was designed to gather the collective experience of the group and synthesize these experiences into suggestions that DeKalb Tech staff can pursue in an effort to strengthen and improve the dual enrollment program. Several strong recommendations were offered. Table 29 summarizes answers to the question of how dual enrollment can be improved.

Both high school and college staff asked that a list of articulated courses be created and provided to counselors and administrators. This was considered a college responsibility. Four people also requested that the Georgia Department of Education also provide course numbers for articulated courses. The course lists and numbers would remove counselor's uncertainty about enrolling students in a particular class and help them understand the Carnegie Unit implications of placing a student in a particular program of study. Four people asked that both the college and the high schools do a better job of publicizing dual enrollment to both students and parents. Three people said that more work must be done to strengthen dual enrollment so that the program remains

Table 29

What can we do to improve dual enrollment?

Category	Adams	Barnes	Faculty and staff Clark	Davis	Evans	Fox	Grant
Keep lines of communication open at all levels	X		X		X	X	X
College should send high schools catalogues; list of articulated courses with course numbers for both college and high school courses			X				
We must become less territorial of our programs to make sure that we are working hand in hand to benefit students	X						
We must work to strengthen dual enrollment programs to ensure relevancy and successful articulation	X			X	X		
Dual enrollment classes must lead to a career	X						
Complete articulation agreements for additional courses		X			X		
Provide list of articulated courses to counselors and administrators		X		X	X	X	
Address issue of different start times for college and local high schools		X					
Provide counselors with course number match between DOE and DTAE courses			X	X	X		
Provide counselors with Carnegie Unit information				X			
DOE must provide more course numbers for articulated courses			X	X	X	X	
College and local schools must publicize dual enrollment better to both students and parents			X	X		X	X
Provide sufficient funding so that program is attractive to both college and high school administrators			X			X	X
Solicit more industry support for dual enrollment programs							X
Continue Summer Academy at Covington Campus				X			
Create follow-up activities to Summer Academy that continues to promote dual enrollment				X			
Provide high school forum for dual enrollment and summer camp completers to promote college/high school joint cooperative efforts				X			
Involve parents in publicity efforts, e.g., newspaper articles about parents view of program				X			
Create understanding and sympathy towards time and resource constraints of high school faculty, counselors, and administrators who place dual enrollment responsibilities on top of an already full plate					X		
Ensure sufficient personnel at high school, college, and DOE level are provided to ensure successful implementation of dual enrollment programs				X	X	X	
DOE and DTAE must work to keep local high school staff informed of curriculum revisions and changes to dual enrollment rules and regulations. Counselors need certainty about credit issues.					X	X	
Assess what additional programs with potential for articulation are needed; ensure those programs are needed in the workforce							X
DOE must collect data that is relevant, positive, and accurate so that dual enrollment programs can be expanded					X		
Dual enrollment must be continually evaluated					X		
Provide additional equipment for programs							X
Provide additional adjunct faculty to assist in instruction							X

relevant and successful articulation is assured. Additional articulation agreements for courses not already covered by agreements must be initiated. Three people suggested that more people be assigned to dual enrollment at all three levels, i.e., secondary, postsecondary, and state, to ensure successful implementation of the program. The Department of Education and Department of Technical and Adult Education must do a better job of informing high school staff about revisions and changes to dual enrollment rules and regulations. To this end, the Department of Education must collect data that is relevant, positive, and accurate to facilitate expansion of dual enrollment programs. All three levels must engage in continued evaluation of the program.

Funding was an issue for one high school vocational supervisor and for both college representatives. These three individuals suggested that sufficient funding be provided so that the program is attractive to both college and high school administrators.

Additional comments included a suggestion that colleges and high schools become less territorial of programs to make sure that educators are working hand-in-hand to benefit students; more industry support should be solicited for dual enrollment; the Summer Academy at Covington Campus should be continued and camp graduates be offered a forum in the high schools to promote joint cooperative efforts. Parents were mentioned; one person said to involve parents more in publicity about the program. Mr. Davis stated the college must “create an understanding and sympathy towards time and resource constraints of high school faculty, counselors, and administrators who place dual enrollment on top of an already full plate.” Finally, the college representatives made a plea for more resources in terms of money, equipment, and additional faculty to help with instruction.

Several categories taken together indicated a theme that emerged from Question 6, i.e., the need for working articulation agreements between the high schools and college that clearly spell out the courses and credits that are available for dual enrollment programs of study. This is not a problem for the HEO program in particular because statewide articulation agreements already exist (Georgia Department of Education & Georgia Department of Technical and Adult Education, 1999). It is, however, a problem for increased enrollment in the computer information systems program and for some of the business and office technology and management and supervisory development courses that do not currently benefit from existing articulation agreements. Again, Table 28 depicts numerous and varied responses to the question about improving dual enrollment. No strong theme emerged from this question but the need for additional articulation agreements does stand out.

Summary of Emerging Themes – Faculty and Staff Interviews

A quick review of Tables 14–29 reveals that the adults interviewed provided more numerous and in-depth answers to the researcher’s questions than did the students. Responses were varied and often no more than three or four of the participants mentioned a similar category. It was therefore difficult to define a strong theme for some of the questions. However, several categories taken together indicated the emergence of a general theme. For example, respondents provided 25 categories for the question about what we can do to improve dual enrollment. The strongest category (5 of 7 respondents) indicated that administrators must keep lines of communication open at all levels. Other categories that fit together included responses citing the need for course lists, additional development of articulation agreements, course number match lists, Carnegie Unit

information, curriculum revisions, and additional data. The combination of responses to a given question along with information gathered from field data, e.g., meetings with administrators and observations of the administration of dual enrollment at both high school and college level, provided the researcher sufficient information to suggest some emerging themes. Table 30 presents a summary of these suggested themes. Several are corroborated by data that emerged from other studies. Chapter V details the similarities of findings between this study and those of Rodriquez (1999) and other researchers.

Faculty and administrators at both the college and high schools clearly and correctly defined dual enrollment. They understood that dual enrolled students received both high school and college credit and both the Georgia Department of Education's full-time equivalent (FTE) money and HOPE Grant provided funding. They understood the purpose of articulation agreements and almost all were familiar with the Georgia Department of Education's requirements for articulated credit. High school staff looked to the college and the Georgia Department of Education for continued leadership in assisting counselors and administrators with the logistics of implementing dual enrollment programs, particularly in regards to identifying course numbers and Carnegie Unit credit for students enrolled in a particular program of study.

Another theme that emerged was that marketing dual enrollment programs required more effort on the part of both the college and high school staff than was provided. Students, parents and teachers all needed more information about dual enrollment. Written material describing the program was brief and not well disseminated. Disseminating more and better information about dual enrollment must become a priority.

Table 30

Summary of Findings, Faculty and Administrators

Strength of Theme	Description
Strong	Administrators provided an accurate definition of dual enrollment
Strong	Dual enrollment provides benefits to students, parents, high school and college staff but needs better marketing
Medium	Students move directly from high school to college
Strong	High school and college staff was primarily responsible for recruitment for dual enrollment
Strong	Administrative staff agreed that students view dual enrollment positively
Strong	Administrative staff agreed that not all student are being reached with information about dual enrollment
Strong	Dual enrollment and AP classes did not overlap, i.e., the two programs were targeted towards different audiences
Strong	College and high school administrators believed that students were academically prepared for dual enrollment
Strong	College and high school faculty strongly support dual enrollment
Medium	Some high school counselors and administrators are wary of dual enrollment because they do not have sufficient information about the program
Medium	There is a need for strong articulation agreements that spell out dual enrollment courses and credit

Dual enrollment helped students achieve career goals. High schools are limited in their ability to provide courses that support all the career interests of technology/career students. Dual enrollment broadened course offerings to include programs of study that are not locally available. Ten high schools students moved directly from high school to college through enrollment in the program. However, only three continued postsecondary training at the time of this writing.

Students were very positive about the program. Parents of dual enrolled students were also pleased that their children were enrolled in college classes. However, many students did not know about the program and promoting the program among college prep students was difficult.

Dual enrollment and Advanced Placement (AP) classes did not compete with one another. While industry people would like to have had more academic high achievers become interested in career/technology programs, the interviews revealed that dual enrollment was promoted among the middle quarter of academic achievers and particularly to students who enrolled in career/technology courses. Counselors viewed AP and dual enrolled students as two different audiences.

With the exception of the HEO instructor, all counselors and administrators at both high school and college believed that dual enrolled students were academically prepared for college work. The primary reason for stating this belief was that students who achieved satisfactory scores on the ASSET placement exam were by definition program ready. They possessed the necessary reading and math skills to be successful in college courses.

Students, parents, the high school, and college faculty and administration were positive about dual enrollment and would like to see the program expanded into new programs of study. However, everyone interviewed agreed that more information about the program is necessary to keep all informed about current rules and regulations that govern the conduct of dual enrollment courses. More effort must be exerted to market the program to a broader group of students.

General Summary

The picture that emerged from the student and faculty/staff interviews is the college and our high school partners have made a solid and excellent start on a most worthwhile enterprise. Dual enrollment holds great promise for moving more students into the postsecondary and enrolling students in college who otherwise would not have considered higher education an option. But an enormous amount of work remains to be done. Two major considerations stand out and they are closely intertwined. Dual enrollment at Covington campus has not been well marketed and the reason this may be true is the uncertainty that surrounds the program. Because it is new and the guidelines vague and sometimes incomplete, key people such as counselors and administrators are hesitant to move too quickly to enroll greater number of students in the program. A tentative conclusion is that both college and high school personnel are currently satisfied to move cautiously and slowly to see how this program develops. A better marketing plan appears to be a necessity as does the development of a complete set of program guidelines that high school and college staff can follow as they expand dual enrollment to move it beyond where it is today.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

In this chapter, the purpose statement is reiterated and a brief review of the constant/comparative data analysis method used in this case study is provided. Data gathered from interviews with students and faculty/administrators is compared and contrasted with the findings, conclusions, and recommendations of other researchers who have examined dual and concurrent enrollment (e.g., Farar, 1999; Marquez, 1999; McConnaha, 1996; Rodriquez, 1999; Sagers, 2000). Recommendations for improving dual enrollment programs at DeKalb Technical College are made and suggested additional research is included with each conclusion, in order to facilitate clarity and cohesion within the text.

Purpose of the Study

The purpose of this study was to examine the factors that impact students' decisions to choose dual enrollment as an educational option at the Covington campus of DeKalb Tech. Interviews were conducted with 10 students and seven adults including the vocational supervisors from Newton county and Social Circle school systems, a youth apprenticeship coordinator from Newton county, a counselor from the Newton county alternative school, the Tech Prep coordinator for the Georgia Department of Education, the director of the Office of Student Services at DeKalb Tech and the Heavy Equipment Operator (HEO) instructor who taught the dual enrolled students at the Covington Campus, DeKalb Technical College. Fictitious names were assigned to students and adults to ensure confidentiality.

Theoretical Framework

This is a descriptive study that illuminates the perceptions that students, faculty, and administrators at DeKalb Technical College and the high schools in the campus service area revealed during a series of interviews conducted in the spring, summer, and fall of 2001. The researcher wanted to know what motivated high school students to consider dual enrollment as an educational option. Motivation has been positively related to educational achievement (Houle, 1988; Wlodkowski, 1985). This study examined internal motivation factors, e.g., academic achievement and career expectations, and external motivation factors such as the influence of counselors, family, and friends on students' decisions to participate in the dual enrollment program.

