A CASE STUDY OF STUDENTS ENTERING AN EARLY COLLEGE HIGH SCHOOL: CHANGES IN ACADEMIC BEHAVIOR PERCEPTIONS

by

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The purpose of this study was to learn more about the transition experiences of one group of high school students ($N = 75$) as they began attending one alternative pathway: an Early College High School program on a community college campus. A four-part conceptual framework of college readiness provided a structure from which to explore the experiences of students in the college environment. One of the four framework areas—academic behaviors (self-management)—was the focus of this study.

Data were collected by means of a pre-post survey, student interviews, and staff interviews in order to understand better the college readiness perceptions of the students, principally as evidenced by changes in their academic self-management behaviors. The survey data were organized into pre-post group comparisons and were reported in terms of

descriptive statistics. The data from semi-structured interviews with participants provided additional insight into changes in the academic and social behaviors of the students.

Results indicate that students' academic behaviors changed during their first term of college. Over the eight survey domains measured, mean scores generally increased moderately between the pre and post surveys in several domains associated with academic behaviors, with two key domains—self-awareness and learning habits (i.e., learning strategies/study habits)—showing the most growth. Additionally, student interview comments demonstrated changes at the end of their first term of ECHS in their study habits and in their ownership of their school efforts. The overall changes in students' academic behaviors imply that they learned new skills as a result of participation in the ECHS program.

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CHAPTER I

INTRODUCTION

Statement of the Problem

While many studies have examined the transition of students from high school to college, most of these studies have focused on the success of high school graduates as they transition from their senior year to the first year of college and beyond. Many of these studies have, in particular, examined students as they transition to a four-year university and begin the pursuit of a bachelor's degree. Fewer studies have examined the high school-to-community college transition, and fewer still have examined the transition experiences of students who, while still in high school, leave the comprehensive high school environment and continue their secondary education on a local community college campus. Such a move has become an option for some high school students in recent years, as in the wake of calls for school reform local school districts have broadened the educational pathways open to students. Among the pathways some districts have developed is one known as Early College High School (ECHS), which often places students in a community college setting, creating a pathway that leads to a high school diploma at the same time that students earn college credits. Better understanding the kinds of support the ECHS pathway needs to provide in helping students complete high

school and become college-ready is important to our understanding of high school-to-college articulation. In addition, because community colleges have open admissions and many times enroll students who are traditionally underserved, better understanding the college readiness of one subgroup of community college students and how successfully they transition to a two-year college environment could provide insight that may strengthen the high school-to-college connection.

In examining that connection, the transition of students from high school to college marks a critical turning point in our educational system, and much research has been conducted in this area. Many students undertake this transition, as about 83% of all high school graduates attend some form of postsecondary education (Adelman, 2006), and many of these students who enter college directly from high school are, in fact, adequately prepared and are able to make that transition successfully (Tinto, 1993). Too many students cannot make that claim, however, as the retention and readiness of a persistently large minority of students is a challenge that most colleges face, especially less-selective public and private colleges (Tinto, 1993). Data indicate that overall about one-third of traditional age college students leave college within three years of starting, without attaining a degree (Bradburn & Carroll, 2002). Most of this attrition occurs in the first year, as at most four-year colleges, about 30% of freshmen do not return for their sophomore year (ACT, 2008). At community colleges, the attrition rate is even higher, with just over 45% of students not returning after their first year (ACT, 2008).

The academic readiness of students is a further challenge facing students and colleges, with a sizable number of students needing remedial help upon entry to college.

One national study estimated that 34% of freshmen in 2002 were not ready for college-level math or English upon entry into college, up from 25% in 1991 (Greene & Winters, 2005). Other education analysts have put the figure higher, noting that over 50% of entering freshmen across all postsecondary institutions take at least one remedial course upon entering college (Kirst & Bracco, 2004). In a study of the California State University system in 2002, a review of student courses showed that 59% of freshmen needed to be placed into remedial math or English (American Diploma Project, 2004). According to NCES (2004) statistics, 76% of colleges and universities in 2000 offered at least one remedial course on their campuses. Such a condition creates problems for both students and institutions in terms of the time, money, and resources that are diverted into remedial instruction rather than college-level work.

In addition to improving the college readiness of high school graduates, there has also been a consistent call in recent years for increasing the graduation rate among high school students. Data indicate that every year about 5% of students in high school drop out (Kaufman, 2004; Laird, DeBell, & Chapman, 2006). To consider this effect over a several year period, it is estimated that in 2004 there were 3.8 million young adults aged 16 through 24 who had either dropped out of school or who were not enrolled in school (Laird, DeBell, & Chapman, 2006). Although the rate at which students graduate from high school had steadily climbed for more than a century, in the past two decades the overall rate has remained mostly stagnant, staying at about 72% nationally since the early 1990s (Greene & Winters, 2005; Kaufman, Alt, & Chapman, 2004). However, some have challenged these figures, saying they are too pessimistic (Mishel & Roy, 2006), and

recent NCES statistics record that in the 10-year period from 1997 to 2007, the percentage of adults age 25 and older who had graduated from high school rose from 82% to 86% (NCES, 2008)[1]. No matter what the exact dropout rate, however, any stagnation or failure to earn a diploma is of concern, as completing high school or its equivalent is commonly understood to be the minimum educational level needed for full economic participation in our society. An ongoing and renewed interest in increasing the graduation rate of students undoubtedly also reflects the demands for accountability called for in the No Child Left Behind Act of 2001 (NCLB), and the increasing emphasis on accountability, achievement, and school effectiveness in education.

The Importance of a High School Diploma

A high school diploma has not always served as a marker for the level of education that individuals needed for full economic participation in society. In the past, when different workplace needs and skills were called for, having a high school diploma was not as closely linked to economic success as it is today. In essence, today's jobs require more verbal skills and more complex problem-solving abilities than did the jobs of generations past, which then typically required more physical abilities (Hunter, 1988). Such a change has contributed to making education an accurate marker for earnings, and earning a high school diploma carries with it real economic and social importance for graduates. Students who do not graduate from high school face fewer options in the job market, and not surprisingly on average they end up with jobs that pay less than their counterparts who complete high school. According to U.S. Census Bureau statistics based

[1] Included in this figure are those who graduated from high school with a diploma, plus those who finished high school by completing an equivalency program.

on 2005 earnings, high school graduates will earn $1.0 million over their working lifetimes (between age 25 and 64), or about $31,000 per year. Those without a diploma earn about a quarter million dollars less, or $750,000, over their working lifetimes, for an average of about $23,400 per year (Baum & Ma, 2007). In addition to overall earnings, the trend for many years now has linked education to career opportunities. That trend will continue for the foreseeable future. According to the U.S. Department of Labor, Bureau of Labor Statistics (2008), of the 30 fastest-growing jobs in the United States, 60% call for education beyond high school, demonstrating the importance of students at least completing high school.

Individual lifetime earnings are not the only economic benefit derived from education. Society also benefits through increased levels of tax revenues when additional education brings with it increased income. The typical lifetime earnings of a high school graduate produce about $60,000 more in taxes than do the earnings of those who do not graduate from high school (Levin, 2005). If one adds up the yearly tax losses for all high school dropouts age 18-67 across the nation, it comes to annual losses of over $50 billion in federal and state taxes; the combined income and tax revenue losses come to an estimated annual total of $192 billion (Levin, 2005).

Students who do not earn a high school diploma also face a greater likelihood of unemployment. About 20 years ago it was estimated that the unemployment rate for all male high school dropouts was approximately twice that of male high school graduates (Editorial Research Reports, 1989). This pattern continues, as more recently students who drop out of high school continue to struggle in the work environment, and high school

dropouts are unemployed at higher rates than those who finish high school. This is measurable almost immediately out of high school among very recent graduates. The unemployment rate for Class of 2007 high school graduates who had not enrolled in college by the following October was just under 20%, whereas the unemployment rate for high school dropouts from the same class at that same time was estimated at 27% (Bureau of Labor Statistics, 2008).

The importance of attaining a high school diploma has also been framed as a health issue. Increasing the graduation rates for students is related to increased health benefits for individuals and communities, including higher levels of mental health benefits (Chen & Kaplan, 2003; Freudenberg, 2007). Public health researchers have noted that one's degree of education is generally associated with healthier behavior choices, as well as with stronger social networks and a greater degree of control over one's life. The effect of this is evident at even a high school completion level (Freudenberg, 2007). Though related and not linked causally, in one striking example, high school graduates can expect to live on average 9.2 years longer than those who drop out of high school (Levin, 2005).

The Call for Alternative Pathways

It is no surprise, then, given the emphasis on accountability and the importance of students becoming college ready and earning a diploma, that educational practitioners and analysts for decades have examined, and sometimes questioned, the structure and efficacy of high schools (Cohen, 2001; Conley, 2005; Goodlad, 1984; Grubb & Oakes, 2007; Sizer, 1992). Many suggestions have been made about improving such structure

and the accompanying knowledge and skills of high school students, as well as about increasing their chances for successful postsecondary education. It is in this context that practitioners and researchers have tried to define high school structure, achievement, and effectiveness. It is also in this context that researchers and practitioners have considered alternative ways of earning a high school diploma, as well as the connection between alternative pathways and college, particularly the community college. Along with the 1983 release of the federal report *A Nation at Risk* (National Commission on Excellence in Education, 1983), which warned against a "rising tide of mediocrity" (p. 1) and challenged educators to hold students to high achievement standards, came a subsequent call for an improvement in learning standards and a rise in accountability for schools, including a challenge to increase the percentage of students earning a high school diploma and becoming college ready. Indeed, that call for improvement and accountability is apparent in the literature on high school completion, and recent research also reflects a heightened interest in linking K-12 student learning with postsecondary preparation (Bailey, Hughes, & Karp, 2003; Bragg, 2006; Kirst & Venezia, 2001).

Since the 1990s there has also been an increased research interest in the link between student learning and alternative pathways to high school graduation, particularly the link between these alternate pathways and the community college (Bragg, 2006). One way to better understand the ECHS pathway is to examine a concept such as college readiness in an alternative setting and the transition to a postsecondary environment. Though additional conceptualizations of high school learning systems exist, college readiness concepts can provide a framework for examining the degree to which one early

college high school program influences high school students' academic behaviors as they begin the college transition process.

The Importance of the Study

It is clear that helping students graduate from high school prepared for either work or college benefits both individuals and society. Students need to be adequately prepared for postsecondary options, whether they are moving on to a university education or entering the world of work. Completing high school should be a key part of helping students prepare for either of these options, as well as in creating a healthy citizenship. National discussions about how to help students attain these goals have included such topics as raising graduation requirements, identifying clear academic standards, ensuring that teachers deliver strong instruction, aligning high school with college expectations, and creating alternative pathways for students. In the face of these discussions, increasing the percentage of students graduating from high school successfully prepared to transition to college remains a challenge facing educators today.

As indicated, one alternative program intended to address this challenge by increasing the percentage of students graduating from high school as well as aiding in their transition to college is early college high school (less often referred to as middle college high school). Early college high school (ECHS) is not a formal program with uniform structures and guidelines, but rather an informal category that exists in several forms in practice. The goal behind ECHS is to help students graduate from high school and become academically ready for college in an actual college setting. Early college programs also aim to help students understand and meet college expectations, to diminish

structural barriers between high school and college, and to reduce first-year college remediation by developing skills needed for college success (Goldrick-Rab, Carter, & Wagner, 2007; Vargas, 2006).

Early college programs are typically targeted to low-income or disadvantaged students, and many have been supported recently by the Early College High School Initiative (www.earlycolleges.org), which has been funded in part by the Bill and Melinda Gates Foundation, along with support from The Ford Foundation, the W.K. Kellogg Foundation, and the Carnegie Corporation of New York[2]. The principal goal of the Early College High School Initiative is to support ECHS programs and increase the graduation rate of high school students, as well as bridge the transition gap between high school and college. Overall, ECHS programs are often operated by local school districts or colleges and are typically connected to community colleges, though some are connected to four-year colleges. Early College High School is a current example of efforts to reduce the barriers between K-12 and post-secondary opportunities (Hoffman & Vargas, 2005). Students enroll full-time and take a range of college-credit classes, while at the same time receiving counseling, mentoring, and academic support services. To date, relatively little evaluation has been done of ECHS programs, and research on the success of early college programs is incomplete.

[2] The ECHS program I studied is not supported by the Early College High School Initiative. It is funded and operated by a local school district in the Pacific Northwest, through agreements with a metropolitan area community college.

Purpose Statement

The purpose of this study was to better understand how high school students transition from a comprehensive high school environment to an early college program in a community college environment. In this study, conducted at one Early College High School program in the Pacific Northwest, I examined students' perceptions of one facet of the concept of college readiness—academic self-regulatory behaviors—as the students began their first term at a community college. In particular, I focused on changes to students' self-management and self-monitoring behaviors, and on their perceptions of personal and academic differences as they left high school and began their first term of community college. I describe the college readiness concepts I utilized in more detail in Chapter II.

This research may help provide a better understanding of students' readiness to enter one emerging alternative pathway to graduation that is open to high school students, especially for those who would like to attend college. As high school and district administrators look to expand and strengthen the options open to high school students—especially to juniors and seniors—identifying how students successfully move from the high school to the community college environment could help strengthen such programs and perhaps make ECHS or similar programs available to more students. This study may provide some helpful information to policy makers as they ponder the expansion of programs that place high school students in community college settings. This study may also provide information about the variety of support students need from ECHS staff as they transition to a community college.

This study may also help us better understand the profile of students who, while sometimes academically unsuccessful or marginally successful in high school, become successful in the community college setting. We know that community colleges most often do not enroll high school students who graduate in the top quartile of their class, in terms of grade point average, and that they generally enroll students who are academically weaker than students in four-year colleges (Adelman, 2005; Dougherty, 1994). Of those students who move on to the community college while still in high school, the academic profile may be even farther from the top quartile. Early college high school programs are alternative pathways for students, and many of the students needing an alternative pathway to get through high school are those who have struggled in high school.

In this study I did not explore the nature of high school education itself from a theoretical perspective (e.g., whether schooling is viewed from a more utilitarian standpoint, in which college or workplace-place skills are transmitted, or whether it is viewed more as a means by which students' values and attitudes are shaped in regards to their future). There is a wide continuum of theoretical ideas about how high school and schooling in general impact the education and formation of young people, and this study did not explore how such ideas about education help us understand how students acquire the skills, values, and attitudes that they need for success in college and in high school.

To review, in this study I examined the transition and academic behaviors of students at one high school / community college partnership in the Pacific Northwest. Throughout this study, I focused on students' perceptions of changes in their academic

self-regulatory behaviors, and on their perceptions of personal and academic differences they encountered as they left high school and moved to a community college environment.

CHAPTER II

LITERATURE REVIEW

The studies and articles presented here are intended to place this study within a suitable conceptual framework and literature base.

Alternative Pathways for High School Students

Many studies of dropout behaviors focus on student characteristics, such as potential individual or social risk factors linked to students dropping out (Kennelly & Monrad, 2007). It is clear that individual student characteristics, such as socio-economic status, disability status, or occupational aspirations, are important to high school engagement and success, and also clear that students who become disengaged with high school both socially and academically are at risk for dropping out (Croninger & Lee, 2001; Jerald, 2006). Other researchers have focused on the role of the school itself and the organizational and structural characteristics that may contribute to students dropping out, such as school environment, instruction, and staff characteristics (Bragg, Kim, & Barnett, 2006; Christle, Jolivette, & Nelson, 2007). These organizational explanations at the larger school level are also crucial, as the high school curriculum and its structure can affect the rate at which students remain in school until graduation and the rate at which they consider postsecondary options (Christle, Jolivette, & Nelson, 2007; Lee & Burkam, 2003).

Educators have recognized the need for alternative ways for high school students to earn a diploma and consider postsecondary options (Andrews, 2004). Hill (2008) studied school organizational strategies designed to help more students navigate their way to college. Her findings suggest that what high schools do organizationally makes a difference in the postsecondary outcomes of students, especially for minority students.

A more organizationally-integrated education system that minimizes the divide between K-12 and postsecondary schools may help students become college ready (Hoffman & Vargas, 2005; Kirst & Bracco, 2004; Kirst & Venezia, 2001; Kisker, 2006). Nationally, several policy and research organizations have examined and proposed ways to minimize the current divide and raise college readiness standards. These organizations include: *Achieve, Inc.*, www.achieve.org; *The Bridge Project: Strengthening K-16 Transition Policies*, www.stanford.edu/group/bridgeproject; the *Center for Educational Policy Research*, www.epiconline.org; *The Early College High School Initiative*, www.earlycolleges.org; *The Education Commission of the States*, www.ecs.org; and *The Education Trust*, www.edtrust.org.

Rather than a single pathway consisting only of the comprehensive high school, alternative pathways can offer a different organizational structure and provide for a range of ways for students to graduate from high school. One organizational change that became more common in the 1990s was the expansion of dual-enrollment opportunities for students in high school (Adelman, 2006). The call for the expansion of such programs has been a response to a need to provide an alternate means for earning credit for high school students, as well as to bridge the gap between high school and college and allow

students (especially disadvantaged students) to have college experiences prior to finishing high school (Goldrick-Rab, et al. 2007; Tierney & Jun, 2001).

The Transition to a Postsecondary Environment

The process of transitioning to college starts as early as middle school (Adelman, 2006; Somers, Cofer, & VanderPutten, 2002; Wimberly & Noeth, 2005). The behavior and attitudes of students in high school and before contribute to the success of their transition to college. A student's readiness for college is complex and involves a long interactive system in which individual and institutional processes blend before a student even applies to college (Conley, 2005; Greene & Winters, 2005; Reason, Terenzini, & Domingo, 2006).

For students to transition to college successfully, they must have the knowledge and skills needed for the expected academic demands, and they must also have the personal and social skills necessary to support them as they assume new roles in an often unfamiliar setting, at the same time that they take on more independence and additional responsibilities (ACT, 2005; Adelman, 2006; Conley, 2007; Tinto, 1993). Such issues as career aspirations, relationships, persistence, and the integration of students into the life of the college also contribute to transition experiences (Tinto, 1993). For students who enter college directly after graduating from high school, beginning college is especially marked by more independence and a beginning of young adult lives (Feldman & Elliott, 1990).

The fact that there is an enduring gap between students who can and cannot meet these first-year demands challenges our understanding of college readiness and how to

assess it. Also, the gap between too many students' academic skills and the needed academic preparation is readily apparent in the rising rates of students who need to enroll in remedial courses in college (Greene & Winters, 2005; Kirst & Bracco, 2004).

Though our understanding of students and their college readiness and retention has improved in recent decades (Tinto, 2006), the disappointing college performance and retention of many entering students reveals a need to provide more comprehensive information about their true college readiness. Such information, if available to both secondary and postsecondary schools, could support collaborative partnership efforts between institutions at both these levels and thus help support students, especially those who enter programs intended to create connections between high school and college. Such shared information might help to better define college readiness (Conley, 2007).

The concept of *college readiness* remains central to efforts to support successful student transition to college and comprises the foundation for this study, which was to better understand the skills students need in order to leave the comprehensive high school and transition successfully to a community college environment. In particular, I examined one facet of college readiness: the academic self-management behaviors of one group of ECHS students. This approach provided an opportunity to better understand how a broader definition of college readiness might apply to students who have not yet finished high school and or even taken junior and senior year high school courses. Looking beyond such college admissibility items as high school grades and ACT or SAT scores is necessary to gain a more complete understanding of the college readiness of students beginning an ECHS program. In one report of ECHS community engagement efforts, the

concept of college readiness was raised as one of several critical issues that must be resolved if ECHS programs are to be sustainable. Writing about this, Webb (2004) said,

> Postsecondary institutions and school districts must resolve complicated issues such as … determining what factors should be considered in decisions about students' college readiness, … and in many instances, how high school students will be integrated into a college campus environment. Districts, postsecondary partners, parents and other stakeholders must devise and operationalize a variety of supports to help students be successful in early college. These supports include tutoring, counseling, mentoring, internships and development of college readiness skills. (pp. 4-6)

Self-Regulatory and Social Factors Related to Students' Transition to College

The term "self-regulation" is used extensively in the literature about college readiness and is associated with autonomy, self-management and self-monitoring concepts. It is clear that students' self-regulatory skills are important to their learning and adjustment to college (Garcia & Pintrich, 1991; Kitsantas, Winsler, & Huie, 2008; Tinto, 1993). It is also clear that first-year college students can benefit from interventions intended to improve their self-regulatory behaviors (Zimmerman, 2008). Students who learn self-regulatory strategies in their first year of college are better able to manage their college efforts and are more effective at setting academic goals (Kitsantas, Winsler, & Huie, 2008). A large-scale study by Robbins et al. (2006) found a positive relationship between students' ability to emotionally regulate their behavior and their academic performance.

