POSTSECONDARY EDUCATIONAL TRANSITIONS FOR AT-RISK YOUTH: EXPLORATION OF THE COLLEGE TRANSITION SUPPORT PROGRAM

by

ROSEMARIE R. DOWNEY-McCARTHY

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Student: Rosemarie R. Downey-McCarthy

Title: Postsecondary Educational Transitions for At-Risk Youth: Exploration of the College Transition Support Program

This dissertation has been accepted and approved in partial fulfillment of the requirements for the Doctor of Philosophy degree in the Department of Counseling Psychology and Human Services by:

Dr. Elizabeth Stormshak	Co-Chair
Dr. Lauren Lindstron	Co-Chair
Dr. Christopher Murray	Member
Dr. Laura Leete	Member
Dr. Gina Biancarosa	Outside Member

and

Kimberly Andrews Espy	Vice President for Research & Innovation/Dean of the Graduate School

Original approval signatures are on file with the University of Oregon Graduate School.

Degree awarded September 2013

DISSERTATION ABSTRACT

Rosemarie R. Downey-McCarthy

Doctor of Philosophy

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Title: Postsecondary Educational Transitions for At-Risk Youth: Exploration of the College Transition Support Program

Working within a Social Cognitive Career Theory framework, the study explored outcomes associated with participation in a dual-enrollment (high school and community college) College Transition Support Program (CTSP). The study used three data points over a nine month period to explore whether participation in the CTSP was associated with changes in college self-efficacy, education-related future aspirations and goals, perceived barriers, perceived support, locus of control, depression, anxiety, academic achievement-related expectations, academic achievement-related fears, and academic achievement-related expectation-fear balance, as well as college persistence and cumulative college GPA.

Repeated measure responses of a group of 34 CTSP students were contrasted with a group of 34 students in a non-equivalent comparison group. Baseline data for a group of 207 non-CTSP alternative high school students were also used to test for selection bias for both of the longitudinal groups. Doubly multivariate repeated measures analysis of variance (DMRM-ANOVA) procedures were conducted. Multivariate results suggested that participation in the CTSP was associated with positive, statistically significant growth in the weighted linear combination of outcome variables.

Repeated measures univariate analyses were also conducted to provide more detail. CTSP participation was associated with growth over time on several positive student outcomes, including college self-efficacy, education-related future aspirations and goals, academic achievement-related expectation-fear balance, academic locus of control, and college persistence/retention. In addition, CTSP students earned significantly higher cumulative college GPAs over their first year at the community college.

CURRICULUM VITAE

NAME OF AUTHOR: Rosemarie R. Downey-McCarthy

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon, Eugene, OR
Boston College, Chestnut Hill, MA
Gonzaga University, Spokane, WA

DEGREES AWARDED:

Doctor of Philosophy, Counseling Psychology, 2013, University of Oregon
Master of Arts, Counseling Psychology, 2003, Boston College
Bachelor of Arts, Psychology, 2000, Gonzaga University

AREAS OF SPECIAL INTEREST:

At-Risk Students, Postsecondary Educational Transitions, and Supportive Interventions

PROFESSIONAL EXPERIENCE:

Family Intervention School Consultant, 2010-2012

Employment & Career Counselor, Womenspace, 2007-2010

Counselor & Faculty Instructor, Lane Community College, 2007-2010

Graduate Teaching Assistant, Family & Human Services, 2006-2009

Child & Family Therapist, Trillium Family Services, 2005-2006

Research Assistant, Brigham & Women's Hospital – Boston, 2004-2005

Clinical Case Manager, The Boston Center, 2003-2005

GRANTS, AWARDS, AND HONORS:

Betty Foster McCue Research Fellowship, University of Oregon, 2011

Clare Wilkins Chamberlin Research Award, University of Oregon, 2011

Graduate School Research Award, University of Oregon, 2011

Psychological Science Conference Award, APA Science Student Council, 2011

Ashworth Scholarship, University of Oregon, 2011

Berniece Oswald Award, Oregon Scholarship Fund, 2011

Leon Culbertson Scholarship, University of Oregon, 2010

Jean Twohig Scholarship, University of Oregon, 2010

Berniece Oswald Award, Oregon Scholarship Fund, 2009

Joseph K. Starr Scholarship, University of Oregon, 2008

Serena B. Streiby Memorial Scholarship, Boston College, 2003

Master's Comprehensive Examination Distinction, Boston College, 2003

PUBLICATIONS:

Chronister, K. M., Luginbuhl, P., Ngo, C., Downey-McCarthy, R. R., Wang, J., Barr, L., Harley, E. K. (under review, first review, *Career Development Quarterly*). The career barriers and counseling needs of intimate partner violence survivors.

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Walsh, M. E., Downey, R. R. & Tufaro, K. A. (2005). Education and applied developmental science. In C. B. Fisher & R. M. Lerner (Eds.), *Encyclopedia of applied developmental science* (pp. 386-397). Thousand Oaks, CA: Sage Publications.

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CHAPTER I

LITERATURE REVIEW

Increasing Importance of Postsecondary Education

In an address to the Joint Session of Congress in 2009, President Barack Obama asserted that, "a good education is no longer just a pathway to opportunity – it is a prerequisite" (Obama, 2009). Although educational attainment is positively associated with increased participation in the American workforce (U.S. Department of Labor, 2010a), high school graduation has ceased to be a reliable predictor of an individual's future social and economic wellbeing (Hoffman, Vargas, Venezia, & Miller, 2007). Instead, it is widely understood that full participation in the contemporary economy is facilitated by some postsecondary education and/or training (Aron, 2006; Flannery, Yovanoff, Benz, & McGrath-Kato, 2008; Lindstrom, Flannery, Benz, Olszewski, & Slovic, 2009; McWhirter, Rasheed, & Crothers, 2000). In today's global, knowledge-based economy, with eighty percent of the fastest growing jobs requiring some education beyond high school (Aron, 2006; McCabe, 2000), economists predict that employment in the U.S. will grow significantly for individuals with some type of postsecondary educational certificate or degree, with anticipated declines in employment rates for all other groups, including those with only a high school diploma (U.S. Department of Labor, 2010b).

In comparison to those with some college coursework, youth who exit the formal education system without, or with only, a high school education are at a disadvantage regarding access to living or family wage employment, health care, and economic stability (Blustein, 2006; McWhirter et al., 2000). Because postsecondary education is

considered the primary means to stable, living wage employment in today's economy, and because work is regarded as a means to survival, power, social connection, and self-determination (Blustein, 2006), leveling access to postsecondary education is a fundamental issue of equity and social justice.

Federal legislation over the past 70 years has attempted to address wide educational and employment disparities. Mindful of the increasing demand for high levels of education within the U.S. workforce, the U.S. government has enacted various policies to support access to postsecondary education, including the G.I. Bill of 1944, the National Defense Education Act of 1958, the Higher Education Act of 1965, the School to Work Opportunities Act of 1994, and most recently, the American Recovery and Reinvestment Act (ARRA) of 2009. Signed into law by President Obama in February 2009, one arm of the ARRA provides over 90 billion dollars in federal stimulus funds to improve K-12 education quality and promote access to and completion of postsecondary training and educational programs (U.S. House of Representatives, Committee on Appropriations, 2009). Private philanthropic organizations have also prioritized postsecondary educational transition efforts, funding programs that aim to prepare students for the challenges of postsecondary education (Sparks, 2010).

Despite federal and private funding and longstanding compulsory educational policies designed to make quality education available to all American youth, pernicious disparities in educational quality endure (Hoffman et al., 2007; Kozol, 1991, 2005; Sparks, 2010). These educational inequalities favor European American students (Hill, 2008; Hoffman et al., 2007; Munoz, 2005; Sparks, 2010), middle- and upper-income students (Beagle, 2003; Blustein et al., 2002; Bowen, Chingos, & McPherson, 2009;

Brown, Fukunaga, Umemoto, & Wicker, 1996; Hill, 2008; Hoffman et al., 2007; Sparks, 2010), students who are not first-generation college students (Hill, 2008; Sparks, 2010), and youth attending traditional, rather than alternative, educational programs (Brown, 2007; Lehr, Tan, & Ysseldke, 2009; Munoz, 2005).

Specifically, youth who are referred to alternative education programs are less likely to graduate than their traditional high school peers (Carver & Lewis, 2010; Oregon Department of Education, 2010). For example, in the local community in which this study was conducted, 46% of alternative high school students graduated in 2009, compared to 87% of traditional high school students (Oregon Department of Education, 2010). Even when alternative education students graduate, they are less likely than traditional high school graduates to leave high school with the employment and academic skills they will need to meet the current demands of the workforce (Lehr et al., 2009; Munoz, 2005).

Alternative Education: A Closer Look

The U.S. Department of Education (2002) defines alternative education as public schools designed to address the needs of students that cannot be met in traditional school settings, including those that serve as an adjunct to traditional schools, or those whose curriculum falls outside the categories of traditional, special, or vocational education. According to Raywid (1983) these alternative schools are intended to create more effective learning environments for students who have experienced previous school failure by providing low teacher-student ratios, individualized and self-paced instruction, noncompetitive performance assessments, and less structured classrooms.

Over the past decade, a growing number of bright, capable youth have been directed into alternative educational programs (Lehr et al., 2009). The National Center for Educational Statistics (NCES) identified 10,300 public alternative schools and programs for at-risk students in the U.S. in 2007-2008, serving a total of 645,500 students (Carver & Lewis, 2010). Students are released from traditional high schools to alternative education programs for a variety of reasons, including chronic truancy, evidence of emotional and behavioral problems, chronic academic failure, and pregnancy/parenthood (Carver & Lewis, 2010; Fuller & Sabatino, 1996; Munoz, 2005). These youth are often among the most socioculturally and academically marginalized in the education system, identified by some educational scholars as "educationally at-risk of pervasive underachievement…and persistent economic disenfranchisement" (Munoz, 2005, p. 4).

Although alternative education programs were designed to provide targeted supports to behaviorally and educationally at-risk students, evidence of the effectiveness of alternative education on students' educational and socioemotional outcomes is mixed (Carruthers et al., 1996; Cox, 1999; Cox, Davidson, & Bynum, 1995; Lehr et al., 2009). Some educational researchers have suggested that these mixed findings are due in part to the inappropriate implementation of alternative educational programs (Arnove & Strout, 1980; Munoz, 2005), some of which may essentially serve as a means to eliminate "problem" students from traditional schools (Cox, 1999). This "dumping" practice is particularly concerning when we consider evidence of peer contagion effects resulting from aggregating youth at risk of delinquent behavior without adequate structure and supervision (Dishion & Dodge, 2005). This literature suggests that programs, including

educational settings, designed to serve at-risk students may inadvertently increase problem-behaviors by providing opportunities for delinquent youth to socialize with one another (Dishion & Dodge, 2005; Dishion & Stormshak, 2007).

Even with adequate supervision and structure, the exclusionary process by which students are referred to alternative education may have negative effects. For some youth, being referred to alternative education is experienced as confirmation of differential or unfair treatment of students, or as evidence of personal inadequacy (Brown, 2007). For example, in a qualitative study focusing on alternative school students' psychological wellbeing, some alternative education students were described as endorsing feelings of hopelessness about their educational futures and distrust of the educational staff and academic programs on which they were reliant (Brown, 2007). These alternative education students reported being labeled as "troublemakers," described feeling ostracized, and indicated that adults in their traditional schools did not care about them or believe in them (Brown, 2007, p. 449).

In this way, alternative education students may be similar to students with disabilities, who often endorse discouragement of achievement and low expectations from adults, internalized perceptions of inadequacy, low education-related self-efficacy, and past experiences of academic and social discrimination (Prentice, 2002). Facing a history of academic failure and low expectations about the future (Brown, 2007), many of these alternative education students express a desire to leave the educational system, and some do so before graduating. However, many alternative education students do persist, demonstrating strength and resilience in the face of many odds.

With emphasis on preventing dropout, behavior management, and academic remediation (Munoz, 2005), alternative schools may have little energy or resources to prepare students for postsecondary education, creating environments that may not overtly encourage and inform students about postsecondary educational opportunities in the same ways traditional high school contexts do (i.e., college fairs, college recruitment visits, financial aid events). Educational sociologists have noted the important influence of the high school context on students' postsecondary plans, shaping and supporting students' postsecondary goals through the transmission of social capital (Deil-Amen & Turley, 2007). For students in alternative education programs without overt postsecondary educational transition planning, the message from the school context may inadvertently be, "college is not for you." This lack of targeted transition planning is especially troubling as many alternative education students are identified as eligible for specific transition services due to their disability status. National survey results indicate that about 12% of all students in alternative schools and programs for at-risk students are special education students with Individualized Education Programs (IEP), with the majority of students served in these settings presenting with learning or emotional/behavioral disabilities (Lehr & Lang, 2003). National surveys indicated that more than half of students with disabilities enrolled in postsecondary education are at risk of academic failure (Getzel & Thoma, 2008; Hong, Ivy, Gonzalez, & Ehrenberger, 2007; National Council on Disability, 2003). One reason cited for this high dropout rate is that students with disabilities are less equipped to manage the demands of postsecondary education (Hong et al., 2007). Because we know that many alternative education programs focus on remediation over academic rigor, it is reasonable to assume that these

alternative education students may be particularly at-risk as they transition from a low-rigor environment to the more rigorous college culture.

Challenges of Postsecondary Education Transitions

Even for traditional education students with high quality secondary education preparation, there is evidence that the transition from high school to college is difficult, as the K-12 educational system is not adequately synchronized with the expectations of postsecondary educational institutions (Chiba & Low, 2007; Conley, 2005; Conley, 2007; Conley, 2010; Hoffman et al., 2007). During this time, youth are expected to navigate the increasingly complex college admissions process and secure financial aid, all while managing normative developmental tasks (Chiba & Low, 2007). For students transitioning to open-enrollment community colleges, the admissions process includes many steps for which students may not be aware of or prepared for (Deil-Amen & Turley, 2007).

The gap between high school and college may be especially wide for alternative high school and other academically at-risk students. Many special educators call for consistent, continuous, and collaborative transition support services to best serve these transitioning students (See Getzel & Thoma, 2008; Hong et al., 2007; Izzo, Hertzfeld, & Aaron, 2001; Lindstrom et al., 2009; National Council on Disability, 2004). In a multiple-site study of partnerships between Vocational Rehabilitation personnel and community college staff, Lindstrom and colleagues (2009) called for changes to service delivery options and procedures for transitioning community college students with disabilities. They recommended that transition support programs involve screening and orientation, career exploration and planning, individualized curriculum/training plans,

improved initial access to college services, and service navigation support. Even for alternative education students who do not meet criteria for special education services, transition services may be needed to support successful postsecondary outcomes for these youth. Community colleges, and particularly those with local secondary school district partnerships, are particularly well-situated to provide some of these college transition support services (Goldrick-Rab, Harris, Mazzeo, & Kienzl, 2009).

Alternative Education Outcomes: A Gap in the Literature

Despite concerns about alternative education students' wellbeing, few studies have investigated the educational and employment outcomes of alternative education students (Brown, 2007; Lehr et al., 2009). Critics charge that national studies have neglected to adequately consider the experiences of alternative education students, suggesting that these students are often "relegated to the 'hidden world' of alternative education, where their plight receives relatively little consideration" (Brown, 2007, p. 433). Existing alternative education research tends to focus narrowly on dropout rates, attendance, results of state-mandated tests, and delinquent behavior of alternative education students, with little emphasis on postsecondary educational transitions (Aron, 2006; Lehr et al., 2009; Ruzzi & Kraemer, 2006). For example, of 36 states participating in the Alternative Schools Research Project (ASRP; Lehr et al., 2009), only seven states indicated that data are collected on post-school outcomes of alternative high school students.

Extant studies of alternative high school students' experiences have been critiqued for lack of rigor, generalizability, and attention to long-term results (Carruthers et al., 1996; Cox, 1999; Cox et al., 1995; Lehr et al., 2009; Ruzzi & Kraemer, 2006). Related

qualitative studies of formerly incarcerated youth (see Todis, Bullis, D'Ambrosio, Shultz, & Waintrup, 2001; Unruh, Bullis, Booth, & Pendergrass, 2005) offer valuable and in-depth insights about students' difficulties accessing family wage employment, but do not specifically focus on the mechanisms by which at-risk students may transition to postsecondary education. Furthermore, these studies have not been connected to the larger body of literature related to education and career development of youth, or explored the role that self-efficacy, education- and career-related outcome expectations, and perceived barriers and supports may play for these students.