Method

Interviews with two groups of dual enrolled students; the HEO classes of 2000-2001 and 2001-2002 were conducted. Also interviewed were faculty and administrators from two school systems, the Covington campus of DeKalb Technical College, and the Georgia Department of Education. The HEO students were chosen because of convenience; they were enrolled in a program of study located at Covington campus, DeKalb Technical College. Therefore, the researcher was familiar with the program and the students. They attended classes as a group at a regular time that facilitated the information gathering process. The students' academic background was of interest. They were C and B students and enrolled in the career/technology track. Assessment of their ability to succeed in college courses was important because dual enrollment was identified as an administrative goal in DeKalb Tech's strategic plan. Dual enrollment holds promise for increasing participation in industrial technology courses that currently

suffer from low enrollment. Adults were selected because they were key people responsible for recruiting students for the HEO program.

The data collected resulted from interviews with students and faculty/administrators. The constant comparative method of data analysis was used to determine similarities and differences between the study groups. Merriam (1998) suggests the use of the constant comparative method as a useful strategy when using case study as a research method.

The basic strategy of the method is to do just what it's name implies-constantly compare. The researcher begins with a particular incident from an interview, field notes, or document and compares it with another incident in the same set of data or in another set. These comparisons lead to tentative categories that are then compared to each other and to other instances. Comparisons are constantly made with and between levels of conceptualization until a theory can be formulated. (p. 159)

Student Group Comparison

In this chapter, data between groups are compared. A comparison between two student groups, the class of 2000-2001 with the class of 2001-2002 is provided. Art, Bob, Cal, Don, Elvin, Fred, and George comprised the class of 2000-2001. This class is referred to as student group A. Ted, Van, and Will constituted the class of 2001-2002 and is referred to as student group B.

Definition of Dual Enrollment

Both groups had a basic understanding of dual enrollment, although the 2000-2001 class had more in-depth knowledge of the meaning of dual enrollment. Table 2 on

page 98 depicts categories of response made by both groups to the question, do you know what dual enrollment is? Group A included the responses, receives college credit, receives high school credit, and credit during school hours. Group B did not mention these important categories. This was a surprising finding because the researcher believed the high school and college staff provided more thorough information to group B students during their recruitment process. Group B students received an approximately one-hour presentation by Ms. Grant, the HEO instructor, and the researcher. The researcher thought the method for awarding credit for participation in dual enrollment had been thoroughly explained. One possible explanation is that group A students were interviewed at the end of their year at DeKalb Tech, while group B students were interviewed three months classes began. Group A students may have accumulated more knowledge about dual enrollment during the course of the academic year. Group B students may have listened to the explanation but were either uninterested or did not understand the explanation. However, the researcher was concerned that students from both groups lacked understanding of the meaning, goals, objectives, and benefits of dual enrollment. This deficiency may have a negative impact when students enroll without a clear understanding of the purpose of dual enrollment. Students who are unfamiliar with the requirements and responsibilities of the program are at risk to fail or prematurely drop out from school. In Chapter III, Participants, the researcher explained that two students dropped the program, one because of academic difficulties, and another because he misunderstood the course content. It is necessary for students to have an understanding of the important factors that determine their success in dual enrollment programs including the way credit is awarded for high school and college. The students' cursory

knowledge that was recorded during the interviews was insufficient to allow them to make reasoned decisions about postsecondary enrollment. Group A and B students received little written information about dual enrollment. The college provided local schools a one-page information sheet that listed courses, registration information, a very brief description of the HEO program, and contact people at the college.

Recommendation for Better Information

Throughout this chapter, recommendations are made that more written and oral information about dual enrollment be provided students so they have a better understanding of the program. A primary recommendation is the creation of a dual enrollment handbook that provides information to include a definition of the program, goals and objectives, key practices, key contact persons at the college and high school, course offerings and course numbers, and step-by-step instructions on how to become successfully enrolled in the program. Experience with group B students who did not grasp Ms. Grant's explanation about dual enrollment leads the researcher to believe that the oral presentation did not properly convey information college staff wished to provide and, therefore, must be improved. A second key recommendation is that a post-presentation evaluation form be developed that asks students if they understand the meaning of dual enrollment, key practices, goals and objectives, and enrollment procedures for the program. This one-page instrument would ask them to provide a definition of dual enrollment, state the major goal of the program, identify several key practices, state the first step in the enrollment procedure, and name the contact persons at their high school and the college who can provide them with more information about the

program. The evaluation form would be distributed at the beginning of the orientation meeting and collected prior to their dismissal.

Explanation of the Dual Enrollment Program

One of the interview questions asked, who was the person at their school that explained the dual enrollment program to students. Both groups A and B cited the same sources of information; counselors, visiting DeKalb Tech staff, and youth apprenticeship coordinator. Students responded that counselors and the youth apprenticeship coordinator were key people at the high schools responsible for getting important information about dual enrollment requirements and responsibilities to them. The researcher concluded that high school counselors would continue to be key providers of information about dual enrollment programs. It is recommended that college staff work closely with high school counselors to provide them with the latest information about dual enrollment. The reason for doing so is that college staff often received information initiated by the Georgia Department of Education (DOE) before counselors receive it. Information from DOE goes to the Georgia Department of Technical and Adult Education (DTAE) and then directly to the colleges, usually through the Tech Prep coordinator who is a college employee but also electronically through E-mail to the presidents of the colleges. The Tech Prep coordinator and/or the president then forwards information to the college dean of instruction and dean of student services. Information from DOE to the high schools appears to take more time. Information is sent to the superintendent of schools, then to the high school principal, and finally, to the counseling staff. Past history indicates that college staff often received information before counselors did. Frequent contact between college staff and counselors will facilitate

information exchange and help keep key people informed of latest decisions and directions concerning changes to dual enrollment policy.

Parental Involvement

Parental involvement was identified as a weakness by Covington campus staff. Ms. Fox said, “Rarely do we talk to parents, only during their (students’) open house.” On the other hand, high school administrators and counselors stated they did talk with parents. Students from both groups said their parents understood the definition of dual enrollment. However, group A provided more responses than group B. One reason for the greater number of A responses may be related to the different sizes between the groups. Group A numbered seven students and group B numbered three.

Rodriquez (1999) discussed the importance that South Bay college staff attached to their communication with parents. “In conjunction with a more personal approach, nearly all of the staff mentioned the importance of parent involvement to encourage students to participate in the Afternoon College. As noted in the research, parents, their education level and socio-economic status are influential in the early stages of the college preparation process” (p. 78). A conclusion reached was high school counselors would most likely continue to have the most contact with parents. However, college staff can provide parents with information through the preparation of written material such as the aforementioned dual enrollment handbook.

Interviews with students and high school staff indicated that parents were very pleased with their sons’ participation in the dual enrollment program. Students in both groups stated their parents supported their participation in dual enrollment. The research literature indicated that parents often influence postsecondary enrollment decisions (Gray

and Herr, 1995; Hossler et al., 1999). The researcher concluded that parents need information about dual enrollment to help with advisement about postsecondary enrollment decisions and recommend that college staff work closely with high school personnel to create a package of materials for parents that clearly defines dual enrollment, explains the benefits of the program, and clearly spells out the logistics of enrollment including all expenses to students not covered by the HOPE grant. Parents must be made aware of incidental costs for drug testing and purchase of books and materials not covered by the HOPE book allowance.

The researcher was interested in finding-out from students if their parents wanted them to continue college after completing the HEO program. Students in both groups answered in the affirmative, citing the opportunity for a better career as a primary reason parents encouraged postsecondary enrollment. The research literature cites the importance of parental influence. Rodriquez (1999) reaffirmed the importance of parental influence in motivating students to consider postsecondary enrollment. She quotes from an interview with a high school counselor.

If the parents push the kids, they probably are going to get more involved. If the parents were perhaps more informed, because see, the parents would much better understand the opportunities involved than juniors and seniors in high school would. (p. 79)

The counselor's quote strikes at the heart of the importance of parental involvement. If parents understand the benefits of technical education, e.g., the salary and wages offered by local business and industry to people with high skills that are in demand, then parents will be more likely to encourage their children to consider dual enrollment and

continuation of higher education through certificate, diploma, and associate degree programs.

The researcher recommends that career information about the occupational areas taught at Covington campus be provided to parents. Electronics, heating and air conditioning technology, HEO, computer information systems, business and office technology, accounting, and management and supervisory development programs all have advisory committees that meet at the college a minimum of twice a year. Advisory committee members to each of the respective programs can provide employment opportunity, salary figures, and opportunity for career advancement to college staff.

Peer Group Influences

The fifth question/recommendation asked whether or not participants' friends supported their enrollment in the program. Both groups stated their friends supported their participation. However, group A responses indicated that friends, while they thought dual enrollment was a good idea, knew little or nothing about the program. Another perspective was offered by Mr. Davis, youth apprenticeship coordinator for Newton County Schools, who commented on the importance of peer influence and knowledge about the dual enrollment program. He talked about the rising ninth graders who attended the DeKalb Tech summer technology camp. These students spent three days working with Covington campus faculty and staff on a variety of hands-on projects that cover almost all the programs offered at the campus. Mr. Davis said,

Those young people who go back to the high school are excellent ambassadors.

We need to provide a forum for those students to talk about their experiences at DeKalb Technical College whether it be that we invite them back over to the

technical college for an alumni luncheon or banquet and require them to bring a buddy with them and show the buddy in thirty minutes what some of the things were that they did. But we got to provide a forum for those young people to function as ambassadors of the technical college and everybody knows that students listen to other students much more than they will listen to anybody else so that's the most effective marketing activity of the Summer Academy Program.

Mr. Davis' comments echo those of Rodriguez (1999) who reported that most students at Malcolm high school found out about the afternoon dual enrollment program through word-of-mouth. Rodriguez talked about the importance of peer influence when dual enrollment participants act as ambassadors for the program, "This finding confirms that a personal approach may be more effective at convincing them (students) that they are capable of taking a college course and the benefits" (p. 88). A conclusion reached was that dual enrollment information must reach more students than is currently happening. The researcher recommends that a dialogue be initiated between college and high school staff to discuss how information can be better disseminated. Mr. Davis, apprenticeship coordinator for Newton County Schools, and Ms. Fox, Covington campus director of student services, mentioned that most dual enrollment information is directed towards students in the technology/career track. A part of the college/high school staff discussion should address how college-prep students and their parents can be targeted in a marketing effort to enroll more high achieving students in technical education programs at both the high school, through the dual seal diploma, and at the college.

One very effective method the HEO instructor used to convey information to students about career opportunities in construction was a series of videos prepared by

industry and provided to the college. Students were interested in the videos and received important information about HEO careers in a short, but powerfully presented, format. Video scenes of the large pieces of equipment digging and grading a construction site grabbed the attention of the viewers. Covington campus has the capability of producing videos, in fact the Vice President for Operations for the campus has filmed one video that has been aired on the local public television channel. He plans to do several more.

Recommendation for Creation of Informational Videos

The researcher recommends that an informational video about dual enrollment be developed that can be played on the closed circuit TV that Newton, Rockdale, and Madison county schools currently have in place. (Social Circle is building a new high school and will also have closed circuit TV). This video can provide information to both career/technology and college prep students. It will also reach teaching staff that may not be familiar with the program and hopefully gain their interest.