Self-regulatory concepts include study skills as an important component of students' college readiness (Conley, 2007; Tinto, 1993; Zimmerman, 2008). For students to employ various study skills, they must develop an awareness of their abilities and be able to employ strategies to assess their classroom efforts (Conley, 2007). These skills prove to be especially important during the first year of college, as student success during the first year serves as a guide for the following years and is critical for retention (Reason, Terenzini, & Domingo, 2006). Study strategies that encourage students to be more personally involved with their course content can especially enhance students' academic competence (Reason, Terenzini, & Domingo, 2006). The benefit of colleges helping first-year students explicitly develop their study skill strategies has also been noted (Kitsantas, Winsler, & Huie, 2008).

As one might expect, issues dealing with responsibility and the increased independence and personal freedom that students encounter in college also influence their college transition (Thompson, 2008; Tinto, 1993). These factors impact students' behavior and create change in students both personally and academically.

In addition to issues related to self-regulatory skills, the nature of the social connections that students make also relate to their successful transition to college. Tinto (1993) has focused on the importance of individual students socially adjusting to the college environment. In a 1997 article, Tinto notes the importance of making social connections for students new to college. He writes,

> At first, new student attention is focused on the need to make social connections with their student peers. Though classes matter, students' concern regarding

> academic involvement appears to be played out against a broader backdrop of social issues and concerns they have over social membership. (p. 618)

We know that social relationships influence the adjustment of students to college not just personally, but also academically (Swenson, Nordstrom, & Hiester, 2008). For first-year students who enter college immediately after high school, the social relationships they form in college can contribute to their having a positive freshman year (Engstrom & Tinto, 2008; Tinto, 1997). According to Robbins et al. (2006), students must strike a balance socially: either too much or too little social engagement negatively influences their academic performance. Reason, Terenzini and Domingo (2006) further report that students' relationships with faculty and the support students are given personally and socially influence their engagement in college and their academic growth.

College freshmen additionally need to be able to separate from their pre-college friendships in order to make a successful transition to college (Paul & Brier, 2001). To be able to adjust to college, students need to manage changes to previous social networks, and even detach from previous social networks, as they form new friendships and face the academic and social challenges of college (Paul & Brier, 2001; Tinto, 1988). This finding is supported by research done by Pittman and Richmond (2008) about the quality of students' friendships as a factor affecting their college transition.

The extent to which college freshmen feel that they are integrated into the college community, described as finding a good "fit" with the institution, is predictive of their successful transition and persistence (Harms, Roberts & Winter, 2006; Tinto, 1993). We know that within a college environment, students who feel they have a good fit with that

environment tend to exhibit aspects of reflective thinking and openness to that experience (Harms, Roberts & Winter, 2006). Researchers have also concluded that a predictor of first-year students' academic success includes their perceptions of whether or not the environment of the college is supportive of them (Reason, Terenzini, & Domingo, 2006).

Early College High School

Though fairly new (having been in existence since the mid-1970s but growing in popularity over the last 10 years), ECHS programs aim to create a more uninterrupted connection between high school and college (Brewer, 2007). One outcome of this uninterrupted connection is to somewhat abruptly expose high school students to the academic and social expectations associated with a two- or four-year college.

Studies of ECHS programs, therefore, provide the opportunity to expand on the limited evidence about how high school students transition from secondary school to the first term of community college, perhaps creating a K-14 or K-16 model of schooling (Vargas, 2006). Goldrick-Rab et al. (2007) note that the setting of ECHS itself may be of key importance, as one criticism of other college-like opportunities for high school students, such as AP, IB, or dual enrollment, is that these programs "provide only a decontextualized entry to college" (p. 2449). Having students separate themselves from the comprehensive high school and attend classes in a college setting may be a critical part of the college preparatory experience for some students, in that it changes the nature of high school for them and gives them little choice but to learn about postsecondary expectations.

Two unpublished dissertations of ECHS programs have pointed toward the importance of the college setting itself. Though both of the studies have limitations due to an absence of comparison groups, they nevertheless provide some indication that the college setting itself may play an essential role in the transition of students to college. In one qualitative study of student experiences in an ECHS setting, Carroll (2006) found that being on a college campus had a strong influence on ECHS students, as the students felt more mature, and they reported they had a stronger intellectual focus and more ability to self-regulate their learning than they did in high school. A related finding was reported in another study of an ECHS program. This study indicated that students attending ECHS increased their motivation and were more engaged with school both intellectually and behaviorally (Roberts, 2007). In this study the students' teachers and instructors also judged that the students increased their levels of attentiveness, class participation, focus on tasks, and frequency of seeking help.

Conceptual Framework

In this study, I used a conceptual framework that focuses on a comprehensive definition of the academic skills and competencies needed for students to be college ready. Although any conceptual system is only an approximate model to help explain relationships and structure research, using a more comprehensive system in this study is necessary to more fully understand and support college readiness. Currently, many judgments about the college readiness of traditional-age students, or at least their college admissibility, rest primarily on high school grades and ACT or SAT scores. It may be, however, that assessments beyond that of content and performance are needed for some

students. The framework I used explores that idea, and was developed out of work done for the Bill and Melinda Gates Foundation by the Educational Policy Improvement Center at the University of Oregon (www.epiconline.org; Conley, 2007).

The work proposes a definition of college readiness that extends high school preparation to include the attitudes, academic behavioral skills, and overall contextual knowledge that students need. Such attitudes and skills include the content knowledge students need in core subject areas and also the thinking skills and strategies for problem solving and analysis students must implement as they take on college-level work. In addition to these items, Conley's definition of college readiness incorporates the attitudes and academic behaviors of successful students, as well as general institutional knowledge about navigating the world of college, described as contextual knowledge, and related to social capital concepts. These four areas of college readiness are labeled as *"key cognitive strategies," "key content," "academic behaviors,"* and *"contextual skills and awareness."* Though there is much overlap among these items, they comprise the major areas making up the four-part model of college readiness. A brief description of each of these areas, taken from Conley's model, follows.

Key cognitive strategies are foundational approaches that apply to the broad intellectual skills that students need to develop in order to be successful in college. They comprise ways of thinking and patterns of asking questions and approaching subjects in a disciplined way. The most important cognitive strategies are intellectual openness, inquisitiveness, analysis, reasoning and argumentation, interpretation, precision and accuracy, and problem solving. In addition to these cognitive strategies, students need to

master foundational skills in key content areas (English, math, science, social studies, world languages, and the arts), and have strong academic skills, especially in the areas of writing and research.

Academic behaviors—the focus of this study—are made up of students' abilities to make choices, monitor and manage their progress and behavior, and apply study skill strategies in ways that help them personally engage course material in a broad manner. Academic behaviors involve students being aware of their learning and able to control their study habits as needed. Anytime the term "*academic behaviors*" is used in this study, it refers to this facet of the comprehensive college readiness framework. As used in this conceptual model, academic behaviors encompass "a range of behaviors that reflect greater student self-awareness, self-monitoring, and self-control of a series of processes and behaviors necessary for academic success" (Conley, 2007, p. 16).

Contextual skills and awareness, in Conley's framework, include being able to function within a wide postsecondary system which may be unfamiliar to students and may create social and communication challenges for them. This area requires students to understand academic culture and its expectations as they navigate their way through college.

Conley (2007) also provides a visual depiction of this college readiness model intended to show the interactive nature of the four key parts of college readiness. As depicted in Figure 1, the four areas are more or less allied as concentric circles, with the intent to show that all of the elements are integrated and work together. Conley is careful to note that this abstraction is not intended to depict four separate facets of college

readiness, but rather to show that these facets work in conjunction with each other and often depend on each other. Conley (2007) writes that, "college readiness is a multi-faceted concept comprising numerous variables that include factors both internal and external to the school environment" (p. 12).

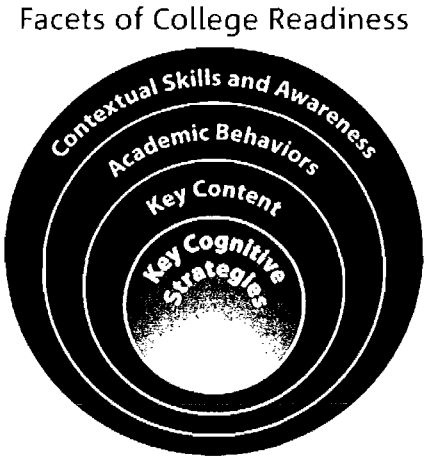

Figure 1. An organizational model of the key facets of college readiness, depicting the four interconnected knowledge and skills areas (Conley, 2007).

Research Questions

My research questions flow from the college readiness conceptual framework and are derived from the academic behavior facet within that framework. This facet of college readiness—the academic behaviors of students—was the focus of this study. Academic behaviors, such as study skills and self-management, "consist largely of self-monitoring skills and study skills" (Conley, 2007, p. 16) and are strongly associated with college transition and academic success. My research questions explored how one group of students who are juniors and seniors in high school perceived changes to their academic behaviors as they transitioned from a comprehensive high school environment to the first

term of an ECHS program on a community college campus. This study examined the following research questions:

1. First term students in a suburban school district's ECHS program are required to take an introductory course about "college success." The course reviews such topics as making positive academic choices, studying, taking responsibility, and using effective self-management tools, etc. How do students' first term experiences and the College Success course affect their perceptions of their academic self-management and self-monitoring behaviors?
2. How do these experiences affect students' perceptions of their transition from high school to the first term of community college?

If one goal of ECHS is to help students graduate from high school and improve their college readiness skills, thereby easing their transition to college, then it makes sense that high school and ECHS educators better understand how students' academic behaviors can be assessed and supported. This study should be considered in that context.

CHAPTER III

METHODOLOGY

I used a mixed methods approach to complete this descriptive study. My data sources include a pre-post survey, student interviews, and staff interviews. This approach addressed my study's purpose, which was to better understand the college readiness of high school students as they transitioned to an ECHS program in a community college environment. I used a quantitative approach as I examined the survey data that I collected and reported out qualitative data from the related interviews.

Though better understanding college readiness is critical to strengthening and promoting college readiness support systems for ECHS students, it is important to reiterate that multiple factors affect students' academic performances and attitudes in college, and also avoid implying that there is a causal relationship between a particular facet of college readiness and how students perform during their first term of college. Nevertheless, the investigation of the research questions that follow, while not establishing causality, may add to our understanding of how students' awareness of their own actions and self-management skills affect their college success, and, in turn, may prove useful to school leaders as they decide how to best support such programs as ECHS.

Setting and Participants

This study took place in a large suburban school district in the Pacific Northwest in the fall of 2008. The school district is comprised of nearly 38,000 students, including 11,800 high school students enrolled in five comprehensive high schools and several small alternative high schools. One of the alternative high schools is ECHS, which at the time of this study served approximately 150 students. The overall district high school population is comprised of 68% white, 16% Hispanic, 14% Asian, 4% African American, and 1% American Indian/Alaska Native students. Across the district for all high school students, 12% have been identified as qualifying for special education and 29% are eligible for free or reduced-price lunch. Also at the high school level, 19% of students in 2007-08 and 2008-09 failed one or more classes at year end. The district had a "cohort" graduation rate of 79% for 2007-08, calculated according to the state methodology. The cohort graduation rate does not take into account students who earn a GED or take a fifth year to finish high school.

The ECHS program operates on one of the campuses of the local community college, through agreements between that college and the local school district. It should be noted that the particular ECHS program I studied is not supported by the Early College High School Initiative, which through the support of charitable foundations in recent years has contributed funding and guidance to over 200 early college programs across the country. The Early College High School Initiative has a primary goal of expanding college opportunities for low-income, underrepresented college students. Although the program I studied has many similarities with Early College High School

Initiative programs and also strives to serve low-income, underrepresented students, financially and administratively it operates independent of the Early College High School Initiative.

According to the school district's guidelines, for students to be considered for entrance to ECHS, they should have demonstrated that they are capable of successful high school work. Prospective students, however, may have failed one or more classes in high school or otherwise not be achieving to potential. Applicants are also considered who may be interested in a specific program or career pathway that the community college offers. Nearly all of the students are high school juniors and seniors, as the local community college requires students to be at least 16 years old.

When students apply, they must go through a several-step process, including getting recommendations and taking the community college placement test. The placement test is the COMPASS® exam (COMputer-adapted Placement Assessment and Support Services), which is a computer-based college placement test developed by ACT that rates students' skill levels in reading, writing, and math. If the placements test scores indicate that the student is capable of college or pre-college work, then an interview is scheduled and the student begins to work with the ECHS support staff. College or pre-college work is defined as students testing into at least two of the following three classes: Writing 115, Reading 115, and Math 60. In other words, in one of the three placement subject areas, a student's test score may be below the recommended minimum. Students must give permission for their academic information to be shared between the local school district and the community college. This permission is needed because under the

Family Education Rights and Privacy Act (FERPA), rights with respect to students' education records transfer from the parent to the student when students either reach the age of 18 or are attending any school beyond the high school level. At this point, the student is also required to enroll in a program orientation course, College Success and Survival (CG100), which at the time of this study met for five two-hour sessions over the period of the first term. With the support of the ECHS staff, students blend earning a high school diploma with up to two years of college credit, including perhaps earning an Associate's Degree. Students attend the local community college full-time.

Measures

I used three sources of data for this study: student self-assessment data, student interview data, and ECHS staff focus group data. I collected these data in two parts. In *Part 1,* I completed a pre- and post-first term survey of the students who were newly enrolled in ECHS. The pre-post surveys allowed students to assess their perceptions of their academic behaviors and attitudes and their transition to a community college setting. The academic behaviors I looked at were primarily students' study skills and their self-monitoring and self-management habits. The pre-ECHS self-assessment survey attempted to capture and describe a beginning-of-college picture of some of the academic behaviors, learning habits, study skills, and attitudes of the students. Through the pre-first term survey I attempted to assess whether the ECHS students perceived they had acquired the academic behaviors and attitudes they need to be successful in college. The post-first term survey asked identical questions, with some additional open-ended questions appended. Limiting my pre-post survey to newly admitted students for fall term

helped with completing the data collection for this study within one term. About 75 students entered the program in September; there were approximately 150 total students in the ECHS program.

In *Part 2,* I collected additional response data through follow-up interviews. I did this in order to include descriptions of students' transition and college readiness perceptions in the study. First, I interviewed a total of 22 students. I interviewed 16 students individually or in small groups, including 6 of them at two points in time. I interviewed those 6 students about three weeks into their first term, and again at about 11 weeks. In addition, I conducted a single focus group of 6 students. The next interview source of data for this study came from a single focus group interview with ECHS staff, soliciting their evaluations of student transition and college readiness. Before interviewing any participants or using any survey data, the necessary Human Subjects consent was obtained (See Appendix A).

In summary, I used the following methods to collect data: a pre-post self-assessment questionnaire; interviews with 16 students individually or in small groups, including interviews with 6 of the students at two points in time; a single focus group interview with ECHS staff; and a single focus group with 6 students.

Survey Instrument

Surveys are a common way to collect data from students about their college readiness and experiences, despite the challenges of measuring students' opinions. Many high school and college academic behavior survey instruments are available, some of which are simple inventories informally used at colleges to give general academic

guidance to students, and some of which are more formal, backed by reliability and validity work conducted in a variety of settings. Examples of the former would include locally developed time management or study habit questionnaires available to students at a college learning resource center, with no reliability or validity evidence supporting their use, and little review. Examples of the latter include such instruments as the *Approaches to Studying Inventory* (Entwistle et al., 2000), the *Learning and Study Strategies Inventory* developed by Weinsten, Palmer, and Schulte at the University of Texas, the *Motivated Strategies for Learning Questionnaire* developed by Pintrich at the University of Michigan (1991), and the *Student Readiness Inventory* developed by ACT. All four of these inventories are aimed largely at college students and attempt to categorize and define approaches to postsecondary learning.

The purpose of using a survey for this study was to obtain valid and reliable information at two points in time from ECHS students about their academic behaviors and attitudes as they enter college and about their perceptions of college readiness. The ECHS students represented a distinct group, however, in that they were students who were attending both high school and college at the same time. At the time of this writing I had found no instruments that had been specifically tested and deemed reliable and valid for this population, i.e., students who are attending community college but who are high school age (16 to 17 years old) and still enrolled in their local K-12 school district. Because of this, one could reasonably argue that the validity of established surveys could be questioned.

For this reason, and because I wanted to formulate a few questions specific to the ECHS group, I used an existing and long established self-assessment instrument that had been recently implemented in the ECHS program I studied, with the addition of a few questions. This pre-post self-assessment instrument is a 64-question self-assessment survey from the textbook that was used as part of the ECHS College Success class. The textbook is *On Course*, and its self-assessment instrument has been developed for use with an introductory college course or a freshman success seminar[3]. The ECHS staff already planned to administer this self-assessment to all students newly enrolled in their program. I received permission to use these data from the Research Committee of the local school district in which I conducted my study. For each administration of the self-assessment I added 11 additional questions, including some open-ended questions on the post-survey, allowing students to reflect on their first term at ECHS.

The On Course Self-Assessment Scale is an instrument intended to raise students' awareness of their learning habits and academic behaviors as they review their approaches and attitudes to school. The questions are separated into eight scales or domains that relate to qualities associated with college readiness and academic behaviors in college: self-responsibility, self-motivation, self-management, interdependence, self-awareness, lifelong learning habits, emotional intelligence, and self-confidence. The

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[3] This instrument is part of a student support program developed for instructors who work with pre-college and college freshmen, particularly at the community college level. Information available at www.oncourseworkshop.com. The self-assessment instrument is from: Downing, S. (2008). *On Course: Strategies for Success in College and Life* (5th ed), Boston: Houghton Mifflin. Starting in September, 2008, the ECHS program adopted *On Course* as the text for its first-term support course, College Success and Survival, CG 100. I spoke with author Skip Downing on July 1, 2008, and obtained permission to use any or all of the questions in his self-assessment questionnaire. The survey has been administered to many thousands of students, and its individual questions have been reviewed extensively by college instructors.

questionnaire asks students about their academic behaviors and skills, primarily in relation to college, self, and the school community, and measures the extent to which students' skills and behaviors reflect skills associated with college success. The self-assessment uses alternately worded questions to ask students about their academic behaviors and skills. The intent of using alternately worded questions is to minimize survey response errors and obtain more consistent responses. An example of this is, "When choosing between doing an important school assignment or something really fun, I usually do the school assignment," and, "When choosing between doing an important school assignment or something really fun, I usually do something fun." After students tallied their responses, they scored themselves by completing some basic subtraction between the alternately worded questions. An aggregate score of between 0 and 80 for each domain was possible.

According to S. Downing, the author of the self-assessment instrument, it has been taken by thousands of students over a period of 13 years—since its development in 1996. He indicated that the 64 questions contained in the assessment have been reviewed by college and university educators as well as textbook publishing editors for clarity and appropriateness (personal communication, July 24, 2008). Downing considered the relationship between the questions and several psychosocial and academic study areas in developing the questionnaire and grouping the questions as he did. Though the primary intention of the self-assessment questionnaire is to raise students' awareness about these eight inner qualities, experience and feedback from over 100 educators working with first year college students indicates that the eight areas identified significantly affect and are

predictive of students' academic success and retention (S. Downing, personal communication, July 24, 2008). Additionally, information from several studies (Le et al., 2005; Lotkowski, Robbins, & Noeth, 2004; Robbins et al., 2006; Zimmerman, 2008 show the positive impact of interventions to strengthen self-management, self-regulatory, and self-awareness qualities in students.

The On Course self-assessment scales link to that facet of the four-part college readiness model describing academic behaviors; they probe the self-management, study skills, and self-awareness aspects of that construct. Again, though any single construct is not exclusive to another and acts in an integrated way with other behaviors and variables (Conley, 2007), measuring the preceding eight areas provided insight about the college readiness perceptions of the ECHS students, and correspondingly helped me better understand their transition to ECHS. In addition to these areas, the survey asked for some demographic information, including sex, race/ethnicity, grade in school, and previous high school attended.

I examined samples of several entering college surveys before selecting this self-assessment instrument. In addition to the surveys previously mentioned, I looked at the Beginning College Survey of Student Engagement, the High School Survey of Student Engagement, the Higher Education Research Institute's First Year College Survey, and the Community College Survey of Student Engagement. I also reviewed the College Student Inventory (CSI), developed by the Noel-Levitz Retention Management System, which is used to assess first-year students' attitudes, as well as the Student Behavior Inventory, developed by Bliss and Mueller (1986). Many of these surveys overlap each

other. I used these surveys as guides to create several additional survey questions related to ECHS experiences. Again, my questions and the use of the On Course self-assessment instrument approached the topic of college readiness from a slightly different perspective. More specifically, the preceding example survey instruments were intended to be given to students who are attending college, or in one case only high school, and ask questions of one or the other of these groups. I used my survey in order to gain insight on another group of students: those who are attending both high school *and* college. My additional survey questions also were based on suggestions from two high school students who reviewed the questions for clarity of wording and intent. My survey questions were not tested ahead of time with any students, as I did not obtain IRB approval prior to the start of fall term. A copy of the self-assessment questions and my additional survey questions is included as Appendix B.