The transition from high school to postsecondary education is crucial (McWhirter, Rasheed, & Crothers, 2000), and it is especially important for academically at-risk students (Hong et al., 2007). Many alternative high school students lack adequate skills and supports to access and succeed in postsecondary educational environments (Aron, 2006; Lehr et al., 2009). Few studies have focused on understanding the unique needs of this population, and fewer track students over the critical transition from high school to college. Although many program evaluations of alternative education programs have been published, to date, no peer-reviewed quantitative studies exploring the unique experience of alternative education students as they transition from high school to college were available through a PsychINFO search.

Theoretical Framework

To support successful transitions for at-risk youth, we must first understand the process through which individuals make educational and career decisions. Bandura's (1986, 1997) social cognitive theory, which has been adapted to describe the career and educational experiences of marginalized youth, provides a helpful framework and

measurement constructs that are thought to be related to youths' education and career-related outcomes. Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994) outlines the processes through which educational and career interests develop, how these interests promote career-related choices, and how varying levels of career performance and persistence are achieved. Central to SCCT are three cognitive mechanisms by which people develop, pursue, and adapt their career-related interests: (a) self-efficacy beliefs, (b) education- and career-related outcome expectations, and (c) education- and career-related goals. Through practice, modeling, and feedback from important others, youth develop various academic and career-related skills, develop self-efficacy related to these skills, and form expectations about their future performance outcomes.

Within the SCCT framework, personal agency is a key element of the decision process. External contextual influences and personal factors may support or constrict personal agency. An individual's background contextual influences (e.g. socioeconomic status, access to resources); personal characteristics (e.g. sex and ethnicity; referred to as person inputs in SCCT); and learning experiences have a bidirectional influence on self-efficacy expectations, education- and career-related outcome expectations, and personal goals (Brown & Lent, 1996; Lent et al., 1994). Self-efficacy beliefs are ideas a person develops about his/her ability to accomplish specific types of activities (Bandura, 1997). An individual can possess various levels of self-efficacy for different types of tasks. In this way, self-efficacy is not a global trait, but rather specific to various domains. Within a SCCT frame, self-efficacy beliefs are based on an individual's judgments about what s/he can do in relation to education and/or work. Bandura (1997) outlined how self-

efficacy can be enhanced by personal performance accomplishments, vicarious learning experiences, social persuasion, and physiological states and reactions. Self-efficacy is thought to relate to other assessments of self-perception, including self-esteem (Bandura, 1997).

Outcome expectations are ideas a person develops about his/her likelihood of success related to specific types of behaviors (Bandura, 1997). In particular, education- and career-related outcome expectations are beliefs about the results of success in specific education- and career-related decisions and behaviors. Self-efficacy beliefs and outcome expectations are related to the development of educational and career-related interests (Brown & Lent, 1996; Lent et al., 1994; Lent et al., 2000). From an SCCT frame, youth are expected to develop interests in activities for which they have positive self-efficacy beliefs and positive outcome expectations (Brown & Lent, 1996; Lent et al., 1994; Lent et al., 2000). Opportunities for self-exploration and access to information about the world of work are critical for fostering career expectations that are realistic and likely to lead to satisfaction. Outcome expectations are related to youth reports of optimism and hope for the future (Bandura, 1997).

Because SCCT takes context into account, perceived barriers and supports are thought to mediate the relationship between self-efficacy, outcome expectations, goals, and action toward career attainment. When barriers to success are perceived, and are assessed as too difficult to overcome, a person may eliminate an educational or career choice (Albert & Luzzo, 1999; Kenny, Blustein, Chaves, Grossman, & Gallagher, 2003; Luzzo & McWhirter, 2001; McWhirter, Torres, Salgado, Valdez, 2007). As Brown & Lent (1999) noted, the empirical literature has not demonstrated clear and consistent links

between perceived barriers and career outcomes, recommending that more careful study of perceived barriers, as well as efforts to improve the support networks of individuals engaged in the career choice process. In studies using a SCCT frame, high school and college students have been noted to perceive a substantial number of barriers to educational and career goal attainment (Luzzo, 1993, 1995; McWhirter, 1997; Swanson & Daniels, 1994).

Hackett and Byars (1996) suggested that, when working with individuals who perceive a greater number of barriers, including women and students of color, career counselors should work first on skill-building and self-efficacy development, while also contributing to collective efforts to resolve societal problems and barriers. In the face of barriers, it is important that students develop task-related skills and self-efficacy, as well as developing skills to overcome anticipated barriers and obstacles (Ali & McWhirter, 2006; Ali, McWhirter, & Chronister, 2005; Luzzo & McWhirter, 2001). For example, students transitioning to a community college context may benefit from direct training in task-related skills relevant to the community college context, as well as information that normalizes the mistakes new community college students tend to make, and how to avoid those mistakes.

For youth who find themselves in marginalized or oppressive contexts, self-concept and ideas about the world of education and work may be circumscribed or less fully developed in comparison to those of youth with greater access to educational and career exploration opportunities, negatively influencing postsecondary educational plans (Anctil, Ishikawa, & Scott, 2008; Deil-Amen & Turley, 2007; Gottfredson, 1981; Hackett & Byars, 1996). Programs designed to support successful postsecondary transitions must

take into account and directly address these powerful contextual influences as well as the developmental experiences of marginalized youth. Interventions may be particularly impactful during late adolescence through the period of early emerging adulthood (Arnett, 2000, 2004), during a time when adult trajectories begin to form (Dishion & Stormshak, 2007). This is a time when youth are expected to explore their world with more independence, and when the seeds of future educational and career planning may begin to form (Arnett, 2000, 2004; Aseltine & Gore, 2005; Herr, 1996). During this time, ecological experiences are thought to generate perceptions of the world of work, including beliefs about the educational and other requirements for access to jobs and who is likely to succeed in various types of employment (Herr, 1996). As they begin to transition from adolescence to adulthood, youth are expected to make decisions, intentionally or otherwise, that relate directly to their postsecondary opportunities and plans. Based on these developmental expectations, interventions designed to support education and career-related cognition and skill development of youth are indicated (Luzzo & McWhirter, 2001; McWhirter, Rasheed, & Crothers, 2000).

For example, in a study exploring influences on high school students' career expectations, Paa & McWhirter (2000) investigated high school students' perception of factors that influenced their career expectations. Results indicated that youth perceive their career expectations to be influenced by personal, background, and environmental factors. In this study, personal variables, such as interests, personality, and values, had a stronger influence on high school students' career motivation than did background or environmental variables examined, such as ability, role models, or the media. Because school counselors ranked low on students' perceived influences, the authors suggested

that increasing environmental support and encouragement from teachers, pro-social peers, and other role models might be a critical component of interventions designed to help youth overcome barriers to their educational and career goals.

In one such intervention, brief exposure to SCCT-informed instruction demonstrated short-term gains in self-efficacy and self-reported career-related expectations for high school youth (McWhirter, Rasheed, & Crothers, 2000). A nine-week career education course designed to assist students in increasing knowledge, skills, and resources to make a successful transition from high school to postsecondary education, training, or work was implemented, and measures of career decision-making self-efficacy, vocational skills self-efficacy, and outcome expectations were collected from participating and wait-listed high school sophomores. This study, like many others in the SCCT literature, utilized self-report career expectations and educational plans as short-term outcomes thought to approximate later career-choice behaviors. Results of the study suggested that the career education class was associated with significant increases in career decision-making self-efficacy and vocational skills self-efficacy. Treatment effects of self-efficacy were still evident at nine-week follow-up. Increased self-efficacy is theoretically associated with the likelihood that students will persist in their endeavors in the face of obstacles. Although outcome expectations were also significantly higher immediately following the intervention, effects wore off by the nine-week follow-up. These findings support that school-based interventions may be effective at improving important career-related psychological variables. McWhirter and colleagues (2000) recommended that future studies utilize a similar course component and track outcomes over a longer period of time.

As Gysbers (1997) and Worthington and Juntunen (1997) emphasized, counseling psychologists can play an important role in designing studies that explore key psychological aspects of postsecondary transitions. SCCT provides a theoretical framework for specifying psychological variables of importance to this transition process. Specifically, assessment of education related self-efficacy expectations, education related outcome expectations, and perceived barriers and supports might serve as valuable short-term outcome indicators of educational outcomes.

Purpose of Study

Working within a Social Cognitive Career Theory (SCCT) framework, this study explores outcomes associated with participation in a College Transition Support Program (CTSP), a dual-enrollment (high school and community college) transition support program, in comparison to a no-treatment (College-Only) comparison group of former alternative high school students.

Brief Introduction to the College Transition Support Program

Mindful of the myriad challenges faced by alternative high school students, and in the face of poor college outcomes (e.g. college grades, persistence) for these students, the College Transition Support Program (CTSP) was designed and developed jointly by the Principal Investigator, colleagues in the High School Connections department of a local community college, local school district alternative education administrators, special education teachers, instructors, and support staff during the 2008-2009 academic year. The CTSP was piloted during the 2009-2010 academic year, and has served over one hundred students to date.

CTSP includes a set of supports available through the High School Connections office at the community college, in partnership with the local public school district, notable for its formal application and selection process, preliminary and ongoing academic preparation and college support classes taught at the high school, part-time Transition Specialist at the high school, communication between college and high school support staff, a mandatory first-term *College Success: High School Transitions* class, and structured requirements to take a reading/writing course the second term. CTSP seeks to combine academic preparation interventions and ongoing supportive interventions, together with public education funding, to help alternative high school students successfully transition to the postsecondary education context. Table 1 summarizes information about CTSP intervention and comparison program components. The College Transition Support Program is described in greater detail in the methods section.

TABLE 1. CTSP & College-Only Comparison Group Components

CTSP College Transition Support Program *Dually Enrolled HS/College Students*	College-Only No Intervention Comparison Group *Non-HS College Students*
• Targeted HS program orientation • Program application and HS selection process • HS college prep class • HS college placement testing prep class • Placement testing • Targeted college orientation • Targeted college advising • First term on-campus, targeted *College Success* class • Ongoing HS-based college support class • Weekly *College Success* student attendance and performance updates shared with HS transition specialist • Mid-term progress reports collected and shared with students and HS staff • Targeted HS transition specialist available • Preventive plans of assistance for all students • Reactive/responsive plans of assistance for failing students • Term-by-term grade reports to HS staff • Transition support for alternative funding sources (e.g. orientation to and support with FAFSA applications)	• Placement testing • *General college orientation* • *General college advising*

Current Study

The current study explored whether participation in the CTSP was associated with changes in a number of key outcomes including: college self-efficacy, hope, future educational aspirations and goals, academic achievement-related expectations, academic achievement-related fears, academic achievement-related expectation-fear balance, perceived support, perceived barriers, locus of control, depression, and anxiety, as well as college persistence, and college grades. To better understand the unique needs of transitioning alternative high school students, the relationships between student demographics (e.g. age, sex, ethnicity, SES, disability status, placement test scores) and outcome variables were also explored (See Figure 1).

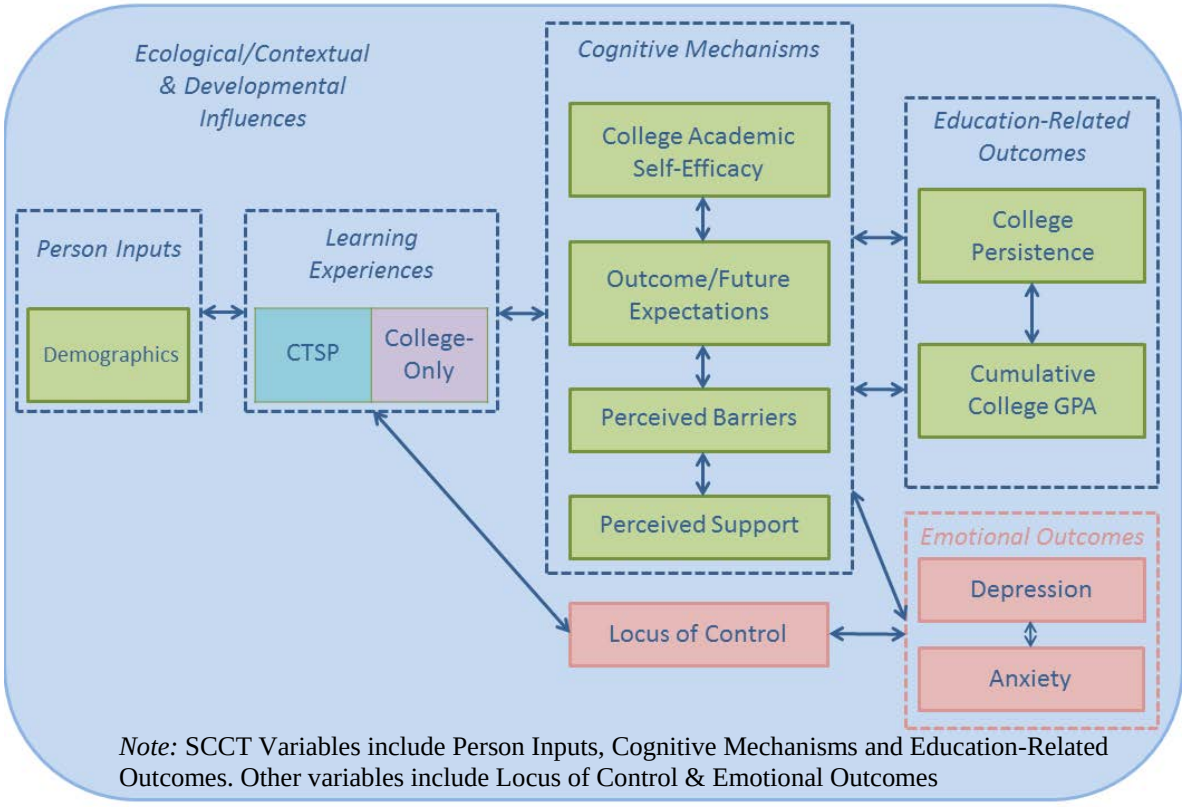


FIGURE 1. Conceptual Model of Predicted Relationships among Study Variables.

Experiences of participating CTSP students were chiefly evaluated against one non-equivalent comparison group, non-dually enrolled (College-Only) students who indicated they attended a local alternative high school before transitioning to college. These students did not access supports from the High School Connections office at the college. In addition, baseline comparisons of non-dually enrolled alternative high school students (HS-Only) were conducted to test for significant difference between the HS-Only students as compared to CTSP and College-Only students.

Value of Study

Although there is a broad body of literature exploring the role that SCCT variables play in the postsecondary experiences of youth, past studies that included SCCT variables used proxy measures such as career- and education-related expectations and goals as outcomes and have not tracked students over the critical transition from high school to college to determine if these self-reports reflect or predict actual education- and career-related behaviors (e.g. college enrollment, college cumulative GPA). Given the traditionally poor postsecondary educational outcomes for this alternative high school population, in addition to the lack of research focus on these youth, this is an important area of study that warrants further research attention.

Research Questions and Hypotheses

The study was organized according to the following research questions:

1. Is participation in the College Transition Support Program (CTSP), as compared to the College-Only non-equivalent comparison group, associated with change in (a) college self-efficacy, (b) outcome/future expectations as measured by (b_1) hope and (b_2) future educational aspirations and goals, (c) perceived barriers, (d)

perceived support, (e) locus of control (f) depression, and (g) anxiety? It is hypothesized that participation in the CTSP will be associated with (a) greater college self-efficacy, (b) greater outcome/future expectations (c) lower perceived barriers, (d) greater perceived support, (e) greater locus of control, (f) lower depression, and (g) lower anxiety.

2. Is participation in the CTSP, as compared to the College-Only non-equivalent comparison group, associated with (a) college retention/persistence or (b) cumulative college GPA? It is hypothesized that participation in the CTSP will be positively related to college retention/persistence and cumulative college GPA.
3. Is participation in the CTSP, as compared to the College-Only non-equivalent comparison group, associated with differences in the pattern of reporting academic achievement-related expectations and fears over time as measured by (a) academic achievement-related expectations, (b) academic achievement-related fears, and (c) academic achievement-related expectation-fear balance? It is hypothesized that participation in the CTSP will be positively related to academic achievement-related expectations and fears, as well as balance between academic achievement-related expectations-fears.
4. Do key demographic variables (e.g. age, sex, ethnicity, SES, disability status, placement test scores) predict trends over time on each of the study's outcome variables?
5. If key demographic variables (e.g. age, sex, ethnicity, SES, disability status, college placement test scores) emerge as statistically significant predictors of trends in outcome variables over time, do these demographic variables change the

relationship of the CTSP program to the weighted linear combination of dependent variables in the multivariate model?