Influence of Dual Enrollment on Friends and Relatives

Did students in the HEO program encourage friends and relatives to consider dual enrollment? What advice do students give to friends or relatives who are considering dual enrollment? Students in both groups said they encouraged friends to consider dual enrollment. Group B students cautioned prospective dual enrollees to ensure their admission records are in order. Group A students recommended careful planning of schedules. Don and Fred said dual enrollment works well if you can handle the workload. The theme that emerged from answers to these questions was that dual enrollment does require action on the part of students to think about how dual enrollment will impact daily routines and how students must pay attention to the details of

registration to avoid problems with finances and class scheduling. A “how to” handbook, developed by Office of Student Services personnel, would be useful to outline registration procedures to accompany copies of the Covington campus student handbook and course catalogue provided to all prospective dual enrolled students. This information should also be included on the Covington campus web page at www.dekalbtech.org. The researcher recommends that the college support the recommendation of Mr. Davis who stated that dual enrollment participants should become ambassadors for the program. College officials might consider an alumni night when dual enrolled students bring several interested friends to a dinner and presentation by staff and students. College faculty and staff could also invite program participants to accompany them to presentations given to prospective dual enrollment candidates so they can receive first hand information from their peers.

Impact of Dual Enrollment on High School Studies

Students were asked whether dual enrollment impacted their high school studies in any way. Two students from each group responded that high schools studies were not affected. Two group A students indicated that their school studies were affected, while two others answered “a little bit.” One student from group A and two from group B stated that high school “is a job you have to do.” The concern that college staff initially harbored, that dual enrollment might be too great a burden for students with C and B grades, was not realized. In fact, HEO students approached dual enrollment in a workperson-like way and completed the job they had to do, i.e., they received the training they desired, attained passing grades in their courses, and graduated with a technical certificate of credit, as well as a high school diploma.

Students in both groups were similar in that they approached the HEO class from the same perspective. All students put just enough effort into the reading and homework assignments to assure that they received passing grades. When they had to score high on a test, e.g., the safety module that required a minimum 80% on the final test, they put forth the effort to study because they knew they could not proceed into lab classes without reaching this benchmark. The HEO instructor continually had to brow beat both groups to take seriously the reading and homework assignments for which they held only a casual interest. When they finally were allowed to operate the skid-steer, mini-excavator, and backhoe machines, they came alive. This part of the program created real excitement and with the exception of only one or two students, all did extremely well in learning the safety, maintenance, and operation requirements for the machinery. Personal observations confirmed that both student groups shared a dislike of bookwork, but a love of hands-on activities. A lesson learned from this experience was that separating the bookwork from the hands-on into two distinct blocks of instruction was a mistake.

Dual enrollment does not appear to have a major impact on high school studies. However, the researcher recommends that college recruiters include, as part of their oral presentation to prospective dual enrollees, information about scheduling and expectations for out-of-class study for college courses. Students must be informed that college-reading assignments may involve more time than they are accustomed to.

Impact of Dual Enrollment on Social Activities

When asked if participation in dual enrollment affected high school extra-curricular or social activities, five of seven group A students replied no. Two of three group B students felt that dual enrollment had no adverse affect on activities outside of

school. Thus it appears that dual enrollment in the HEO program did not have a negative impact on high school activities. Group B included two students who participated in athletic programs. They indicated a possible scheduling conflict with practice time for athletics. Scheduling conflicts will most likely continue to discourage some athletes from considering dual enrollment programs.

One of the questions posed to students asked if dual enrollment had an impact on their social life in any way. Two students each from both groups A and B answered yes. Four group A students answered no or a little bit. One B student answered no. No strong theme emerged from the answers to this question. However, one interview with an administrator helped to somewhat clarify the relationship between participation in dual enrollment and social activities. Mr. Davis characterized the 2000-2001 class as being comprised of at least several students who he described as loners. These are students who didn't fit in with peers who view high school as an end to itself. Rather they see high school as a means to an end that they described as "something you had to do." The expectation from friends and family was that you had to complete high school as part of growing up. It was a social responsibility. The researcher's perception is that the social experience of high school was not the same for the HEO students as it was for the athletes, cheerleaders, student government leaders, and other youth who enjoyed being in high school for the socialization and extra-curricular activities that high school offers.

Dual enrollment may have some impact on social activities. However, the small number of students enrolled in the program does not provide sufficient information to draw a definitive answer. Therefore, it is recommended that additional research be

conducted to determine if students do not participate in dual enrollment programs because time spent in college classes interfere with time spent with friends and family.

Impact of Dual Enrollment on Employment

Is employment affected by dual enrollment? Almost all the group A students had part-time jobs. All but Art were able to adjust their work schedules. At the time of the interviews, no B group students were working part-time. The researcher did note that students frequently talked about their work experiences during both lecture in the classroom and, at times, during casual discussions in the field. It was interesting to note how they compared information from their instructor (the “correct” textbook way to conduct safety, operate, and maintain equipment) with their actual work place experiences. They related how the real world does not always resemble the theoretical work world that we taught. For example, a cardinal rule in HEO safety training is trench protection. State and federal laws demand that workers be protected from dirt cave-in when working in trenches. Students with part-time construction jobs explained that this safety requirement was almost universally ignored and asked if Ms. Grant was out-of touch with the real world when she made this a major point of instruction. Ms. Grant explained that the college is required to teach what the law demands. But this presented a strange dynamic in that staff was challenged to change a practice that was solidly rooted in the students’ experience. When asked if they would henceforth follow stated safety recommendations, they smiled and said yes. Considering the pressure they will face from work supervisors to meet time and budget constraints, their answer may be negated.

Dual enrollment did not appear to have a major impact on part-time work. The question of theory versus practice in the field does require some reflective thinking on

how DeKalb Tech can better address the issue of changing habits and attitudes particularly in regard to safety. One possible way to address work place issues, e.g., safety and part-time work schedules, is to invite employers to speak to the students. The HEO instructor invited a small number of industry representatives to speak to students and demonstrate the use of equipment. The researcher recommends the guest lecture practice be expanded to representatives from companies with outstanding safety records. Contractors who provided part-time employment to participants of the youth apprenticeship program can address the scheduling issue and should be invited to speak to the students.

Impact of Dual Enrollment on Academic Achievement

Students were asked if they enjoyed attending college classes more than high school classes. Both groups answered yes to this question. The theme that emerged was that dual enrolled students believed they could successfully perform college level work. Students from both groups talked favorably about the program. All group A students successfully completed the HEO program and graduated from high school. Two of them were employed in the construction industry. This finding corroborates research by Rodriquez (1999) who quoted the experience of a science teacher at De La Guerra High School. Bernice Scott, the science teacher, said dual enrollment gave students stimulation that they need in order to excel. I think that a lot of times our students have attendance problems because they are bored in classrooms. And I think that if they had an opportunity to get into a college class, the pace of the class is a lot faster. And they're actually more accountable for their work, and their behavior. And I think they would perform. I think they would perform well. (p. 103)

The science teacher's quote describes the researcher's experience with the HEO students. The fast pace of instruction, coupled with hands-on experience, motivated students to academically perform at a higher level than they did in high school. However, the researcher reiterates the recommendation that Office of Student Services staff ask dual enrollment program completers to assist with recruiting. For example, Art and Tim have continued their education at Covington campus. It is suggested they be invited to accompany DeKalb Tech recruiters to college night open houses and special meetings of students interested in dual enrollment. Art and Tim or others can explain the benefits of dual enrollment from a student perspective.

The final question asked students if they felt more positive about taking college classes now that they were dual enrolled. All students in both groups answered in the affirmative. The theme, "I can get through college," emerged from the answers to this question. During the course of the year, several Group A students complained to Ms. Grant that the work was too hard, that there was too much reading, and the tests were too difficult. Ms. Grant did an admirable job of coaching the whiners and complainers through the part of the curriculum that was causing them difficulty. The tool she used to accomplish this was her personal experiences in the construction industry. She narrated real-life situations that happened to her during the course of building transit stations, county, and state prisons in Atlanta. These experiences related to course material with which the students struggled. Her coaching, cajoling, and occasional threats pulled the students through difficult times. Her situation was different from most high school teachers in that she had real-world experience, therefore she was believable; she was tough, i.e., she refused to buckle to student pleas to lighten the study load, and perhaps

most importantly of all, she had no more than 14 students in her class at any one time. Students who required extra help received it because she had time available to provide additional instruction. She spent many hours before and after class helping students with their assignments. Two students experienced reading comprehension difficulty so she set aside time to give them oral exams. As a college instructor, she was dissimilar to her high school colleagues in that she taught four hours a day as opposed to seven hours that is the norm in secondary schools. One reason students were more positive about taking college classes was directly related to the extraordinary help they received in getting through the HEO classes, i.e., they received time and attention not usually available at the high school. This finding can be utilized as a recruiting tool, particularly for students enrolled at the Sharp Learning Center alternative school. College staff can successfully market small class size, individualized attention, and improved counseling through the dual enrollment program, services the high school cannot realistically provide. College faculty and counselors can help to convince particularly academically at-risk students, that given a reasonable student motivation to succeed, they need not fear academic failure.

Summary of Student Comparisons

Students in groups A and B had similar answers for most of the questions. The only readily apparent difference between the two groups was that B students did not have part-time jobs. All students were positive about their dual enrollment experience. All the A group students believe they are capable of doing college-level work after successfully completing the HEO program. Dual enrollment has now expanded to additional Covington programs including heating and air conditioning and computer information

systems. The researcher recommends including students in these programs in all future evaluation and research conducted by the college.

Comparison of Data Between Students and Faculty/Administrators

Did students and high school/college staff share similar perceptions toward the dual enrollment program? This section compares and contrasts responses provided by each group on questions posed to both groups. For the sake of convenience, the counselors and the Newton county youth apprenticeship coordinator are included as part of the faculty/administrator group.

Definition of Dual Enrollment

Both students and faculty/administrators were asked to explain in their own words what dual enrollment was. Both groups understood that dual enrollment involved attendance in high school and college at the same time. Only students Don and Fred mentioned course credit during their interviews. Faculty/administrators, however, were more detailed in their responses and mentioned course credit when defining dual enrollment and citing key practices of the program. A conclusion reached was that faculty/administrators are more knowledgeable about the specifics of dual enrollment than students. This is a reasonable and expected outcome because of the time the adults spent in activities such as Tech Prep training and dialogue with college and state staff about dual enrollment considerations and protocols. Results of the faculty/administrator interviews convinced the researcher that both high school and college staff were well versed in the philosophy, goals, and benefits of dual enrollment and fully capable of passing this information along to students. Faculty/administrators should increase efforts to explain to prospective dual enrollment students the meaning of articulation, credit

towards graduation, and enrollment in a program of study. The need for a parent/student handbook that includes information about registration, articulation, credit towards graduation, and programs of study available at the Covington campus is reiterated here.

Sources of Information About Dual Enrollment

Both groups were asked how students obtained knowledge about the dual enrollment program. The two groups agreed that faculty and staff and particularly counselors passed along information. Both groups mentioned recruiting visits from Covington campus staff. Only two adults, Mr. Adams and Ms. Barnes, said they prepared reading materials for students, although students made no mention of any literature. The spoken word was the way they received information about dual enrollment. The college provides only a simple flyer announcing classes prior to the beginning of each quarter. Of particular concern were the comments from both students and Mr. Davis who stated that a minority of the student body was aware of the dual enrollment program.