Student Selection for Interviews and Questions

I selected the 22 students to interview not randomly, but largely on the basis of their demographic characteristics and school experiences. This type of purposeful sampling allowed me to include a wide range of student views in my study, and it allowed me to capture a representative mix of the students enrolled. I worked with the ECHS staff for suggestions about which students to interview. On two of seven days when I was at the college for the interview sessions, I also asked for student volunteers. I interviewed an equal number of males and females (11 each), students from all of the district's high schools, students who both had and had not done well academically in high school, and representative minority students. I interviewed students in a mix of several

formats, which varied due mainly to the way in which students were available to me. All of the interviews were conducted on site at the local community college. I audio recorded the interviews and later transcribed them verbatim. I interviewed six of the ECHS students on two occasions for pre and post comparisons of their transition experiences and college readiness perceptions and to confirm their original information. As stated, I also interviewed ECHS staff members.

The interviews were structured around the themes of study skills, self-management, and self-monitoring behaviors. For purposes of this study I defined study skills as class preparation, planning, and use of time. Self-monitoring was defined as students knowing their academic performance, their academic strengths and weaknesses, and being self-aware as they handle stress and pressure; basically, "knowing how you're doing." Self-management was defined as "controlling how you're doing." It encompassed such skills as making choices and decisions, and is related to self-regulatory behavior patterns.

The interview questions addressed the following areas. These areas are ways to group the academic self-management skills necessary for college-readiness and success and may help inform students and ECHS staff about students' readiness for post-secondary success. The areas are:

1. Academic self-management behaviors, including effort, use of time, goal setting, and study skills.
2. Students' assessment of their college preparation and self-monitoring of their academic performance.

3. The transition to ECHS, including information about the separation from high school and the change to a community college setting.

Validity and Reliability

Regarding the On Course Self-Assessment Scale, a preliminary unpublished technical report was completed for this study, testing whether the data appear to support the instrument's structure. On the basis of the testing, the On Course instrument appears to have moderate to strong reliability (Duesbery, Healy, & Daniel-DiGregorio, 2009). This conclusion comes from results of a confirmatory factor analysis testing the extent to which the survey items support the categories they're organized into. To undertake the factor analysis, On Course Self-Assessment Scale data from over 280 students was obtained from a community college in California. Overall, the On Course instrument was tested and partially accepted on the basis of fit statistics, supporting the hypothesized multi-dimensional structure of the scale. See Appendix C for a draft of the technical report.

Regarding the additional survey questions (11 total), as stated earlier, I had planned to pilot test these survey questions with 15-20 high school juniors and seniors, getting their feedback on questions that were potentially confusing or unclear. These students would have been from the same school district and age group as the students in ECHS. However, because I did not obtain IRB clearance before the term had already started, I was not able to field test my supplemental questions before I needed to administer the survey. However, although I was unable to field test my additional survey questions, 6 of my 11 questions were modeled after nationally established surveys, in

particular a survey instrument from the National Survey of Student Engagement (NSSE), the College Report. The NSSE survey instrument is a long established survey, which in turn draws upon items from other surveys, such as the College Student Experiences Questionnaire (CSEQ), the Cooperative Institutional Research Program (CIRP) survey instruments, and questionnaires from the University of North Carolina state system (Ouimet et al., 2001). Research analysts have conducted focus study groups and have field tested the NSSE survey instrument with about 36,000 students at dozens of universities, and the survey has a high degree of validity and its items are reported to be reliable (Ouimet, et al., 2001).

Sample and Data Collection

The survey group included nearly all of the entering ECHS students ($N = 75$) for the fall of 2008. All of the first-term students periodically met for a "College Success" class, including a half-day orientation meeting prior to the start of fall term. The survey was given to students as an activity as part of this class. The survey took approximately 20 minutes for students to complete. As part of the human subjects process, students and their parents were mailed a letter shortly after the orientation asking for passive permission to use the survey results, and indicating that all responses would be confidential. When all the participants had completed the pre-survey, the materials were collected and stored in the ECHS office until two weeks after the human subjects letter had been received by students and parents. As the study's author, I did not have access to the surveys during that time.

Data Analysis

I examined the self-assessment data through the use of pre-post group comparisons and descriptive statistical analyses. Data analysis for each survey question included *t*-tests, Pearson *r* correlations, and effect size measures. I used tables to report the key results and descriptive data. The *On Course* self-assessment survey was based upon a Likert scale (strongly disagree/totally false = 0 and strongly agree/totally true = 10), reflecting students' attitudes about their academic behaviors and transition to ECHS.

I used a dependent samples *t*-test to compare the pre and post survey groups. In order to calculate a *t*-test, it is important that the sample being measured is distributed normally. A normality check of the self-assessment data was calculated using skewness statistics. See Appendix D for more detail about testing this assumption.

It should be noted that there have been questions raised about the appropriateness of using a *t*-test to gauge the differences between two groups when the data is based upon Likert scale rank-ordered data (Romano, 2006). Such criticism rests on the understanding that *t*-tests can best be used to evaluate the statistical significance of the mean differences between groups when interval scale measurements are used, implying a normal distribution (Romano, 2006). Although responses to the self-assessment questionnaire provided an ordered data set (strongly disagree to strongly agree) to which numbers were assigned, the differences between the units of this ordered data could have been interpreted differently by different students. For example, the value differences between strongly agree and agree, or strongly disagree and disagree, may not have been responded to in similar ways among the students. However, many surveys are commonly analyzed

using *t*-tests to compare groups, including analysis of group differences among the NSSE surveys (Romano, 2006), and *t*-tests remain a commonly recommended statistical procedure for descriptive data.

At the completion of fall term, all collected self-assessment data were organized by paired samples and then transcribed onto an Excel spreadsheet document prior to analysis. Data analysis was completed using the data analysis features contained in Excel (Microsoft Office Excel, 2000). The effect size analysis was completed with the use of an Internet-based effect size calculator (http://www.uccs.edu/~faculty/lbecker/).

Link to Conceptual Framework

The methodology I used linked my research questions and data collection to the study's conceptual framework. One facet of the four-part conceptual framework—academic behaviors—served as the organizer in the selection of the questions for the survey I used and for the interviews.

CHAPTER IV

RESULTS

The purpose of this chapter is twofold: to describe the results of the self-assessment questionnaire, and to describe the findings from the student and staff interviews. An assumption of this study is that students were able to accurately self-assess their academic behaviors as they started and finished their first term of college.

I begin this chapter by reporting descriptive, significance, and effect size statistics for the pre and post-surveys. The surveys asked students about their perceptions of their academic regulatory behaviors, such as self-management and self-monitoring behaviors. I end with student and staff interviews. The interviews for students and staff were structured around the topics of study skills, self-management, and self-monitoring behaviors, and included such topics as: (a) academic self-management behaviors, including effort, use of time, goal setting, and study skills; (b) students' assessment of their college preparation and self-monitoring of their academic performance; and (c) the transition to ECHS, including information about the separation from high school and the change to a community college setting.

Academic Behavior Self-Assessment Results

To review, the self-assessment instrument contained eight domains or sub-scales: self-responsibility, self-motivation, self-management, interdependence, self-awareness,

lifelong learning habits, emotional intelligence, and self-confidence. Each domain was made up of eight questions, each of which could be responded to on a 0 - 10 point Likert type scale. An aggregate score of between 0 and 80 for each domain was possible. In addition to the self-assessment instrument, 11 additional survey questions asking students about their college intentions and the degree to which they felt connected to Early College and high school were included with the survey. Seven of the supplemental survey questions were on a 1-5 scale, and four were on a 1- 3 scale.

Seventy-one students took the pre-survey portion of the study. Eleven participants failed to complete the follow-up survey, as they were not given enough time. As a result, data from these students were excluded from the analysis, leaving a total sample size of 60. Regarding the supplemental questions, 57 participants responded to both the pre and post supplemental questions. Some of these 57 participants either did not answer all of the 11 supplemental questions, or answered them with more than one response, leaving between 53 and 55 single responses to each question. The 60 students whose surveys comprised the sample resembled the school district's overall high school demographic population: 38 (63%) were white, 11 (18%) were Hispanic, 2 (3%) were African American, and 2 (3%) were American Indian/Alaska Native. None of the ECHS students in the survey sample recorded themselves as Asian. Three of the students did not respond to any of the available racial/ethnic categories. As noted in Chapter III, at the time of this study, the overall district high school population of 11,800 high school students was comprised of 68% white students, 16% Hispanic, 14% Asian, 4% African American, and

1% American Indian/Alaska Native. Of the 60 student surveys, 27 were from male students.

Self-Assessment Descriptive Statistics

Over the eight domains measured, mean scores varied moderately between the pre and post surveys. The mean scores ranged from a low of 46.6 in the pre first-term domain of Interdependence, to a high of 63.8 in the post first-term domain of Personal Responsibility. The highest pre-survey score was also in the area of Personal Responsibility, while the area representing Interdependence attained the lowest student scores overall across both pre and post first-term assessments.

Students reported growth in all eight domains over the course of their first term of college (See Table 1). In two of the domains (Self-Awareness and Learning Habits) students showed moderate growth of about 7 points; in four domains (Personal Responsibility, Self-Motivation, Emotional Intelligence, and Self-Confidence) students showed smaller growth of 3-4 -points; and in two domains (Self-Management and Interdependence) students showed minimal-to-negligible growth of 1-2 points.

Overall, students reported average growth of about 4 points from pre- to post-survey, from 52.6 (SD = 11.27) to 56.8 (SD = 11.82). Of note, the largest mean growth occurred in the area of Self-Awareness, where students grew, on average, 7.06 points from pre-survey (M =51.61, SD = 11.12) to post-survey (M = 58.68, SD = 13.94). Students also showed clear gains in the area of developing Learning Habits, where students grew, on average, 7.01 points from pre-survey (M = 50.5, SD = 11.72) to post-survey (M = 57.51, SD = 13.22). The lowest growth occurred in the area of

Interdependence, where students only rated themselves on average 1.21 points higher at the end of the term ($M = 47.86$, $SD = 11.20$) than the beginning ($M = 46.65$, $SD = 10.76$).

Table 1

Mean Self-Assessment Scores of Students' Perceived Academic Regulatory Behaviors

	Pre first-term survey		Post first-term survey		
Domains	*M*	*SD*	*M*	*SD*	Mean Growth
Personal Responsibility	59.61	9.85	63.71	10.48	4.10
Self-Motivation	54.45	12.77	58.50	14.01	4.05
Self-Management	52.56	11.86	54.46	13.34	1.90
Interdependence	46.65	10.76	47.86	11.20	1.21
Self-awareness	51.61	11.12	58.68	13.94	7.06
Learning Habits	50.50	11.72	57.51	13.22	7.01
Emotional Intelligence	47.66	12.18	51.40	14.78	3.74
Self-confidence	59.38	9.94	62.28	12.60	2.90
Self-assessment averages	52.80	11.27	56.8	11.82	4.00

Note. Maximum score = 80.

Description of Supplemental Questions Results, Part 1

Means and standard deviations for the pre and post supplemental questions were also calculated. The seven questions in Part 1 were each scored on a 1-5 scale, from *strongly disagree* (1) to *strongly agree* (5). Mean scores across all seven questions were comparable between the pre and post surveys (See Table 2). Pre-survey scores for questions 1-6 ranged from 4.0 to 4.3. Scores on the post-survey were similarly high and

varied little, ranging from 4.1 to 4.6. The highest pre-survey score on this section came from a question in which students were asked to rate their intent to earn a four-year degree, where they indicated on average 4.3/5. The highest average post score (4.6/5) was in response to a question about how connected students felt to ECHS.

The lowest mean scores overall across both pre and post first-term assessments came from the question about how strongly students felt connected to their home/neighborhood high schools. While students rated themselves on average 2.94 in September, they dropped slightly to a 2.77 average in December.

Table 2

Mean Self-Assessment Scores of Supplemental Questions, Part 1

	Pre first-term survey		Post first-term survey		
Questions	*M*	*SD*	*M*	*SD*	Mean Growth
Intent to earn four-year degree	4.30	0.99	4.54	0.81	0.24
Connection to ECHS	4.28	0.60	4.60	0.63	0.32
Regularly check schoolwork	4.16	0.89	4.34	0.82	0.18
Can tell how doing	4.05	0.76	4.11	0.91	0.05
Skills & attitudes	4.11	0.72	4.26	0.73	0.15
Aware of academic strengths/weaknesses	4.29	0.65	4.45	0.53	0.16
Connection to H.S.	2.94	1.29	2.77	1.39	-0.16

Note: Questions on a 1-5 scale.

Description of Supplemental Questions Results, Part 2

Supplemental questions 8-10 were each on a 1-3 rating scale. Questions 8 and 9 asked participants to indicate their preparation for college on a poorly- prepared (1) to well-prepared (3) continuum. Question 10 asked participants to indicate their certainty about attending ECHS on an uncertain-to-certain continuum. Question 11 asked participants to indicate what their primary goal or objective was in attending ECHS: (a) complete high school, (b) earn college credits or associate's degree, or (c) improve skills required for college. Means and standard deviations across questions 8 -10 did not vary much between the pre and post surveys (See Table 3). Of note, for question 10, the participants felt certain about their choice of attending ECHS, with a mean pre-survey score of 2.80 ($SD = 0.4$) and a mean post-survey score of 2.94 ($SD = 0.22$). For question 11, 86% of the participants in the pre-survey indicated that earning college credits or an associate's degree was their prime reason for attending ECHS; 83% of participants on the post-survey similarly responded.

As question 11 was not on a continuous scale, it is not reported in the following table.

Table 3

Mean Self-Assessment Scores of Supplemental Questions, Part 2

Questions	Pre first-term survey		Post first-term survey		Mean Change
	M	*SD*	*M*	*SD*	
How well H.S. prepared you	2.03	0.61	1.88	0.66	-0.14
How well prepared self	2.47	0.53	2.40	0.56	-0.07
Certainty about attending ECHS	2.80	0.40	2.94	0.22	0.14

Note: Questions on a 1-3 scale.

Tests of Significance, Students' Perceived Academic Regulatory Behaviors

Prior to running the *t*-tests, I tested to be sure the data met the assumptions required for the *t*-test to be appropriate. The self-assessment data were found to be normally distributed, with 14 of the 16 pre-post domains showing skewness within an acceptable range. In addition, a *t*-test itself is robust to violations of normality (Glass, Peckham, & Sanders, 1972). See Appendix D for more normality detail.

Having established that the data met the assumptions for t-tests, I then compared the mean difference in the self-assessment scores of students before and after their first term using a paired samples *t*-test. Students' ratings differed significantly between the pre and post scores in six of the eight domains. The six domains that showed a significant pre-post difference were: self-responsibility, self-motivation, self-awareness, learning

habits, emotional intelligence, and self-confidence. This result suggests that students grew in those six areas over the course of their first term of college. There was no significant difference between the pre-post scores of the self-management and interdependence domains.

Self-awareness and learning habits were the two domains in which students exhibited the most growth. The paired samples *t*-test indicated a significant difference between the mean self-awareness pre-score ($M = 51.61$, $SD = 11.12$) and post-score ($M = 58.68$, $SD = 13.94$), $t(59) = 4.83$, $p < .05$. The paired samples *t*-test also indicated a significant difference between the mean learning habits pre-score ($M = 50.5$, $SD = 11.72$) and post-score ($M = 57.51$, $SD = 13.22$), $t(59) = 4.74$, $p < .05$. Table 4 provides more detail about these analyses.

To assess the strength of the difference between the pre and -post scores, I present effect size statistics (Cohen's *d*) in Table 4. Using an effect size statistic can help with understanding whether the results have any practical significance (Kirk, 1996). According to Cohen (1992) $d = 0.2$ is associated with a small effect size, $d = 0.5$ is considered a medium effect, and $d = 0.8$ is considered a large effect size. Three of the domains had a medium effect size. The mean differences for the self-awareness and learning habits domains each produced an effect size of .56, while the area of personal responsibility produced an effect size of .40. Other effect size results fell in the small to low medium range. Two domains, self-management and interdependence, showed a negligible effect size.

The Pearson *r* correlation in Table 4 confirms the strong relationship between the mean pre and post scores for the students. Because the same participants took the same assessment at the beginning and end of the first term, we would expect to see a high degree of correlation between the two scores.

Table 4

Paired Sample t-Test and Effect Size Results of Mean Pre-Post Student Scores

Domains	*r*	*df*	*d*	*t*	*p*
Personal Responsibility	0.54	59	.40	3.25**	0.001
Self-Motivation	0.50	59	.30	2.34*	0.022
Self-Management	0.70	59	.15	1.50	0.137
Interdependence	0.57	59	.11	0.92	0.358
Self-awareness	0.61	59	.56	4.83**	0.000
Learning Habits	0.58	59	.56	4.74**	0.000
Emotional Intelligence	0.64	59	.27	2.49*	0.015
Self-confidence	0.71	59	.25	2.52*	0.014

Note: $^{*}p < .05$. $^{**}p < .01$.

Tests of Significance, Supplemental Questions

With two exceptions, there was not a significant difference between the pre-post scores of the supplemental questions. Nine of the 10 continuous scale questions did not differ significantly between the mean pre-post scores.

However, there was a statistically significant difference between the mean pre-post scores of two related questions dealing with (a) how connected students felt to college and ECHS, and (b) how certain they were about their choice of leaving their home high schools and instead attending ECHS. A paired samples *t*-test revealed a significant difference between the mean connected-to-ECHS pre-score ($M = 4.28$, $SD = 0.6$) and post-score ($M = 4.6$, $SD = 0.63$), $t(52) = 3.33$, $p < .05$. A *t*-test also revealed a significant difference between the mean certainty-of-attending-ECHS pre-score ($M = 2.8$, $SD = 0.4$) and post-score ($M = 2.94$, $SD = 0.22$), $t(54) = 2.66$, $p < .05$. These two questions also demonstrated pre-post effect size differences of medium size. Tables 5 and 6 provide more detail.

Table 5

Paired Sample t-Test Results of Mean Pre-Post Scores of Supplemental Questions, Part 1

Questions	*r*	*df*	*d*	*t*	*p*
Intent to earn four year degree	0.42	53	.26	1.35	0.057
Connection to ECHS	0.35	52	.52	3.33**	0.001
Regularly check schoolwork	0.44	54	.21	1.49	0.141
Can tell how doing	0.18	52	.05	0.38	0.704
Skills & attitudes	0.26	52	.20	1.24	0.220
Aware of academic strengths/weaknesses	-0.29	54	.26	1.69	0.094
Connection to H.S.	0.68	53	.12	1.13	0.260

Note: Questions on a 1-5 scale.
*$p < .05$. **$p < .01$.

Table 6

Paired Sample t-Test Results of Mean Pre-Post Scores of Supplemental Questions, Part 2

Questions	*r*	*df*	*d*	*t*	*p*
How well H.S. prepared you	0.47	53	.23	1.65	0.102
How well prepared self	0.52	54	.12	1.00	0.321
Certainty about attending ECHS	0.28	54	.43	2.66*	0.010

Note: Questions on a 1-3 scale.
*$p < .05$. **$p < .01$.

Student Interview Results

I interviewed 22 students to capture information about the transition experiences of a representative sample of those enrolled in the ECHS program. These students were purposefully selected with the help of the ECHS staff on the basis of their demographic characteristics and school experiences. This type of sampling allowed for a range of student views to be included in this study. I interviewed students in a mix of formats, which varied due largely to the manner in which students were available to me. I interviewed six of the ECHS students individually on two occasions for beginning and ending comparisons of their transition. An additional three students were interviewed in one-on-one individual sessions, making a total of nine interviewed in one-on-one sessions. I also interviewed one group of six students in a single focus group setting. In

addition to the student focus group, three other smaller group interviews were conducted: one group was made up of two students, and two groups were each made up of three students.

The interview questions were organized around the topics of transition, study skills, self-management, and self-monitoring behaviors. I provided a framework with my questions so that students could describe their experiences themselves. The interview questions also paralleled the pre-post survey categories. See Appendix E for a list of the interview questions. The interviews themselves were semi-structured; follow-up questions were asked when appropriate and the order of the questions depended on the direction of the conversation and the topics that students raised.

All of the interviews were face-to-face sessions conducted at the local community college. I audio recorded all of the interview sessions to capture an exact record of all of the interview dialogue. For recording, I initially used a cassette tape recorder in conjunction with a small handheld digital recorder, and then later abandoned the cassette recorder in favor of a computer recording software program (Audacity, 2004) through which I recorded directly to my laptop computer. I was able to accurately record all of the conversations, and only four words over the course of all of the interviews were unintelligible. I listened to each recording several times and transcribed the recordings as close to verbatim as possible.