CHAPTER II

METHODOLOGY

This study utilized a quasi-experimental design with between- and within-subjects measurements. There were two independent variables (IVs) and 13 dependent variables (DVs). The IVs were group condition and time. Group condition had three levels: (a) College Transition Support Program participation (CTSP), (b) no treatment College-Only student comparison group (College-Only), and (c) no treatment HS-Only student control group (HS-Only). Component differences between CTSP and the College-Only comparison group are provided in Table 1. The second IV, time, had three levels: (a) Time1 – Fall 2010, (b) Time2 – Winter 2011, and (c) Time3 – Spring 2011. The DVs were (a) college self-efficacy, (b) outcome/future expectations as measured by (b_1) hope, (b_2) future educational aspirations and goals, (b_3) academic achievement-related expectations, (b_4) academic achievement-related fears, and (b_5) academic achievement-related expectation-fear balance, (c) perceived barriers, (d) perceived support, (e) locus of control, (f) depression, (g) anxiety, (h) college persistence, and (i) cumulative college GPA. Participants completed self-report measures related to eleven of the variables at each of the three time points, and data from the community college were collected to track college persistence and cumulative college GPA.

Participants

Participants comprised 275 high school and college participants, including: (a) CTSP participants – 34 dually enrolled alternative high school/community college students in the CTSP intervention condition, (b) College-Only participants – 34 recent alternative high school completers/leavers in their first year of coursework at the

community college, and (c) HS-Only participants – 207 non-college, high school juniors and seniors from participating alternative high schools. The 207 HS-Only participants were included for baseline comparison purposes only. Longitudinal data at three time points were collected for a total of 68 participants (34 CTSP, 34 College-Only).

Sample Demographics

Sample demographics are displayed in Appendix A. When statistically significant differences between the intervention groups emerged, demographics are reported for the full sample as well as the longitudinal sample. The mean age for the full sample was 17.60 (*Md* = 17.00, *Mode* = 17.00, *SD* = 1.41). The mean age for the longitudinal (CTSP and College-Only) subsample was 18.87 (*Md* = 19.00, *Mode* = 18.00, *SD* = 1.43). Sex composition of the full sample was 54% male and 46% female, while sex composition for the longitudinal sample was 57% female and 43% male. The self-identified ethnicity of the participants was as follows: White or European American, 58.6% (*n* = 163); Bi-Racial, 14.0% (*n* = 39); Hispanic/ Latina(o)/ Chicana(o), 9.4% (*n* = 26); American Indian or Alaskan Native, 6.1% (*n* = 17); Multi-Racial, 3.6% (*n* = 10); Black or African American, 1.4% (*n* = 4); Asian American/ Pacific Islander, 1.1% (*n* = 3); Other, 1.1% (*n* = 3); and not reported, 3.6% (*n* = 10). When ethnicity was treated as a dichotomous variable due to small cell size in the current sample, demographics were as follows: White or European American, 58.6% (*n* = 163); all other ethnicities, 37.8% (*n* = 102); not reported, 3.6% (*n* = 10). In terms of socioeconomic distribution of participants, 32.0% of the full sample endorsed being poor or working class, and 44.0% of the longitudinal sample reported being poor or working class. 37% of the full sample endorsed having a disability diagnosis.

These 275 participants represent 76% of the total population of 362 students who were eligible to participate, including 38 students participating in the CTSP during the 2010-2011 academic year (89% recruited/completed, *n* = 4 declined participation or failed to complete initial survey within time limit); 48 eligible College-Only students identified by the college's Institutional Research, Assessment, and Planning office during the 2010-2011 academic year (73% recruited/completed, *n* = 13 declined participation or failed to complete initial survey within time limit), and 276 HS-Only students enrolled at the three participating alternative high schools (75% recruited/completed, *n* = 66 not at school during baseline assessment, and *n* = 3 declined participation).

A total of 401 paper surveys were collected over the three timepoints. If a participant indicated that s/he had not attended an alternative high school, his/her data were not included in the sample. One participant who was originally screened into the study by phone later indicated he had attended an International Baccalaureate (IB/Honors) high school program rather than an "alternative" program as defined by the study, and was therefore excluded from analyses. This resulted in a final full sample of 68 participants (34 CTSP, 34 College-Only) who completed longitudinal analyses, and an additional 207 High School-Only participants who completed the Time1 baseline assessment only. Eight of the 68 participants failed to complete all three waves of data, resulting in incomplete data for 12% of participants. Of the 204 possible longitudinal surveys collected over the study's three time points, 194 were collected, resulting in 95% of possible surveys collected.

Procedures

Approval and Support

The High School Connections and Counseling and Career and Employment Services offices at the community college were informed of and expressed formal support of this project. Administrators of the local school districts and the Institutional Research, Assessment, and Planning Office at the community college provided letters of support for this study. A Human Subjects Protocol was prepared and Institutional Review Board approval was obtained before participants were contacted or data were collected (See Appendix B for Human Subjects approval and letters of support).

Recruitment

Participants for the intervention study were recruited in multiple ways (See Appendix C for recruitment materials). HS-Only participants and participants already affiliated with CTSP were asked to participate at their high schools, and were offered high school class time to complete questionnaires. Paper questionnaires were administered by high school personnel at high schools during high school class time for dually-enrolled students. When necessary, the principal investigator met individually with CTSP students who did not complete surveys at their high schools.

CTSP participants received a handout describing the research, and were asked to participate by their high school transition specialists and high school special education teachers. Passive consent forms were sent home to parents/guardians of all students who were under age 18 (See Appendix D for consent/assent forms).

To recruit non-CTSP affiliated participants, the principal investigator accessed names and contact information of potentially eligible students through the Institutional

Research, Assessment, and Planning Office at the community college via phone and email, describing the research study and inviting students to participate. Participants in the College-Only comparison group were identified by and recruited in collaboration with the Institutional Research, Assessment, and Planning office to approximately match dually-enrolled students by age (16-22yo); Accuplacer college reading placement test score at or above 55/120, the score used to determine whether students are eligible to take developmental, credit-level college courses (and also required for CTSP eligibility); and high school affiliation (i.e., alternative schools only, based on high school code students select when they applied to the college). These participants were asked to complete the paper questionnaires at individually arranged times on the community college campus or at locations off campus, as determined on an individual basis to be most convenient for participants. All questionnaires were administered by the principal investigator.

Compensation

Incentives were provided to increase recruitment and improve retention and full participation at all study measurement opportunities. CTSP and HS-Only participants were invited to participant in a high school-based pizza party during the first survey administration (Time1, Fall 2010). At Time2 (Winter 2011), CTSP participants who completed the survey received $10 in the form of a choice of a gift card to either Target or Fred Meyer. At Time3 (Spring 2011), CTSP participants who completed the survey received a $25 gift card. College-Only participants were offered a $10 gift card following completion of survey at Time1 and Time2 and a $25 gift card at Time3. In this way, HS-Only participants who completed the baseline assessment were eligible to earn a pizza party, CTSP participants were eligible to earn a pizza party and a total of $35 for

full study participation, and College-Only participants were eligible to earn a total of $45 for full study participation. Student participants were allowed to opt not to complete the full battery and still participate in the study.

Data Collection and Storage

Data were collected over the course of the 2010-2011 academic year. Before administration, an introductory verbal script was read by the proctor. This script included (a) a brief description of the study, including the approximate length of time it should take to complete the survey, (b) a description of the incentive to be earned by completing the full survey, and (c) information about confidentiality of surveys. Student assent was assumed by completion of the survey. The survey was expected to take an average of 30-40 minutes for participants to complete at each administration point. Most study participants completed the surveys in 25-35 minutes.

To ensure confidentiality of student responses, surveys included a cover page with students' names and college student ID numbers, which corresponded to Study ID codes that were used to link student data over the three survey administrations. Cover pages were removed by participants immediately following survey completion so that data packets included no identifying information. All protocols for securing data were strictly followed. All available data were analyzed.

Database Management

The study utilized Teleform™, a software application used to create forms for collecting data, distributing surveys, and then reading the data using a scanner. When forms produced with Teleform™ are completed and returned, the software automatically interprets hand and type-printed text. Data that may have been incorrectly completed or

mismarked are identified and held for review and verification. After a form is verified, its data are stored and exported. Use of Teleform™ reduced the likelihood for data entry error.

Once data were entered into an external database through the Teleform™ export process, the dataset was spot-checked to ensure that item-level data were recorded in the data as planned.

Measures

In this section, I describe each of the measures used in this study. All measures are included in Appendix E. Table 2 provides an overview of study constructs and their associated measures.

Self-report data were collected from all study participants at three time points – Fall 2010, Winter 2011, and Spring 2011.

Demographic Information. Participants were asked to complete a demographics questionnaire that included information such as their age, sex, ethnicity, household makeup, subjective and objective socioeconomic status, disability status and type, and college supports accessed. Specifically, students were asked to report on both their subjective or perceived social status, as well as more common, objective markers of social class, including family income and parent education, to provide more detailed information about how students perceive themselves in relation to peers in terms of social class (Fouad & Brown, 2000; Goodman, Alder, Kawachi, Frazier, Huang, & Colditz, 2001; Liu & Ali, 2005; Liu & Ali, 2008; Liu, Ali, Soleck, Hopps, Dunston, & Pickett, 2004; Singh-Manoux, Alder, & Marmot, 2003). In addition participants were asked to

indicate their chosen major or occupation if one had been selected, and level of confidence with those choices, along with other demographic contextual variables.

TABLE 2. Study Constructs & Measures

Construct	Measure	Number of Items	Purpose	Variable Type
Background contextual factors	Demographics/ Background Questionnaire	32	Describe background & contextual variables	Varies
Academic Self-Efficacy	College Academic Self-Efficacy Scale	13	Measure self-efficacy related to common academic college tasks	Ordinal Range = 1 to 8
Outcome/Future Expectations	Future Aspirations and Goals subscale of Student Engagement Instrument (SEI)	4	Measure outcome expectations	Ordinal Range = 1 to 4
	State Hope Scale	6	Measure perceived hope, optimism, and expectations about the future	Ordinal Range = 1 to 4
	Possible Selves Questionnaire	8	Measure hoped/feared future expectations	Open-ended and Binary (Yes/No)
Perceived Barriers	Perceptions of Barriers Scale	28	Measure perception of barriers	Ordinal Range = 1 to 4
Perceived Support	Social Provisions Scale (Reliable Alliance and Guidance Subscales)	8	Measure perceived instrumental and guidance social support	Ordinal Range = 1 to 4
	College Preparation & Support Scale[a]	4	Measure perceived assistance with college preparation and support with college-related tasks	Ordinal Range = 1 to 5
	College Advisor Access Scale[a]	3	Measure perceived access to college advisor	Ordinal Range = 1 to 5
Locus of Control	Perceived Academic Control Scale	8	Measure perceived academic locus of control	Ordinal Range = 1 to 4
Depression	Patient Health Questionnaire-8	8	Measure symptoms of depression	Ordinal Range = 0 to 3
Anxiety	State-Trait Anxiety Inventory	8	Measure symptoms of anxiety	Ordinal Range = 0 to 3
College Persistence	Registered/not registered	0	Measure term-by-term college enrollment	Ordinal Range = 0 to 2
College GPA	Cumulative college GPA	0	Measure cumulative college GPA	Continuous 0.00 – 4.00+

Note: [a]Non-validated measure developed by principal investigator for purposes of the current study.

College Self-Efficacy. The College Self-Efficacy Inventory (CSEI; Solberg, Villareal, Kennel, & Davis, 1993) measures college students' confidence in their ability

to complete specific college-related tasks. The CSEI consists of 20 items related to common tasks college students face, including "tak[ing] good class notes," "ask[ing] a professor/instructor questions outside of class" and "participat[ing] in class discussions." Items are scored on an 8-point scale (from "1 = no confidence at all" to "8 = complete confidence"). Seven of the items relate to dormitory-style living arrangements and load on to a factor called "roommate self-efficacy" (e.g. "divide space in your residence" and "divide chores with others you live with." As roommate relationships were not directly addressed in the intervention, those seven items were excluded, leaving 13 items that load onto two subscales – seven items for course self-efficacy and six items for social self-efficacy. In its original 20-item form, the CSEI demonstrated strong reliability, with full scale $\alpha = .93$ and subscale $\alpha = .88$.

Outcome/Future Expectations. The State Hope Scale (SHS; Snyder et al., 1996) is a 6-item scale designed to measure hope as it is related to the ongoing events in people's lives. The State Hope Scale is intended to provide a "snapshot of a person's current goal-directed thinking. Respondents are asked to rate how true statements are, from "1 = definitely false" to "8 = definitely true"). Items include, "At the present time, I am energetically pursuing my goals" and "At this time, I am meeting the goals that I have set for myself." In application with a group of 444 college students, the scale produced Chronbach's $\alpha = .93$.

The Student Engagement Instrument (SEI; Appleton et al., 2006) is a 33-item self-report survey designed to measure five subtypes of student engagement: Teacher–Student Relationships (TSR), Control and Relevance of School Work (CRSW), Peer Support for Learning (PSL), Future Aspirations and Goals (FG, previously referred to as

Commitment to and Control over Learning by Appleton et al., 2006), and Family Support for Learning (FSL).

TSR, PSL, and FSL are intended to tap student psychological/affective engagement, and CRSW and FG are aimed at measuring student cognitive engagement. Respondents indicate their level of agreement with each item using a 4-point Likert-type scale (from "1 = strongly agree" to "4 = strongly disagree") Previous research produced internal consistency estimates ranging from $\alpha = .72$ to $\alpha = .88$ for the five subscales, with evidence supporting the validity of scores with a wide range of intended outcomes related to engagement (Appleton et al., 2006). For purposes of this study construct, the Future Aspirations and Goals ($\alpha = .80$) subscale was utilized. This subscale includes five items that tap cognitions related to future educational goals and aspirations, with items including, "going to college after high school is important," "school is important for achieving my future goals" and "my education will create many future opportunities for me."

The Possible Selves Questionnaire (PSQ; Oyserman & Markus, 1990) is an open-ended self-concept measure designed to assess adolescents' hoped-for, expected, and feared selves one year in the future. The measure is designed to assess the specific images, conceptions, and feelings that adolescents have of their potential and their future. The PSQ employs a coding system to identify themes in respondents' future descriptions, including categories of achievement, interpersonal relationships, personality traits, physical/health-related, material/lifestyle, and negative/non-normative/risky behaviors. The author reports 95% interrater reliability and a three-week test-retest reliability of $\alpha = .90$, and evidence suggests that the PSQ correlates with close-ended self-report

inventories measuring similar constructs, including Rosenburg's Self-Esteem and Optimism for the Future scales (Oyserman & Markus, 1990).

The Possible Selves Questionnaire was designed as a qualitative measure, with content coded following Oyserman and Marcus (1990). In all, 411 PSQs were collected and coded per the Oyserman and Marcus (1990) guidelines by a team of three coders. Coders worked under supervision of the PI until 95% interrater reliability was achieved (i.e., 22/23 possible ratings per PSQ coding sheet were congruent between coders). Coder disagreements were discussed to reach agreement. Once 95% reliability was achieved, the PI conducted spot checks on every fifth questionnaire to insure coder reliability was maintained. Based on spot checks of 20% of the full sample, 95% interrater reliability was maintained across coding.

For purposes of this study, only the PSQ academic achievement-related categories were analyzed, including three levels: (a) academic achievement-related expectations, (b) academic achievement-related fears, and (c) academic achievement-related expectation-fear balance. Academic achievement-related expectations and fears are considered balanced against one another if an individual generates an expectation and also produces a fear or desire to avoid the opposite result. For example, if a student expects to earn passing grades in college courses, that student might also be fearful of failing college classes. Participants who generated a related expectation and fear were coded as having a "balanced" response set.

Perceived Barriers. The Perceptions of Barriers Scale (POB) is a 28-item, 4-point Likert-type measure (from "0 = not at all likely" to "3 = definitely") adapted by McWhirter, Rasheed and Crothers (2000) from the earlier McWhirter (1992) Perceived

Barriers inventory to measure high school students' perceptions of educational and career barriers. Luzzo and McWhirter's (2001) version of the POB scale was used in this study. Sample items include, "not knowing what kind of school or training I want" and "school too stressful." Luzzo and McWhirter (2001) reported a Cronbach's alpha value of $\alpha = .89$ for career-related barriers, $\alpha = .91$ for education-related barriers, and full-scale reliability of $\alpha = .93$.

Perceived Support. The Social Provisions Scale (SPS; Russell & Cutrona, 1984) is a 24-item scale designed to measure the degree to which individuals' social relationships provide various dimensions of social support, including attachment, social integration, reassurance of worth, reliable alliance, guidance, and opportunity for nurturance. The scale correlates well with other measures of social support, including the UCLA Loneliness Scale and the Provisions of Social Relationships Inventory. Overall, the questionnaire has acceptable internal consistency, with highest scores ($\alpha = .66$-$.70$) found on the reliable alliance and guidance subscales. Because the social support most closely targeted in this study mapped on well with the reliable alliance and guidance subscales, and because other subscales demonstrated weak internal consistency, these subscales were excluded. Reliable alliance items are intended to tap individuals' sense that "others can be counted upon for tangible assistance," with items including, "there are people I can depend on to help me if I really need it" and "if something went wrong, no one would come to my assistance." Guidance items are designed to measure an individuals' perception that others are available to provide "advice or information," including "there is someone I could talk to about important decisions in my life" and "there is a trustworthy person I could turn to for advice if I were having problems."