Another concern is the lack of interest in dual enrollment from college-prep track juniors and seniors. The researcher attended a March 28, 2002 Clarke County (Georgia) Technology/Career Advisory committee meeting where a presentation by technology/career staff about the school districts' vocational programs was given. During the course of the presentation, one speaker noted that a majority of college-prep students at Cedar Shoals and Clarke Central high schools chose fine arts electives rather than technology/career electives because of the policy of the Georgia Board of Regents. The Board of Regents governs admission to four-year baccalaureate programs in Georgia's colleges and universities. Students are advised by counselors to select fine arts

electives because the colleges and universities view them more favorably than vocational courses. The practice of advising students to enroll in fine arts electives is also the norm in schools in the Covington campus service area. A conclusion reached was that enticing college-prep students to consider a dual seal certification, i.e., receive credit for participation in both college prep and technology/career tracks, will continue to be a major challenge but one that college staff must address. Georgia Department of Education staff recently gained approval from the Board of Regents to recognize selected technology/career courses, e.g., principles of technology and anatomy and physiology, as approved science courses. Georgia secondary and technical college educators need to continue to lobby the Board of Regents to recognize additional technical courses such as information technology to be worthy of consideration as college preparatory instruction.

Parental Involvement

Both students and faculty/administrators agreed that parents are informed about the program. Interviews with both groups indicated that high school counselors and the youth apprenticeship coordinator are key contacts for parents and that parental support for the program is strong. The data suggests that parents of the 10 students who participated in the study have been adequately informed about dual enrollment. No evidence exists that parents outside the HEO group are knowledgeable about the program. Results from both students and faculty/administrators did not indicate any pronounced efforts by either college or high school personnel to reach parents beyond those who had children interested in the dual enrollment program. For example, college staff discussed a mass mailing of an informational brochure to all parents of high school

children enrolled in Newton, Rockdale, and Morgan counties, a recommendation that should be implemented.

Recommendation to Create Videotape

College staff also discussed taping an interview about dual enrollment with key high school and college staff and offering the video to the local public television channel. This proposal is still in the discussion stages and no action has yet been initiated to make the video a reality. For the immediate future, additional information can be provided to parents through the dissemination of flyers and other written material such as the aforementioned dual enrollment handbook. Another recommendation is that Covington campus staff be permitted to address parents of college-prep students during college recruitment seminars. Parents of all students should be made aware of the opportunities for higher education that dual enrollment offers. This is an important proposal because promotion of a dual seal among college prep students is a worthy cause. Gray and Herr (1995) make the best arguments for promoting the dual seal program.

1. Using American Council on Education college completion rate figures for 1994, Gray and Herr state that only 31% of college freshman graduate in four years. They suggest that the 69% who drop out would benefit from skills learned in technology/career preparation programs.

2. Using data from the 1993 Monthly Labor Review, U.S. Department of Labor, Gray and Herr (1995) show positive net openings in construction, health, craft, precision metal, specialized repair, mechanics, installers and repairers occupations. They show negative net openings in executive, administration, public relations, physical scientists, lawyers, technicians, and engineers. They cite projections that by 2005, the workforce

will provide 147 million jobs. Only 32 million (21%) will require a college degree. The message they convey is that job opportunities exist for people with postsecondary technical training but not necessarily a four-year degree.

3. Again, using Bureau of Labor statistics forecasts, Gray and Herr (1995) state that one in three college graduates will not find college-level employment in the years 2002 through 2005.

Gray and Herr (1995) address the misconception that college graduates will displace non-degree holders in good jobs that require less than a four-year degree. Dual enrollment can provide skills that college-bound students can use to earn a living as they continue their education. Hull and Parnell (1991) would describe this as a 2+2+2 scenario where a student completes two years of high school technical/career training, two years of technical college training for a diploma or associate degree, and two years of college culminating in a baccalaureate degree. This approach to postsecondary education provides flexibility to meet a multitude of occupational opportunities and ensures a fallback position should pursuit of a four-year degree become an unreality.

High School, College, and State Department Comparison

Decision-making in dual enrollment occurs at three levels; secondary, post-secondary, and state department of education. Each depends on the other for information, guidance, and direction. For example, the state department provides the college and high schools with policy statements and interpretation of state board rules and regulations. State department staff determined that for dual enrollment programs both full-time equivalent (FTE) and HOPE scholarship grant moneys from the Georgia lottery could be used to reimburse school systems and students. Prior to this decision, superintendents of

schools were reluctant to commit to dual enrollment for fear of losing FTE funding. This was important because technical colleges could not recruit students for joint enrollment programs. The college depends upon high school staff for publicizing and enrolling students in the program. The high school staff looks to college personnel to identify programs of study that are appropriate for dual enrolled students.

The researcher wanted to compare interview answers from representatives of each of these levels with one another to determine if they concurred in their definition of dual enrollment and the goals and objectives for the program. Also of interest was a comparison of perceptions between particularly high school and college administrators of the efficacy of dual enrollment as it affects students, parents, faculty, and staff. This is important because program effectiveness depends upon agreement of goals, objectives, and implementation of dual enrollment guidelines at each of the three levels. When confusion concerning implementation of dual enrollment occurred, several key players became concerned. Mr. Davis said,

What I'm telling you is that within a high school, counselors, registrars, administrators...feel like they can control what's going on and they understand the system. Their frustration comes and their suspicions and their lack of use of dual enrollment comes from the fact that they don't know it, they don't understand it and they don't feel like they can control it, and nobody knows what this dual enrollment puppy looks like. Counselors all over the state are feeling the elephant and every one of them will describe it differently to you. And they are absolutely terrified if they make a wrong call it's going to come back to haunt

them and if it comes back to haunt them internally within their secondary school system, they can't solve it.

The three levels of representation were divided as follows.

1. High school representatives included Mr. Adams, vocational supervisor; Ms. Barnes, high school counselor; Ms. Clark, vocational supervisor; Mr. Davis, high school youth apprenticeship coordinator.
2. The state department representative was Ms. Evans.
3. DeKalb Tech was represented by Ms. Fox, Assistant Dean of Student Services and Ms. Grant, HEO instructor.

Definition of Dual Enrollment

The first question asked for a definition of dual enrollment. Everyone agreed that students were enrolled in high school and college simultaneously, and that students received both high school and college credit. The high school and state department representatives mentioned dual enrollment classes were advanced level courses; Ms. Fox and Ms. Grant did not. There was general agreement on the definition of dual enrollment at all three levels. Agreement on key terms means that everyone speaks a common language when communicating with one another about dual enrollment concerns. This facilitates the exchange of information both up and down educational hierarchies. In Chapter II, the differences between dual enrollment and the post-secondary options program are discussed. The funding implications are profound. Dual enrollment provides money to both high schools and the college. Post-secondary options do not necessarily do that. As of this writing, Covington campus has dual enrolled nine juniors and seniors from Morgan County High School under the post-secondary options program.

It was critically important that Morgan County administrators understood that these nine students were funded differently than they would have been had they participated in the dual enrollment program. Without a common language, students would be at risk for losing Carnegie credits and school financing could be in jeopardy.

Key Practices of Dual Enrollment

Interviewees were asked about their perceptions of the key practices of the program. Answers to this question diverged. The state department representative, Newton county vocational supervisor, and youth apprenticeship coordinator agreed that courses are career related and both college and high schools receive funding for dual enrollment. Otherwise, comments were varied among representatives from the three levels. Unanimity did not seem to exist. However, the key practices cited are all legitimate parts of the dual enrollment picture. This is an opportunity to share information and expand knowledge about the program by synthesizing and distributing the various key practices mentioned in interviews. Key practices enumerated by faculty/administrators must be included in the dual enrollment handbook for students and parents. This information should also be shared during Tech Prep training workshops and joint in-service between college and high school faculty and staff. Again, another major recommendation of this study is to provide information about dual enrollment on the college web site.

The Goal of Dual Enrollment

The next question asked what the goal of dual enrollment is and again, answers were numerous and varied. High school representatives, Mr. Adams and Mr. Davis, agreed with DeKalb Tech's Ms. Fox that the goal of dual enrollment is to move high

school students from the high school to the technical college. Adams and Davis thought dual enrollment motivated students to pursue postsecondary education. Davis and Ms. Grant agreed that the program provides skills training that may result in a good chance of success for employment. Ms. Barnes and Ms. Clark did not clearly enumerate a goal for the program. The researcher expected that there would be agreement on a goal statement and educators from all three levels would weigh in with similar language about the goal of the program. The reason for assuming this is that all the interviewees have attended the same workshops and conferences where dual enrollment has been discussed. This was a wrong assumption.

Sharing a similar goal is important as a foundation for an action plan. The action plan spells out how resources are to be allocated. Because resources of time, money, and personnel are so limited, it is important that everyone at each education level agrees on how those resources can best be used. A common goal is the glue that binds the three levels together in this effort. A clearly defined goal is essential for facilitating the planning effort.

In this case, the goal for dual enrollment can be more clearly defined. College staff should prepare a goal statement and distribute it to representatives from the three levels for their concurrence. Perhaps the best way of reaching consensus on program goals and objectives is for high school and college staff to meet together. One possibility is to arrange time at Tech Prep consortium meetings for a dual enrollment sub-committee to discuss these important issues. The goal statement should be incorporated in the dual enrollment guidebook distributed to the students, parents, faculty, and administrators.

The Greatest Benefit of Dual Enrollment

What is the greatest benefit of dual enrollment to students, counselors, and school administrators? High school and state department representatives agreed that dual enrollment provides students with more options for courses. The college offers courses the high school, because of limited resources, cannot and thus opens doors to greater varieties of occupational training possibilities. This was a major theme that emerged from the data, one that can be used to persuade administrators at the superintendent's level to consider dual enrollment as an option. College staff concentrated their responses on students, while high school and state department staff talked more about counselors. This makes sense because the two college representatives were very student-centered and worked more closely with HEO students than they did the counseling staff. This is, however, a problem. The college staff, particularly the teaching faculty, requires a closer working relationship with high school counselors. Mr. Davis, youth apprenticeship coordinator for Newton county, and Mr. Adams, vocational supervisor for Social Circle High School, emphasized during their interviews the need for better communication with college staff. Articulation is a case in point. Faculty from both high school and college must be involved in creating agreements because both parties must know what the other teaches, what textbooks are used, what lab equipment can be shared. When collaboration falls by the wayside, duplication of instruction can occur or key competencies may be omitted from a particular course.

Faculty can benefit by knowing more about the counselor's experience with those students who they send to the college for classes. For example, Ms. Grant discovered that two students had Individualized Education Plans (IEPs). The students informed her

about their learning disabilities. She should have received this information from the counseling staff when classes first began. A closer working relationship between faculty and counselors will facilitate exchange of important information, e.g., students with IEPs.

The Benefits of Dual Enrollment

Representatives from the three levels were varied in their perceptions of the benefits of dual enrollment and it is recommended that literature prepared by the college incorporate the many good ideas into a single, comprehensive explanation of the benefits of the program. This information should be included in the student/parent handbook and the web site. In a broader context, representatives from the three educational levels should individually promote the benefits of dual enrollment. There are important people who know little or nothing about the program. Board members at the local, college, and state department levels are an example. Written and oral information can be supplied that will enhance their knowledge of the program. For example, the researcher belongs to the Newton county schools Technology/Career Education Advisory Committee where dual enrollment is promoted at every opportunity. The Covington campus Vice President for Operations promoted dual enrollment at the Newton and Morgan County Chambers of Commerce and several service clubs including Kiwanis and Rotary. Targeting individuals and organizations outside of the education community will help reach a broader audience of potential program supporters and hopefully create community interest in dual enrollment.