Although some of the students I interviewed were more expansive in their comments than others, all of the students readily talked to me, and the majority seemed eager to talk. The ECHS students I interviewed reflected the school district's high school

demographic population: 15 (68%) were white, 4 (18%) were Hispanic, 2 (9%) were African American, and 1 (4.5%) was Asian. Again, at the time I conducted this study, the overall district high school population of 11,800 high school students was comprised of 68% white students, 16% Hispanic, 14% Asian, 4% African American, and 1% American Indian/Alaska Native. Eleven of the students I interviewed were male, and 11 were female. All of the students were 16 or 17 years old. All of the interviews were conducted on the community college campus, immediately after one of the scheduled sessions of the College Success class.

During the interviews, the students talked about their perceptions of their high school preparation and their entry into the community college environment. The students generally placed a strong value on the opportunity to attend college and consistently praised the ECHS program. In order to protect confidentiality, I identify the participants in the statements that follow through the use of a code rather than by name. Statements from all 22 participants are included in the results. The number of narrative statements included per participant varies from 1-6.

Analysis of the interviews started with an examination of the transcripts. Similar key statements that students and ECHS staff had generated were grouped to form sub-categories, which were then used to support broader patterns or themes. Themes emerged and developed as I examined and connected the data from the sub-categories. Not all of the participant statements fit neatly into a particular theme, and many times the participant statements contained more than one sub-category. Miles and Huberman (1994) point out that sometimes it can be almost too easy to see patterns, even if none

exist, and it is important to be mindful of evidence and potential alternative themes at the same time one is looking at emerging categories. They note, "The critical question is whether the meanings you find in qualitative data are valid, repeatable, and right" (p. 245). I used a process of looking for "recurring phrases or common threads" across the interviews as I looked for related material (Miles & Huberman, 1994, p. 70). I grouped quotations under the resulting themes to provide meaningful descriptions and accurately reflect participants' comments.

An initial reading of the student interview transcripts turned up key statements of common ideas, which in turn were grouped into sub-categories. It is important to note that many of the quotations illustrating the sub-categories contain more than one distinct statement or idea. For example, a statement such as, "The college environment has more freedom and is more mature" could illustrate the sub-categories of both freedom and maturity. In such cases, I decided which of the two sub-categories seemed to be emphasized the most, depending upon the context of the statement, and for organizational purposes placed it in that category. However, I also attempted to make sure that a similar example of the other sub-category was presented in subsequent interview statements. Collectively, the various sub-categories supported three major themes: (a) social contrasts students experienced as they moved from high school to college; (b) academic contrasts students experienced as they moved from high school to college; and (c) the college setting itself, or institutional contrasts.

Social Contrasts Students Experienced as They Moved from High School to College

The first category illustrating the social contrasts theme relates to the perceived differences in maturity between high school and college. This category was often one of the first that students mentioned in the interviews, suggesting that it and other social contrasts may have made, if not a primary impression, at least a first impression, on students. One student said that students who select the ECHS program have to make a mature decision to begin with, and grow more so as a result of being in the program. She explained,

> It's a very mature environment. … I think in order to come here and be successful in the first place, you kind of had to make the mature decision to say, "Hey, am I willing to give up high school for this?" And in order to fit in you kind of have to be mature in the first place. But then going through your classes, and learning as you go, it kind of grows on you, and so you learn to become more mature. [S2]

Another student supported that idea, but came at the issue with an additional perspective, saying, "I like it better [than high school]. It's just more mature, it's more laid back, rather than a bunch of, like, drama and stuff. [S13]" Another participant commented that the students in the community college setting seemed more "serious about what they're doing," and contrasted it with high school, concluding "I enjoy the [ECHS] environment a lot better" because of "the maturity of the environment, and how it's more relaxed and you take more responsibility for your own stuff." [S12]

Not surprisingly, responsibility was a subject that was referred to by students. One student spoke about ECHS this way: "It's a lot more based upon self-responsibility, and

not so much like they're going to babysit you through the process" [S22]. Of note, "Personal Responsibility" was one of the domains from the self-assessment in which students exhibited pre-post growth over their first term. Personal responsibility was also an *On Course* topic covered by the ECHS counselor/instructor in the College Success class that all students took. Among other topics covered in that class, the instructor spent time working with students on the subject of taking responsibility for their own actions, in particular, using the concepts of "victims" and "creators" to illustrate how people view their lives and how such viewpoints affect the choices they make. In essence, the instructor worked with the students about empowering themselves to take responsibility and gain control over their success in college.

That sense of the relative maturity of the college environment also was evident within the classroom to some students. Their prior concept of classroom conduct had come from behavior they had witnessed, or exhibited themselves, in their high school freshman and sophomore level classes. That behavior contrasted with the community college, where they witnessed students being more serious in class and taking more responsibility for their own learning. One student said, "During class it's quiet the whole time and you're listening to the instructor, that's a little different." [S3] Another student talked about the contrast in this manner:

> In high school, you can just be a jackass and walk in 20 minutes late, Jamba Juice in hand, and just sit down, and, you know, everyone's just laughing at it like it's the cool thing to do. But here at [the community college] you're on time and everyone just stares at you, like, shut up and sit down, you know we're trying to

> listen to the lecture. Everyone's more focused. There's less of the side talk going on: "Oh, my gosh, I can't believe she's wearing that skirt." You know, nobody cares. [S4]

For this student, the classroom differences between high school and college were even evident in the decline in side conversations students had during classes about the behavior of their peers.

The high school classroom was not uniformly remembered as a place where students were not serious about their academic work, however, and several students acknowledged being focused in classes and working hard in high school. One student who had done well in high school described his academic work there by saying he worked hard, noting simply, "There really wasn't anything that messed up my success."[S5] Similarly, another student pointed out that while overall ECHS is in a more mature environment, not everyone in the ECHS program behaved more maturely simply by moving to the new setting. This student observed:

> Some people still haven't matured [in ECHS]. There's still people that come in [to class] late. Even regular college age or the Early College, there's still people who aren't taking responsibility and they come in late and they don't put as much effort forth, even though there's more money going into them being here[4] [S12].

The second category that emerged illustrates another social contrast that is closely related to the maturity of the new environment, but more specifically, to a perceived

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[4]Although exact dollar amounts are unavailable, at the time I completed this study, less money per pupil was actually spent on ECHS students than on students attending comprehensive high schools within the district.

absence in the community college environment of the melodramatic aspect of some adolescent relationships, often marked by gossip and rumors among peers. Several students used the word "drama" to describe this. One student commented, "There was a lot of drama [in high school], and I kind of wanted to get away from that. ... There were a lot of problems, like influences, like people, peer pressure. Like a lot of social things like you had to act a certain way to fit in. That was kind of hard" [S15]. Another student said, "High school has its own, like, vibe about it. Like everybody's, 'So and so said this.' Here, I've never heard that before. It's like completely different. People have their focus on their education, not like what somebody says about someone" [S3]. Another student expressed the same idea, saying, "There's a lot of drama, a lot of rumors [in high school]. I'm glad that's gone" [S20].

One student had a slightly different perspective on this and noted the stress associated with the social relationships of high school, but also linked that to the perceived intense nature of the high school environment. This student said:

> I didn't really like the high school environment, I guess. Gossip, and all that kind of, you know, ridiculous stuff. I didn't really get so much out of my classes. It was kind of overwhelming having so many classes at once and not being able to choose what you wanted specifically, or what you felt you could handle. It's not just specifically drama, but it's the high school environment, and it's stressful and tiring after awhile. [It's] a mass of people and it's kind of just like a hectic campus. Here it's pretty relaxed. [S16]

Another student implied that the skills she was learning as she moved to college were distancing her from some of the more adolescent aspects of some relationships present in the high school environment. She said that being at ECHS had led to her feeling more mature in her relationships with others, including her relationship with her boyfriend and her parents. In her statements, she indicated that she did not feel like a "high schooler" anymore, and the "drama" of previous friendships was absent. She said the following:

> It's like not just school has gotten better, everything's gotten better. I don't know if that applies to everybody, but [it does to me]. My relationship with my boyfriend is ten times better. My relationship with my parents is better. None of my friends have drama any more, or if they do, I'm not hearing about it, so that's better for me. And I feel more mature, and whenever people come to ask me questions I feel like I have the confidence to be able to help them rather than just being a high schooler. [S1]

For the ECHS students, then, one aspect of their ability to successfully transition to college may involve simply recognizing that school is different for them now socially. That, along with their willingness to act differently and take on the social norms present in the new environment, may be an important marker of the success of their transition. Another student recognized the differing social norms of high school when he said, "Drama? There is none here. People aren't, 'You went out with her?' and 'You did what?' Here it's kind of like just keeping to yourself. People aren't really [wanting] to get involved in your business, cause, you know, they have a family to take care of, they got

jobs to work, so they're occupied with their own stuff" [S8]. For this student, part of making the transition to college may have involved understanding that students in college generally have more complex lives than do students in high school, and the adolescent nature of some of the social interactions present in high school seemed trivial by comparison.

Continuing with the category of social relationships, another student commented on the apparent scarcity of cliques or stereotypical peer affinity groups on the community college campus, compared to high school. He had this comment:

> I mean, everyone interacts differently than the high school, because there's not so many cliquedoms. You know, there's no groups, really. I mean there are groups of people that hang out but they're not specified, like jocks or punk. It's just a bunch of people who hang out. [S21]

To that student, leaving a comprehensive high school, with its visible array of athletics, music, clubs and various student social networks, and moving to a college with (a) no competitive athletic teams or athletic presence on the campus he attended; (b) a less institutionally-organized student social environment; and (c) an older student body that commuted each day to campus, it appeared that there were few student-established groups that served as the primary social outlet for members of the group. In comparison to high school, to this student, the community college setting seemed relatively free of such groups.

Again, the contrast between the immaturity of some high school peer interactions, in comparison to social interactions observed at the community college, was a category

that emerged from the student comments. In addition, how community college students and high school students socially group themselves initially appeared to be quite different to the ECHS students.

The next category illustrating social contrasts has to do with the age difference between ECHS students and the general community college population. Several students made statements about feeling out-of-place because they were younger than most of the college population. To one ECHS student, it seemed school was "not the same, cause everyone's older than you. You feel kind of [different]" [S18]. Another student even asked, "Going to college at 16, is that natural?" [S5]. The challenge of making friends or of associating with non-ECHS students at the community college was mentioned by several students. One quotation illustrating this sentiment came from a student who said, "[It's difficult] making friends that are my age. Like I have some friends that are older, but it's not like I'm going to go hang out with a guy that's 25 or something. It's not necessarily a negative, it's just kind of weird" [S13]. Another student said: "The only thing I really miss from high school is having a lot of people my age around me, being able to go up to somebody and communicate with them" [S8]. Another student said, "You don't make friends as easy [at ECHS], cause nobody's your age" [S12]. One mentioned having a parent in college, and said:

> Everyone here was a lot older than I expected they would be. I know my mom is in college and it's common for a lot of older people to go to college. But I was surprised at how few people my age are in college. It's just surprising, cause I figured more young people would be [in college]. [S9]

Related to the social maturity theme, the probable connection between an older student body and the corresponding maturity of students' behavior was not lost on the ECHS students. For one student, while it may have been frustrating to not be around a larger number of same-age students, the trade-off was that the overall environment was less affected by the social interactions of adolescent-age students. This student said:

> I still miss a lot of my friends at [my high school]. The age group is totally different here, people from all walks of life. I have a woman in my physics class who has four kids, you know, so that's something hard to get used to, that there's no one your age that you can really connect to. But, you know, if you look at the other side of that, it's a more mature environment, you don't deal with, you know, all the junk that teenagers do. [S5]

It was also expressed that there was a negative component to being younger than almost all of the student body, aside from the difficulty of making friends. One student identified feeling somewhat marginalized in a class because of her age. She said:

> Because people are older than me, I feel like a lot of them talk down to me. Especially in my math class. When we're having discussion or I'm working with someone trying to figure something out, they treat me like, I don't know, like I'm not at the same level, even though I completely understand what they're talking about. I'm in their class cause I tested into that, it's what I know, but they still treat me different at times. [S10]

For this student, the age difference between her and at least some of her classmates was a variable that was perceived negatively. No one mentioned being treated differently than

older students by the faculty, and this was not an underlying theme throughout the interviews.

Academic Contrasts Students Experienced as They Moved from High School to College

The next category is associated with the academic contrasts between high school and the community college classes. In general, students expressed that they had been expecting their community college classes to be more difficult than they were. Several students mentioned this idea, saying that before they began attending ECHS, they imagined that their entry-level classes would be more challenging than they turned out to be. One student said, "The only concern I had [moving to ECHS] was that everybody kept saying it's going to be very hard and you're going to have lots of homework and get stressed out. But none of that turned out to be really true. That was a pretty big surprise. Everything's more manageable; I think it was more hectic in high school than it is here" [S6]. Another student voiced a similar idea when he said: "I thought the homework was going to be, like, crazy. And the homework's nothing ridiculous, because it's what you need to do to learn how to do it. Like what you're going to need to do to pass the test in the end" [S16]. Similarly, a third student expressed this same idea by stating, "Everybody that talks about it, they make college look like it's going to be like this big bad thing, that the teachers aren't going to help you or anything, and that they're just going to ignore you and just talk. But they actually communicate with you. That's what I was fearing, and I see it different now" [S13].

Students largely reported that they were able to keep up with assignments, and they reported initial success in managing homework. One student expressed that she felt

capable of meeting the demands of her classes when she said: "I mean, it's challenging, but it's not challenging to the point where I can't function and I can't focus and am not going to go through with it" [S1]. Another student also expressed the idea that the demands of ECHS were manageable, yet he differentiated ECHS from what he termed "real college," which he considered to still be in his future. He said:

> I guess I wouldn't say it's easy [ECHS], but you think of college classes and you think of big math equations and ten-page essays, and we haven't had to do that. We don't have that problem yet, and I don't expect to until, like, my senior year of real college, you know. So, two to four years down the line, or four years down the line, that's when I expect to see that stuff. … [ECHS is] different. It's not as hard as I expected it to be, curriculum-wise. So it's definitely a good transition. It's a lot easier than I thought it would be. Everyone was, like, "College is going to be so hard." Really, it's not. [S7]

Interestingly, this student viewed ECHS as a transitional program, preparing students for a four-year college, and decreasing the divide between high school and college.

Of note, one of the self-assessment domains that showed the most growth was related to the topic of study skills and managing study. Termed "Learning Habits," students exhibited the second highest pre-post growth over their first term in this domain. An example of one of the study skills-related questions used to assess this domain was, "I don't know how to study effectively."

The next category has to do with time management, which is related to the self-management domain from the *On Course* self-assessment. Interestingly, students showed

low pre-post growth in the self-management domain. A sample question assessing this domain was, "I use self-management tools (like calendars and to-do lists) that help me remember to do important things." In contrast, several students during the interviews emphasized using their time differently at ECHS, in comparison to high school. In general, students who spoke about how they used their time talked about having more open time during the day, and using some of that open time to study and complete homework. Several students also talked about being more organized in completing assignments and not putting schoolwork off until the last minute. One student talked about this concept in this way:

> I've noticed a big change. Like one of the things I used to do was I would wait til the last second, then do all my homework. But I realized that does not work here. There's just too much homework. And also, I used to never even study; now, like I'm always at the library. … I spent a lot more time in the library studying and doing my homework and stuff. [S20]

Another student echoed this comment with the following:

> There's a lot less class time and a lot more work time available [at ECHS], so there is that illusion that I got all the time in the world, and that's something I got to adjust to real quick. I don't have all the time in the world, so I guess the only adjustment that I've made is getting to work right away. As soon as I come home, as soon as I get an essay or paper, is start working on it right away. Don't procrastinate at all. [S5]

Several students also spoke about the opportunity to manage their time, and contrasted the use of their time in high school with their use of time in ECHS. While in high school, the students were used to having most of their school day directed by their teachers and dictated by their schedule of classes. One student noted that not having that direction at ECHS presented a challenge, in that he now had to direct his own use of time and study schedule. This student said, "I find it harder, because no one [else] really implements the studying, you know." Some students commented on the less hectic atmosphere of ECHS, as opposed to high school, and its impact on their time management. One student spoke about this by saying:

> I didn't do a lot of my homework in high school. And now that I'm in college I realize why. It's because you spend, you know, eight hours a day in [high] school, and then they expect you to go home and spend another eight hours, and I just can't do that. Here I only spend a couple of hours in school [a day], and I still have in-class work time, and I'm able to do my homework in my free time because I have more free time overall. [S10]

One student acknowledged that while that he was not sure he was actually using his time well at ECHS, he no longer had the kind of feeling he used to consistently have in high school: a sense that he was not using his time well and avoiding the schoolwork he was supposed to be doing. He said, "I can't say that I'm managing my time well. In high school, when I wasn't doing something, even if I wasn't consciously aware of not doing something, I kind of felt weird about it. But I haven't felt that [at] all really since I got here" [S7].

The next area I report about is the perceived pressure to succeed academically that some students mentioned. Interestingly, students overall did not comment much about feeling pressured to succeed at ECHS, either by parents or staff, and so while this category is not explored more because of that, it is still included because it suggests that at least a few students felt some outside pressure to succeed as they transitioned to the community college. Two quotations related to this category follow. One student said:

> For some reason I'm taking this more serious than I did high school. So it's just like, now I know I have to do this, because if I don't, then [the staff member] and you guys will be like, "OK, why did you fail this?" or "Why did you get a D or whatnot?" Kind of more pressure from everybody. Higher expectations, looking at for me to succeed. [S13]

Another student described feeling that if she was not successful, that it would reflect poorly on the entire ECHS program. She said, "I think that if you're going to take it [enroll in ECHS], you have to realize that you're not just going to affect yourself. By taking the program you affect other people. I felt like if I failed I'd be getting bad marks for the program itself, and I might disable other people's ability to take it. [S10]

The next category I report on is students' perceptions of how academically well their high schools prepared them for college. Overall, students did not agree on whether or not their high schools adequately prepared them for college. Several students were critical of their high school preparation, while others differed, saying that their high school adequately prepared them for ECHS. One student said, "I was actually in a writing class where we wrote an essay every day. That was Writing 121. That was actually bad

for me, because I have problems writing, and I ended up taking an F for that class. … I don't think high school prepared me for college at all" [S20]. Similarly, another student reported, "My high school didn't teach me much at all. It was basically repeating stuff we'd learned through middle school" [S10]. With an opposing assessment, another student stated, "Absolutely, yes [high school prepared me]. My high schools drilled me hard, the ones I went to. There's a couple of things that I probably could have learned that I didn't, but for the most part, it was good" [S11]. Similarly, a student reported, "I think [high school helped with] organization, and managing when you're supposed to do your work and stuff, and I think that's what helped. And a lot of my teachers, like, urged you to study and learn the material" [S6]. Another student said, "It all depends on what you put into it. What you put in is what you get out. I put a lot of effort, tried to get as much info as I could about college and stuff. … Yeah, I think high school does prepare you for college" [S5].

The idea that high school preparation and readiness for ECHS may not reflect a readiness for university-level coursework was voiced by at least one student. When asked whether high school prepared him for college, this student said, "[high school] prepared me for [the local community college], but I'm not sure about a four-year [college], because I'm not there" [S14]. This statement reflects a view that successfully transitioning to ECHS is not the same as successfully transitioning to a four-year university, where additional variables come into play. It raises the point that the transition experiences of students may vary, depending upon the kind of institution in which they enroll after high school. Standards for admission aside, students who transition to a four-

year research university, for example, may require additional skills to adjust to university life than those who transition to a local community college.

Helping students gain those skills is, in part, what ECHS is about. Some of those transition skills may be expressed through the environment itself. Interestingly, one student talked specifically about the importance of learning about the college environment. While acknowledging that there were important academic skills that are taught in high school, of the college environment, he said: "I don't know if it's something that's teachable. You know, I don't know if you can teach the college environment without being in a college environment" [S7]. That statement reflects the idea that ECHS can help fill the gap between the regular high school environment and college by helping students navigate the college environment itself.

Finally, it was recognized that when the students spoke about how well their high schools prepared them for college, they were talking about just their first two years of high school. One student alluded to the fact that his preparation for college might have been more complete if he had attended all of high school when he said, "I will miss my junior and senior years. It might have been, if I had stayed there, there would have been more opportunities. ... and junior and senior years there's a lot of stuff" [S5].