The College Preparation and Support Scale was created for the current study. The measure was designed to measure college students' perception of preparation for and support with college readiness. This measure included four items: (1) *I have had good preparation to start college this year (e.g. support with placement testing, orientation to college, registration assistance),* (2) *I know someone who is knowledgeable about college, who I could ask general college questions,* (3) *I know someone who is available to help me with college homework if I am stuck,* and (4) *There is someone who believes in me and wants me to do well in college*. Respondents were asked to rank their responses on a 5-point scale (from "1 = strongly disagree" to "5 = strongly agree"). After these questions, students were asked, "if you receive any of the above supports, who provides you with assistance?" and asked to check any of the following options, (a) parent(s)/guardian(s); (b) sister(s)/brother(s); (c) teacher(s) at my high school; (d) college instructors; (e) college advisor(s); (f) friend(s) from my high school; (g) friends at college. Internal consistency reliability for these items was good (4 items; $\alpha = .818$).

The College Advisor Access Scale was created for the current study. The measure was designed to measure college students' perception of availability of, access to, and comfort working with their college advisor/counselor. The measure included three items: (1) *I know how to reach my college advisor/counselor for registration clearance and other assistance,* (2) *my college advisor/counselor is available when I have questions or need assistance,* and (3) *I feel comfortable talking to my college advisor/counselor*. Respondents were asked to rank their responses on a 5-point scale (from "1 = strongly disagree" to "5 = strongly agree"). Internal consistency reliability for these items was acceptable (3 items; $\alpha = .708$).

Locus of Control. The Perceived Academic Control Scale (PACS; Perry, Hladkyi, Pekrun, & Pelletier, 2001) is designed to assess academic locus of control. The measure includes eight items; four items are positively worded (e.g., "The more effort I put into my courses, the better I do in them") and four are negatively worded (e.g., "No matter what I do, I can't seem to do well in my courses"), with responses ranging on a 5-point scale (from "1 = strongly disagree" to "5 = strongly agree"). High scores reflect higher perceived personal control or high internal locus of control. Psychometric properties are reported to be moderate, with α ranging from .75 to .83 (Perry et al., 2005; Ruthig et al., 2007).

Depression. The Patient Health Questionnaire (PHQ; Spitzer et al., 1999) is a self-administered version of the Primary Care Evaluation of Mental Disorders (PRIME-MD) diagnostic instrument used by physicians. The PHQ-8 (PHQ-8; Spitzer et al., 1999) is the PHQ's depression module excluding suicidal thoughts, which scores eight of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) criteria for depression on a 4-point scale (from "0 = not at all" to "3 = nearly every day"). The PHQ-8 is considered an effective and efficient means to identify concerns associated with depressed mood and behavior, including "feeling down, depressed, or hopeless" and "feeling bad about yourself – or that you are a failure or have let yourself or your family down." In studies including over 6,000 outpatient medical clinic patients (Kroenke, Spitzer, & Williams, 2001), the PHQ-8 demonstrated excellent reliability, with α ranging between .86-.89. This inventory also demonstrates solid criterion validity, with increasing PHQ-8 scores correlating with a greater likelihood of a diagnosis of major depression.

Anxiety. The State-Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970) was designed to measure symptoms of anxiety, including current emotional "state anxiety" and "trait anxiety," or long-term, personality-related anxiety. The STAI state anxiety subscale is a 10-item measure feelings of apprehension, tension, nervousness, and worry on a 4-point scale (from "0 = not at all" to "3 = very much so"). Individuals are asked to endorse the response that corresponds to how they feel as they complete the questionnaire, reporting the intensity of their feelings of anxiety *"right now, at this moment,"* with items including "I am relaxed" and "I feel nervous." The STAI correlates well with other well-known scales of anxiety, including the Anxiety Scale Questionnaire (ASQ) and the Manifest Anxiety Scales (MAS), with correlations ranging between .73-.85 (Spielberger et al., 1995). Because the trait subscale of the STAI is intended to measure elements of anxiety that are expected to be stable over time and are not particularly sensitive to context or intervention, these items were not included in the current study.

College Persistence/Retention. For purposes of this study, college retention was operationalized as enrollment in credit-level coursework during Week 2 of each term (including developmental coursework as appropriate). Enrollment was recorded at Week 2 to capture all students who enrolled, regardless of subsequent withdrawals. Week 2 was used as the benchmark because it reflects the first week during which a student's withdrawal appears on the college transcript. During Week 1, students may withdrawal without financial penalty, and the course never appears on the student's transcript.

Weighted Cumulative College GPA. For purposes of this study, it was necessary to transform simple 0.0–4.3 college grade point averages into a numeric GPA scale (see

Table 3). This numeric GPA scale attaches a numeric value to non-letter grades, such as Pass (P), No Pass (NP), Withdrawal (*), No Credit (NC), and Incomplete (I). The numeric GPA scale, which is used by the college to assess Quality Points, is as follows:

TABLE 3. Numeric Grade Point Average Transformations

A = 43	B+ = 33	C+ = 23	D+ = 13	F = 5
A = 40	B = 30	C = 20	D = 10	I = 0
A- = 37	B- = 27	P = 20	D- = 7	W = 0
		C- = 17	NP = 5	NC = 0

Note that a student earns a GPA of 0.50 for a grade of "F" or "NP," and a GPA of 0.00 for courses from which s/he withdrew or earned an incomplete or grade of no credit. These last three categories (i.e., withdrawal, incomplete, and no credit) reflect grades earned when a student has failed to attend a course through the end of finals week, whereas courses with "F" and "NP" grades were likely completed, although not in an academically satisfactory manner. Note also that the numeric system assigns a GPA of 2.0 (equivalent to a "C") for a grade of "P." This numeric system is preferable for quantitative analyses because it distinguishes more carefully between non-letter grades, which all count as a GPA of 0.00 in a traditional GPA system (e.g. grades of P and NP would count equally, as 0.00).

Internal Consistency Reliability of Dependent Measures

To examine the internal consistency reliability of items within each dependent measure, Cronbach's alpha tests were conducted at each of the three data collection time points. George and Mallery (2003) suggest the following rules for evaluating alpha coefficients, "> .9 excellent, >.8 good, > .7 acceptable, > .6 questionable, > .5 poor, < .5 unacceptable" (p. 231).

Cronbach's alpha for each time point (Time1, Time2, Time3 respectively), are presented in Table 4. Results were as follows: *College Academic Self-Efficacy Scale* (13 items; α = .916, .938, .956), *State Hope Scale* (6 items; α = .716, .903, .884), *Future Aspirations and Goals subscale of Student Engagement Instrument* (4 items; α = .856, 860, .891), *Perceptions of Barriers Scale* (28 items; α = .899, .930, .912), *Social Provisions Scale* (8 items; α = .876, .912, .909), *Perceived Academic Control Scale* (8 items; α = .802, .860, .842), *Patient Health Questionnaire 8 – Depression* (8 items; α = .868, .892, .881), and *State-Trait Anxiety Inventory* (10 items; α = .805, .862, .883). Internal reliability for all measures ranged between acceptable and excellent.

TABLE 4. Internal Consistency Reliability of Dependent Measures

Measure	Items	α Time1	Time2	Time3
College Self-Efficacy	13	.916	.938	.956
Hope	6	.716	.903	.884
Future Aspirations & Goals	4	.856	860	.891
Perceived Barriers	28	.899	.930	.912
Perceived Social Support	8	.876	.912	.909
College Prep. & Support[a]	4	-	-	.818
College Advisor Access[a]	3	-	-	.708
Locus of Control	8	.802	.860	.842
Depression	8	.868	.892	.881
Anxiety	10	.714	.705	.704

Note: Time1 = Fall 2010; Time2 = Winter 2011; Time3 = Spring 2011; [a]Non-validated measure developed by principal investigator for purposes of the current study

To further examine the structure of each previously validated measure to determine whether measures were performing as expected, principal access factoring tests with oblimin rotation were conducted for each of the measures at each of the three data collection time points. Authors of each of the standardized measures intended them to demonstrate simple, single-factor structure. Factor analysis findings revealed simple factor structures for all of the measures with the following ranges of factor loadings: *College Academic Self-Efficacy Scale* (.540-895), *State Hope Scale* (.645-.913), *Future Aspirations and Goals subscale of Student Engagement Instrument* (.604-.750), *Perceptions of Barriers Scale* (.336-.708), *Social Provisions Scale* (.304-.868), *Perceived Academic Control Scale* (.485-779), *Patient Health Questionnaire 8 – Depression* (.565-.772), and the *State subscale of the State-Trait Anxiety Inventory* (.583-.843). When

more than one factor emerged, factor loadings were low and uninterpretable based on item content. It was determined that full averaged scale scores were an appropriate measure of the dependent variables, and that no sub-scale scores would be needed to explore latent variables within the data.

Detailed Description of College Transition Support Program

The College Transition Support Program (CTSP) includes a set of supports available through the High School Connections office at the community college, in partnership with the local public school district, notable for its formal application and selection process, preliminary and ongoing college support classes taught at the high school, part-time Transition Specialist at the high school, communication between college and high school support staff, a mandatory first-term *College Success* class, and structured requirements to take a reading/writing course the second term.

In addition, CTSP students are financially sponsored by their high school/district. Consistent with state law, students may be sponsored by their high school/district for up to 36 college credits, including the cost of tuition, fees, and books. These students are selected for dual enrollment through a structured process; students who express interest in CTSP are invited to attend an orientation hosted by the CTSP Transition Support staff, a part-time school district employee whose role is to coordinate the CTSP program from the high school end. Parents/guardians are invited to attend a Parent Orientation. During these orientations, students and parents meet high school CTSP staff and learn about the how to get started in the program.

Interested students go on to complete two six-week high school units taught by one of three high school group leaders to demonstrate their readiness to take college

classes. During the first six-week unit, in addition to other high school classes, students enroll in a "College Exploration" course designed to introduce them to the community college. Students use class time to complete online enrollment and obtaining a student ID number, learn about college classes/programs/degrees offered, and to explore students' current educational and career interests. During this class, students are exposed to Career Information Services (CIS) career exploration software, as well as the college catalog, which includes information about all college programs/degrees. At the end of this class, students complete a brief application to the CTSP program, in which they articulate their interest(s) in attending college, their current educational and/or career goals, the personal strengths that will serve them in college, the barriers/challenges they anticipate, and they sign a contract agreeing to complete all student requirements of the program. This contract also serves as a preventive plan of assistance for all participating students, as it includes informed consent about supports available to students throughout the program progression. These applications/contracts are shared with and available to the high school transition specialist, the three high school group leaders/teachers, and the CTSP college advisor.

During the second six-week unit, students move on to take a "College Placement Test Preparation" course at their high school, taught by the same group leaders who teach the "College Exploration" courses. In this class, students complete a reading/writing practice test prepared by Accuplacer, the testing company. Students also use the college's math placement test practice packets to prepare for the math placement tests. Students take the placement tests during the 4th or 5th week of the six-week unit, which coincides with the timing of registration for the upcoming college term. CTSP students

are held to the same placement test cut scores as all other students, as described above. CTSP students must also take the college's writing and mathematics placement tests so that they are eligible to register for writing or math classes, respectively. No cut-scores are required on the writing and math tests, consistent with college policies.

After completing these two six-week high school units, CTSP students are admitted to the program based on high school attendance (80% average over two six-week high school units), performance (earning full credit in all high school classes over the course of two six-week high school units), and students' expressed interest in taking college classes.

After CTSP students have completed their college application, placement testing, and referral paperwork, they attend a targeted CTSP orientation. During this orientation, students are introduced to college resources, policies, registration instructions, and information about the CTSP program (e.g. dual credit, payment by high schools, academic advising supports, student and high school responsibilities, information about their first term in the program, and the flow of classes after the first term).

Once students are accepted into the program, CTSP students access targeted college advising from one of two High School Connections advisors. This advisor meets with students each term by appointment (in contrast to the drop-in advising system available to all other students at the college), provides term-by-term advanced registration releases for students to register for classes, and is available by phone, e-mail, and in person for additional questions about the college experience. This college advisor coordinates with the high school transition specialist as needed (usually multiple times weekly) via e-mail and phone, and in person once every two weeks to review student

progress and address any concerns noted in the high school or college environment. In addition, the college advisor also coordinates on a weekly basis with the instructor of the first term *College Success* class that all CTSP students are required to take.

College Success: High School Transitions is a 2-credit psycho-educational college class that meets weekly on the college campus. Seats are reserved exclusively for CTSP students, a process that alleviates the difficulties associated with finding open seats in classes during first-term registration. The course utilizes an existing text commonly used in first-year experience college programs (Pattengale, 2006). The text focuses on the role of personal responsibility, motivation, self-management, interdependence, goal-setting, self-awareness, and self-esteem, as well as college reading, notetaking, study, and writing strategies (Downing, 2008). The course text is complemented by additional materials introducing students to Bronfenbrenner's (1979) ecological model, critical consciousness of sociopolitical contexts of daily life (Freire, 1970), Hayes' (2001) ADDRESSING framework for understanding human diversity and the impact of racism/sexism/classism and other forms of discrimination, common experiences of first generation college students, personal and family values/ideas/experiences with/of education, typical barriers to educational success and how to build skills and access supports to overcome these barriers, using a planner and prioritizing time, strategies for effective communication, problem-solving, and accessing specific college supports and resources (e.g. Disability Resources, tutoring centers, computer labs, Women's Center, Multicultural Student Center), as well as group and individual assignments that require students to visit these resources and deliver presentations about them to the class. *College Success* students are also guided to develop and articulate a personal mission that involves educational and/or

career plans, and to identify short-term and immediate steps to implement their mission. Students in the class access an online educational tool, Moodle (similar to Blackboard), which many community college instructors use to collect homework, conduct quizzes and tests, make reading materials available to students, record assignment and course grades, and communicate electronically with individual and whole classes of students.

The class was designed to specifically address first generation college student experiences, mindful that many of these youth may not have access to the same social capital – internalized preparedness for college – as more educationally privileged peers (Bailey & Alfonzo, 2005; Hill, 2008). Thus, the course is designed to scaffold knowledge about college culture and norms. For example, the class includes direct instruction about details such as how to format an assignment to include a student's name, date, class title, and name of assignment at the top of each assignment; how to access an instructor during office hours; and how to communicate via e-mail and phone with college instructors in an effective and professional manner. The class also involves detailed feedback to students about their performance on each assignment and project, including a grading rubric to help students learn where their academic strengths and areas of growth lie. After each *College Success* class session, the course instructor sends an attendance and participation report to the college advisor and high school transition specialist via e-mail, recommending specific follow-ups with individual students as needed. Through this ongoing communication with college advisors and high school transition specialists, students receive timely feedback about and support toward their progress.

After completing the first term of *College Success*, students who earn a C (or Pass) or higher move on to take a college reading or writing course determined by scores on the college placement tests. Students who do not pass the *College Success* class either take the *College Success* class again or exit the program of their own volition. After the two foundation courses – *College Success* and the first reading/writing course – CTSP students are eligible to take up to seven credits, and they may petition for more credits as needed. Approval of petitions is determined on a case-by-case basis.

CTSP students must complete and submit a mid-term progress report for each class for which they are registered, as described above. Results of the mid-term progress reports are collected and shared with the high school transition specialist and high school group leaders. Students are "staffed" at the high school staff meeting as any academic or personal issues arise. At the end of the term, CTSP students' grade reports are shared with the high school transition specialist and high school group leaders.

As these CTSP students are dually enrolled, they continue to take core academic classes (i.e., English, math, social studies, science, etc.) at their high school. Even if students have completed their core high school requirements and would ordinarily not be required to attend high school on a regular basis, as a condition of participation in the CTSP program, students are required to attend a "College Prep" course at their high school during their first two terms of college sponsorship. This class is facilitated by the high school group leaders and transition specialist, and functions as a study hall during which students complete work for college courses and seek support from high school teachers. Students are supported to use their skills and resources to identify solutions to

problems they encounter, and they are encouraged to share information and questions about their challenges and solutions with their college advisor.