The Need for Media Exposure

Finally, local newspapers provided media coverage of dual enrollment but nowhere else. The radio and television media apparently did not taken an interest in the

program, most likely because they know little of its existence. As a long-range goal, the college should consider attracting radio and television coverage to the successful dual enrollment programs provided. The HEO instructor and students have been filmed by local Atlanta television stations and given very brief exposure on newscasts. The college should pursue the television stations, requesting them to seek an in-depth examination of the program.

How Students Received Information About Dual Enrollment

The second series of questions asked how students received information about dual enrollment and how faculty and staff perceived the students' views of the program. One strong theme emerged from the answers to the question. There was unanimous agreement that students are very positive about the program but other responses were varied. Interviewees were asked for their perceptions on how they thought dual enrolled and general population students viewed the program. Several important categories emerged from the responses. The two college representatives and Mr. Davis from Newton County schools stated that dual enrollment helps students achieve career goals. Farmer (1985), Paa and McWhirter (2000), and Rodriquez (1999) found that career expectations influenced high school students' decisions to participate in postsecondary education. Rodriquez found that, "students were much more focused on using the opportunity as a means to help them determine their future careers" (p. 84). She determined that, "for these students, the effectiveness of Afternoon College was that it appealed to a career interest, which, in turn, motivated them to go to college" (p. 85). The high school staff, i.e., Adams, Barnes, Clark and Davis, said much the same thing. Davis, from the high school, and Fox from DeKalb Tech, agreed that dual enrollment

meets expectations about technical education that is career related. However, expectations that at least a several of the HEO students would begin working for utility contractors after graduation from high school were unfulfilled. Of the ten students, Art and Will are working as equipment operators at the time of this writing. Ms Grant, HEO instructor, asked students to describe why they enrolled in the class and what their expectations were for their program of study. Almost all the students expressed a career interest in equipment operation, a situation that presents a conundrum. The faculty/administrators agree that dual enrollment attracts students because of career interest but only one student is working in the occupation for which the college trained him. One possible explanation is that students were not recruited by industry for equipment operator positions after they graduated from high school. Ms. Grant did try to place several students with construction firms but met resistance when they learned they would have to either travel long distances to work or move away from the Covington area to gain employment. More research is needed to determine the extent that dual enrollment helps students achieve career goals. For example, follow-up interviews would help explain why program completers have not chosen to enter the profession for which they were trained. Some of the Group A students, Art and Elvin for example, remain at Covington campus as full-time students, but the remainder have drifted away.

Dual Enrollment Expands Course Offerings

The category, “students need and desire courses that are not offered by high school,” was mentioned by faculty/administrators. Ms. Clark from Newton county schools, Ms. Evans from the state department, and Ms. Grant, HEO instructor, stated that dual enrollment programs offered students technology/career courses that were not

provided by the high schools. Therefore, representatives from all three educational levels considered this an important reason students chose dual enrollment. The literature review revealed Galloway (1994), Koelling (1997), and McCarthy (1999) reporting that dual enrollment provides students with expanded vocational program choice. The faculty/administrators' belief that dual enrollment benefits expanded choice is therefore supported by data from other research.

Expanded choice was an important factor that helped motivate students to participate in the program. College staff should prepare marketing literature that emphasizes the availability of courses that are currently unavailable at the high schools. The literature should also highlight articulated courses, e.g., in the computer information systems program, high school completion of Computer Applications I and Advanced Computer Applications will provide students with credit for the college micro-computer applications course. The Micro-Computer Applications course is a required course for all technical college programs of study.

General Student Population Views of Dual Enrollment

The seven faculty/administrators were asked, "How do you think the general student population view this program?" Two high school representatives, Ms. Clark and Mr. Davis, along with Ms. Fox from DeKalb Tech answered that many students do not know about the program because it is new and has not been well promoted. Another possibility is that the general student population knew about the program but chose not to participate. A third explanation is that students know about the program and would like to participate, but sports, academic requirements, or extra-curricular interests mitigate against their participation. Why more students are not interested in dual enrollment is not

known; more research is needed to ascertain why. Efforts to educate students and change their attitudes towards the program are a possibility. For example, each year DeKalb Tech hosts a summer workshop that provides high school teachers with an opportunity to spend time at the Covington and Clarkston campuses working alongside the college teaching faculty. This is an opportunity to recruit teachers as dual enrollment proponents. These teachers can provide first-hand career advice to their students when they return to the classroom in August. Teacher influence may help to change student attitudes towards enrollment at a technical college versus the mania that exists for enrollment in a four-year program (Gray & Herr, 1995).

College and high school staff must improve efforts to promote the program and the handbook and video will help. The college has a video studio at the Economic Development Center building, located two miles away from the Alcovy Road campus with recording and editing equipment. College staff could produce a promotional video using dual enrolled students as the actors in the film. The video can be shown over high school closed circuit TV at times designated by secondary staff. Newton County, Eastside, Salem, and Heritage high schools currently have these systems in place. The new Social Circle high school, currently under construction, will also have this capability. The video can also be shown at DeKalb Tech recruiting visits to high schools.

Advanced Placement Classes

The third series of questions asked respondents about their perceptions of Advanced Placement (AP) classes particularly in regard to how AP was similar or dissimilar to dual enrollment. A major theme emerged from the data. Representatives from all three levels agreed that no overlap of students exists between AP and dual

enrolled students. The consensus of opinion was that the two programs are directed toward two different groups. AP classes are promoted among college-prep students in the upper 10 to 15 percent of their academic class. Ms. Evans, the state department representative, commented that the goals are similar but the target groups are very different. Both the college and high school representatives commented on the role of the counselors; they are responsible for guiding students towards one of the two tracks. One of the reasons for asking participants about their perceptions of dual enrollment as it related to AP classes was to gather information about the possibility of recruiting greater numbers of high achieving academic students into dual enrollment programs. This may be difficult because dual enrollment is not promoted among college-prep students and particularly, the academic high achievers. This presents a challenge to the college because industry partners strongly desire entry-level employees with strong reading, math, and problem-solving skills. The electronics, computer information systems, and industrial systems technology programs also include high levels of math, e.g., algebra and trigonometry, and advanced level courses require problem-solving skills. Attracting the academically high achieving college-prep students to these programs was and will continue to be a challenge. Additional research should be conducted to ascertain how these students could be encouraged to consider enrollment in two-year technical college programs. Representatives from all three levels of education should be consulted to address this challenge. The State Department of Education recently hired a consultant to work on articulation of secondary and postsecondary courses. This person could become a key player in bringing the three levels together in a joint effort to promote dual enrollment.

The Faculty View of Dual Enrollment

Question four asked how the interviewees characterized faculty's views of dual enrollment. There was agreement among the three groups that high school faculty view dual enrollment positively. Most of the statements made in response to this question came from high school staff. The state department and college staffs were limited in their comments because of limited exposure to high school teacher's perceptions of the dual enrollment program. College and state department representatives should be provided with more information about how high school faculty viewed this program.

The flow of information during the past two years has originated with the state department and the college and moved down to the high school. Evaluation of dual enrollment will be enhanced if the information moves in both directions. The HEO instructor should be provided an opportunity to meet directly with high school faculty to help promote and evaluate the dual enrollment program. High school faculty should consider additional visits to the college to meet with instructors in the heating and air conditioning, industrial systems technology, computer information systems, and electronics programs to gain knowledge of the curriculum content and math/reading skills required in these programs.

Parental Involvement

The fifth question asked interviewees to provide their perception of parent's opinion of dual enrollment. Ms. Evans from the State Department of Education did not talk with parents. Both college and high school staff had conversations with parents. College staff stated that parents were not given sufficient information about dual enrollment. High school representatives perceived parents to be informed about the

program. Comments from high school staff exceeded those provided by college personnel. While college faculty/administrators have some exposure to parents, high school faculty/counselors/administrators have a closer working relationship college staff. Parents of dual enrolled students should be invited to the college to attend an orientation to the program at the beginning of classes in August or early September. The college should consider a graduation ceremony at the end of the year with parents and students invited along with high school counselors and administrators to the celebration. The event can facilitate an information exchange. College staff should request feedback from parents and students and present information about continuation of study at the college after graduation from high school. Similarly, an evaluation of the dual enrollment program should ensue, as well as a time to market full-time enrollment at both the Covington and Clarkston campuses for high school graduates. A survey instrument could be developed that can be distributed at the graduation ceremony. Questions on the survey should be designed to help with program evaluation. For example, one question might be: "Do you intend to pursue education at the college after graduation from high school?" It will also provide additional time that high school and college staff can meet together to plan joint cooperative activities such as new student/parent orientation and development of programs of study.

Suggested Ways of Improving the Dual Enrollment Program

Finally, the researcher asked for suggestions to improve the dual enrollment program. The theme that emerged from responses to this question is that state department and college administrators must provide high school staff with more and better information about the program. All three levels of personnel mentioned a list of

articulated courses and course numbers as a key information component. All three levels agreed that sufficient personnel must be provided at the high school, college, and state department to ensure lines of communication are continued between the agencies.

College and high school staff agreed that dual enrollment needs more and better publicity. Both college and high school representatives mentioned sufficient funding as an important consideration. High school, college, and state department personnel agree on action activities that can be implemented to improve the program.

Summary of Comparison of Faculty/Administrator Responses to Interview Guide

High school, college, and state department personnel share a common understanding of dual enrollment, but additional resources must be developed at all three levels to improve inter-agency communication and cooperation. A key recommendation is the development of a student/parent dual enrollment handbook that outlines the goals and objectives of the dual enrollment program, states the key practices, and describes the benefits of the program including career information. The handbook should contain specific information about student academic expectations and the enrollment procedures that must be followed. The programs of study must be included as part of the information and contain course numbers for articulated classes and Carnegie Unit credit. This information should be downloaded to the DeKalb Tech web site. An informational video should be developed that can be used internally by local school personnel to promote dual enrollment and externally by college staff during visits to community, student, and school groups as part of the college recruitment effort.

Comparison of Findings of the HEO Program With Other Research

A review of the literature (Farar, 1999; Marquez, 1999; McConnaha, 1996; Rodriquez, 1999; Sagers, 2000) identified research of dual enrollment programs in locations outside of Georgia. In this section the findings of this study are compared and contrasted with those found in the literature. This study was patterned on work done by Rodriquez because the researcher identified with her research interests, and the questions she asked students, teachers, and administrators were of interest. Her study design and student populations were similar to the Covington Campus situation. She conducted a case study where students at the two high schools she interviewed were academically similar to the HEO students, i.e., both groups were in the academic middle quartile, C and B students. Therefore, a major part of this section is devoted to comparing results of this study with hers. A less extensive comparison to work done by Farar, Marquez, McConnaha, and Sagers is provided, because their student populations and study designs were more different than similar to this study.

Comparison with Rodriquez (1999) Study

Rodriquez (1999) interviewed students, high school faculty and administrators, and college staff who had experience with concurrent enrollment programs in two Los Angeles high schools that she called Malcolm and De La Guerra high schools. The college that was affiliated with the two high schools she called South Bay College. The purpose of her study was

to determine whether a concurrent (dual) enrollment program, in which high school students enroll in college courses, could be a vehicle to improve college preparation among average-achieving African American and Latino students.