Institutional Contrasts Between High School and Community College

The next category I report on has to do with comments students made regarding some institutional differences between high school and college. In general, students were pleased with the additional independence and corresponding freedom they perceived they had at ECHS, which they saw as a sign of the adult environment of the community

college. Students generally described their high schools as being places where their choices throughout the day were proscribed, and where they were prohibited from certain behaviors, such as not being allowed to leave school during regular school hours. One student said, "In college you have a lot more freedom, and you don't get hassled by teachers to do your homework even though you've done it. It's just a lot easier" [S17]. Similarly, a student said, "You kind of have the freedom that high school doesn't give you. And I like that, and overall it's just a better environment" [S3]. Another student said, "It's not so controlling, like closed campus, or 'You can't do this, can't do that.' There's a lot more liberty" [S12].

Students also spoke about what they perceived as the excessive structure of the high school day, and praised the flexibility they found at ECHS. Several of the students felt that their high schools were restrictive and didn't offer them enough autonomy in arranging their day. One student expressed it this way:

> I hated high school. It was too restrictive. I'm the kind of person who likes to do my own thing, make my own schedule, be on my own time. I don't like the standard 7:45, get up, go to class until 2:30. Way too long a day for me. I like to have breaks in between. [S4].

Another student had a similar comment, and said:

> I like this better than regular high school. It's not all crazy, like freaking out about health [for example], and you don't have a bunch of classes to manage. You can kind of take it slow and steady. [S6]

Yet another student acknowledged the institutional structures of high school when she said:

> It [ECHS] was really kind of a shock at first, not because it was difficult or anything. But because you don't have someone following you around and hounding you. And you feel like when you're walking around you should be in trouble if you're not in class or anything. [S2]

The contrast between high school and college seemed so strong to a couple of students that they even compared the limitations and conventions of high school to prison. One student said, "I feel like this is more like a school, and high school is more like a prison. Like you can't even leave the high school premises at all, but here you can come and go and nobody really cares" [S17]. Another student made the same comparison by saying, "High school was like a jail cell in which they give you books to keep you entertained. Early College, I feel my schedule is freed, and I have a couple hours, four hours, to do classes, and then I get homework, and I can do that on my own time, when I want, and do successfully, that way" [S11]. While I did not find students in general describing the institutional contrasts in quite as descriptive a fashion, students overall clearly saw the high school environment as limiting.

Interestingly, in one of the interviews, one student linked the institutional contrast between high school and college back to the concept of responsibility. He talked about the need for students to take ownership of their behavior in order for them to move from high school to college. He implied that an important part of this ownership was responsibly being able to work with adults in the new learning environment, and that

students need to be able to interact with adults in order to be successful in college. To him, being able to work and communicate with adults in the college setting was a transition skill. This student called ECHS "a whole different society from high school," and mentioned the helpfulness of his prior experience working with adults. He said the following:

> I think that what prepared me for college was working. Being out with other adults, just working with them. Like the summer before last I had a job and I worked down in Portland, and just going out and working with other adults, you kind of get to feel like, responsibility, and all that. You come in here, it's kind of like the same thing. So I just really didn't have a problem [transitioning to ECHS]. [S8]

The next category has to do with the structure of the homework assignments the ECHS students experienced, and how they contrasted that experience with their homework assignments in high school. Several students suggested that in high school they tended to have more unrelated homework assignments, and that at ECHS the homework they did was more connected to the course content. One student said, "In high school you have everything every day. You have the same class every day, and then you have a little tedious assignment you have to do. Here it's like they'll teach you, and then probably like a week and half down the road you'll have to remember you have that paper due" [S14]. Not surprisingly, homework was also linked to the structure of high school itself. As in the previous quotation, another student said that what made it more challenging for him in high school, "was more the system, it was being so repetitive. It's

the same five classes every day, and you wake up [at] the same time, you go home and you do the same homework for the same classes over and over and over again" [S7].

An additional aspect of how homework at the community college was perceived is that it appeared to students to be more purposeful. One student expressed this when she said, "Here you, actually, everything you do, has a purpose. There's no pointless work. It makes sense. … I actually care about what I'm doing. [In high school] I never did homework. Here I haven't missed a single homework assignment" [S4]. Another student said, "When here, you're actually learning stuff, and you can actually see that you're moving up [to] a higher level. And it's pretty quick, but I like it a lot better" [S19]. Although this information about homework provides an interesting perspective on students' transition to college, it is unknown whether or not students thought they would have been better prepared for college had their high school homework been more like the homework they encountered in college.

The next institutional contrast I report out has to do with things that students expressed missing about high school. The things that students reported missing centered largely around informational and social issues. One student spoke about missing out on information that she was used to getting in high school, that she now no longer received at ECHS. She said, "I feel a little out of the loop sometimes. Just like a dance coming up, or, like, testing, because I missed out on the PSAT, because I didn't hear about it. The high school doesn't send me anything anymore" [S2]. Another student reported concerns about missing out on social connections. He said, "I was a little worried about the health of my social life, just because I realized how many people are not coming to Early

College rather than going to high school" [S11]. Another student wished ECHS had social "activities or something during the day that, you know, like we can all just get together and do something. Kind of like what we had in high school, clubs and stuff" [S17]. Similarly, a student saw the social connections she easily formed in high school as being a contrast with ECHS. Her biggest challenge was the difficulty of leaving her friends in high school. She said,

> It's like, leaving all my friends, like the positive side of high school. Like going to all the social events, and knowing about them ahead of time, and actually having lunches and stuff to hang out. Yeah, that's basically it. My friends and stuff. [S3]

No students suggested that these limitations of ECHS affected the overall success of their transition to college.

Staff Interview Results

The staff interview results were drawn from a single group interview with four of the five ECHS staff members. Staff members were interviewed in order to provide an important additional reference point to the student interview findings. The staff members included the full-time director and administrator of ECHS, the part-time counselor/CG100 instructor, a part-time special education teacher, and the part-time ECHS secretary. The fifth staff member, who was not included in the interview, was another part-time special education teacher, who worked with second year ECHS students. The purpose of the interviews was to capture staff members' perspectives about the transition experiences of the ECHS students. The interview questions were organized around the topics of college readiness and academic transition behaviors. Several of the

interview questions were also related to the self-management aspects of the pre-post survey. See Appendix E for a list of the staff interview questions.

Two themes emerged from the staff interview. The themes follow, with example relevant comments included. The themes were: (a) the college setting and its influence on students as they moved from high school to college; and (b) the importance of the ECHS staff support.

The Influence of the College Setting

Several staff interview comments indicated that the setting itself played an important role in teaching students new behaviors as they transitioned to college. Staff shared observations about the changes in students as they were exposed to academic and social expectations in the new environment. Specifically, staff commented about students taking on academic behaviors they witnessed in the community college setting. Interestingly, staff made few comments regarding the faster academic pace of the college environment, and instead talked mainly about the transformational changes students made as they learned to act in a new setting. One ECHS staff member summarized the importance of the setting in the transition process when she said the following:

> I think really the key to the program is the fact that it's sited on the community college campus. Because when you're talking with kids in high school about behaviors and making changes, it's one thing just to tell them, and they're living it here. ... I think that's just the critical piece, because they're in it, the reality, so all those sort of dysfunctional, for lack of a better word, behaviors, or irrational

> thinking that kids have been relying on for so long just doesn't work anymore when you're thrown into this situation.

This quotation is important on at least two levels. First, it summarizes the key idea of the setting itself and its impact on student behavior. The speaker makes the point that despite being presented in the past with similar information about behaviors and skills that support high school and college success, such information was not meaningful to students until they exchanged the high school setting for the college setting. Second, a connection between the setting and college readiness is implied. It suggests that for students in the ECHS program, a key part of the readiness process is actually experiencing college and learning to function in that new setting.

Another staff member acknowledged the academic challenges students face, yet highlighted the environmental contrast between high school and the community college. He described the transition this way:

> Even these A.P. Physics kids [at ECHS] are struck with the rigor and the high expectations of the instructors, and have to learn some behaviors of them to achieve where they want to go. And I don't think it's easy even for them, so it isn't just a matter of being a bright kid, or even having all the tools and coming in here and being successful. I think, still, this is such a different place and a different environment [from high school].

A third staff member referred to the importance of the environment by stating that for some students, their ability to notice what successful behavior looks like, and imitate that behavior, is important to the transition experience. This staff member said that for the

students, "some of them are savvy enough where they watch and pick up the cues of the expectations and learn, and some of them it takes a little bit longer." In order for the ECHS students to successfully transition to college, it appeared to staff that they had to conform their behaviors to the norms they observed, based upon an environmental context. The staff member also provided the following example:

> Sometimes just being in the class with some other students that are 35 and 40 years old, and if they're sitting there chatting with someone in the background, the 40-year-old looks over there and raises an eyebrow and says, "Hey, I'm paying for this. I need to pay attention. You need to be quiet."

Staff also commented on the additional independence and freedom that students encountered as they entered college. One staff member acknowledged this, but linked it to the concept of personal responsibility. This staff member said:

> Kids [starting ECHS] are going from a very dependent to a very independent environment. And so, that is very attractive to kids, but it's not as easy to handle as they first think. You know, it's, "Oh, freedom, flexibility, this is great!" And then reality kind of sets in: "Oh, responsibility comes along with that." I think it hits them in the first term, and then it might take them a couple of terms to figure that out. But, you know, we tell them that right away, but then they find out for themselves.

Another staff member made the same point, saying:

> I think one of the things the kids feel when they first come up here and when we make their schedule, and they say, … "I have only two classes on Monday-

> Wednesday and one class on Tuesday-Thursday, and I'm done!" So they've got this big huge wide-open schedule, and they just think it's great. But trying to explain to them those blocks and those pieces that are wide open, that's your other job, that's the studying piece, and that's where you have to fill in those blanks and fill in that study time, … some of them, it takes a term or two to [understand]. … They have to have that responsibility piece in there.

Similarly, a staff member commented on the need for students to take responsibility for their actions in the new environment. She suggested that by taking more responsibility for their learning, many ECHS students correspondingly gained skills in managing and navigating the challenges of the college setting. That was due, she said, in part because of FERPA regulations, which limits instructors' communication with parents who might intervene, thereby forcing students to deal with perhaps difficult classroom issues themselves. She said,

> The other piece here that I think is really critical: mom and dad, they can't call the instructors, and make the plea for their student. It is truly all on their lap…. And that is a real critical thing that puts it right smack on the student's lap: the responsibility piece.

Similarly, another staff member noted, "There's some letting go and some big adjustment on behalf of the parents. And the kids have a sense of personal power to say, you know, I don't want my dad to be able to access this or not."

A staff member also suggested that the concept of personal responsibility differs between the ECHS setting and the high school setting. She said that in working with

students, she keeps, "Just trying to repeat time and time again the personal responsibility piece and the expectation of what they need to be doing [to] create their own success. … It seems somewhere that personal responsibility gets lost at the comprehensive high schools."

A staff member also commented on changes she observed in the students' personal motivation to succeed, which she attributed in part to the ECHS setting. She said the adult differences between high school and college gave students confidence in the new setting. She explained: "What I've noticed is that kids in this environment, they get a boost of self-esteem. They feel more adult, and they feel more in control of their future, and because of that front-loading on them, it fuels their motivation." Of note, self-motivation was one of the self-assessment domains in which students showed pre-post growth.

The more adult environment of ECHS also was viewed as contributing to students' personal growth. As they developed and matured as students, students may have gained in self-awareness and perhaps in emotional intelligence as well. One staff member expressed this idea of personal growth by saying:

> College readiness is a buzz word these days in education, so I would venture to guess that most all of [the students] academically, to be able to get into this program, are college ready, because they've tested at that. But … they're not emotionally, spiritually, whatever it is, college ready yet. They're still children, in an adult world, in an adult environment. So I think that's kind of the neat thing to see, the transformation of their own personal growth.

Another staff member noted that the ECHS setting conveys a benefit in that no matter what their background or what high school students had previously attended, all of them start college in the same place. The new setting seemed to serve as a motivator to assist students who had struggled academically in the past with overcoming the liabilities of their previous academic behaviors. The staff member said:

> One thing, too, about the program is that it levels the playing field for a lot of kids. So kids who were failures, outcasts, losers in high school come here, and they've got the same issues, concerns that these really bright A.P./I.B. kids have. And I think that's really a positive experience for both students. You know, the one kid who's gone through feeling pretty defeated, and the student who's gone through feeling like, "Hey, I'm in control." They get here and suddenly they're in the same places, and the interaction of those students ... I think it's a really positive experience for both combinations.

Interestingly, the perceived absence of "drama" in the community college setting was mentioned by staff as a factor in the transition process, just as it was by students. As also used in the student interviews, "drama" is meant to refer to the immaturity of some adolescent social relationships. It appeared to staff that the college setting helped to distance students from at least some of the immature connections that they had previously had with their high school peers, and that separation assisted them as they transitioned to the community college. An example comment from a staff member reflecting this is:

> The transition I see with the population of students that I work with, is that it's, finally, they can breath, and they're not involved in all the drama that is going on

> at the high school, and they're finally trusted to do something on their own. ... It's a new focus for them, gives them a chance to have a new focus.

The value of that new focus was supported by another staff member, who contrasted the ECHS setting with that of high school by saying, "I think for some kids, and we're talking about some kids who come here with that lower GPA, I think they realize this is a fresh start, and I think cause they're divorced from that old system, sometimes it kind of breaks the inertia that students have." Another staff member added, "I think some of the biggest struggles for them are, one, the whole transformation from going to the chaos and the circus of high school, and the atmosphere, to a different venue over here. I want to say that maybe this [ECHS] is less chaotic." These staff members seemed to suggest that the high school environment was a hindrance to the academic success of some students, and that moving to ECHS – provided that students imitated the more mature behaviors they observed in that new setting – helped them successfully transition to the community college.

In another example of the change students go through as they begin ECHS, one staff member used the word "transformation" to describe the growth students made. He also spoke about the resilience of students. This staff member commented:

> I'm stunned on a daily basis in the most encouraging ways to see the transformation for kids as they struggle. ... I see them struggle with everything from failing a test, to getting to class, to dealing with life issues; how many of them seem to have either developed, or find in themselves, some form of resilience to keep battling through that. *¡Si, se puede!,* you know.

The Importance of the ECHS Staff Support

Another theme that emerged from the staff interview was that ECHS was seen as providing an important pathway for students to enter college in a manner that allowed them to encounter a community college environment academically and socially, yet also provided a support system with resources for the students. This idea was expressed by a staff member, who said:

> I think this program is really good to help prepare them; it bridges the gap between high school and college. Because a lot of them are juniors, they aren't graduated, so they have some of the academic skills and social skills that maybe are not completely developed yet. And that's why the program's really good, to help ease that transition.

From this staff member's perspective, the ECHS program served to assist students in their transition to college by providing support and by helping them develop some of the contextual skills needed to be successful in college. Another staff member echoed this sentiment, but extended it to beyond the ECHS staff, when she said, "I feel that there is an atmosphere here not only just with our program and how we reach out and serve kids, but I've seen instructors and professionals all around in the learning center and the library, very accessible to kids." Another staff member said, "You know, our kids are here, in this program, and they're dumped in the deep end of the pool, and they have to survive – in an environment that is pretty nurturing." Yet another staff member stated the following:

> Part of the strength of the relationship that we have with students, it's just an opportunity to learn a new set of behaviors. So the focus is really on, "OK, you're still a good person, we're still here for you, so what are your solutions?" And there are a lot of different solutions.

Staff interview results also suggested that the connections students made with other students were helpful in assisting them in transitioning to a community college. Though students were not together in a formal cohort group, as they did not intentionally share classes, they all took a common class, CG100, that periodically met. Informally, the term "cohort" was used by the staff to describe the common support given to all of the students. One staff member summarized the importance of this by saying:

> They [ECHS students] also have connectivity, though, to their cohort, and where students from the high school, they might see their friends in the hall, but it's not the same where they can learn through that connectivity to campus life. I think that's really important.

Another staff member made the following statement about the connection amongst the first-year students:

> Part of that connection, too, is validation. … So I think there's a degree of validation, and things probably happen beyond that class [CG100], or at break time, that also adds to the learning for these guys as they chatter with each other.

An additional staff member's statement about the connectivity amongst the students suggested that students need to be able to rely on other students to some degree in order to successfully transition to college. The following quotation summarizes this,

and adds the concept of interdependence as a component regarding the transition to college. The staff member made the following statement:

> Interdependence is critical, you know. [It's important to be able to say], "I can't do this by myself." And I think in overt ways, this CG100 class, teaches that, and talks about it. Puts it right out on the table. [Whereas] I think that's very covert in high school. It's not by any design, it's just not something that's talked about, because it doesn't fit in with the A.P. Physics or the Senior English curriculum, or the Algebra 2 curriculum.

It is interesting to note that interdependence was one of the domains in the pre-post self-assessment. Though "interdependence is critical," and was cited by a staff member as an essential component of a student's transition process, it must be noted that interdependence was one of two domains from the self-assessment on which students showed negligible pre-post growth.

In addition to expressing ideas about support and about the connection between students and staff, and between students and students, the ECHS staff also noted that their work with students occasionally included a role addressing the retention of students in the program. Though nearly all students are retained in the program, with only five not returning between the 2007-08 year and the 2008-09 year, staff noted that even with those figures, the stakes are higher for students at ECHS than they are in high school. One staff member suggested that this is an advantage ECHS has that the high schools do not. If a student is not being successful, the student may decide, as a staff member said, "maybe this isn't for me. This isn't the right deal." Or, it may be may be that the staff has

to make that decision, resulting in the student returning to their previous high school. This staff member made the following statement:

> I think there's something, too, the fact that in this environment, in this program, we're able to, [the ECHS administrator is] able to, kind of have a stance of "Why should we keep you in this program?" I mean, she has the advantage of that lever, whereas in a comprehensive high school, we can bark, jump up and down, pray with them, or whatever, and it is that learned helplessness. … there's no [concern] about correcting that behavior. Here the stakes are higher, and kids had to go through some efforts and some energy to get here.

If a student is not taking responsibility for his or her own learning, and is not successfully transitioning to entry-level work, then the ECHS staff has the administrative authority to revoke the student's enrollment in ECHS.

On the topic of staff support and college readiness, one staff member mentioned concerns that had been raised by some of the community college staff about the readiness of the ECHS students. The implication was that the ECHS students were not ready to transition to the community college. It was clear to the staff, though, that they believed the support they provided was making a difference, and that the students were ready to succeed in the community college. One staff member contrasted the advising ECHS students receive before registering for classes and the guidance they receive during their stay in ECHS with the transition experiences of students leaving high school and entering the community college without similar support. The staff member said:

> There's kind of a myth on the campus a little bit among some of the faculty, like some concern about all these high school kids on the campus. But as we've delved into it, it's really not the Early College students, it's really, it's a lot of the first year high school graduates. I don't think they're as prepared, and they're certainly not as monitored or screened. They don't have the orientation or advising and everything that our students do. So there's been some interesting conversations with staff and faculty here on that.

Summary

In this chapter, I described the results of the self-assessment questionnaire, and presented the findings from the student and staff interviews. The self-assessment showed that students reported gains in their self-regulatory behaviors over the course of their first term of college, with students reporting moderate to less moderate growth in six of the eight domains. In two of the domains students showed moderate growth (Self-Awareness and Learning Habits), and in four domains students showed less moderate growth (Personal Responsibility, Self-Motivation, Emotional Intelligence, and Self-Confidence). The student interview findings supported several themes, including the social and academic contrasts students experienced as they moved from high school to college, and the impact of the college setting itself. The staff interview findings echoed the theme of the college setting and its influence on students, and added the theme of the importance of the ECHS staff support. All of these results add to our understanding of the transition of high school students to an ECHS program in a community college environment.

In Chapter V I discuss the significance of my findings, present my conclusions, present limitations to this study, and make recommendations for further research.

CHAPTER V

DISCUSSION

In this study, I examined how one group of high school students transitioned from high school to a community college, where they began an Early College High School program. The purpose of my study was to learn more about students' college readiness perceptions, principally in relation to changes in their academic self-management and self-monitoring behaviors (referred to as *academic behaviors*). In this chapter, I discuss the significance of my findings and also briefly suggest how they might be applied in practice. At the end of this chapter, I present limitations to this study and make recommendations for further research.

Two research questions helped to guide this study: (a) How did students' first-term ECHS experiences and their College Success course affect their perceptions of their academic self-management and self-monitoring behaviors? and (b) How did these experiences affect their perceptions of their transition from high school to the first term of community college?

The four-part conceptual framework used in this study (see Chapter II), encompassing a comprehensive definition of college readiness, provided a structure from which to examine the actions of students in the ECHS environment. This study focused

on one of the four framework areas—academic behaviors—in an attempt to better explain how ECHS students learn those skills in college.