After the first two terms in the program, most students have completed all required high school credits. If students are in good standing with the high school based on the last two units of high school attendance (80% average) and performance (earning full credit in all high school classes), as well as the college's Satisfactory Academic Progress standards (i.e., C or 2.0 GPA average, 66.6% credits completed), students are invited to meet with the high school transition specialist on the college campus once weekly (as opposed to four times weekly at the high school). Students who do not meet with the transition specialist on campus are required to contact their high school transition specialist on a weekly basis to maintain good standing with the program. All CTSP students are tracked by the high school transition specialist weekly, and reactive/responsive plans of assistance for struggling or failing students are implemented as needed.

As students prepare to transition from the College Transition Support Program, they are invited to attend a general college Financial Aid application workshop held at the college every January, as well as a targeted Financial Aid workshop held at their high school. Students are also encouraged to pursue additional college support programs for which they were not eligible as dually enrolled high school students (e.g. TRiO Student Support Services).

At every point in the CTSP program, from preparatory orientations through transition supports, all interactions between CTSP students and the college advisor, the high school transition specialist, the high school group leaders are intended to support

students in identifying and utilizing personal strengths, accessing contextual resources, and developing concrete plans for and motivation to pursue future educational and career opportunities. In this way, the program aims to promote student development of increased college self-efficacy, hope, future educational aspirations and goals, academic achievement expectations, perceived support, locus of control, and personal wellbeing, while reducing perceived barriers to educational goals.

CHAPTER III

RESULTS

All statistical analyses were conducted using the Statistical Package for the Social Sciences, GradPak v.20 (SPSS, 2011). An alpha level of .05 was set *a priori* to signify statistical significance.

Preliminary Analyses

Outliers

Prior to running analyses of central interest, exploratory data analyses were conducted to determine the presence of outliers. Continuous variables of interest were examined via descriptive statistics (e.g. frequencies, boxplots, and bivariate scatterplots). These examinations revealed no cases with values that differed substantially from other observations, indicating no extreme or bivariate outliers.

Missing Data

First, a missing values analysis was conducted on item-level data. Item-level missingness across all dependent variables of interest ranged from 0.0 and 39.7 percent. Based on Little's MCAR tests for each wave of data (i.e., Time1, Time2, and Time3 collections), data were determined to be missing completely at random, with the following test statistics: Time1 $\chi^2 = 99.014(112)$, $p = .805$; Time2 $\chi^2 = 66.525(66)$, $p = .493$, and Time3 $\chi^2 = 61.186(56)$, $p = .295$. However, missingness was not consistent across waves, with more missingness at Time2 and Time3 due to attrition (5% loss over the course of three waves) as well as an increasing percentage of participants skipping portions of the assessment packet during Wave2 and Wave3.

To address missing data, expectation maximization (EM) estimation was employed. EM imputations are considered preferable to mean substitutions because they preserve relationships with other variables (Tabachnick & Fidell, 2007). EM is an iterative procedure that uses two steps – expectation and maximization – for each iteration. Specifically, EM estimation uses all available information in the dataset to impute a value (expectation), then assesses whether that is the most likely value (maximization). If the value is determined not to be the most likely, the algorithm estimates a more likely value. This process goes on until the program reaches the most likely value (SPSS, 2011). First, imputation was attempted at the item level for all dependent variables of interest. The iteration cut-point was set to 25. Convergence was not reached at 25 iterations, so iterations were increased to 500. Again, convergence was not achieved. It was determined that imputation at the item level was not feasible due to inadequate power in the context of a large number of items. Instead, imputation was conducted at the mean scale score level (computed for all participants with 80% or more data available for each scale). Using scale score data, for each wave convergence was reached at or before 25 iterations. Imputed data were used in all longitudinal analyses, with the exception of analyses related to college persistence and GPA, as well as those involving open-ended questions about students' future expectations and fears.

Intercorrelations

Next, to explore associations between dependent variables of interest, intercorrelations between variables were calculated. Results are displayed in Tables 5-7. As is common is social science research, intercorrelations between dependent variables of interest are moderate, ranging from .126-.764, with an average intercorrelation of .451

and 63% of intercorrelations falling at or below .50. Strongest intercorrelations occurred between college self-efficacy, hope, future aspirations and goals, and perceived barriers, as well as depression and anxiety. All intercorrelations were in the expected direction.

TABLE 5. Pearson Correlations Between Dependent Variables at Time1

	College Self-Efficacy	Hope	Future Goals & Expectations	Perceived Barriers	Perceived Social Support	Locus of Control	Depression	Anxiety
College Self-Efficacy	1							
Hope	.564**	1						
Future Aspirations & Goals	.370**	.383**	1					
Perceived Barriers	-.380**	-.387**	-.204**	1				
Perceived Social Support	.340**	.369**	.419**	-.413**	1			
Locus of Control	.366**	.319**	.262**	-.392**	.452**	1		
Depression	-.271**	-.372**	-.241**	.405**	-.334**	-.183**	1	
Anxiety	-.146	-.194	-.334**	.297*	-.336**	-.152	.621**	1

Note: *$p < .05$ (2-tailed), **$p < .01$ (2-tailed).

TABLE 6. Pearson Correlations Between Dependent Variables at Time2

	College Self-Efficacy	Hope	Future Goals & Expectations	Perceived Barriers	Perceived Social Support	Locus of Control	Depression	Anxiety
College Self-Efficacy	1							
Hope	.764**	1						
Future Aspirations & Goals	.615**	.446**	1					
Perceived Barriers	-.640**	-.533**	-.536**	1				
Perceived Social Support	.462**	.500**	.311**	-.555**	1			
Locus of Control	.542**	.557**	.465**	-.430**	.516**	1		
Depression	-.536**	-.479**	-.384*	.611**	-.381**	-.296**	1	
Anxiety	-.492*	-.459**	-.299*	.420**	-.273*	-.353**	.504**	1

Note: *$p < .05$ (2-tailed), **$p < .01$ (2-tailed).

TABLE 7. Pearson Correlations Between Dependent Variables at Time3

	College Self-Efficacy	Hope	Future Goals & Expectations	Perceived Barriers	Perceived Social Support	Locus of Control	Depression	Anxiety	College Prep & Support[a]	College Advisor Access[a]
College Self-Efficacy	1									
Hope	.734**	1								
Future Aspirations & Goals	.687**	.582**	1							
Perceived Barriers	-.532**	-.461**	-.473**	1						
Perceived Social Support	.504**	.384**	.395**	-.532**	1					
Locus of Control	.578**	.539**	.530**	-.545**	.616**	1				
Depression	-.493**	-.314*	-.420**	.541**	-.456**	-.395**	1			
Anxiety	-.580**	-.438**	-.369**	.571**	-.569**	-.529**	.712**	1		
College Prep. & Support[a]	.574**	.436**	.613**	-.626**	.476**	.485**	-.438**	-.537**	1	
College Advisor Access[a]	.341*	.274	.421**	-.583**	.330*	.558**	-.213	-.500**	.620**	1

Note: [a]Non-validated measure developed by principal investigator for purposes of the current study; *$p < .05$ (2-tailed), **$p < .01$ (2-tailed)

Group Equivalence at Baseline

Next, preliminary analyses were conducted to verify that: (a) there was not significant program/condition selection bias (i.e., there were no significant differences between the HS-Only group and each of the two longitudinal comparison groups on key demographic variables at Time1); (b) there were no significant differences between the two longitudinal comparison groups on key demographic variables at Time1; and (c) there were no significant differences between the two longitudinal comparison groups on dependent factors of interest at baseline (Time1).

To assess for possible selection bias (i.e., significant differences between the CTSP group and the HS-Only group, and between the College-Only group and the HS-Only group), as well as differences between the two longitudinal comparison groups (CTSP vs College-Only) on key demographic variables at Time1, descriptive statistics were run. Recall that frequencies, means, and standard deviations for all demographic variables, as well as appropriate test statistics (F or χ^2) and p-values, are listed in Appendix A. Analyses revealed several differences between the three groups at baseline, which are discussed in the following paragraphs.

Regarding possible selection bias of the CTSP program in comparison to the HS-Only group, one baseline difference emerged, ages differed between the groups $F(1, 237) = 23.676$, $p <.001=$. Overall, HS-Only students tend to be younger than CTSP students, with mean ages of 17.16 and 18.18, respectively. This age difference was expected, as all junior and senior HS-Only students were invited to participate in the baseline assessment regardless of age, and CTSP students tend to be selected from junior and senior level students nearing the completion of required high school credits. HS-Only and CTSP

students did not statistically significantly differ on any other demographic variables, indicating no selection bias in the CTSP program related to demographic variables assessed, including sex, ethnicity, and socioeconomic status.

Regarding possible self-selection bias of the College-Only group in comparison to the HS-Only group, eight baseline differences emerged. Overall, College-Only students tend to be older than HS-Only students $F(1, 237) = 120.408$, $p < .001$, with mean ages of 19.56 and 17.60, respectively. In terms of socioeconomic status, College-Only students tended to report lower perceived SES than HS-Only students $\chi^2(1) = 5.218$, $p = .022$, and tended to report greater historical utilization of public assistance $\chi^2(1) = 6.851$, $p = .009$. In comparison to HS-Only students, College-Only students are more likely to be female $\chi^2(1) = 7.725$, $p = .005$, and to be parents $\chi^2(1) = 5.856$, $p = .016$. College-Only students reported earning higher grades in high school $\chi^2(4) = 21.910$, $p < .001$ as compared to HS-Only students. Finally, College-Only students are more likely to have selected a college major $\chi^2(1) = 46.911$, $p < .001$, and are more certain of their future career decisions $\chi^2(3) = 9.098$, $p = .028$, as compared to HS-Only students. These findings suggest that the group of students who navigate themselves to college after leaving alternative high school differ in several ways from the typical alternative high school student body. They are older, more female, more likely to have children, report having earned better high school grades, report lower SES and greater historical utilization of public assistance, and are more certain about their educational and career decisions, when compared to the average alternative high school student body in this sample. Whereas no selection bias was found for the CTSP program, there is evidence of a self-selection bias

for College-Only students. These differences will be important as we consider the ways in which College-Only students differ at baseline from CTSP students.

To test for the presence of significant differences between the two longitudinal comparison groups (CTSP vs College-Only) on key demographic variables at baseline (Time1), descriptive statistics were run. Means and standard deviations for each group by demographic variable, as well as appropriate test statistics (F or χ^2) and p-values, are listed in Appendix A. Five baseline differences emerged between the CTSP and College-Only groups. Overall, College-Only students tend to be older than CTSP students $F(1, 66) = 20.357$, $p < .001$, with mean ages of 19.56 and 18.18, respectively. College-Only students are also more likely to have spent time out of school between alternative high school and college $\chi^2(4) = 34.496$, $p < .001$, compared to CTSP students who are dually enrolled in high school and college. College-Only students scored significantly higher on the college writing placement test $F(1, 65) = 606.580$, $p = .024$, and reported earning higher grades in high school $\chi^2(4) = 11.717$, $p = .020$ as compared to CTSP students. Finally, College-Only students are more likely to have selected a college major $\chi^2(1) = 28.569$, $p < .001$, as compared to CTSP students. These findings suggest that the group of students who navigate themselves to college after leaving alternative high school differ in several ways from students who are selected for CTSP participation. College-Only students are older, are more likely to have spent time between high school and college, report having earned better high school grades, earned higher college writing placement tests, and are more certain about their college major, when compared to the CTSP students. Differences in age and time out of high school were expected. The other three group differences were unexpected and favored College-Only students. At baseline,

College-Only students appear more prepared for college success than CTSP students, with stronger high school grades, higher college writing placement test scores, and more certainty about their college majors.

Analyses were also conducted to evaluate whether differences existed between the College-Only and CTSP groups on baseline dependent measures. Means and standard deviations for each group by dependent variable are presented in Table 8. Test statistics and *p*-values are listed in Table 9.

TABLE 8. Dependent Variable Means & Standard Deviations for Time1-3 by Condition

	CTSP						College-Only					
	Time1		Time2		Time3		Time1		Time2		Time3	
Variable	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
College Self-Efficacy	5.76	1.03	5.80	0.93	6.39	1.05	6.01	0.94	5.95	0.91	5.96	1.14
Hope	6.21	1.02	5.95	0.98	6.61	0.92	6.27	1.31	6.02	1.04	6.12	1.17
Future Aspirations & Goals	2.29	0.37	2.13	0.34	2.36	0.37	2.13	0.30	2.14	0.30	2.12	0.41
Perceived Barriers	1.93	0.40	2.06	0.41	1.89	0.47	2.01	0.46	2.03	0.33	1.98	0.46
Perceived Social Support	3.38	0.53	3.31	0.45	3.44	0.52	3.48	0.55	3.34	0.54	3.47	0.46
Locus of Control	3.32	0.36	3.40	0.29	3.56	0.38	3.44	0.33	3.43	0.38	3.47	0.40
Depression	0.81	0.67	0.80	0.55	0.79	0.54	1.05	0.74	0.71	0.59	0.86	0.71
Anxiety	0.97	0.54	.923	0.42	.753	0.50	1.15	0.61	.952	0.50	0.97	0.64
College Prep. & Support[a]	-	-	-	-	4.36	0.78	-	-	-	-	3.82	0.86
College Advisor Access[a]	-	-	-	-	4.46	0.66	-	-	-	-	3.65	0.86

Note: [a]Non-validated measure developed by principal investigator for purposes of the current study, collected at Time3 only

Univariate analysis of variance results indicate there were no statistically significant differences between the CTSP and College-Only groups on baseline (Time1) measures: College Self-Efficacy $F(1, 66) = 1.082$, $p = .302$; Hope $F(1, 66) = 0.050$, $p = .823$; Future Aspirations and Goals $F(1, 66) = 3.862$, $p = .054$; Perceived Barriers $F(1, 66) = .611$, $p = .437$; Perceived Social Support $F(1, 66) = 0.548$, $p = .462$; Locus of Control $F(1, 66) = 2.156$, $p = .147$; Depression $F(1, 66) = 1.913$, $p = .171$; and Anxiety $F(1, 66) = 0.416$, $p = .521$. Based on these findings, it was determined that the groups were reasonably equivalent on baseline measures of interest, and there was no need to adjust for baseline differences between the longitudinal comparison groups in further analyses.

TABLE 9. Univariate *F*-Tests Comparing CTSP & College-Only Students at Time1

Variable	*F*	*p*	η^2	η^2
College Self-Efficacy	1.082	.302	.016	.016
Hope	0.050	.823	.001	< .001
Future Aspirations & Goals	3.862	.054	.055	.055
Perceived Barriers	0.611	.437	.009	.009
Perceived Social Support	0.548	.462	.008	.008
Locus of Control	2.156	.147	.032	.032
Depression	1.913	.171	.028	.010
Anxiety	0.416	.521	.006	< .001

Main Analyses

Doubly multivariate repeated measures analysis of variance (DMRM-ANOVA) was identified as an appropriate analytic approach for this study because of its unique capacity to handle multiple dependent variables in a repeated measures design. DMRM-ANOVA is particularly robust against Type I error (i.e., incorrectly rejecting a true null hypothesis), and is thought to be more sensitive to small effects than separate analyses (Taylor, 2011). DMRM-ANOVA seeks to optimally discriminate between groups by combining dependent variables into a single weighted linear combination of dependent variables or discriminant function. DMRM-ANOVA analyses are conducted using these discriminant function data, rather than using item-level or scaled scores.

DMRM-ANOVA has two assumptions. Multivariate normality and the homogeneity assumptions are necessary and sufficient assumptions for the validity of doubly multivariate repeated measures analysis of variance (DMRM-ANOVA) procedure (Tabachnick & Fidell, 2007). The DMRM-ANOVA assumption of multivariate normality was determined to be met due to sufficiency and equality of group size. Tabachnick and Fidell (2007) suggest that, with equal group size and "a few" more cases (participants) than dependent variables, "there is no concern about deviation from multivariate normality" (p. 360). With equal group sizes and 34 participants in each group, there were more than four times as many participants as dependent variables. Therefore, it was determined that the assumption of multivariate normality was satisfied. Due to the small sample size, a more robust multivariate test statistic (i.e., Pillai's Trace) was chosen to interpret results (Tabachnick & Fidell, 2007).

The DMRM-ANOVA assumption of homogeneity of variance-covariance matrices was tested using Box's M statistic, which was requested from SPSS. The tests for homogeneity of dispersion matrices were significant $F(231) = 456.484$, $p = .001$. It is recommended that the *F* test from Box's M be interpreted cautiously (Tabachnick & Fidell, 2007). Given that sample sizes were equal in this analysis, significant findings for Box's M were not considered a severe violation (Tabachnick & Fidell, 2007).

Research Question 1

Is participation in the College Transition Support Program (CTSP), as compared to a non-equivalent comparison group, associated with change in (a) college self-efficacy, (b) outcome/future expectations as measured by (b_1) hope and (b_2) future educational aspirations and goals, (c) perceived barriers, (d) perceived support, (e) locus of control, (f) depression, and (g) anxiety? It is hypothesized that doubly multivariate repeated measures analyses will reveal that participation in the CTSP will be associated with (a) greater college self-efficacy, (b) greater outcome/future expectations (c) lower perceived barriers, (d) greater perceived support, (e) greater locus of control, (f) lower depression, and (g) lower anxiety.