Using select interviews, study participants were asked to define the program's benefits, limitations and identify strategies to improve college preparation. (p. xi)

The following is the method used to compare findings of this study with those of Rodriquez. Her chapters on Findings and Analysis for Malcolm High School, De La Guerra High School, and South Bay College are reviewed and findings and conclusions of topics that were similar to this study are highlighted. A comparison of themes developed by Rodriquez with those that emerged from Covington campus research is presented in the order she presented her findings.

A note of explanation is necessary to understand the context of comparisons between DeKalb Tech and it's high school partners and South Bay College and De La Guerra and Malcolm High Schools. Both De La Guerra and Malcolm high schools had large Latino and African-American student populations. In Chapter II, figures show Newton and Rockdale county schools and Social Circle High School to have low minority enrollment. However, the population of interest for this study as well as for Rodriquez (1999) is students in the academic middle (Gray & Herr, 1995; Hull, 1993). Rodriquez uses the term "average achieving" students. She also reports that De La Guerra and Malcolm high schools formed partnerships with several higher education institutions, e.g., the University of California at Los Angeles, to provide courses and in-service training programs. South Bay College, then, is one of several higher education institutions that provided service to the high schools. Rodriquez called the high school-community college preparation program, the Afternoon College. In 1999 the Afternoon College enrolled over 200 high school students.

Afternoon College offers a mix of vocational and academic courses based on administrator preferences...While a few of the courses transfer to the CSU and UC, most of the courses are vocational, providing an introduction to specific careers. These vocational courses provide students with an opportunity to explore a variety of careers which, in turn, can be instrumental in developing motivation and educational goals. (p. 5)

Findings and analysis – De La Guerra high school. Rodriquez (1999) described the perceptions De La Guerra High School staff held towards the Afternoon College. A high school counselor related “that students take Afternoon College courses to learn more about a particular career interest” (p. 102). In the Covington study, Ms. Clark, Mr. Davis, and Ms. Evans stated that a key practice of the Covington campus dual enrollment program was that courses are career related and relate to students’ career goals. De La Guerra staff stated that Afternoon College provided the motivation that students needed to excel. A teacher related, “That students who may not be doing well academically because they are turned off by the redundancy of high school curriculum, may be turned on by the challenge and accountability of a college course” (p. 103). Rodriquez indicated that high school staff believed that average and below average students benefited from Afternoon College the most. At Covington, Ms. Fox commented that HEO students were surprised that study at the college required self-motivation and self-direction. Fred and Van said that dual enrollment made you want to study harder. Ms. Davis said that college enrollment motivated academic average students to higher achievement. Findings in this study corroborate Rodriquez’s report that average achieving students are motivated by college enrollment. De La Guerra staff became alarmed when some

students encountered difficulty meeting both college and high school academic demands. Art who stated that dual enrolled students must find time to study both high school and college material echoed this concern. Rodriguez recommended that prospective students must be made aware of the increased academic demands that dual enrollment entails. She noted “the importance of open communication between the high school and the community college” (p. 106) to ensure that students do not over-commit to sports, work, extracurricular activities, and college classes.

Academic preparation was a topic in both studies. De La Guerra staff listed academic preparation, adequate counseling, and cost and financial aid information as critical factors in preparation for college. Earlier, a description was given about Mr. Davis cautioning that dual enrolled students do not realize they are not prepared for the different academic lifestyle that comes with postsecondary enrollment. Ms. Fox believed that the socialization process could be different for dual enrolled students in that they may be immature in dealing with the reality of a college schedule. Also noted was the fact that several students learned the hard way that cost and financial aid information became their responsibility. Rodriguez (1999) stated, “Most staff believed that taking college courses can help students understand early on, that in college, they are responsible for their own success or failure” (p. 109).

The importance of counseling is a recurring theme in both studies. De La Guerra counselors found fault with students and their parents for not adequately preparing for college, both academically and financially. In this study, Ms. Grant was concerned with the poor reading, spelling, and work ethic skills that HEO students brought to class.

Another noteworthy comparison cited in both studies was the benefit to be gained when dual enrolled students are offered a broader range of courses than may be available at the high school. De La Guerra staff “felt that college preparation would be improved if the high school had a broader range of course offerings. Due to its small size, the high school is not able to offer a comprehensive program” (Rodriquez, 1999, p. 111). During the interview with Mr. Davis, he noted that a great advantage to partnership with the college is the expansion of course offerings that allowed counselors to provide an increased number of programs of study for high school students. However, the researcher noted a difference in findings between Rodriquez’s and this study. De La Guerra staff was interested in adding more fine arts courses while Covington campus partners desired more technical courses.

Another area of agreement between the De La Guerra teachers and the Covington faculty/administrators was the need for marketing dual enrollment. Rodriquez (1999) wrote,

The staff felt the marketing of the program could be expanded to include teachers and parents. Most of the staff believed that teachers were aware of the program, but that they were not well informed of the program details. In fact, the science teacher indicated that this lack of information may affect which student the teachers recommend to the program. She went on to state that she has not seen any written information, meaning brochures or flyers, outlining the course offerings and placement exam requirements. The teacher felt that this information would enable her to recommend the program to a wider variety of students. (p. 116)

Ms. Fox and Mr. Davis echoed this same concern. The need for a better marketing effort for dual enrollment at DeKalb Tech is one of the major recommendations of this study.

Findings and Analysis – Malcolm High School. The second high school partner of South Bay College is Malcolm High School. Rodriquez interviewed Malcolm staff that indicated they “saw the program as an opportunity for students to experience a college atmosphere, get a head start on their college education or earn additional high school credits” (p. 62). These categories also appeared in this study.

Malcolm high school staff also noted that high school students do not participate in dual enrollment because of competition from work, homework, extra curricular activities such as band, sports, and social activities. Covington faculty/administrators were asked, “why would students choose not to participate in dual enrollment.” Their answers revealed that disparity with high school schedules and part-time jobs conflicts with postsecondary class schedules. Student interviews in this study revealed that, with the exception of Elvin, extra-curricular activities were not a consideration when HEO students explored dual enrollment. Interviews with Ted and Will indicate that dual enrollment may compete with sports. Additional research is required to determine if extra-curricular activities are a barrier to participation in dual enrollment in high schools served by DeKalb Tech.

The principal of Malcolm high school “suggested that some students do not participate because they have a fear of failure” (Rodriquez, 1999, p. 65). No students or faculty/administrators in the Covington study expressed this concern. Interviews with Art, Bob, Elvin, George, and Van revealed that they were initially uncertain about their ability to do college work. Fear of failure may be a barrier to students in the Covington

campus service area but additional research is required to determine if this is true.

Therefore, the researcher recommends that Covington campus staff interview students at Sharp learning center and other schools to determine if fear of failure is cause for them to not consider dual enrollment.

Malcolm High School counselors stated, “Those students who may attend a community college, may not be adequately prepared for college” (Rodriquez, 1999, p. 67). They listed academic skills and life skills including test taking strategies and time management for average students as concerns. High school administrators were asked if the HEO students were academically prepared for college work. Mr. Davis stated that dual enrolled students did not realize and weren’t prepared for the different academic lifestyle at the technical college. Ms. Evans stated that some students who are admitted as provisional students (at some colleges) may not be academically prepared. Ms. Fox said socialization could be different in that students may be immature in dealing with reality of a college schedule. Rodriquez found that “surprisingly, nearly all of the students felt that they were being adequately prepared for college” (p. 92).

In conclusion, students at Covington campus, De La Guerra, and Malcolm high schools felt that dual enrollment was of benefit to them. The college experience helped students realize they were capable of successfully completing college work. Rodriquez (1999) and this study share a common recommendation that dual enrollment must be better marketed and that communication between college and high school staff must be improved. Data from both studies indicates that counseling support is critical to the success of the program.

South Bay College. A final comparison between Rodriquez (1999) and the Covington study is a comparison of perceptions of dual enrollment of college administrators. South Bay College enrolled about 28,000 students in 1998 and was located about five miles away from De La Guerra High School, nine miles from Malcolm High School. The student population was 25% White, 20% African American, 25% Latino, and 15% Asian. It generally served communities south of the City of Los Angeles including the beach towns of Redondo, Hermosa, and Manhattan Beaches as well as the inland cities of Inglewood, Hawthorne, Lawndale, El Segundo, and Torrance.

Rodriquez (1999) interviewed college administrators about their perceptions of the Afternoon College in the areas of benefits to students, course offerings, and benefits to the college. Administrators at South Bay agree with Covington campus staff on several key points.

1. Dual enrollment is a way for students to gain early admittance to college, improve technical and academic skills, and explore career interests.
2. Dual enrollment expands course offerings.
3. Career guidance is enhanced by the addition of college staff that can provide this service to dual enrolled students.
4. High school students may not realize they are academically unprepared for college work. High school and college staff must find a way to communicate the lack of college preparedness to students.
5. Dual enrollment is an excellent recruiting tool for college programs.
6. Communication between high school and college staff must be strengthened.
7. Articulation of courses must be strengthened.

In summary, the comparison of findings and conclusions from this research study corroborates many of the results of the Rodriguez study. The researcher concurs with Rodriguez's (1999) observation of dual enrollment program benefits.

Most compelling were the students themselves who stated that taking a college course motivated them to attend college because the courses provided information about their career goal and an understanding of how a college education contributed to this goal....On the whole, as a result of their Afternoon College experience, the students had a more positive attitude towards college, meaning that a college education was now accessible, attainable, and a priority. This is a significant finding because this experience provided students who were not considering or unsure about a postsecondary education the motivation to attend a community college. (p. 159)

Comparison with the Farar Study

Farar (1999) identified 12 effective early outreach programs created to increase the number of disadvantaged students eligible to attend college in California. The success of these programs was geared towards increasing access to higher education for minority and low-income students. Farar conducted interviews with 12 directors of early outreach program about the historical background, goals and objectives, funding, administration, target populations, and evaluation of their programs. Farar used the constant/comparative method to note similarities and differences in the data from the interviews.

The programs supported disadvantaged students through tutoring; providing mini-courses taught by college professors; academic enrichment programs; group and peer

counseling; dissemination of information about college requirements, courses of study, costs, financial aid opportunities, and planning; instruction and practice in problem-solving and higher order thinking skills; visitations to colleges and universities; professional development for teachers, counselors, and principals; weekend academies; parent and family involvement initiatives; and cultural and recreational activities. South Bay community college provided leadership that facilitated the implementation of these programs. The focus of many of the programs was academic preparation. Disadvantaged students were provided additional support through mentoring and extra-curricular activities that gave them skills they needed to be accepted into postsecondary institutions (Farar, 1999).

Several of the characteristics of effective early outreach programs highlighted by Farar (1999) find commonality with the results of this study. The first key characteristic of a successful program Farar identified is leadership. “Some of the roles mentioned by early outreach directors were fundraiser, administrator, maintaining good relationships with all of those involved in the program, staff development, remaining informed and in touch and being flexible in order to get the job done” (p. 107). These characteristics resemble several of the comments made by administrators in this study who were asked, “What can be done to improve dual enrollment programs?” Answers included keeping lines of communication open, becoming less territorial of programs, soliciting more industry support, involving parents, creating understanding and sympathy towards school counselors, keeping local high school staff informed about curriculum decisions, and continually evaluating the program. Leadership is a necessary component of successful communication and implementation of cross-agency cooperation.