Overall, the results of my study indicate that students' academic behaviors changed during their first term of college. Results of the self-assessment showed an increase in the scores of several domains associated with academic behaviors, with two key domains—self-awareness and learning habits (i.e., learning strategies/study habits)—showing the most growth. The growth in these two domains in particular provides some evidence that students saw themselves as having moderately stronger academic behaviors at the end of the term than at the beginning. The interview results complement this. Related changes in students' academic behaviors, including changes in their study habits and in their ownership of their school efforts, were an important part of student interview comments about the personal and academic contrasts between high school and college. The overall changes in students' academic behaviors implies that they learned new skills. This corresponds to Zimmerman's findings (2008) that first-year college students can learn skills to manage their self-regulatory behaviors.

Though my results cannot be interpreted as solely due to the influence of leaving high school and attending ECHS, the impact of the college setting was a concept that emerged from both student and staff interview results. Evidence from the self-assessment and interviews suggests that for this group of high school juniors and seniors, there may have been a relationship between leaving high school to attend ECHS and changes in academic behaviors. We know that within a college environment, students who feel they have a good fit with that environment tend to exhibit aspects of reflective thinking and

openness to that experience (Harms, Roberts & Winter, 2006; Tinto, 1993). In my study, I found that students expressed a stronger connection to ECHS than to their previous high schools, and their connection to ECHS increased over the course of their first term. This finding could indicate that students who are willing to leave the familiarity of their neighborhood high schools in order to attend ECHS instead, may be inclined to recognize and be open to the norms of that new educational environment. It could be that for younger students to be successful in transitioning to college, one of the first things they must do is recognize that they are in a more complex environment than that of high school, and be willing to adjust to that environment.

One of the essential questions of this study having to do with the environment concerned the perceptions of students about their connection to school as they transitioned from a comprehensive high school environment to a community college setting. According to Robbins et al.'s (2006) findings, students who attend four-year colleges generally feel more connected to their schools than do students who attend two-year colleges. This finding raised an interesting related question about how students enrolled in an ECHS program would feel: more or less connected to their prior high schools? Although most of the supplemental questions appended to the *On Course* self-assessment did not show meaningful change, the significance of two of the questions, dealing with connectivity to high school and ECHS, support the notion that over the course of their first term of college, this sample of students showed less connection to their neighborhood high schools and more connection to ECHS. Interview comments from several students also supported this finding. Although high school (and college)

membership can include a component of loyalty to one's school—being a "Jaguar" or a "Valiant"—and having a sense of connection to that larger community, this finding of a diminishing connection to high school is not surprising. This finding is not surprising, in that the students in this sample had weak connections to their neighborhood high schools in the first place, they were recommended for ECHS, and they showed their openness to that new experience by following through and applying to attend an alternative to their high schools. This finding suggests that students who are open to leaving high school at a younger age and are looking for an alternative such as ECHS, may also be open to making connections to a new environment.

The suggestion that the community college setting influenced ECHS students' academic behaviors raises questions. The concept of the college environment/setting is exceedingly broad, and it would be overreaching to conclude that changes in students' study habits or attitudes toward school were due only to their exposure to factors within the environment. Elements both in and out of college work in concert to influence students, and within college itself there are many factors in and out of the classroom that have an effect on a student's development (Terenzini & Reason, 2005). Additional questions about how the setting promotes academic behavior changes, especially for younger students still officially in high school, need to be considered. The results of my study provide limited insight about what specific elements of the environment most contributed to the changes students voiced.

A significant social concern among the ECHS students was the subject of peer friendships. The ability of college freshmen to deal with the potential loss of pre-college

friendships impacts their transition experiences (Paul & Brier, 2001). This may also hold true for ECHS students. To be able to transition to college without undue hardship, students need to be able to manage changes to previous social networks. It could be that the ability of ECHS students to separate from the comfort and familiarity of established friendships in their neighborhood high schools was important to their successful transition. Several ECHS students commented on changes that occurred with their high school friendships after they left high school, and several spoke about making friends, or the difficulty of making friends, among an older population in the community college setting. My findings regarding this concern among the ECHS students fits acceptably well with the research done by Pittman and Richmond (2008) about the quality of students' friendships as a factor affecting their transition to college.

It is not unexpected that the theme of friendships and of how students socially connect to each other resonated throughout the student interviews, given that at ECHS the participants were all newly-enrolled commuter students who were used to the previous obligatory peer togetherness of high school. For students who traditionally transition to college immediately after graduating from high school, the social relationships and connections they form are important in supporting them to successfully complete their freshman year (Engstrom & Tinto, 2008; Tinto, 1997). Just as this is true for students who have finished high school before they begin college, it may also be true for younger students who begin college before completing high school.

In talking about their social relationships and connections, some ECHS participants contrasted their peer relationships in high school with the more productive

relationships/connections they observed at the community college. In particular, some students emphasized earlier distractions amongst high school friends that interfered with their previous high school success. For at least a segment of the ECHS students, it may be that being removed from the less mature environment of high school helped them replace some of their unproductive peer interactions with healthier social interactions. We know that peer relationships influence the adjustment of students to college (Swenson, Nordstrom, & Hiester, 2008), and it could be that ECHS students' social interactions with other community college students were influenced by their observations of what they perceived to be more mature and academically-focused behavior on the part of the older college students, and they modified their own behavior accordingly. This resulting benefit relates to a previous finding that social relationships are significant in supporting students not just personally, but such relationships can lead to increased student involvement and are a means through which students can also receive academic support (Thompson, 2008).

In considering the overall self-assessment results, however, an opposite effect was found in the results from the self-assessment domain dealing with interdependence. Though interdependence plays a role in peer and social relationships, and was cited by an ECHS staff member as a critical component of students' successful transition, it must be noted that interdependence was one of two domains on the self-assessment in which students showed negligible pre-post growth. Students' lack of significant reported growth in interdependence, however, may reflect the complexity of that construct. Although students quickly picked up on the more obvious differences between the high school and

college environments and adjusted some academic behaviors accordingly, interdependence is a more involved concept and one that students may not recognize as easily. To recognize interdependence requires an acknowledgement of one's personal autonomy and an understanding that relationships can be based on reciprocity (Chickering & Reisser, 1993). Students may not yet have had time to foster such relationships or perhaps to recognize such changes. Though appreciable growth in interdependence was not captured in the self-assessment, several of the student interview statements suggested that elements of it were present. More than one student, for example, spoke of the improvement in relationships with peers, and one student spoke of the improved relationship with her parents. Such comments suggest growth in the category of interdependence.

The results of another self-assessment domain are also somewhat incongruent with other findings about students' growth in academic behaviors. Interestingly, students showed little pre-post growth in the self-management domain. That students reported little gain in this domain is surprising given the interview comments related to executive functions and self-regulation, and the growth students showed in other domains.

Another finding worth mentioning, and supported both by student comments and results of the self-assessment instrument, was that students reported a stronger sense of personal responsibility as a result of their experience at ECHS. In one interesting example from the interviews, one student commented on his experience in learning about personal responsibility, and noted the positive influence his summer work with older adults had on preparing him for college. His comment relates to a finding by Byrd and MacDonald

(2005) that first-generation older students perceived that their life experiences contributed to the development of many of the skills they needed to be successful in college.

As described in Chapters III and IV, the College Success course functioned as a primary means through which the ECHS staff provided guidance and advising to the first-year students. My results, however, were not specific enough to assess the effect of the College Success course. Therefore, I cannot assume that the course contributed to the changes in students' academic behaviors. Neither, though, can I conclude that the course was not beneficial. Though some staff referred to the help the course provided for the students, and several students mentioned the benefit of the guidance and advising they received from the ECHS staff, my findings lack the specificity required to draw any conclusions about the effect of the course.

Consistent with other research showing the positive impact of interventions to strengthen self-management and self-awareness behaviors in students (Le et al., 2005; Lotkowski, Robbins, & Noeth, 2004; Robbins et al., 2006; Zimmerman, 2008), and of the benefit of extra support and counseling in dual enrollment programs (Karp et al., 2004), it is probable that the course had a positive impact on students' academic behaviors, though my results were not comprehensive enough to reach such a conclusion. Despite the limitations of my results, it is clear from interview comments that the College Success course assisted the ECHS staff in maintaining contact with students, as well as in helping the students to maintain contact with a cohort-like group of their ECHS peers.

In sum, the results of my study indicate that students' academic behaviors changed over the first term of attending the ECHS program. My results present a view of

the community college as a more complex environment with the potential to impact younger students as they transition to a community college setting. Results of the self-assessment showed a moderate increase in several domains, and the interview results also support similar changes in students' academic behaviors.

Conclusion

Although I am not able to generalize beyond this study, the following conclusion can be cautiously drawn from my research: that the community college environment itself was a positive agent in helping the ECHS students learn new academic behaviors and gain a greater awareness of the skills necessary to successfully transition to college. It may be that for some students, particularly those who are at least minimally academically proficient but who may not have performed well in high school, or who have not demonstrated a beginning grasp of the readiness skills needed for college success, that becoming college ready requires a context beyond just waiting for them to mature. It similarly requires more than hoping that they somehow connect with the right teachers who will instill in them the skills and knowledge needed for college success. Just as a bridge functions to provide passage over an obstacle, part of the obstacle for some high school students, as Venezia, Kirst, and Antonio (2003) point out, may be the social or emotional distractions inherent within the environment of the high school itself. The ECHS program I studied may function as that "bridge" for some students. This is similar to a conclusion as reported by Goldrick-Rab et al. (2007) that the setting of ECHS itself may be of key importance in that it provides a more complete framework for developing needed college readiness skills. If the community college environment was a factor in

helping students learn new academic behaviors, however, it is important for decision-making purposes that we understand more about how this happened, and about the varying ways in which students' academic behaviors can be supported in a new setting.

Practical Application

We know that the structure of high schools can have an influence on students dropping out (Lee & Burkam, 2003), and that challenges continue in making sure that high school graduates are ready for college without the need for remediation (Kirst & Bracco, 2004). Given this challenge, it is important that educators refine support systems so that high school students in a structurally different pathway such as ECHS can transition successfully to a community college environment, earn their high school diploma, and persist in their college studies. My study may be able to inform ECHS staff and other educators about the value of supporting students in that environment, and provide insight regarding the development of students' academic behaviors. Based upon my results, I make three suggestions regarding how information from this study might be applied in practice. My suggestions are based upon the transition experiences reported by the ECHS students.

First, high school educators should look for ways to give students feedback about their academic behaviors. Assessing students' academic behaviors could aid in strengthening their academic behavior skills and in preparing them for a range of postsecondary opportunities. Students who are working toward gaining the skills they need for college are routinely given feedback about their understanding of content knowledge subjects, either through teacher-generated feedback or from standardized

tests. Today, high school students have far fewer opportunities, however, for similar feedback about their skills in managing their attitudes and behavioral abilities. As these skills and areas require a degree of self-awareness on the part of students (Conley, 2007), efforts to provide students with such information may help them assess their skills and raise their self-awareness of their proficiencies in these areas. Correspondingly, efforts to give students feedback about their academic behaviors may help them meet a more comprehensive definition of college readiness. By assessing such behaviors, either through a survey such as used in this study or by another means, high school and ECHS educators could design interventions to more specifically teach the academic behavior skills necessary for college success, based in part upon the assessment results. Assessing such student behaviors could be instructive for both students and ECHS programs, as a measure of both individual and school-wide skills. This recommendation corresponds to findings from Kitsantas, Winsler, and Huie (2008), who found that first-year students can benefit from interventions to strengthen their academic behaviors.

Second, high school educators should not make college seem fearsome. Several ECHS students spoke of having high school teachers who stressed the demanding nature of college to their students, as if to impress upon them how much more difficult than high school it was going to be. That, combined with the usual uncertainties of leaving high school, can give a mixed message to students unfamiliar with the expectations that accompany attending college. High school students most certainly need honest and forthright information about what it takes to succeed in college, but information given in the context of fear, even if accurate, can be easily dismissed. If students dismiss it, they

may think that they can wait until they enter college to start acquiring the skills they need to become successful in college (Rosenbaum, 1998). All students who graduate from high school should have the skills they need to pursue meaningful alternatives. This need for honest information may mean a truthful conversation about the demands of college, but also the opportunity to explore all of the supports available.

Lastly, educators should try to create opportunities within the high school to foster more academic independence on the part of students. Although providing such opportunities happens to a moderate degree now, increased attention on independence skills will present a challenge in a traditional high school environment, as high school differs from college on many levels. School culture, organizational structures, and methods of governance vary greatly between college and high school, and significant changes to the comprehensive high school in these areas would likely be chaotic. Nevertheless, additional efforts to foster academic independence, self-awareness, and responsibility in students may benefit their college readiness, and students should not have to wait until they begin college to truly encounter any of the norms that accompany a postsecondary experience. Again, while the limitations of the high school environment do not allow for the degree of independence that students are presented with during their first year of college, efforts to support students in taking a greater degree of personal control of their academic behavior can foster their college readiness (Jakubowski & Dembo, 2004). Easily implemented examples of such efforts include teaching students to be reflective about their learning, letting students set some goals for their own learning, and giving students opportunities to self-assess their work.

Though it would be easy to suggest that ECHS programs should be more widely implemented, based upon the positive feedback students reported, a more cautious approach is called for. This study does not suggest that a wider implementation of ECHS programs will result in more students being college ready. Indeed, such a conclusion and recommendation is beyond the scope of this study. Though the ECHS program I studied began admitting additional students for the 2009-10 school year, widespread expansion of ECHS programs into numerous local school districts and colleges would involve complex policy considerations between K-12 and many diverse postsecondary institutions. Agreement among these groups on supporting an alternate pathway such as ECHS in a significant manner is unlikely in the near future. In addition, current research about the long-term effects of ECHS is incomplete (Brewer, 2007; Vargas, 2006). The previous recommendations, however, represent changes that high school educators can make that may communicate college readiness information more accurately and help high school students practice the skills needed for college success.

Limitations: Threats to Internal and External Validity

The findings in my study cannot be interpreted as supporting a causal connection between students leaving high school to attend ECHS and the development of their academic behaviors. It is possible that students' self-reported changes to their academic behaviors were due to factors other than the community college setting. It is also possible that students' self-reported changes did not reflect meaningful changes, but instead reflected other growth or perception changes that influenced how students interpreted their behaviors. Or, as students moved through their first term, they may have held

themselves to a higher standard, and their post-scores could even reflect harsher assessments or some depression because of that. In other words, students' pre-post self-assessment patterns themselves could have changed over the course of the first term of college, due to changes in their self-assessment standards. An assumption of this study, however, was that students were able to accurately self-report their academic behaviors.

Several additional limitations should be considered when reviewing this study. The potential threats to external validity in this study relate to limitations in its generalizability. The potential threats to internal validity were from instrumentation, selection bias, and the one group pretest-posttest design itself. Additional limitations have to do with the length and depth of the study and the potential for researcher bias. I discuss each in turn, next.

Generalizability

The approach I used in this study limits its external validity, despite my use of a comprehensive college readiness framework. The study sample was small, and it represents only one ECHS program in one local school district. Replicating this study with other districts with ECHS programs would be one way in which to address this limitation. There are also limitations with the academic behavior facets being examined. Pascarella and Terenzini's 1991 and 2005 studies (as cited in Reason, Terenzini, & Domingo, 2006), conclude that many studies examining the transition of students to college and their first-year development take into account only a few factors, whereas in reality, "multiple forces operate in multiple settings to influence student learning and

persistence" (p. 153). This study's limited sample size and overall design framework did not take into account multiple factors.

Instrumentation

Though I examined many surveys and questionnaires in order to find one appropriate to this group and my purpose and to minimize potential instrumentation problems, there is always the danger of students not interpreting the survey items consistently. The intent was to use a self-assessment instrument in which similar responses among the respondents meant the same thing. In part to address this threat, I also interviewed 22 of the ECHS students for more information about their transition experiences and college readiness perceptions. In regards to the survey instrument itself, because of time constraints I was unable to pilot my supplemental questions. In addition, on average, students tended to answer supplemental questions toward the high end of the rating scale for both the pre and post surveys, creating a ceiling effect. The supplemental questions were scored on a 1 – 5 or a 1-3 scale, differing from the 0-10 scale used on the On Course self-assessment. Piloting these questions first and using a similar scale throughout the self-assessment might have improved the instrument behavior.

Selection Bias

It is important to acknowledge that though the ECHS student interview and self-assessment findings were useful in addressing the research questions, the findings have limitations, given the potential for bias in that the ECHS students may not have been representative of the general high school population. Though the ECHS students were representative of the overall district high school population in terms of ethnicity/race and

sex, it may be that they differed from their peers on other variables that were not measured in this study, variables which may be predictive of the potential to transition successfully to college at a younger age.

Single Group Threat

Because I did not use a comparison group, a single group design carries with it threats to internal validity. Threats identified in the literature include history, maturation, test-retest familiarity, and statistical regression to the mean (Campbell & Stanley, 1963). I used three additional sources of data in order to minimize these threats: individual and small group interviews with 16 students, one focus group interview with six students, and one focus group interview with ECHS staff.

Study Length and Depth

The study was limited to just one term, and how students performed academically is not reported.[5] Although in the interviews students reported that they were able to keep up with the academic work and that the study skills they employed were helping them to be successful, a limitation in my study was that I neither tracked the number of credit hours individual students were enrolled in, nor monitored final course grades. It would have strengthened this study to compare the academic performance of students at the end of their first term to their high school academic grade point averages. Also missing from this study is an evaluation of the depth of study the students were expected to complete during their first term, or the amount of reading and writing they were expected to do.

[5] High school and corresponding first term ECHS grade information were sought for each participant. The use of course and letter grade information was approved by the local school district and the university IRB, but was not provided to the researcher.

However, the students were guided into schedules that did not put unrealistic academic demands on them. Indeed, many of them spoke of the more relaxed nature of the community college, and some of that undoubtedly reflected the fact that most students were enrolled for 12 credit hours of classes, which is minimally considered a full-time student. Students also had to meet with the ECHS staff before committing to a schedule of classes. Several students mentioned having a traditionally non-academic class as part of their schedule, such as art or physical education, which left some students with only three core academic classes.

Researcher Bias

I am an administrator in the same school district in which this study was conducted and was already acquainted with a few of the students who participated in the study. Although I am not connected to ECHS, I have worked with most of its staff members for years. The students and staff knew my role in the district, and that could have influenced how they responded and how I interpreted student behavior. However, I was not in a supervisory role for the program, and I used several sources of data to try to protect against researcher bias.

Recommendations for Further Research

In looking at the results of my study and its limitations, I recommend four areas for further research. First, I recommend that future studies about high school students' college readiness and their transition experiences extend into the second year of ECHS. In addition to addressing academic behavior skills beyond the first term, such studies could take a deeper look at the kinds of support students need from staff, and better

define how students' initial perceptions of their college readiness are predictive of their ongoing academic success and retention in college. Second, I recommend that future studies about high school students entering college through ECHS programs include that population of students transitioning to four-year postsecondary institutions rather than just two-year institutions. Such studies would offer insights about institutional differences that affect the general college readiness abilities of younger students. Such studies may also suggest whether there are practical differences about college readiness that students, parents, and school officials should address, depending upon the type of institution younger students enter. Third, I recommend that future studies of ECHS focus on the different transition experiences of students, depending upon their demographic characteristics and upon their past academic performance. I did not explore the influence of such differences in my study, but such an approach may lead to a better understanding of how varying transition experiences can be effectively supported. Fourth, I recommend that future studies explore whether the ECHS model provides the academic knowledge and skills students need to earn a bachelors degree, especially for minority or disadvantaged students. Though some work has been done in this area, further research may help us better understand the ECHS framework and may reveal if this is a model that provides an academic program of enough intensity and quality to boost the number of students who not just profess a desire to earn a bachelors degree, but who actually earn such a degree.

More research could be done on the topic of students beginning college while still enrolled in high school. There is a need for such research, especially in light of the

importance of students earning a high school diploma, and the current problem of many high school graduates failing to be college ready. Such research could contribute to policy discussions regarding the creation of more flexible arrangements for completing high school while simultaneously beginning college. Further research could help establish whether ECHS is a reform that should be encouraged from both a K-12 and a postsecondary viewpoint. Additional research may also help establish whether a program such as ECHS can especially help first-generation or disadvantaged youth graduate from high school and become college ready in a more comprehensive way.

Final Comments

In general, ECHS programs are not intended to be terminal programs, but are intended to help students develop a range of college readiness skills needed to understand and meet college expectations as they continue their education beyond high school (Goldrick-Rab, Carter, & Wagner, 2007; Vargas, 2006). It is my hope that this study will contribute to a better understanding of how ECHS helps students acquire college readiness skills, as well as illustrate one way in which local school districts and colleges can help students develop the academic behaviors necessary for them to successfully transition to college. While ECHS is likely to remain a small alternative pathway, using an expanded concept of college readiness as the framework for the program may not only assist students in actively developing their academic and self-regulatory behaviors at a critical point in their high school career, it may correspondingly highlight additional areas of college readiness that comprehensive high schools may want to emphasize. Despite the limitations of this study, its findings may be useful if more thorough research on ECHS is

undertaken and if future studies confirm that ECHS is a pathway that contributes to the development of the kinds of academic behaviors that help students earn their high school diploma and have a positive and rich experience in college.