To examine whether the weighted linear combination of dependent variables was sensitive to differential effects over time by condition, doubly multivariate repeated measures analyses of variance (DMRM-ANOVA; Tabachnick & Fidell, 2007) were conducted using SPSS software (SPSS, 2011). Condition (i.e., CTSP, College-Only) served as the between-subjects independent variable. Time (i.e., Time1, Time2, Time3) served as the within-subjects independent variable. The discriminant function consisted

of eight variables: college self-efficacy, hope, future goals and expectations, perceived barriers, perceived support, depression, and anxiety.

Omnibus tests of the DMRM-ANOVAs are reported for the effect of condition by time, followed by the main effects of condition and time. It is important to note that the interaction of condition by time (i.e., do the different groups show different patterns of change across time?) is of most interest and is therefore presented first and in greater detail. Pillai's Trace *F* statistics were used to interpret results, with $p < .05$ as the level of statistical significance to reject the null hypothesis. Statistically significant multivariate findings are followed by a report of univariate repeated measure results that show change on each of the dependent measures.

The multivariate test of significance for the effect of condition by time was statistically significant $F(16, 51) = .367$, $p = .049$. Based on the fully multivariate analysis, there is a statistically significant relationship between the discriminant function by condition over time. Students' participation in the CTSP intervention, as compared to College-Only students, is associated with differing patterns of change over time on the discriminant function. In terms of effect size, approximately 37% of the variance in this discriminant function is explained by the interaction of condition and time, which is statistically significant. Observed power to detect the interaction effect was high (.89).

Figure 2 was generated by calculating a discriminant function score for each student from the discriminant function weights for the condition by time effect. It provides a visual with which to help interpret the multivariate effects. Note that the scale on the y-axis on this figure is arbitrary. The figure reflects the relatively flat, marginally negative trend for College-Only students on the discriminant function over time, as

compared to the positive linear trend for CTSP students on the discriminant function over time. CTSP students, on average, look better over time relative to the discriminant function, whereas College-Only students look the same, if not slightly worse, over time.

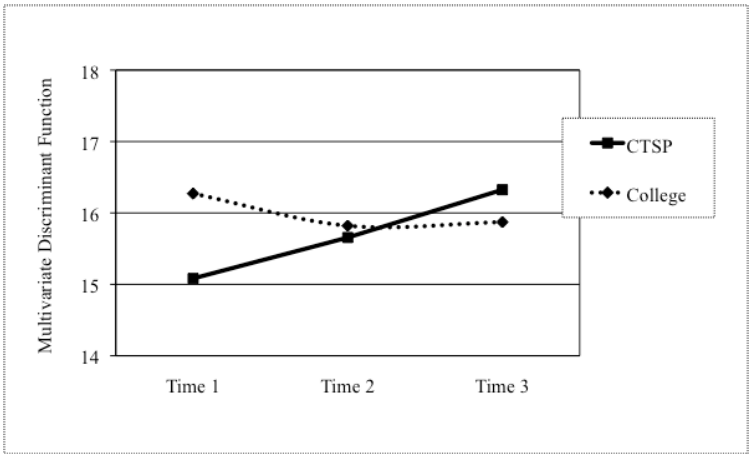


FIGURE 2. Multivariate Discriminant Function Scores by Condition & Time.

To better understand which dependent variables contribute the most to the significant difference between the study conditions across time, discriminant function coefficients were evaluated and are displayed in Table 10. Standardized discriminant function coefficients are scaled so that comparisons among them are interpretable (Thomas, 1992). As a result, discriminant function weights reflect the relative power that each variable has to differentiate the group conditions, and do not simply reflect the scales on which the variables were measured. These weights are semi-partial, representing the unique contribution of each dependent variable to the significant effect of condition across time. The signs of the coefficients further help us to assess the nature of the discriminant function. Results indicate that the multivariate discriminant function for condition by time is chiefly driven by college self-efficacy, future aspirations and

goals, and locus of control. College self-efficacy and locus of control are negatively loading, and future aspirations and goals is positively loading.

TABLE 10. Standard. Discriminant Function Weights for the Effect of Condition by Time

	DF Weight
College Self-Efficacy	.76474
Hope	-.23733
Future Aspirations & Goals	.47877
Perceived Barriers	-.11766
Perceived Social Support	.18631
Locus of Control	-.43930
Depression	-.12227
Anxiety	-.24097

The multivariate test of significance for the main effect of condition was not statistically significant $F(8, 59) = .138$, $p = .328$. Based on the fully multivariate analysis, there is no statistically significant effect of condition on the discriminant function (collapsed across time). This suggests that students' participation in the CTSP intervention is not associated with differences on the discriminant function when averaging over time. Approximately 13% of the variance in the discriminant function is explained by condition when time is ignored, but this is not statistically significant. Due to the nonsignificant finding, discriminant functions are not reported.

The multivariate test of significance for the main effect of time was statistically significant $F(16, 51) = .488$, $p = .001$. Based on the fully multivariate analysis, there is a statistically significant effect of time on the discriminant function (collapsed across conditions). This suggests that the discriminant function changes over time when

averaging across groups. In terms of effect size, approximately 49% of the variance in the discriminant function is explained by time, which is statistically significant. Observed power to detect the main effect of time was high (.99).

Figure 3 was generated by calculating a discriminant function score for each student from the discriminant function weights for the time effect. It provides a visual with which to help interpret the multivariate effects. Note that the scale on the y-axis on this figure is arbitrary. The figure reflects the moderately positive trend for all students (i.e., CTSP and College-Only) on the discriminant function over time. Students, on average, look better over time relative to the discriminant function, particularly between Time2 and Time3.

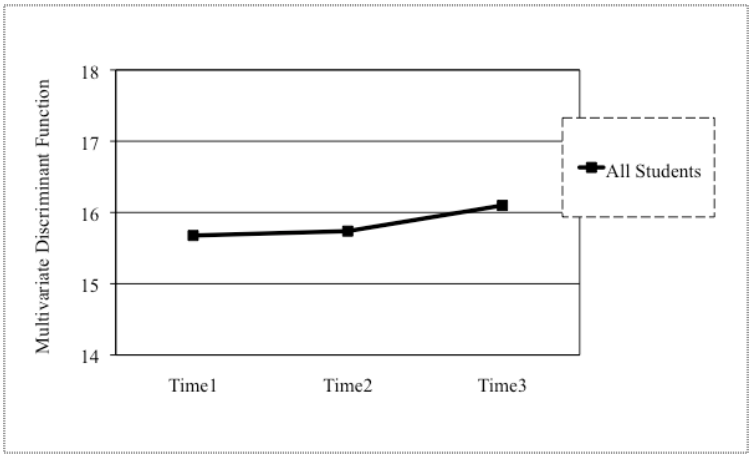


FIGURE 3. Multivariate Discriminant Function Scores by Time.

To better understand which dependent variables contribute the most to the significant difference of the discriminant function over time, discriminant function coefficients were evaluated and are displayed in Table 11. Discriminant function coefficients are standardized so that comparisons among them are interpretable (Thomas,

1992). As a result, discriminant function weights reflect the relative power that each variable has to differentiate the group conditions, and do not simply reflect the scales on which the variables were measured. These weights are semi-partial, representing the unique contribution of each dependent variable to the significant effect of change over time. The signs of the coefficients further help us to assess the nature of the discriminant function. Results indicate that the multivariate discriminant function for time is chiefly driven by locus of control, college self-efficacy, and anxiety. Locus of control and College self-efficacy are positively loading and anxiety is negatively loading.

TABLE 11. Standard. Discriminant Function Weights for the Effect of Time

	DF Weight
College Self-Efficacy	.44709
Hope	-.04820
Future Aspirations & Goals	-.21268
Perceived Barriers	.02953
Perceived Social Support	.00946
Locus of Control	.49836
Depression	-.13743
Anxiety	-.31196

Because standardized discriminant function weights reflect the contribution of each variable in the context of other variables in the model (Wuensch, 2008), and because standardized discriminant function weights may fluctuate greatly from sample to sample, especially when intercorrelation is high and the sample is small (Taylor, 2011), it was deemed appropriate to report and interpret results of univariate analyses for each of the dependent variables. To that end, follow-up univariate repeated measures ANOVAs for

time and condition by time were conducted. Linear and quadratic results are presented for each dependent variable. It should be noted that this study is underpowered to adequately explore univariate trends. If the appropriate Bonferroni correction were made, the significance level would be set at $p < .006$. As such, these univariate analyses are reported to provide a more complete understanding of the multivariate findings, for purposes of this dissertation only. Results for the main effect of time, as well as interaction effects by condition are reported. Figures are provided only for variables with statistically significant condition by time effects.

College Self-Efficacy: Univariate repeated measures analyses on the college self-efficacy measure reveal a statistically significant linear main effect of time $F(1, 66) = 8.575$, $p = .005$, $\eta^2 = .099$ (see Table 12). When collapsed across conditions, students' self-efficacy scores increase significantly over time in a linear pattern. As expected, the linear effect of time on self-efficacy was moderated by group $F(1, 66) = 11.756$, $p = .001$, $\eta^2 = .136$, with College-Only students remaining relatively flat in their scores and CTSP students reporting higher self-efficacy scores over time (see Figure 4). No significant quadratic patterns over time were observed across groups $F(1, 66) = 2.814$, $p = .098$, $\eta^2 = .037$ or between groups $F(1, 66) = 1.878$, $p = .175$, $\eta^2 = .025$.

TABLE 12. Univariate Effects for Time & Condition by Time – Self-Efficacy

	F	*SS*	*p*	η_ρ^2	η^2
Self-Efficacy					
Linear	8.575	2.844	.005	.115	.099
Quadratic	2.814	1.053	.098	.041	.037
Linear x Condition	11.756	3.899	.001	.151	.136
Quadratic x Condition	1.878	.703	.175	.028	.025

Note: *SS* = sum of squares; η_ρ^2 = partial eta squared; η^2 = eta squared; *df* = 1 for main effect, 66 for error

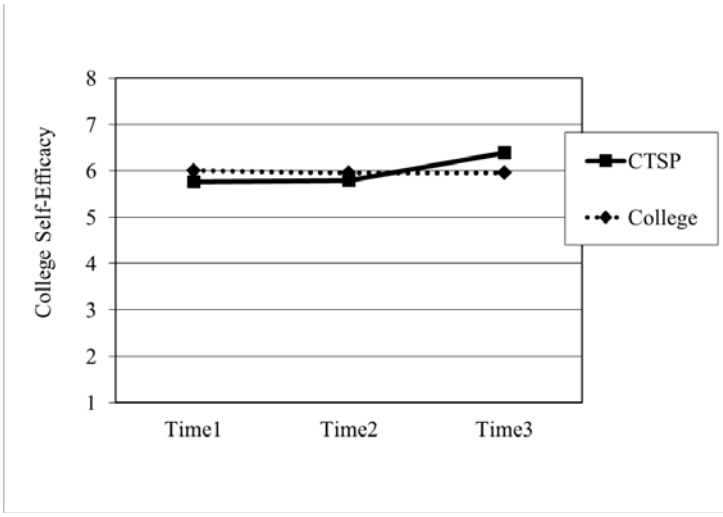


FIGURE 4. College Self-Efficacy Scores by Condition & Time.

Hope: Univariate repeated measures analyses on the hope measure reveal no statistically significant linear main effect of time $F(1, 66) = .783$, $p = .379$, $\eta^2 = .011$, and no linear group moderation, $F(1, 66) = 3.889$, $p = .053$, $\eta^2 = .054$ (see Table 13). There was a statistically significant quadratic main effect of time for hope, $F(1, 66) = 8.229$, $p = .006$, $\eta^2 = .108$. However, this effect was not moderated by group $F(1, 66) = 1.660$, $p = .202$, $\eta^2 = .022$.

TABLE 13. Univariate Effects for Time & Condition by Time – Hope

	F	*SS*	*p*	η_p^2	η^2
Hope					
Linear	.783	.532	.379	.012	.011
Quadratic	8.229	4.428	.006	.111	.108
Linear x Condition	3.889	2.639	.053	.056	.054
Quadratic x Condition	1.660	.893	.202	.025	.022

Note: *SS* = sum of squares; η_p^2 = partial eta squared; η^2 = eta squared*; df* = 1 for main effect, 66 for error

Education-Related Future Aspirations and Goals: Univariate repeated measures analyses on the future aspirations and goals measure reveal no statistically significant linear main effect of time $F(1, 66) = .424$, $p = .517$, $\eta^2 = .006$, and no linear group moderation, $F(1, 66) = .679$, $p = .413$, $\eta^2 = .010$ (see Table 14). There was a statistically significant quadratic main effect of time on the future aspirations and goals measure, $F(1, 66) = 4.998$, $p = .029$, $\eta^2 = .064$. When collapsed across conditions, students' future aspirations and goals scores follow a quadratic pattern, indicating that on average, students experience a dip in future aspirations and goals at Time2, as compared to Time1 and Time3. As expected, this quadratic effect was moderated by group $F(1, 66) = 7.188$, $p = .009$, $\eta^2 = .092$, with College-Only students remaining relatively flat in their scores and CTSP students reporting higher future aspirations and goals scores at Time1 and Time3, and lower scores at Time2 (see Figure 5).

TABLE 14. Univariate Effects for Time & Condition by Time – Future Aspirations/Goals

	F	*SS*	*p*	η_ρ^2	η^2
Future Aspirations & Goals					
Linear	.424	.032	.517	.006	.006
Quadratic	4.998	.331	.029	.070	.064
Linear x Condition	.679	.052	.413	.010	.010
Quadratic x Condition	7.188	.476	.009	.098	.092

Note: *SS* = sum of squares; η_ρ^2 = partial eta squared; η^2 = eta squared; *df* = 1 for main effect, 66 for error

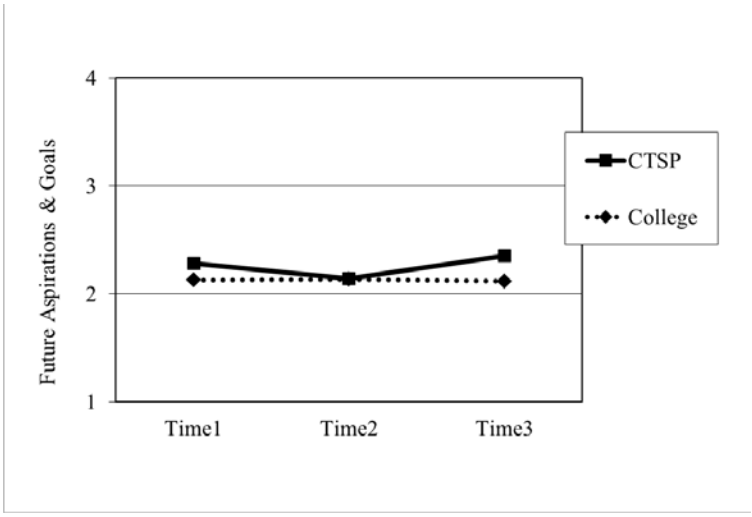


FIGURE 5. Future Aspirations & Goals Scores by Condition & Time.

Perceived Barriers: Univariate repeated measures analyses on the perceived barriers measure reveal no statistically significant linear main effect of time $F(1, 66) = .750$, $p = .390$, $\eta^2 = .011$, and no linear group moderation $F(1, 66) = .025$, $p = .874$, $\eta^2 < .001$ (see Table 15). There was a statistically significant quadratic main effect of time relative to the perceived barriers measure $F(1, 66) = 5.989$, $p = .080$, $\eta^2 = .083$. However, this effect was not moderated by group $F(1, 66) = 2.796$, $p = .099$, $\eta^2 = .037$.

TABLE 15. Univariate Effects for Time & Condition by Time – Perceived Barriers

	F	*SS*	*p*	η_ρ^2	η^2
Perceived Barriers					
Linear	.750	.054	.390	.011	.011
Quadratic	5.989	.366	.017	.083	.080
Linear x Condition	.025	.002	.874	< .001	< .001
Quadratic x Condition	2.796	.171	.099	.041	.037

Note: *SS* = sum of squares; η_ρ^2 = partial eta squared; η^2 = eta squared*; df* = 1 for main effect, 66 for error

Perceived Social Support: Univariate repeated measures analyses on the perceived social support measure reveal no statistically significant linear main effect of time $F(1, 66) = .249$, $p = .619$, $\eta^2 = .004$, and no linear group moderation, $F(1, 66) = .345$, $p = .559$, $\eta^2 = .005$ (see Table 16). No significant quadratic patterns over time were observed across groups $F(1, 66) = 3.431$, $p = .068$, $\eta^2 = .049$ or between groups $F(1, 66) = .092$, $p = .763$, $\eta^2 = .001$.