Farar (1999) states that another key practice for program improvement is collaboration between state education agencies, public schools, colleges and universities, private sector companies, and community-based organizations. Results from the Covington study also show that inter-agency cooperation is necessary with information flow up and down the educational hierarchy an essential ingredient of successful communication. Students must also be included in the flow of information. Van, an HEO student from Eastside High School, during an after class conversation, suggested his principal be asked for permission to allow Covington campus staff to set up a booth outside the cafeteria to provide students who may be interested in dual enrollment with information about the program. He explained that the military and other colleges visited his campus two or three times a year. This activity could be a good way of including students in the communication loop.

Planning, commitment, communication, support, and evaluation are also mentioned in Farar's (1999) study as essentials for a successful program. Farar concluded, "Collaboration emerged from this study as the single most important component of early outreach programs...It is recommended that programs not only collaborate with other schools, universities, business and the community but also with other early outreach programs" (p. 116).

Collaboration is a very important component when providing dual enrollment programs as suggested by Mr. Davis and other administrators. Collaboration in Georgia will become increasingly important as dual enrollment programs expand to more high schools and colleges and the numbers of students grow. The Georgia Department of Education should consider periodic workshops to bring together dual enrollment

practitioners from across the state who, when meeting together, can compare programs and share similar problems and concerns. State staff also needs to provide feedback on program evaluations to let local practitioners know how they are doing. Dual enrollment can be strengthened by expanding beyond the cloistered boundaries that now exist where each college/high school partnership works in isolation from one another. The State Department of Education can provide much needed leadership by bringing all programs together and providing feedback from data they receive statewide.

Comparison with Marquez Study

Marquez (1999) studied the effect of concurrent enrollment programs on persistence, transfer, and graduation rates of community college students in Arizona. He drew several interesting conclusions. He found that concurrent enrollment programs

1. are effective in recruiting non-traditional students,
2. are characterized by a high rate of remedial course placement,
3. result in participants performing better than non-participants in regards to numbers of students transferring and graduating,
4. require an expanded evaluation process to include tracking students over a period of time. He suggests 8 years as an appropriate length of time for a longitudinal study, and
5. need participants to enroll at the college full-time immediately after graduation.

Marquez's findings were compared to data from the Covington study and it appears that dual enrollment at both Covington campus and Arizona community colleges is effective in recruiting students who might not have otherwise considered higher education as an option. Concurrent or dual enrollment is a good recruiting tool

particularly among average achieving students (Rodriquez, 1999). Evidence in the Covington study was provided by responses to the last question in the student interview that asked if students felt more positive about taking college classes now that they had completed a year of study. With one exception, all the answers were positively stated. Students said that dual enrollment gave them confidence, it was smart to go through the program, college was motivating and helped with jobs and their personal life, and their participation made them feel proud. Art, Cal, Don, Fred, Van, and Will all stated that friends supported their college enrollment. The HEO participants were technology/career track students whose aspirations for higher education did not include enrollment in four-year baccalaureate programs. Dual enrollment at a technical college worked well for them.

Contrary to Marquez's (1999) findings of a high rate of remedial course placement, the ASSET exam in Georgia somewhat mitigates the problem of low academic achievement. The ASSET test eliminates students who are functioning below ninth grade levels in math and reading. Remedial education at DeKalb Tech provides instruction for students with eight grade and lower skills.

Marquez's (1999) third item stated that concurrent enrollment students perform better than non-participants on acceptable transfer rates from community college to four-year college and university programs. Transfer is an incidental, not a primary, part of the mission of technical colleges in Georgia, i.e., the primary mission is to prepare students for entrance into the workforce upon completion of certificate, diploma, or associate degree programs. However, a recent conversation with the dean of industrial technology programs at another Georgia technical college indicated that enrollment in college-level

math, English, social studies, and science courses has experienced a sharp increase after the Georgia Board of Regents approved transfer credit for academic courses at his school. Transfer credit may become an issue for technical colleges in the future. Dual enrollment will not be adversely impacted by increased numbers of transfer students because current Georgia State Department of Education guidelines prohibit dual enrolled students from selecting academic subjects. Only technical courses are eligible for state reimbursement.

The last item mentioned was the need for students to immediately enroll in college after graduation from high school. Gray and Herr (1995) state that moving students from high school directly to college eliminates stop-out, i.e., an interruption in the continuous movement of students from secondary through postsecondary education. Covington campus staff should research ways and means other institutions have created to eliminate the stop-out and drop-out from their programs of study and incorporate their methodology into our administrative practice. The researcher previously stated that less than 15% of high school graduates continue postsecondary training at a technical college (Georgia Department of Education, 1999a). Dual enrolled students who continue their postsecondary training after graduation from high school may help raise the 15% figure.

Comparison with McConnaha Study

McConnaha (1996) studied dual enrollment at the University of Chicago Laboratory High School located in Chicago, Illinois (hereafter referred to as the Chicago School). The Chicago School enrolled approximately 460 students in grades nine through twelve in a college-prep program of study. McConnaha's research question was, "What is the relationship between program components and student attitudes of juniors and seniors involved in dual enrollment at the University of Chicago Laboratory High

School?” (p. 6). His research provided data useful in efforts to compare and contrast findings from the Covington study.

McConnaha’s (1996) four-year project involved interviews with 20 students selected through a stratified, purposeful sampling method from a total population of 65 dual enrolled students who attended the Chicago School during the years 1988-1992. Of the 20 students, 15 were male and five were female; three were minority students. McConnaha used a semi-structured interview that ranged from 35 to 50 minutes in length. He also interviewed teachers, counselors, and parents of participating students. The purpose of these interviews “was to gain insights into the effect of the college enrollment on the student’s high school program, free-time activities and home life.” (p. 69). McConnaha (1996) found that more males participated in the program than females and more whites than minorities. Dual enrolled students were highly motivated, extremely independent, and academically talented. He found that motivation “is a key and consistent element among these subjects” (p. 134). School students typically selected courses in mathematics, foreign languages, and computer programming that were not available at the high school. McConnaha found that a primary reason students participated was “university courses would enhance their admission opportunities following graduation from high school” (p. 132).

McConnaha (1996) asked students what their prime motivation for participating in dual enrollment was. Responses included “wanting to prepare themselves better for college; being influenced by a counselor, friend or parent; wanting to study more of a particular subject; wanting to expose themselves to a challenge; wanting a better looking academic record; getting a college course out of the way; and taking advantage of the

opportunity to study with a particular teacher” (p. 135). In the Covington study students and high school staff stated that friends and family influenced their decision to participate in the dual enrollment program. For example, Ted, Van, and Will were friends of Elvin. Elvin told them about his positive experiences with the HEO program and encouraged them to consider dual enrollment. They discussed the HEO program with high school and college counselors and enrolled in the program. Art’s mother, a part-time student at Covington campus, encouraged her son to follow in her footsteps. He successfully completed the HEO program, graduated from high school, and as of this writing, continues at Covington campus as a full-time student. Therefore, McConnaha’s finding that family and friends influenced dual enrollment decisions for students at the Chicago School is supported by the experience of several HEO students at Covington campus.

McConnaha (1996) asked if dual enrollment caused students to participate less in social activities and athletics in high school. Responses indicated, “laboratory sessions, held in addition to the class meetings...cut into time which the subjects had formerly devoted to athletic practice, school social events and ‘hanging-out’ with friends” (p. 139). He went on to say, “This negative impact results from a lack of time to accomplish all that needs to be done in both the university and high school settings; and/or a feeling of abandonment regarding peers and programs” (p. 142). This finding stands in contrast to responses by the HEO students in this study who indicated dual enrollment did not have a major impact on their social life at school. The difference between HEO students and participants of the dual enrollment program at the University of Chicago, is the Chicago School students carried a full academic load. McConnaha reported that most of the students selected Advanced Placement (AP) high school classes and then added

university math, computer, and foreign language courses on top of an already demanding schedule. The HEO students did not carry a heavy academic load and therefore had more time available for other pursuits, e.g., they filled available free time with part-time work. Interviews with the HEO students, in contrast to Chicago School students, revealed no negative feelings towards time spent with friends, family, and social activities. As stated earlier, school related social activities were never a priority for the HEO students.

Dual enrollment participants at the Chicago School were asked if participation in the program changed their self-image. McConnaha (1996) concluded that dual enrollment did increase a positive view towards self but primarily because of academic achievement “of pride in discovering they could do the university work, a feeling of focus and a sense that they were ready to move on” (p. 144). The HEO students expressed similar sentiments, i.e., completing the program also provided them with a sense of accomplishment and confidence that they could do college work. A comparison of the HEO with Chicago School students indicates that students at both the high and middle academic achievement levels find satisfaction from participation in dual enrollment programs.

McConnaha (1996) asked if student’s attitudes towards high school or college changed after participating in the dual enrollment program. He received positive or neutral responses and noted, “Many students expressed relief at discovering how the university was much better socially than they had thought, easier academically than they had thought, or less threatening than they had thought” (p. 146). The HEO students did not use the word “easy” in their description of their experience at DeKalb Tech. They did, however, convey a sense of accomplishment and a feeling that they could do college

work. The data from both studies suggests that students from the Chicago School and Covington campus would agree that participation in dual enrollment resulted in a positive attitude towards school and particularly towards participation in college classes.

Another question McConnaha (1996) asked was, “If a friend were trying to decide about dual enrollment, what would you tell that friend?” (p. 146). Fifteen of the 20 students in McConnaha’s study said they would recommend dual enrollment to their friends. Several of the 15 students experienced academic difficulty but still spoke positively about the program. The HEO students were also very positive about their participation in college classes. Rodriquez (1999) stated that students at De La Guerra and Malcolm high schools in California promoted dual enrollment among their friends. Communication among peers appears to be a powerful way students gain interest in dual enrollment programs. Again, college staff should capitalize on the ability of program participants to market dual enrollment programs by including students in marketing efforts. Dual enrolled students should accompany college recruiters to high school campuses to augment presentations to students, parents, and faculty.

A final point of agreement between McConnaha’s (1996) and the Covington study concerns counseling of students. McConnaha recommended that, “A study of how students are informed of the dual enrollment option and what kind of counseling is done prior to the placement is also needed” (p. 149). Additional research is needed to ascertain how effectively Covington campus staff is counseling/advising students who express interest in dual enrollment. An additional concern is students who are not made aware of the benefits of dual enrollment opportunities, particularly college-prep students and their parents. Interviews with high school and college administrators revealed that

college prep track students are advised to pursue four-year baccalaureate degree programs. Grey and Herr (1995) state that many college prep students are misdirected and poorly advised by high school counselors. They indicate that the majority of high skill/high wage jobs in the next ten years will require two-year diploma or associate degree postsecondary credentials. The problem Covington campus staff must confront is marketing two-year programs to college prep students and recruiting sufficient numbers of students to keep technical programs viable at the college. Diploma and associate degree level programs at DeKalb Tech can benefit from enrollment of more college prep track students. A recommendation of this study is that Covington campus staff initiate research to determine how college and high school staff can do a better job of counseling all students who are interested in pursuing higher education opportunities.

As stated above, the student population in the McConnaha (1996) study was very different from the HEO students in the Covington study. Students from the Chicago School were academic high achievers who enrolled in AP classes and selected college-level math, language, and computer courses because they had exhausted the high school offerings. McConnaha described them as highly motivated. The HEO students were average or better in their academic achievements, not a part of an AP group, and DeKalb Tech staff had to continually work to increase student motivation to study and stay on task in class. Despite the academic and motivation differences between the two groups, they did share several common traits. Both groups received a feeling of pride and accomplishment from participation in dual enrollment and both said they would recommend the program to their friends. Both groups stated they looked favorably on college enrollment. Additional research is needed to determine differences and

similarities between AP and average achieving students in regard to influences (family, friends, counselors, teachers) that shape their decision making about education opportunities beyond high school.