APPENDIX A

ASSENT / CONSENT LETTERS

Assent letter for use of self-assessment data mailed to all students

9625 S.W. 125th Ave.
Beaverton, OR 97008
October 7, 2008

Dear Student:

I am an administrator in the Beaverton School District, and I hope to learn more about how students transition from high school to the community college environment. I may have met you, as I was introduced to the Early College students during the orientation on September 10 at PCC. You are invited to participate in a research study about Early College conducted by me, Jim Healy, for my doctoral dissertation through the University of Oregon, Department of Education. You have been selected as a possible participant in this study because you are a student in the Early College High School program.

I would like to ask your assent to use the data collected from the pre-assessment you took at the beginning of the term, as well as the post-assessment you will take again at the end of the term. The assessment asks about your study habits and your perceptions of college readiness. Nearly all of the survey questions come directly from the self-assessment in the *On Course* textbook you are using in your College Success class.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential. Your identity regarding the self-assessment will be kept confidential by using coded numbers instead of names, and all of the data will be kept secure. The coded numbers will be able to be linked to names only by the ECHS administrator. I will not have access to any assessment data with your name on it. I cannot guarantee that you will personally receive any benefits from this research.

In addition to the self-assessment, I will be inviting five to eight students to be interviewed twice to provide more detailed information about their first-term experiences at Early College High School. These students will be asked to give their assent to be interviewed, and will be selected through the recommendation of the ECHS staff, to represent a general cross section of students.

Your participation is voluntary. Your decision whether or not to participate will not affect your relationship with the Beaverton School District or Early College High School. If you decide to participate, you are free to withdraw your assent and discontinue your participation at any time without penalty.

If you have any questions, please feel free to contact me at 503-259-5420 or e-mail me at jim_healy@beaverton.k12.or.us. You may also contact Linda West, the ECHS

administrator, at 503-614-7217 or by email at linda_west@beaverton.k12.or.us. My advisor can be reached at 541-346-6153 or by e-mail at david_conley@epiconline.org. If you have questions regarding your rights as a research subject, contact the Office for Protection of Human Subjects, University of Oregon, Eugene, OR 97403, 541-346-2510. This office oversees the review of the research to protect your rights and is not involved with this study.

If you do not give your assent to participate in this study, please sign the bottom portion of this form and return it by October 23, 2008, to the School Principal, Southridge High School, 9625 S.W. 125th Ave., Beaverton, OR 97008.

Sincerely,

Jim Healy

❑ I DO NOT give my assent to participate in this study.

Print student name: _____

Student signature:_____

Date_____

Assent letter for interview participation given to students

9625 S.W. 125th Ave.
Beaverton, OR 97008
October 24, 2008

Re: Assent letter for students who are interviewed

Dear Student:

Thank you for agreeing to participate in my research project. The research will help me and the ECHS staff to learn more about how students transition from high school to the community college environment. This research study is also being conducted by me for my doctoral dissertation through the University of Oregon, Department of Education

Today you are invited to participate in an individual interview, which should take approximately 20 minutes. Your participation is voluntary. If you do not wish to participate, you may stop at any time. Responses will be completely confidential, and your name will not appear anywhere in the final write up. Any recordings will only be used for transcription purposes, and will be destroyed at the project's conclusion. I would like to transcribe the interviews accurately afterward, and because of this I would like to make recording a condition of the interview. Interview recordings will remain in a secure location, and will not be duplicated or distributed. Because ECHS staff will have access to the interview recordings and may know the identity of students, I cannot guarantee your confidentiality for the interviews. Signing below and taking part in this interview is your agreement to participate.

Your decision whether or not to participate will not affect your relationship with the Beaverton School District or Early College High School. If you decide to participate, you are free to withdraw your assent and discontinue your participation at any time without penalty.

If you would like a copy of this information for your records, please let me know and I will give you a copy immediately after our interview. If you have any questions about this project, please feel free to contact me at 503-259-5420 or e-mail me at jim_healy@beaverton.k12.or.us. You may also contact Linda West, the ECHS administrator, at 503-614-7217 or by email at linda_west@beaverton.k12.or.us. My advisor can be reached at 541-346-6153 or by e-mail at david_conley@epiconline.org. If you have questions regarding your right as a research subject, contact the Office for Protection of Human Subjects, University of Oregon, Eugene, OR 97403, 541-346-2510. This office oversees the review of the research to protect your rights and is not involved with this study.

If you give your assent to participate in this interview, please sign the bottom portion of this form. Thank you for your help.

Sincerely,

Jim Healy

Do you agree to participate in this interview? _____

Do you agree to be audio/video recorded? _____

I (print name)_____ give my assent to participate in this study.

Signature: _____

Date_____

Consent letter mailed to all parents re: student participation

9625 S.W. 125th Ave.
Beaverton, OR 97008
October 7, 2008

Dear Parent/Guardian:

This is a follow-up to the letter I sent you in August. I am an administrator in the Beaverton School District, and I hope to learn more about the Early College program and about how students transition from high school to the community college environment. Your child is invited to participate in a research study about this conducted by me, Jim Healy, for my doctoral dissertation through the University of Oregon, Department of Education. Your child was selected as a possible participant in this study because he or she is a student in the Early College High School program.

Your child took a 30-minute self-assessment during their orientation on September 10, and will do so again at the end of the term. The self-assessment is a regular planned assignment in their College Success class and is not an extra activity. The survey asks students about their study habits and their perceptions of college readiness. Nearly all of the survey questions are based upon one of the textbooks students will be using in their College Success class. I am asking for your consent to have access to this self-assessment data. All students will also be asked to give their assent to use their self-assessment data. (See additional enclosed letter.)

Any information that is obtained in connection with this study and that can be identified with your child will remain confidential. Students' identity regarding the self-assessment will be kept confidential by using coded numbers instead of names, and all of the data will be kept secure. The coded numbers will be able to be linked to names only by the ECHS administrator. I will not have access to any assessment data with a child's name on it. Also, any subsequent information that is obtained in connection with this study, such as report card grades, that can be identified with your child will remain confidential and names will remain unknown to me. Your child's identity will not be a part of any records, and all of the data will be kept secure. The data will be shared only with those assisting with data analysis and with the Early College High School staff.

Additionally, five to eight students will be interviewed twice to provide more detailed information about their first-term experiences at Early College High School. These students will be asked to give their assent to be interviewed. If time permits, I would also like to conduct a focus group interview with five to eight students. All interview and/or focus group students will be invited to participate based upon the recommendation of the ECHS staff, and will represent a cross section of students. Responses will be completely confidential, and students' names will not appear anywhere in the final write up. I would

like to transcribe the interviews accurately afterward, and because of this I would like to make recording a condition of the interview. The recordings will only be used for transcription purposes, and will be destroyed at the project's conclusion. Interview recordings will remain in a secure location, and will not be duplicated or distributed. Because ECHS staff will have access to the interview recordings and may know the identity of students, I cannot guarantee student confidentiality for the interviews.

Your child's participation is voluntary. I cannot guarantee that you or your child will personally receive any benefits from this research. Your decision whether or not to let your child participate will not affect your relationship with the Beaverton School District or Early College High School. If you decide to allow your child to participate, you are free to withdraw your consent and discontinue your child's participation at any time without penalty.

If you have any questions, please feel free to contact me at 503-259-5420 or e-mail me at jim_healy@beaverton.k12.or.us. Feel free to also contact Linda West, the Early College director, at 503-614-7217, or by e-mail at linda_west@beaverton.k12.or.us. My advisor can be reached at 541-346-6153 or by e-mail at david_conley@epiconline.org. If you have questions regarding your child's rights as a research subject, contact the Office for Protection of Human Subjects, University of Oregon, Eugene, OR 97403, 541-346-2510. This office oversees the review of the research to protect your rights and is not involved with this study.

If you do not give your consent for your child's participation in this study, please sign the bottom portion of this form and return it by Oct. 23, 2008, to: School Principal, Southridge High School, 9625 S.W. 125th Ave., Beaverton, OR 97008.

Sincerely,

Jim Healy

I DO NOT give consent for my child (name)_____ to participate in this study.

Print Parent/Legal Guardian name: _____

Parent/Legal Guardian
Signature:_____Date:_____

Consent letter for ECHS staff focus group participation

9625 S.W. 125th Ave.
Beaverton, OR 97008
November, 2008

Re: Consent Letter for Focus Group Adults

Dear ECHS/PCC staff member:

Thank you for agreeing to participate in my research project. The research will help me and the ECHS staff to learn more about how students transition from high school to the community college environment. This research study is also being conducted by me for my doctoral dissertation through the University of Oregon, Department of Education

Today you will be participating in a focus group interview, which should take approximately one hour. Your participation is voluntary. If you do not wish to participate, you may stop at any time. Responses will be confidential, and your name will not appear anywhere in the final write up. Any recordings will be only used for transcription purposes, and will be destroyed at the project's conclusion. I would like to transcribe this group interview accurately afterward, and because of this I would like to make recording a condition of the interview. Signing below and taking part in this interview is your agreement to participate.

During the group interview, I will not be able to guarantee confidentiality because we will be discussing information as a group. Therefore, if you would feel uncomfortable with any of your statements being shared with others in or outside the group, please do not share them during the process.

Your decision whether or not to participate will not affect your relationship with the Beaverton School District or Early College High School. If you decide to participate, you are free to withdraw your consent and discontinue your participation at any time without penalty.

If you would like a copy of this information for your records, please let me know and I will give you a copy immediately after our interview. If you have any questions about this project, please feel free to contact me at 503-259-5420 or e-mail me at jim_healy@beaverton.k12.or.us. My advisor can be reached at 541-346-6153 or by e-mail at david_conley@epiconline.org. If you have questions regarding your right as a research subject, contact the Office for Protection of Human Subjects, University of Oregon, Eugene, OR 97403, 541-346-2510. This office oversees the review of the research to protect your rights and is not involved with this study.

If you give your consent to participate in this focus group, please sign the bottom portion of this form. Thank you for your help.

Sincerely,

Jim Healy

Do you agree to participate in this interview? _____

Do you agree to be audio/video recorded? _____

I (print name)_____ give my consent to participate in this study.

Signature:_____Date_____

APPENDIX B

SELF-ASSESSMENT INSTRUMENT

Early College High School Self-Assessment

Age: _____ **Grade: 10 11 12** **Sex: M F**

Name of high school you last attended: _____

What is your racial/ethnic background:
_____ American Indian/Native American
_____ Asian/Asian American/Pacific Islander
_____ Black/African American
_____ Hispanic or Latino
_____ Multiracial
_____ White
_____ Other

Are you on an Individual Education Plan: Yes No

I speak a second language at home: Yes No If yes, language: _____

Self-Assessment Instructions
This self-assessment is not a test. There are no right or wrong answers! The questions simply give you an opportunity to create an accurate and current self-portrait. Be absolutely honest!

Read the statements below and score each one according to how true or false you believe it is about you. To get an accurate picture of yourself, consider what is currently true about you (not what you want to be true) as you get ready to enter PCC. Your scores will identify behaviors and beliefs you may wish to change in order to achieve more of your potential in college. The findings from the surveys will concentrate broadly on eight areas: personal responsibility, self-motivation, self-management, interdependence, self-awareness, learning habits, emotional intelligence, and self-confidence. At the end of the course or semester, you will repeat this self-assessment.

This survey is also part of a research study examining how students new to Early College High School transition to community college. The study is being conducted by Jim Healy, an administrator in the Beaverton School District, in cooperation with Linda West, the Early College High School administrator. The results of the study will provide useful information about the ECHS program, and will also help support Mr. Healy's doctoral dissertation. If you have any questions about this survey, please feel free to contact Jim Healy at 503-259-5420 or by e-mail at jim_healy@beaverton.k12.or.us. You can also contact Mr. Healy's advisor, Dave Conley, at 541-346-6153 or by e-mail at david_conley@epiconline.org.

YOUR RESPONSES ARE CONFIDENTIAL. No individual responses will be reported out. Thank you for taking the time to complete this.

Early College High School Self-Assessment

Self-Assessment Questionnaire
Questions 1-64 from On Course, Second Edition, by Skip Downing

The self-assessment questionnaire uses a 0 – 10 scale, asking you to choose the best response as to how much you agree with the statements below.

0	1	2	3	4	5	6	7	8	9	10
Totally false										**Totally true**
strongly disagree		disagree			neutral		agree			strongly agree

1. _____ I control how successful I will be.
2. _____ I'm not sure why I'm in college.
3. _____ I spend most of my time doing important things.
4. _____ When I encounter a challenging problem, I try to solve it by myself.
5. _____ When I get off course from my goals and dreams, I realize it right away.
6. _____ I'm unsure how I learn best.
7. _____ Whether I'm happy or not depends mostly on me.
8. _____ I'll truly accept myself only after I eliminate my faults and weaknesses.
9. _____ Forces out of my control (like poor teaching) are the cause of low grades I receive in school.
10. _____ If I lose my motivation in college, I know how to get it back.
11. _____ I don't need to write things down because I can remember what I need to do.
12. _____ I have a network of people in my life that I can count on for help.
13. _____ If I have habits that hinder my success, I'm not sure what they are.
14. _____ When I don't like the way an instructor teaches, I know how to learn the subject anyway.
15. _____ When I get very angry, sad or afraid, I do or say things that create a problem for me.
16. _____ When I think about performing an upcoming challenge (like taking a test), I usually see myself doing well.
17. _____ When I have a problem, I take positive actions to find a solution.
18. _____ I don't know how to set effective short-term and long-term goals.
19. _____ I remember to do important things.
20. _____ When I have a difficult course in school, I study alone.
21. _____ I'm aware of beliefs I have that hinder my success.
22. _____ I don't know how to study effectively.
23. _____ When choosing between doing an important school assignment or something really fun, I usually do the school assignment.
24. _____ I break promises that I make to myself or to others.
25. _____ I make poor choices that keep me from getting what I really want in life.
26. _____ I have a written plan that includes both my short-term and long-term goals.
27. _____ I lack self-discipline.
28. _____ I listen carefully when other people are talking.

0	1	2	3	4	5	6	7	8	9	10
Totally false										**Totally true**
strongly disagree		disagree			neutral		agree			strongly agree

29. _____ I'm stuck with any habits of mine that hinder my success.
30. _____ When I face a disappointment (like failing a test), I ask myself, "What lesson can I learn here?"
31. _____ I often feel bored, anxious, or depressed.
32. _____ I feel just as worthwhile as any other person.
33. _____ Forces outside of me (like luck or other people) control how successful I will be.
34. _____ College is an important step on the way to accomplishing my goals and dreams.
35. _____ I spend most of my time doing unimportant things.
36. _____ When I encounter a challenging problem, I ask for help.
37. _____ I can be off course from my goals and dreams for quite a while without realizing it.
38. _____ I know how I learn best.
39. _____ My happiness depends mostly on what's happened to me lately.
40. _____ I accept myself just as I am, even with my faults and weaknesses.
41. _____ I am the cause of low grades I receive in school.
42. _____ If I lose my motivation in college, I don't know how I'll get it back.
43. _____ I use self-management tools (like calendars and to-do lists) that help me remember to do important things.
44. _____ I know very few people that I can count on for help.
45. _____ I'm aware of the habits I have that hinder my success.
46. _____ If I don't like the way an instructor teaches, I'll probably do poorly in the course.
47. _____ When I'm very angry, sad, or afraid, I know how to manage my emotions so I don't do anything I'll regret later.
48. _____ When I think about performing an upcoming challenge (like taking a test), I usually see myself doing poorly.
49. _____ When I have a problem, I complain, blame others, or make excuses.
50. _____ I know how to set effective short-term and long-term goals.
51. _____ I forget to do important things.
52. _____ When I have a difficult course in school, I find a study partner or join a study group.
53. _____ I'm unaware of beliefs I have that hinder my success.
54. _____ I've learned to use specific study skills that work effectively for me.
55. _____ I often feel happy and fully alive.
56. _____ I keep promises that I make to myself or to others.
57. _____ I make wise choices that help me get what I really want in life.
58. _____ I live day to day, without much of a plan for the future.
59. _____ I am a self-disciplined person.
60. _____ I get distracted easily when other people are talking.
61. _____ I know how to change habits of mine that hinder my success.
62. _____ When I face a disappointment (like failing a test), I feel pretty helpless.
63. _____ When choosing between doing an important school assignment or something really fun, I usually do something fun.
64. _____ I feel less worthy than other people.

Self-Assessment Scoring Sheet

Transfer your scores to the table below. For each of the eight areas, add your scores in columns A and B. Then total your final scores as shown in the sample. Be careful to transfer your scores accurately. Thank you!

Sample	1. **Personal Responsibility**	2. **Self-Motivation**
A B 6. 8 29. 3 14. 5 35. 3 21. 6 50. 6 73. 9 56. 2 28 + 40 - 14 = 54	A B 1. _____ 9. _____ 17. _____ 25. _____ 41. _____ 33. _____ 57. _____ 49. _____ _____ + 40 - _____ = _____	A B 10. _____ 2. _____ 26. _____ 18. _____ 34. _____ 42. _____ 50. _____ 58. _____ _____ + 40 - _____ = _____
3. **Self-Management**	4. **Interdependence**	5. **Self-Awareness**
A B 3. _____ 11. _____ 19. _____ 27. _____ 43. _____ 35. _____ 59. _____ 51. _____ _____ + 40 - _____ = _____	A B 12. _____ 4. _____ 28. _____ 20. _____ 36. _____ 44. _____ 52. _____ 60. _____ _____ + 40 - _____ = _____	A B 5. _____ 13. _____ 21. _____ 29. _____ 45. _____ 37. _____ 61. _____ 53. _____ _____ + 40 - _____ = _____
6. **Lifelong learning habits**	7. **Emotional intelligence**	8. **Self-confidence/Belief in yourself**
A B 14. _____ 6. _____ 30. _____ 22. _____ 38. _____ 46. _____ 54. _____ 62. _____ _____ + 40 - _____ = _____	A B 7. _____ 15. _____ 23. _____ 31. _____ 47. _____ 39. _____ 55. _____ 63. _____ _____ + 40 - _____ = _____	A B 16. _____ 8. _____ 32. _____ 24. _____ 40. _____ 48. _____ 56. _____ 64. _____ _____ + 40 - _____ = _____

Using the following 1 – 5 scale, please circle the best response as to how much you agree with the statements below. Your thoughtful responses are appreciated.

1	**2**	**3**	**4**	**5**
strongly disagree	**disagree**	**neutral**	**agree**	**strongly agree**

1.	I intend to earn a four-year college degree.	1	2	3	4	5
2.	I feel like I belong in college and feel connected to ECHS.	1	2	3	4	5
3.	I regularly check to make sure I'm staying up with my schoolwork.	1	2	3	4	5
4.	I can accurately tell how I'm doing in school.	1	2	3	4	5
5.	I have the study skills and attitude to be successful in college.	1	2	3	4	5
6.	I am aware of my academic strengths and weaknesses.	1	2	3	4	5
7.	In high school I felt like I was connected and belonged there.	1	2	3	4	5

8. How well do you think your high school prepared you for college?
   1 = poorly prepared 2 = adequately prepared 3 = well prepared

9. How well do you think you prepared yourself for college?
   1 = poorly prepared 2 = adequately prepared 3 = well prepared

10. How certain are you about your choice of attending Early College High School?
    1 = uncertain 2 = reasonably certain 3 = very certain

11. What is your primary goal or objective in attending ECHS?
    1 = Complete high school
    2 = Earn college credits or associate's degree
    3 = Improve skills required for college

Short answer questions (for post-1st term survey only)

12. Describe the thing(s) that have challenged you the most this term, or that you've most struggled with this term.

13. Describe the most important thing you learned about your readiness for college this past term.

APPENDIX C

TECHNICAL REPORT: RELIABILITY AND FACTOR STRUCTURE OF THE ON COURSE SELF-ASSESSMENT SCALE

Technical Report: Reliability and Factor Structure of the On Course Self-Assessment Scale[1]

Luke Duesbery, San Diego State University, California

Jim Healy, Beaverton School District, Oregon

Kristie Daniel-DiGregorio, El Camino College, California

[1] Duesbery, L., Healy, J., & Daniel-DeGregorio, K., (2009). *Technical Report: Reliability and Factor Structure of the On Course Self-Assessment Scale.* Unpublished manuscript.

Technical Report: Reliability and Factor Structure of the On Course Self-Assessment Scale

Abstract: The focus of this analysis was to examine the factor structure of the On Course Self-Assessment Scale. Data from a sample of 281 transitioning community college students were examined using confirmatory factor analytic methods. An eight-factor model was tested and partially accepted on the basis of fit statistics, supporting the hypothesized multi-dimensional structure of the scale.