TABLE 16. Univariate Effects for Time & Condition by Time – Perceived Social Support

	F	*SS*	*p*	η_ρ^2	η^2
Perceived Social Supports					
Linear	.249	.024	.619	.004	.004
Quadratic	3.431	.588	.068	.049	.049
Linear x Condition	.345	.033	.559	.005	.005
Quadratic x Condition	.092	.016	.763	.001	.001

Note: *SS* = sum of squares; η_ρ^2 = partial eta squared; η^2 = eta squared*; df* = 1 for main effect, 66 for error

Additional Exploration of College-Related Social Support at Time 3: The previously validated perceived social support measure did not perform well in this study.

It was the only measure that did not reveal a linear or quadratic main effect of time. After data were being collected for the study, it became clear that the reliable alliance and guidance subscales of the Social Provisions Scale were tapping personal supports, including items such as, "there is no one I can turn to for guidance in times of stress," "there is someone I could talk to about important decisions in my life," and "there are people I can count on in an emergency" rather than supports more relevant to college student success. At Time3, the principal investigator, in collaboration with CTSP staff at the high schools and college, added two non-validated measures to assess program-related supports, including (a) college preparation and support and (b) college advisor access.

College Preparation and Support: To test for group differences in relation to college preparation and support, a univariate analysis was conducted, revealing a statistically significant difference between CTSP and College-Only students on the non-validated *College Preparation and Support* measure at Time3, $F(1, 52) = 5.819$, $p = .019$ (see Table 17). As displayed in Figure 6, students in the CTSP had statistically significantly higher mean scores on the measure than their College-Only peers (CTSP $M = 4.36$, $SD = .855$; College-Only $M = 3.82$, $SD = .781$).

TABLE 17. Comparison of CTSP & College-Only Students on College Prep. & Support at Time3

Variable	*F*	*SS*	*p*	η_ρ^2	η^2
College Prep. & Support	5.819	3.930	.019	.101	.100

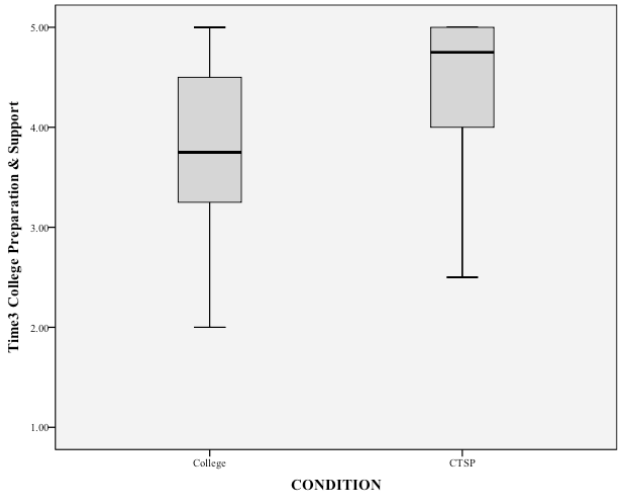


FIGURE 6. College Preparation & Support at Time3 by Condition.

When asked to indicate by whom the differential support was provided, three statistically significant differences emerged. First, CTSP students were less likely to indicate that siblings were a source of college support $\chi^2(1) = 5.124$, $p = .024$, and second, CTSP students were more likely to report that high school teachers $\chi^2(1) = 13.339$, $p < .001$ and college advisors $\chi^2(1) = 4.121$, $p = .042$ provided support.

College Advisor Access: To test for group differences in relation to college advisor access, a univariate analysis was conducted, revealing a statistically significant difference between CTSP and College-Only students on the non-validated *College Advisor Access* measure at Time3, $F(1, 41) = 11.605$, $p = .002$. As displayed in Figure 7 and Table 18, students in the CTSP had statistically significantly higher mean scores on the measure than their College-Only peers (CTSP $M = 4.45$, $SD = .655$; College-Only $M = 3.65$, $SD = .857$).

TABLE 18. Comparison of CTSP & College-Only Students on College Advisor Access at Time3

Variable	*F*	*SS*	*p*	η_p^2	η^2
College Advisor Access	11.605	6.614	.002	.229	.228

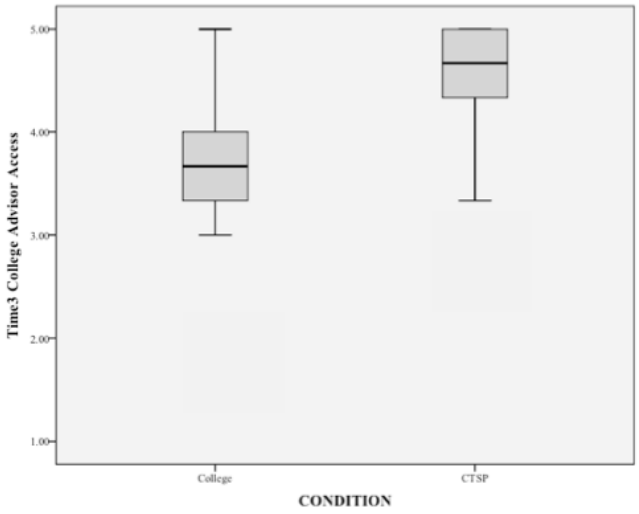


FIGURE 7. College Advisor Access at Time3 by Condition.

Because the College Preparation and Support and College Advisor Access measures were included only at Time3, it was not possible to assess for change over time associated with the CTSP intervention. Despite this limitation, it is clear that CTSP participation is associated with higher self-reported college preparation and support by high school teachers and college advisors, and less support from siblings, when compared with College-Only peers. It is also clear that students in CTSP are more likely to report that they have access to their college advisor.

Locus of Control: Univariate repeated measures analyses on the locus of control measure reveal statistically significant linear main effect of time $F(1, 66) = 7.766$, $p = .007$, $\eta^2 = .098$ (see Table 19). When collapsed across conditions, students' locus of

control scores increase significantly over time in a linear pattern, indicating that both groups perceived a greater sense of internal locus of control over time. As expected, the linear effect of time on locus of control was moderated by group $F(1, 66) = 4.891$, $p = .030$, $\eta^2 = .062$, with College-Only students remaining relatively flat in their scores and CTSP students reporting greater locus of control scores over time, particularly at Time3 (see Figure 8). No significant quadratic patterns over time were observed across groups $F(1, 66) = .724$, $p = .398$, $\eta^2 = .010$ or between groups $F(1, 66) = .022$, $p = .883$, $\eta^2 < .001$.

TABLE 19. Univariate Effects for Time & Condition by Time – Locus of Control

	F	*SS*	*p*	η_ρ^2	η^2
Locus of Control					
Linear	7.766	0.591	.007	.105	.098
Quadratic	0.724	.0.044	.398	.011	.010
Linear x Condition	4.891	0.372	.030	.069	.062
Quadratic x Condition	0.022	0.001	.883	< .001	< .001

Note: *SS* = sum of squares; η_ρ^2 = partial eta squared; η^2 = eta squared; *df* = 1 for main effect, 66 for error

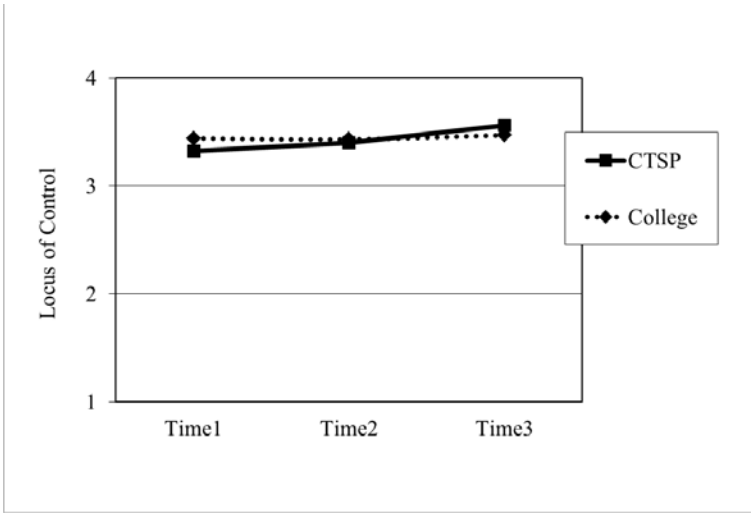


FIGURE 8. Locus of Control Scores by Condition & Time.

Depression: Univariate repeated measures analyses on the depression measure reveal no statistically significant linear main effect of time $F(1, 66) = 2.686$, $p = .106$, $\eta^2 = .038$, and no linear group moderation $F(1, 66) = 1.779$, $p = .187$, $\eta^2 = .025$ (see Table 20). There was a statistically significant quadratic main effect of time relative to the depression measure $F(1, 66) = 4.080$, $p = .047$, $\eta^2 = .055$. When collapsed across conditions, students' depression scores follow a quadratic pattern, indicating that, on average, students experience a dip in reported depression at Time2, as compared to Time1 and Time3. Furthermore, as expected, the quadratic effect of time on depression was moderated by group $F(1, 66) = 4.072$, $p = .048$, $\eta^2 = .055$, with CTSP students remaining relatively flat in their scores and College-Only students reporting higher depression scores at Time1 and Time3, and lower scores at Time2 (see Figure 9).

TABLE 20. Univariate Effects for Time & Condition by Time – Depression

	F	*SS*	*p*	η_ρ^2	η^2
Depression					
Linear	2.686	.394	.106	.039	.038
Quadratic	4.080	.667	.047	.058	.055
Linear x Condition	1.779	.261	.187	.026	.025
Quadratic x Condition	4.072	.666	.048	.058	.055

Note: *SS* = sum of squares; η_ρ^2 = partial eta squared; η^2 = eta squared; *df* = 1 for main effect, 66 for error

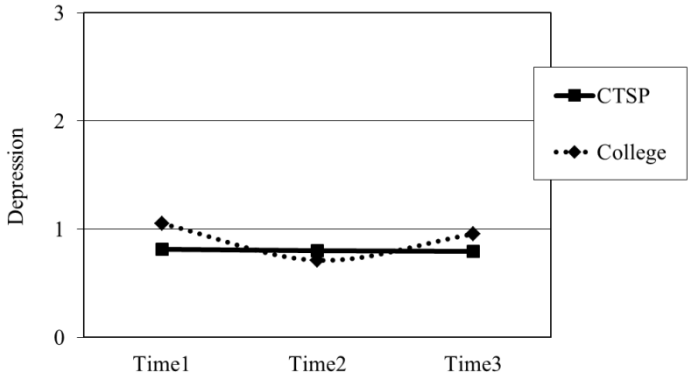


FIGURE 9. Depression Scores by Condition & Time.

Anxiety: Univariate repeated measures analyses on the anxiety measure reveal a statistically significant linear main effect of time $F(1, 66) = 9.274$, $p = .003$, $\eta^2 = .123$ (see Table 21). When collapsed across conditions, students' anxiety scores decrease significantly over time in a linear pattern, indicating that both groups became less anxious over time. This effect was not moderated by group $F(1, 66) = .070$, $p = .793$, $\eta^2 < .001$. No significant quadratic patterns over time were observed across groups $F(1, 66) = .151$, $p = .699$, $\eta^2 = .002$ or between groups $F(1, 66) = 2.256$, $p = .138$, $\eta^2 = .033$.

TABLE 21. Univariate Effects for Time & Condition by Time – Anxiety

	F	*SS*	*p*	η_ρ^2	η^2
Anxiety					
Linear	9.274	1.308	.003	.123	.123
Quadratic	.151	.022	.699	.002	.002
Linear x Condition	.070	.010	.793	.001	<.001
Quadratic x Condition	2.256	.334	.138	.033	.033

Note: *SS* = sum of squares; η_ρ^2 = partial eta squared; η^2 = eta squared; *df* = 1 for main effect, 66 for error

Research Question 2

Is participation in the CTSP, as compared to a non-equivalent comparison group (College-Only), associated with (a) college retention or (b) college GPA? It is hypothesized that participation in the CTSP will be positively related to college retention/persistence and college GPA.

College Retention: To determine whether participation in CTSP was associated with college retention over the course of the 2010-2011 academic year, a linear mixed model chi-square test was conducted. Results of this test reveal a significant linear difference between the CTSP and College-Only conditions over time in relation to college retention scores $\chi^2(1) = 7.235$, $p < .000$, with College-Only students decreasing in college enrollment over time and CTSP students reporting increasing enrollment over time (see Figure 10). There is an interaction, with the two groups differing significantly from one another in their linear trend on this measure. Students in the CTSP are more likely to be enrolled in college over time when compared to their College-Only peers.

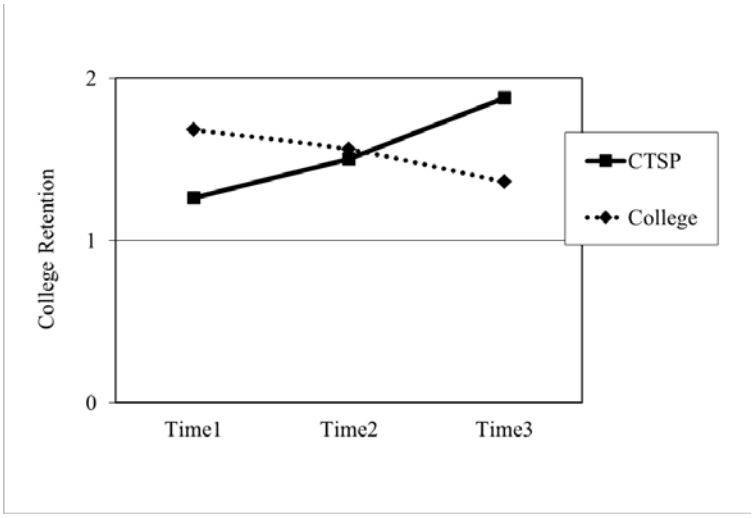


FIGURE 10. College Retention by Condition & Time.

Weighted College GPA: Because not all students earned a GPA for all three terms (due to staggered/delayed start at the college), and also because cumulative GPA over the first year of college is more meaningful than the GPA for a single college term, cumulative GPA was used in the following analyses. Once numeric GPAs were calculated for each student per term, these numeric GPAs were divided by ten to create new variables, Fall GPA Points, Winter GPA Points, and Spring GPA Points. In this way, GPAs reflect the familiar 4.3 – 0.0 grading scale. From these variables, cumulative GPA was calculated using the following formula: Cumulative Weighted GPA = [(Fall Credits x Fall'10 GPA Points) + (Winter Credits x Winter'11 GPA Points) + (Spring Credits x Spring'11 GPA Points)] / (Fall Credits + Winter Credits + Spring Credits). Descriptive statistics for both groups are presented in Table 22. *F*-test results are listed in Table 23.

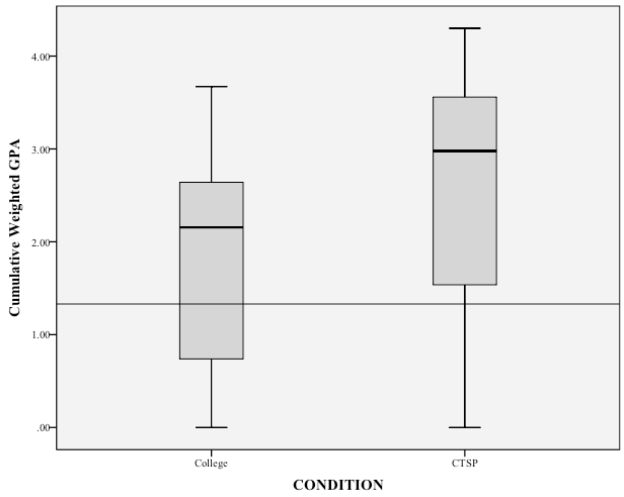
TABLE 22. Cumulative Weighted GPA Descriptives by Condition

	M	*SD*	95% CI	Min	Max
CTSP	2.49	1.07	1.96 – 3.00	0.00	4.30
College-Only	1.79	1.07	1.42 – 2.16	0.00	3.67

Note: $N = 34$ for each group

Figure 11 represents the distribution of weighted GPAs by condition. It is clear that CTSP students are outperforming their College-Only peers in terms of cumulative GPA. CTSP students' grades have an interquartile range from 1.54 to 3.54, as compared to College-Only students with an interquartile range from 0.74 to 2.65. The reference line falls at a GPA of 1.33 (lowest point of a C- grade), which reflects the lowest grade that qualifies as both "completed" and "passed." Grades above this line represent "progression credits," meaning they help a student move toward a degree, certificate, or

university transfer. Grades that fall below this line (Ds, Fs, NP, NC, W) reflect "completed" but not "passed" credits, and do not move the student closer to completion status, putting the student at risk of being in violation of Satisfactory Academic Progress standards required for continuous enrollment and financial aid eligibility. Nearly 75% of CTSP students' cumulative GPA reflect both "completed" and "passing" grades, whereas College-Only students are more consistently earning non-passing grades.