Comparison with Sagers' Study

Sagers (2000) conducted a five-year descriptive and evaluative study of concurrent enrollment in six school districts and Salt Lake City Community College (SLCCC) in Utah. He interviewed

Granite school district office administrators, high school principals and their assistants, the Utah State Office of Education (USOE) coordinator of the concurrent enrollment program, the USOE superintendent, the state office attorney, the USOE director of curriculum, teachers, students, parents, and college administrators. (p. 8)

He asked five research questions.

1. What are the characteristics of the size and growth of the concurrent enrollment program?
2. What are the program characteristics of the concurrent enrollment program in terms of the number of students, courses, and credits.
3. What are the program characteristics of the concurrent enrollment program in terms of services produced and the number and types of courses.
4. What impact does concurrent enrollment have on the acceleration of students through the system of higher education?
5. Does concurrent enrollment offer the same quality as an equivalent college course? (p. 37)

Sagers (2000) described the growth of the concurrent enrollment program and demographic characteristics of individual students. Growth trends were compared among the six school districts in the SLCCC service area; the demographic characteristics helped determine if concurrent enrollment programs ensured equal access to all students. He compiled SAT test scores and grade point averages (GPA) for students to measure academic progress of concurrent enrollment participants. Interview data with students, parents, and administrators was used to assess quality of the concurrent enrollment program. He compared student GPA in high school and after graduation from college.

Sagers (2000) found that vocational classes, including marketing, graphic arts, and architecture/drafting, comprised 17% of the total course offerings. The remaining 83% were academic courses. Slightly more than 50% of the courses taken were traditional liberal arts courses (math 24%, language arts 15%, and history/humanities 12%). Concurrent enrollment grew significantly in a six-year period, from 1,499 students in 1993 to 4,320 in 1998. The distribution of services “while varied across districts, is relatively representative among student groups (defined by race/ethnicity and sex)” (p.87). Concurrent enrollment students earned an average of nine vocational or academic credits. He concluded, “It appears that less able students are able to earn much higher course grades than their more able (defined by average ACT scores for the two groups) colleagues who take the same course at a college campus” (p. 87).

Sagers (2000) recommended that concurrent enrollment programs be more thoroughly evaluated. He writes,

One of the biggest claims from proponents of concurrent enrollment is that the program reduces the need for capital facilities. This is true only if students

actually pass through the system more quickly than if they did not accumulate credits through concurrent enrollment programs. If the credits accumulated through concurrent enrollment do not reduce the number of credits students must earn at the university level, the program contributes to the overall load on the educational system rather than diminishing it. (p. 89)

Accountability is another theme that Sagers (2000) introduced as part of his recommendations. He mentioned student selection, teacher qualifications, and supervision of concurrent enrollment teachers as issues that need to be examined. He recommended a limit on the number of courses that are offered in the concurrent enrollment program and suggested they be restricted to liberal arts courses.

Sager's (2000) recommendation that dual enrollment programs need to be more thoroughly evaluated is applicable to the Covington campus program. At the time of this writing only the Georgia Department of Education conducts evaluation of dual enrollment programs. This evaluation is limited to ensuring that courses offered by the colleges match state department curriculum guidelines. No consideration has been given to the quality of the programs, e.g., no evaluation component exists to determine if dual enrollment provides students with skills that match workforce needs and requirements. No cost-effectiveness studies have been conducted to determine if financial resources provided by the HOPE Grant program and Full Time Equivalent (FTE) funding from the Department of Education budget are being used to their best advantage. No longitudinal studies have been conducted to determine if students found employment in occupations they have been trained for. DeKalb Tech can contribute to the evaluation effort by maintaining contact with dual enrollment program completers and their employers to

determine if the skills training the college provides is adequate to meet workplace standards.

Sagers (2000) recommended that dual enrollment be restricted to liberal arts courses. Again, this may be advantageous for Salt Lake City Community College and it's emphasis on transfer credit but would be unworkable for DeKalb Tech. DeKalb Tech's mission is the provision of technical training and restricting dual enrollment to liberal arts courses would virtually eliminate the program at Covington campus. Currently, only a small number of students enroll at Covington campus with the intention of transferring credit to a four-year institution. Dual enrollment is needed to entice students to consider diploma and associate degree programs in technical fields. Dual enrollment at Covington campus should be expanded to additional programs including accounting, business, marketing, computer, and industrial technology programs.

Final Summary

Chapter V provides information that compares and contrasts findings of this study with those of other researchers. Data indicates that dual enrollment at DeKalb Tech shares many similarities with programs in Arizona, California, Illinois, and Utah. Results of this study corroborate findings of other researchers, most notably Rodriquez (1999). Recommendations from all researchers include initiating more research on dual enrollment programs.

Several themes emerged from the information provided by students, faculty, and administrators interviewed in this study. Tables 13 on page 124 and 30 on page 168 summarize these themes. Taken together, the data indicates that students, faculty, and administrators approve and support the program. However, additional resources should

be committed to expand and improve dual enrollment to include students who are not being served by the program. High school staffs look to the college and state department of education for leadership in moving dual enrollment forward.

Evaluation of dual enrollment can be improved. The Georgia Department of Education, DeKalb Tech, and local high schools should work together to provide additional research of the efficacy of the program. A longitudinal study that follows program completers can help determine if the program is meeting its primary goal of moving students from secondary to completion of postsecondary training. Dual enrollment research should also be conducted at a national level, perhaps through the Center for Occupational Development and Research (CORD) or the United States Department of Education. A national conference, Tech Prep for example, that devoted a portion of its program to dual enrollment would be of great benefit to both researchers and practitioners in the field who struggle to link high school and college technical training together. Dual enrollment, if properly implemented, holds great promise for students, parents, high schools, colleges, and American industries that depend on us to provide a well educated and technically skilled workforce for the future.

A final note concerning the development of theory is warranted. No clear theories relating to dual enrollment emerged from the literature review. The findings of this study corroborate those of other researchers, most notably Rodriguez (1999). However, the data gleaned from the participants of the Covington campus program does not provide sufficient information to develop substantive theory. Additional research, e.g., a longitudinal study, is necessary before hypothesis can be suggested.

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APPENDIX

CONSENT FORMS

CONSENT FORM

I give my consent to be interviewed for the research study on “Dual Enrollment and the Heavy Equipment Operator Program at Dekalb Technical College” which is being conducted by doctoral student William E. Gohdes (Phone number: 770-786-9522-3116) of the Occupational Studies Department at the University of Georgia (Phone number: 706-542-1682). I understand that my participation is entirely voluntary; I can withdraw my consent at any time without penalty and have the results of the participation, to the extent that it can be identified as mine, returned to me, removed from the record, or destroyed.

The following points have been explained to me:

1. The reason for this research is to determine the factors that contribute to high school students' enrollment in the Heavy Equipment Operator dual enrollment program.
2. I understand that I will participate in an interview roughly 30-60 minutes in duration. The interview will be tape recorded and transcribed by the researcher.
3. I understand that there will be no foreseen discomforts or stresses during the research.
4. I understand that there are no risks involved in this research.
5. I understand that my identity will be kept confidential and any personal responses or personal documents will not be released in any individual identifiable form without my prior consent unless required by law. The tape of my interview will be destroyed after a period of three years. For purposes of data analysis and reporting, a first name pseudonym will be used to protect my identity further.
6. The investigator will answer any further questions about the research, now or during the course of the project.
7. My signature below indicates that the researchers have answered all of my questions to my satisfaction and that I consent to volunteer for this study. I have been given a copy of this form.

Signature of Investigator

Date

Signature of Participant

Date

PLEASE SIGN BOTH COPIES OF THIS FORM. KEEP ONE AND RETURN THE OTHER TO THE INVESTIGATOR

The Institutional Review Board oversees any research-type activity conducted at the University of Georgia that involves human participants. For questions or problems about your rights please call to Human Subjects Office, Office of the Vice President for Research, The University of Georgia, 606A Graduate Studies Research Center, Athens, Georgia 30602-7411 Telephone: 706/542-6514 or IRB@uga.edu.

CONSENT FORM

I give consent for my child _____ to participate in the research titled *Dual Enrollment and the Heavy Equipment Operator Program at Dekalb Technical College* which is being conducted by doctoral student Mr. William E. Gohdes, (Phone number: 770-786-9522-3116) of the Occupational Studies Department at the University of Georgia (Phone Number: 706-542-1682). I understand that this participation is entirely voluntary; I, or my child can withdraw consent at any time without penalty and have the results of the participation, to the extent that it can be identified as my child, returned to me, removed from the research records, or destroyed.

Title of Research: *Dual Enrollment and the Heavy Equipment Operator Program at Dekalb Technical College*

Researchers Name: *William E. Gohdes*

UGA Department: *Occupational Studies*

Phone Number: *706-542-1682*

Participation is voluntary. _____ ***Can withdraw at any time.***

I give my permission for the researcher to audiotape my child's responses to the interview questions _____

Parent's Initials

Student's Initials

I do not give my permission for the researcher to audiotape my child's responses to the interview questions. _____

Parent's Initials

Student's Initials

1. The following points have been explained to my child and me.

The reason for the research is to determine the factors that contribute to high school students' enrollment in the Heavy equipment Operator dual enrollment program. The students will respond to an eleven question interview guide and their answers will be coded and categorized and compared and contrasted to answers provided by students in similar studies as found in the research literature.

The benefit I may expect from it is that information provided by the students will be used to evaluate and improve the Heavy Equipment Operator dual enrollment programs at Covington-Newton campus of Dekalb Technical College. My child will benefit from an improved program of study in Heavy Equipment Operation.

2. The procedures are as follows:

The researcher will interview the Heavy Equipment Operator students at the Covington-Newton Campus of Dekalb Technical College at a mutually agreed upon time between the researcher and the student. The researcher will ask eleven questions about the student's perceptions of participation in dual enrollment in the Heavy Equipment Operator program. This interview should last from 30 to 60 minutes depending upon the length of answers provided by the student. The interview will be audiotaped but only with the student's and my permission. My child and I have initialed a statement above which gives/does not give my permission for my child to be audiotaped during the interview.

3. No discomforts or stresses are foreseen.

4. No risks to participants are foreseen.

5. The results of this participation will be confidential, and will not be released in any individually identifiable form without my prior consent, unless otherwise required by law.

The audiotapes of the student interviews will be housed in the researchers locked office.

6. The researcher will answer any further questions about the research, now or during the course of the project, and can be reached by phone at 770-786-9522 extension 3116.

7. My signature below indicates that the researchers have answered all of my questions to my satisfaction and that I consent to volunteer for this study. I have been given a copy of this form.

William E. Gohdes, researcher

Parent/guardian

PLEASE SIGN BOTH COPIES OF THIS FORM. KEEP ONE AND RETURN THE OTHER TO THE INVESTIGATOR.

Research at the University of Georgia which involves human participants is overseen by the Institutional Review Board. For questions or problems about your rights please call to Human Subjects Office, Office of the Vice President for Research, The University of Georgia, 606A Graduate Studies Research Center, Athens, Georgia 30602-7411 Telephone 706-542-6514.