Introduction

The On Course Self-Assessment Scale (OCSAS)[2] is an instrument intended to raise students' awareness of their learning habits and academic behaviors as they review their approaches and attitudes to school. The questions are separated into eight scales or domains that relate to qualities associated with college readiness and academic behaviors in college: self-responsibility, self-motivation, self-management, interdependence, self-awareness, lifelong learning habits, emotional intelligence, and self-confidence. The questionnaire asks students about their academic behaviors and skills, primarily in relation to college, self, and the school community, and measures the extent to which students' skills and behaviors reflect skills associated with college success. The self-assessment uses alternately worded questions to ask students about their academic behaviors and skills. The intent with using alternately worded questions is to minimize

[2] The On Course self-assessment scale is from: Downing, S. (2008). *On Course: Strategies for Success in College and Life* (5th ed), Boston: Houghton Mifflin. Information available at www.oncourseworkshop.com.

survey response errors and obtain more consistent responses. An example of this is, "When choosing between doing an important school assignment or something really fun, I usually do the school assignment," and, "When choosing between doing an important school assignment or something really fun, I usually do something fun." After students tally their responses, they score themselves by completing some basic subtraction between the alternately worded questions. An aggregate score of between 0 and 80 for each domain is possible.

This self-assessment instrument has been taken by thousands of students over a period of 13 years, since its development in 1996. The questionnaire author, S. Downing, indicated that the 64 questions contained in the assessment have been reviewed by college and university educators as well as textbook publishing editors for clarity and appropriateness (personal communication, July 24, 2008). The author considered the relationship between the questions and several psychosocial and academic study areas in developing the questionnaire and grouping the questions as he did. Though the primary intention of the self-assessment questionnaire is to raise students' awareness about these eight inner qualities, experience and feedback from over 100 educators working with first year college students indicates that the eight areas identified significantly affect and are predictive of students' academic success and retention (S. Downing, personal communication, July 24, 2008). Additionally, information from several studies (Le et al., 2005; Lotkowski, Robbins, & Noeth, 2004; Robbins et al., 2006; Zimmerman, 2008) show the positive impact of interventions to strengthen self-management, self-regulatory, and self-awareness qualities in students.

Table 1

Exemplars from the OCSAS

Factor	*Exemplars*
Personal responsibility	I control how successful I will be. When I have a problem, I take positive actions to find a solution.
Self-motivation	If I lose my motivation in college, I know how to get it back. I have a written plan that includes both my short-term and long-term goals.
Self-management	I spend most of my time doing important things. I remember to do important things.
Interdependence	I have a network of people in my life that I can count on for help. I listen carefully when other people are talking.
Self-awareness	When I get off course from my goals and dreams, I realize it right away. I'm aware of beliefs I have that hinder my success.
Life-long learning habits	I know how I learn best. I've learned to use specific study skills that work effectively for me.
Emotional intelligence	Whether I'm happy or not depends mostly on me. I often feel happy and fully alive.
Self-confidence	I feel just as worthwhile as any other person. I accept myself just as I am, even with my faults and weaknesses.

Study Questions

We ask two preliminary research questions in this study: To what degree does the OCSAS demonstrate internal reliability, and to what degree does the latent structure of the OCSAS test model fit the theorized model.

Method

Sample

Respondents were students enrolled in Human Development courses[3] at El Camino College, a two-year community college in Torrance, California, in the spring of 2009. The El Camino College student population is comprised of 31% Latino, 21% White, 20% African American, 14% Asian, 5% Filipino or Pacific Islander, and 8 % Unknown. Approximately two-thirds of the college population (60%) is students between the ages of 18-24. Another third of enrolled students are working adults aged 25-44. Students over the age of 45 account for 8% of the student population.

The El Camino College Office of Institutional Research recreated an online version of the On Course Self-Assessment Scale with permission of the publisher, Cengage Learning, Inc. Students were required to take the online assessment, located on the El Camino College website, for a class assignment.

Data Analysis

Reliability. When developing any instrument, we consider reliability to be the primary statistical procedure to ensure inferences based on the data are consistent.

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[3] El Camino College Human Development courses are introductory courses aimed at providing opportunities for students to master the strategies, skills, understanding, and attitudes that foster effective and self-directed learning in college and beyond. The courses are transferable to the California State University system and the University of California.

Reliability is often used to describe that a test is measuring something consistently, but not necessarily what it is supposed to be measuring. For example, while timing the 100 meter dash is very consistent, it would not be a valid measure of reading. In short, reliability does not imply validity. Reliability calculates consistency, while validity addresses accuracy of decisions we make.

Considering the data collection method and the intended use of the OCSAS, for this analysis we considered the internal structure of the OCSAS to be the best indicator of reliability. Internal consistency is a measure based on the correlations between different items on the same test (or the same subscale on a larger test). In other words, the degree to which the items in each construct are getting information on the same behavior. It measures whether several items that purport to measure the same general construct produce similar scores. Internal consistency is usually measured with Cronbach's alpha (α), a statistic calculated from the pairwise correlations between items. Generally, α increases when the correlations between the items increase. Commonly accepted guidelines are that an alpha of 0.6 - 0.7 indicates acceptable reliability, and 0.8 or higher indicates good reliability. It is critical to note that extremely high reliabilities (0.95 or higher) are not necessarily desirable, as this may indicate item redundancy.

Confirmatory factor analysis (CFA). Cronbach's alpha is both theoretically and empirically related to factor analysis. For example, using items from each factor (personal responsibility, etc.) to maximize internal consistency usually results in a test that is homogeneous in nature. And though unidimentionality is a statistical assumption for α to be an unbiased indicator of reliability, it is not necessarily related to factorial

homogeneity because the value of α depends on the *size* of the average inter-item covariance, while unidimensionality depends on the *pattern* of the inter-item covariances.

Confirmatory factor analysis is primarily used in theory testing rather than theory development. CFA is used to assess the number of factors and the loadings of variables (items). In this case the factors are personal responsibility, self-motivation, self-management, interdependence, self-awareness, life-long learning habits, emotional intelligence, and self-confidence, each with eight items. In contrast to exploratory factor analysis, where all loadings are free to vary and the intent is to explore what are the "best" items to measure a given factor, CFA allows for the explicit constraint of certain loadings to be zero, thus testing how well the selected items are measuring a factor. Among its strengths is the ability to model constructs as latent variables which are not measured directly, but are estimated by items that we hypothesize are representations of the latent variables This allows the structural relations between latent variables to be accurately estimated.

Model fit measures are calculated to assess how well the proposed model captured the covariance between all the items on the test. Guided by literature in the field we place most emphasis on root mean square of approximation (RMSEA), coupled with an array of supporting fit statistics: chi square, the normed fit index (NFI), and the comparative fit index (CFI). Guidance of fit for each model is discussed. The latent factor structure of the test was modeled with AMOS 16 (SPSS, Inc.).

Results

Internal Reliability

Only intact records were included in reliability analyses, resulting in a negligible loss in sample size for each form. Internal reliability coefficients are summarized in Table 2.

Table 2
Internal reliabilities, n=281

	# items	*alpha**
Personal responsibility	8	0.64
Self-motivation	8	0.75
Self-management	8	0.70
Interdependence	8	0.52
Self-awareness	8	0.71
Life-long learning habits	8	0.76
Emotional intelligence	8	0.69
Self-confidence	8	0.56
Overall	64	0.93

* Within people between items tests of significance all, $p < .001$

Confirmatory Factor Analysis

In the following paragraphs we first present the model specification, followed by parameter estimates and model fit statistics.

Model specification. We work under and test the hypotheses that our instrument reflects an eight factor structure composed of:

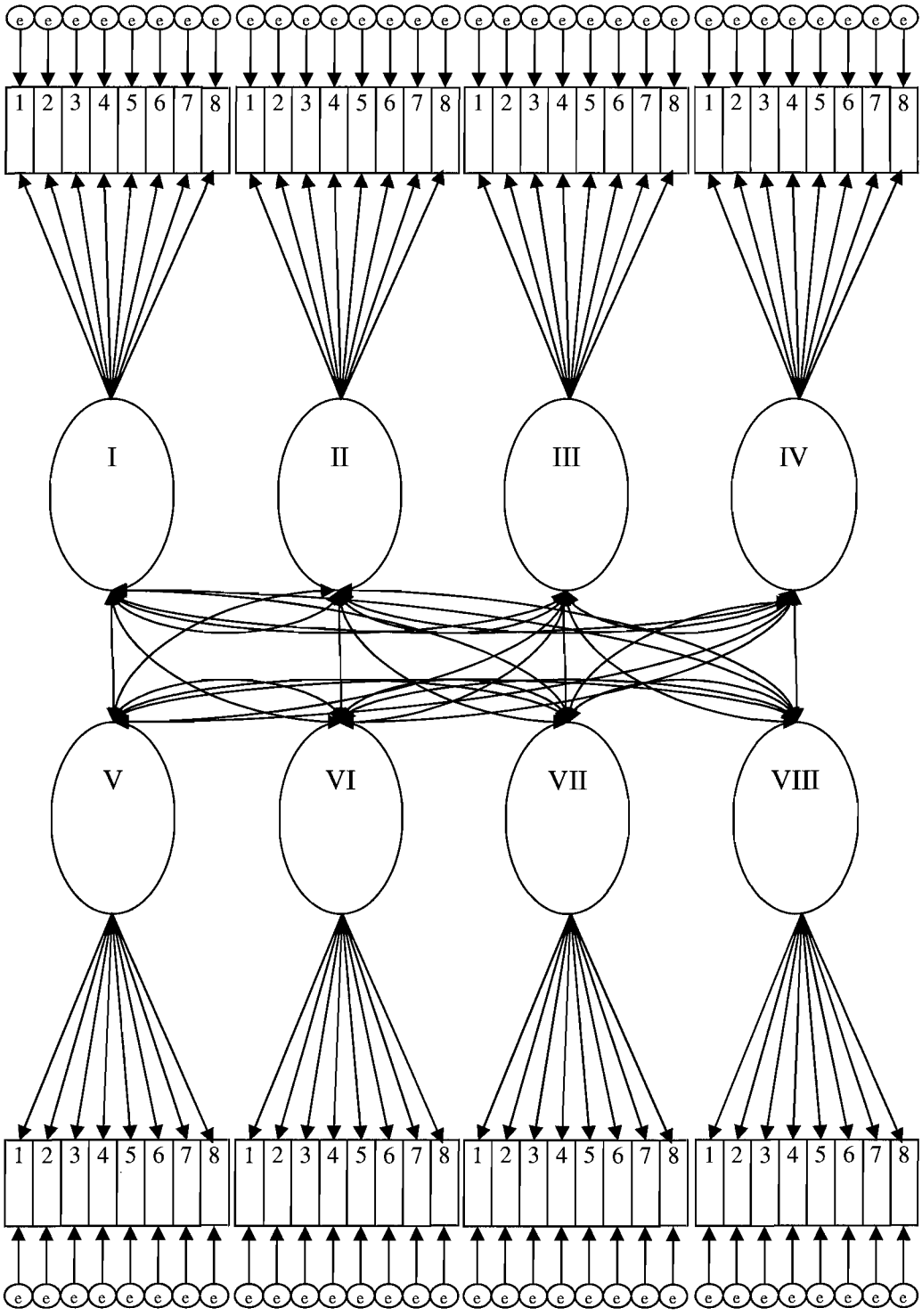
I. personal responsibility,
II. self-motivation,

III. self-management,
IV. interdependence,
V. self-awareness,
VI. lifelong learning,
VII. emotional intelligence, and
VIII. self-confidence.

In our model there are 64 observed variables and eight intercorrelated unobserved factors corresponding to the eight factor structure. The observed variables load on the eight factors in the following manner: Items 1, 9, 17, 25, 33, 41, 49, and 57 load on factor 1; Items 2, 10, 18, 26, 34, 42, 50, and 58 load on factor 2; Items 3, 11, 19, 27, 35, 43, 51, and 59 load on factor 3; items 4, 12, 20, 28, 36, 44, 52, and 60 load on factor 4; items 5, 13, 21, 29, 37, 45, 53, and 61 load on factor 5; items 6, 14, 22, 30, 38, 46, 54, and 62 load on factor 6; items 7, 15, 23, 31, 39, 47, 55, and 63 load on factor 7; items 8, 16, 20, 24, 32, 40, 48, and 64 load on factor 8. Each of the observed variables is thought to load on one, and only one, factor, and errors of measurement are modeled as uncorrelated. A model schematic is provided in Figure 1. Estimation of parameters is based on Maximum Likelihood method.

Figure 1

Schematic of the specified eight-factor structure



Model parameters and estimation. Focusing on factor loading estimates alone, most regression weights are reasonable and statistically significant ($p < .05$). A number of items did not have statistically significant regression weights, including items 41, 15, 23, 31, 39, 47, 55, 63, and 11. *Of note, no items in the emotional intelligence factor had statistically significant regression weights.* Except items 41 and 56, most regression weights were in the direction expected. Standard error estimates for the well fitting model parameters were reasonable in the 0.12 to 0.51 range. Item parameters are summarized in Table 3.

Table 3

Parameter estimates: Unstandardized CFA factor loadings

Factor	Item #	Factor loading	Standard error	*P* value
I. Self-motivation	2	1.000		
	10	2.097	0.412	< .001
	18	2.081	0.423	< .001
	26	1.498	0.366	< .001
	34	0.251	**0.086**	0.004
	42	2.581	0.498	< .001
	50	2.409	0.465	< .001
	58	2.078	0.421	< .001
II. Personal responsibility	1	1.000		
	9	1.010	0.267	< .001
	17	1.670	0.258	< .001
	25	2.825	0.421	< .001
	33	0.962	0.257	< .001
	41	**-0.234**	0.224	**0.296**
	49	1.904	0.319	< .001
	57	2.203	0.316	< .001
III. Emotional intelligence	7	1.000		
	15	4.807	**2.532**	**0.058**
	23	7.582	**3.873**	**0.05**
	31	6.072	**3.146**	**0.054**
	39	3.167	**1.741**	**0.069**
	47	3.660	**1.954**	**0.061**
	55	3.318	**1.754**	**0.059**
	63	8.234	**4.202**	**0.05**
IV. Self-confidence	8	1.000		
	16	1.288	0.252	< .001
	24	1.434	0.290	< .001
	32	0.770	0.203	< .001
	40	1.202	0.247	< .001
	48	1.629	0.310	< .001
	56	**-1.247**	0.246	< .001
	64	1.521	0.292	< .001

V. Interdependence	4	1.000		
	12	-1.338	0.351	< .001
	20	-0.986	0.328	0.003
	28	-1.085	0.252	< .001
	36	-1.189	0.329	< .001
	44	-0.751	0.348	0.031
	52	-2.350	0.511	< .001
	60	-2.287	0.495	< .001
VI. Self-management	3	1.000		
	11	.069	0.154	**0.656**
	19	.857	0.126	< .001
	27	1.537	0.217	< .001
	35	1.517	0.197	< .001
	43	1.135	0.216	< .001
	51	1.540	0.194	< .001
	59	1.266	0.176	< .001
VII. Self-awareness	5	1.000		
	13	0.891	0.163	< .001
	21	0.597	0.154	< .001
	29	1.104	0.180	< .001
	37	1.481	0.196	< .001
	45	0.887	0.149	< .001
	53	0.987	0.171	< .001
	61	1.482	0.181	< .001
VIII. Lifelong learning	6	1.000		
	14	1.037	0.202	< .001
	22	1.711	0.278	< .001
	30	1.288	0.229	< .001
	38	1.304	0.223	< .001
	46	1.258	0.224	< .001
	54	1.533	0.247	< .001
	62	1.347	0.236	< .001

Model Fit Statistics

Model fit statistics: Chi square. Not an unexpected result, the OCSE model yielded a $\chi 2$ value of 4736.164 with 1924 degrees of freedom and a probability less than .0001, suggesting the data did not adequately fit the specified model. However, such a

result is not necessarily indicative of poor fit, and is common with larger samples used in structural modeling (see MacCallum, Browne, & Sugawara, 1996). As such we follow with more pragmatic fit statistics as adjuncts. Model fit statistics are summarized in Table 4.

Model fit statistics: RMSEA. The root mean square error of approximation (RMSEA) statistic (Steiger & Lind, 1980) is recognized as an informative component of covariance structure modeling. It answers the question, how well would the model fit the population covariance matrix with optimally chosen parameters (Brown & Cudeck, 1993, pp. 137-138). The index is sensitive to the number of estimated parameters in the specified model. At 0.072, the RMSEA value] of the test, while not good, can be considered a reasonable error of approximation. Further we are 90% confident the actual value lies somewhere between 0.070 and 0.075; both bounds fall at or below the 0.8 threshold for reasonableness asserted by Brown and Cudeck (1993).

Model fit statistics: NFI and CFI. The normed fit index (NFI) provides another measure of the model goodness of fit, and with the comparative fit index (CFI) takes sample size into account (Bentler, 1990). An NFI value > 0.9 and CFI value > 0.95 indicate superior fit. The values obtained here (NFI= 0.460 and CFI = 0.58) indicate are low (Bentler, 1990)., but perhaps indicate a reasonable *enough* fit. The relative fit index (RFI) and incremental fit index (IFI) also point to a reasonable model.

Table 4

Model Fit Statistics

	Parameters	$\chi 2$	*df*	*p*	$\chi 2$ / *df*
OCSE	220	4736.164	1924	.000	2.349

Model Fit: RMSEA

	RMSEA	90% CI Low	90% CI High	PCLOSE
OCSE	.072	.070	.075	.000

Model Fit: NFI and CFI

	NFI Delta1	RFI rho1	IFI Delta2	CFI
OCSAS	.460	.434	.589	.583

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APPENDIX D

NORMALITY CHECK OF SELF-ASSESSMENT DATA

Table 7

Tests of Normality Using Skewness Scores of Students' Perceived Academic Regulatory Behaviors

Domains	*Pre-survey Skewness*	*Normality*	*Post- survey Skewness*	*Normality*
Personal Responsibility	-0.06	Accept Normality	-0.58	Accept normality
Self-Motivation	-0.36	Accept normality	-0.68	Reject normality
Self-Management	-0.14	Accept normality	-0.01	Accept normality
Interdependence	0.27	Accept normality	-0.24	Accept normality
Self-awareness	0.01	Accept normality	-0.30	Accept normality
Learning Habits	-0.03	Accept normality	-0.33	Accept normality
Emotional Intelligence	0.19	Accept normality	0	Accept normality
Self-confidence	-0.28	Accept normality	-0.80	Reject normality

Note: Normality = skewness score of <0.63

APPENDIX E

INTERVIEW QUESTIONS

Student interview questions

1. Why did you decide to attend ECHS? Were there barriers for you in high school, and if so, what were they?
2. What are your positive/negative surprises or impressions about ECHS so far?
3. What are you most struggling with?
4. What kind of effort do you put into your schoolwork? How much time do you spend studying? Talk about any challenges you have had with managing your time.
5. What is causing the most stress for you this first term? What is your biggest concern about school as you look to the rest of the term?
6. Before starting at ECHS, what was your biggest concern about leaving high school and moving to a community college campus?
7. Do you believe that high school prepared you for community college?
8. Do you think you are adequately prepared for college? Why?
9. How is school different for you now than in high school? Are there any traditions or things from high school that you miss? How do your past experiences in high school compare to your first term at ECHS?
10. Talk about any difficulty you may have had this term in staying up with schoolwork. What are some of the challenging experiences you've had at ECHS?
11. How effective was high school in helping you to be successful in community college?
12. Have you made any changes in your study habits this fall, as compared to last year? Explain.
13. What, if anything, has surprised or most impressed you about the transition to college?
14. Thinking back on your experience over the past ____ weeks, do you think you were prepared in high school for college? Why?
15. How much time each week do you spend outside of class studying?
16. Describe some of your study skills and habits that have been most helpful to you in attending PCC this term.
17. Describe some of your study habits that have been least helpful to you in attending PCC this term.
18. Talk about your future goals.

ECHS staff interview questions

1. What did students this term most struggle with? What were their biggest challenges?
2. What strengths do ECHS students have?
3. What does success look like in an ECHS program? What impact has ECHS had on students' academic performance?
4. How has the ECHS program changed students' academic behaviors?
5. What services will be needed to support ECHS in the future in order to make sure that students are or continue to be college ready?
6. What study skill strategies are the most important for student success in college-level classes? Have these study strategies been adequately taught to students?
7. How many or what percentage of students are adequately prepared for college entry-level work?
8. What should high schools be doing to better prepare students for college?
9. In your opinion, are ECHS students ready for college?
10. Are there any final comments or thoughts anyone has?

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