Note: reference line falls at 1.33 GPA (low end of C-)

FIGURE 11. 2010-2011 Cumulative Weighted GPA by Condition.

Next, a test was conducted to evaluate whether a statistically significant difference existed between the College-Only and CTSP groups on cumulative weighted GPA. Results, displayed in Table 24, indicate there was a statistically significant difference between the CTSP and College-Only groups on cumulative weighted GPA for the 2010-2011 academic year $F(1, 66) = 5.052$, $p = .028$, $\eta^2 = .074$.

TABLE 23. Comparison of CTSP & College-Only Students on Cumulative Weighted GPA

Variable	*F*	*SS*	*p*	η_p^2	η^2
Cumulative Weighted GPA	5.052	7.846	.028	.074	.074

Research Question 3

Is participation in the CTSP, as compared to a College-Only non-equivalent comparison group, associated with differences in the pattern of reporting academic achievement-related expectations and fears over time as measured by (a) academic achievement-related expectations, (b) academic achievement-related fears, and (c) academic achievement-related expectation-fear balance? It is hypothesized that participation in the CTSP will be positively related to academic achievement-related expectations and fears, as well as balance between academic achievement-related expectations-fears.

The open-ended Possible Selves Questionnaire was included in the study to add richness and voice to students' perceptions about themselves and their future expectations and fears. To better understand the academic achievement-related expectations and fears of the current sample, descriptive statistics were computed and are displayed in Table 24. At Time1, 29.4% of CTSP students generated an academic achievement-related expectation, compared to 32.4% of College-Only students and 25.1% of HS-Only students. Also at this time, 29.4% of CTSP students produced an academic achievement-related fear, compared to 52.9% of College-Only students, and 32.9% of HS-Only students. At Time2, 67.6% of both CTSP and College-Only students generated an academic achievement-related expectation. Also at this time, 44.1% of both CTSP and

College-Only students produced an academic achievement-related fear. At Time3, 55.9% of CTSP students generated an academic achievement-related expectation, compared to 67.6% of College-Only students. Also at this time, 73.9% of CTSP students produced an academic achievement-related fear, compared to 54.2% of College-Only students.

Chi square analyses were conducted to determine whether there were baseline differences between the CTSP and College-Only groups on either the academic achievement-related expectations $\chi^2(1) = .069$, $p = .793$ or fears $\chi^2(1) = 2.975$, $p = .085$. At baseline the two groups did not statistically significantly differ from one another.

TABLE 24. Descriptive Statistics related to the Possible Selves Questionnaire

	CTSP		College-Only		HS-Only	
Variable	*n*	%	*n*	%	*n*	%
Time1						
Academic Expectation	10	29.4	11	32.4	52	25.1
Academic Fear	10	29.4	18	52.9	68	32.9
Time2						
Academic Expectation	23	67.6	23	67.6	-	-
Academic Fear	15	44.1	15	44.1	-	-
Time3						
Academic Expectation	19	55.9	23	67.6	-	-
Academic Fear	17	73.9	13	54.3	-	-

Note: N for CTSP = 34, *N* for College-Only = 34

To determine whether participation in CTSP was associated with differential changes in academic achievement-related expectations and fears, compared to the College-Only group, over the course of the 2010-2011 academic year, repeated measures ANOVAs for condition by time were conducted. Linear and quadratic results are presented.

In relation to academic achievement-related expectations, univariate repeated measures analyses reveal no statistically significant differences between the CTSP and College-Only conditions over time, both in terms of linear $F(1, 66) = 1.000$, $p = .321$, $\eta^2 = .014$ and quadratic trends $F(1, 66) = .166$, $p = .685$, $\eta^2 = .002$ (See Table 25). Students in the CTSP and College-Only do not have statistically significant different trends in terms of generated academic expectations over time.

TABLE 25. Univariate Effects for Condition by Time – Academic Achieve. Expectations

	F	*SS*	*p*	η_ρ^2	η^2
Academic Expectations					
Linear x Condition	1.000	.184	.321	.015	.014
Quadratic x Condition	.166	.022	.685	.003	.002

Note: *SS* = sum of squares; η_ρ^2 = partial eta squared; η^2 = eta squared; *df* = 1 for main effect, 66 for error

Related to academic achievement-related fears, a statistically significant difference in pattern over time was observed between groups in terms of linear change $F(1, 66) = 5.023$, $p = .028$, $\eta^2 = .070$, whereas no quadratic pattern difference was observed between the two groups $F(1, 66) = .269$, $p = .606$, $\eta^2 = .004$ (see Table 26). Students in the CTSP condition produced increasing academic achievement-related fears over time, whereas College-Only students appear to generate academic achievement-related fears in the same proportions over time (see Figure 12).

TABLE 26. Univariate Effects for Condition by Time – Academic Achieve. Fears

	F	*SS*	*p*	η_p^2	η^2
Academic Fears					
Linear x Condition	5.023	1.059	.028	.071	.070
Quadratic x Condition	.269	.039	.606	.004	.004

Note: *SS* = sum of squares; η_p^2 = partial eta squared; η^2 = eta squared; *df* = 1 for main effect, 66 for error

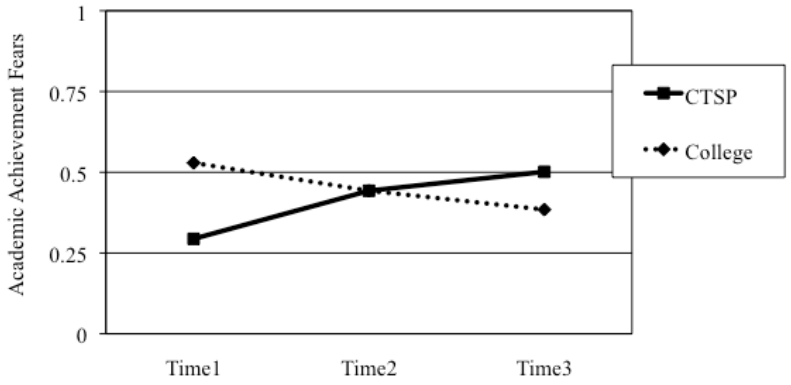


FIGURE 12. Academic Achievement Fears by Condition & Time.

A statistically significant difference in the pattern over time was observed between groups in terms of linear academic achievement-related expectation-fear balance $F(1, 27) = 6.731$, $p = .015$, $\eta^2 = .185$, whereas no quadratic pattern difference was observed between the two groups $F(1, 27) = .604$, $p = .444$, $\eta^2 = .022$ (see Table 27). Students in the CTSP condition produced increasing academic achievement-related expectation-fear balance over time, whereas College-Only students appear to produce less balance over time. This increasing balance over time is likely due to the general tendency of CTSP students to generate more academic fears over time, as compared to

College-Only students. Whereas both groups tend to produce more academic expectations over time, only the CTSP students generate more academic fears over time, enabling them to achieve balance between academic achievement-related expectations and fears (see Figure 13).

TABLE 27. Univariate Effects for Condition by Time – Academic Expect.-Fear Balance

	F	*SS*	*p*	η_ρ^2	η^2
Academic Balance					
Linear x Condition	6.731	1.342	.015	.200	.185
Quadratic x Condition	.604	.095	.444	.022	.022

Note: *SS* = sum of squares; η_ρ^2 = partial eta squared; η^2 = eta squared; *df* = 1 for main effect, 66 for error

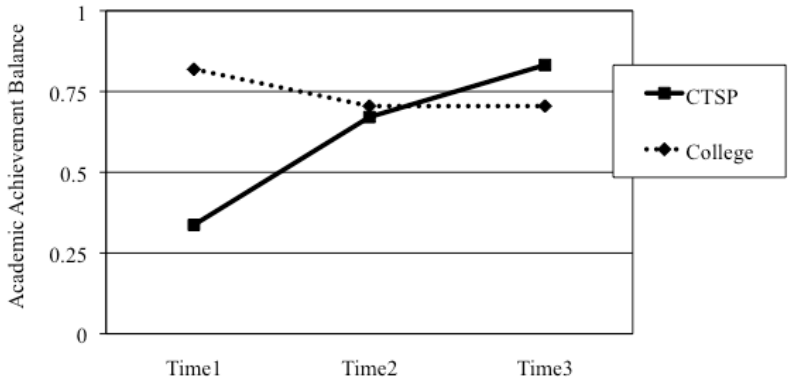


FIGURE 13. Academic Achievement Expectation-Fear Balance by Condition & Time.

To further explore the data collected for this study, two follow-up research questions were asked. These analyses are regarded as strictly exploratory, as cell size for many of the demographic factors are too small to provide meaningful information about

the sample. Also, as mentioned previously, the study is underpowered for this number of simultaneous analyses.

Research Question 4

Do key demographic variables (e.g. age, sex, ethnicity, SES, disability status, placement test scores) predict trends over time on each of the study's outcome variables?

To determine whether students' age, sex, ethnicity, SES, ethnicity, disability status, or college placement test scores were statistically significantly related to any of the study's outcome variable trends across time, a series of repeated measures ANOVAs were conducted. Six tests yielded significant findings – three for age, two for ethnicity, and one for socioeconomic status – which are briefly described below.

Univariate repeated measures analyses revealed three differences related to age. First, there was a difference in the linear trend over time for hope by age $F(1, 60) = 3.412$, $p = .004$, $\eta^2 = .285$. Younger students (16-19yrs), on average, tended to report increasing hope over time, while older students (> 20yrs) tended to report decreasing hope over time. Second, there was a difference in the linear trend over time for perceived barriers by age $F(1, 60) = 2.213$, $p = .046$, $\eta^2 = .205$. Younger students (16-19yrs), on average, tended to report increasing barriers over time, while older students (> 20yrs) tended to report decreasing barriers over time. Finally, there was a difference in the quadratic trend over time for anxiety by age $F(1, 60) = 2.272$, $p = .040$, $\eta^2 = .210$. Younger students (16-19yrs), on average, tended to report decreasing anxiety over time, while older students (> 20yrs) tended to report increasing anxiety over time.

Univariate repeated measures analyses also revealed two differences related to ethnicity. First, there was a difference in the linear trend over time for perceived social

support by ethnicity $F(1, 66) = 5.823$, $p = .019$, $\eta^2 = .082$. Due to a relatively low percentage of students of color in this sample, and an overall small sample size, ethnicity was treated as a dichotomous variable with two levels – students of color and white students. In this sample, students of color demonstrated a clear positive trend in perception of support, perceiving more support over time compared to white peers, who reported higher perceived support at Time1 and Time3, and lower perceived support at Time2. All students look similar at Time2 and Time3, with the difference associated with ethnicity most noticeable at Time1, when students of color reported low perceived support and white students reported relatively higher perceived support. Second, ethnic groups were differentiated in their quadratic trend over time for perceived barriers $F(1, 66) = 4.389$, $p = .040$, $\eta^2 = .064$. In this sample, students of color demonstrated a marginal downward trend, reporting fewer barriers over time, whereas white students reported low perceived barriers at Time1 and Time3, and higher perceived barriers at Time2.

Univariate analyses also revealed a significant difference between socioeconomic groups in the linear trend over time for future aspirations and goals $F(1, 66) = 3.030$, $p = .024$, $\eta^2 = .167$. Poor and working poor students in this sample demonstrate a positive upward trend over time regarding their future aspirations and goals, reporting greater educational aspirations and goals over time. In contrast, upper and middle class students in this sample demonstrated a downward trend, reporting lower educational aspirations and goals over time. This group difference was true when groups were analyzed separately (i.e., poor, working poor, lower middle class, middle class, upper class), and

also when the SES categories were collapsed into low, middle, and high income students $F(1, 66) = 4.768$, $p = .012$, $\eta^2 = .130$.

Research Question 5

If key demographic variables (e.g. age, sex, ethnicity, SES, disability status, college placement test scores) emerge as statistically significant predictors of trends in outcome variables over time, do these demographic variables change the relationship of the CTSP program to the weighted linear combination of dependent variables in the multivariate model explored in Research Question 1?

Based on univariate tests of significance, age, ethnicity and socioeconomic status were identified as possible covariates. To test whether age, ethnicity, and socioeconomic status affected the more sensitive multivariate model, a DMRM-ANCOVAs was conducted including the three demographic variables of interest – age, ethnicity, and socioeconomic status – as separate covariates. The DMRM-ANCOVA multivariate test of significance was as follows: $F(16, 45) = .387$, $p = .066$. This non-significant DMRM-ANCOVA test means that, when the three covariates are separately accounted for/partialed out, the intervention condition is no longer significantly related to the weighted linear combination of dependent variables over time.

Using logistic regression to compute a single propensity score for these three covariates allows us to account for the three covariates simultaneously, preserving power by reducing the number of variables and associated degrees of freedom in the model (Rosenbaum & Rubin, 1984). Participants who have the same propensity score should have the same combined distribution of the measured demographic variables (Hong & Yu, 2008). When these three covariates (age, ethnicity, and socioeconomic status) are

collapsed into a single propensity score, they can then be entered into the DMRM-ANCOVA as a single covariate. When this was done, the DMRM-ANCOVA multivariate test of significance was as follows: $F(16, 48) = .410$, $p = .026$. This statistically significant DMRM-ANCOVA test means that, when the three key covariates are simultaneously accounted for/partialed out, the intervention condition remains statistically significantly related to the weighted linear combination of dependent variables over time. Based on the fully multivariate analysis with inclusion of possible confounds, there is a statistically significant relationship between the discriminant function by condition over time. Students' participation in the CTSP intervention, as compared to College-Only students, is associated with differing patterns of change over time on the discriminant function.

Recall that the multivariate test of significance for the effect of condition by time – without consideration of confounds – was statistically significant $F(16, 51) = .367$, $p = .049$. In terms of effect size, approximately 37% of the variance in the original discriminant function was explained by the interaction of condition and time. Once we introduce covariates using the propensity score method, we see that 4% more of the change over time on the discriminant function – 41% – is explained by condition over time.

Although it is common practice to adjust for only covariates in which a statistically significant difference was observed, there is no reason to believe that the absence of statistical significance implies that any imbalance on other covariates is so small as to justify ignoring differential variance it may contribute (Hong & Yu, 2008). When all seven key covariates (age, sex, ethnicity, socioeconomic status, disability status,

reading placement test score, writing placement test score) were collapsed into a single propensity score, the DMRM-ANCOVA multivariate test of significance was as follows: $F(16, 46) = .407$, $p = .037$.

In the spirit of using all available demographic data collected at Time1, logistic regression was once again employed to compute a single propensity score that allows us to account for all the measured baseline demographic factors simultaneously. When all 14 demographic variables (age, sex, ethnicity, socioeconomic status, disability status, reading placement test score, writing placement test score, HS grades, family language, parent status, job, public assistance - historical, college major and career plans) were collapsed into a single propensity score, the DMRM-ANCOVA multivariate tests of significance was as follows: $F(16, 44) = .402$, $p = .054$. This non-significant DMRM-ANCOVA test means that, when all 14 covariates are simultaneously accounted for/partialed out, participants are no longer statistically significantly differentiated by condition regarding their discriminant function over time.

Summary of Findings

Taken together, the study's findings suggest promising results associated with participation in the CTSP. CTSP and College-Only students were statistically significantly differentiated when college self-efficacy, outcome expectations, perceived barriers, perceived support, locus of control, depression, and anxiety were pooled in a weighted linear combination. At the multivariate level, college self-efficacy, future aspirations and goals, and locus of control contributed the most weight to differentiating CTSP from College-Only students.

When three demographic variables (i.e., age, ethnicity, socioeconomic status) were combined into a propensity score that was subsequently included as a covariate in the multivariate analysis, original results did not change; CTSP and College-Only groups were still differentiated on the weighted linear combination of outcome variables. This pattern remained true when the seven key demographic variables (age, sex, ethnicity, socioeconomic status, disability status, reading placement test score, writing placement test score) were collapsed into a propensity score covariate. However, when all measured demographic variables were included in the propensity score covariate, the multivariate findings were statistically non-significant. These findings suggest that demographic differences between the CTSP and College-Only groups are likely contributing some of the variance originally explained in the doubly multivariate repeated measures analysis of variance.

When each longitudinal outcome variable was assessed separately, CTSP students reported increasing academic self-efficacy, future aspirations and goals, locus of control, academic achievement fears, and academic expectation-fear balanced pairs, and decreasing depression over time. In addition, students in the CTSP were statistically significantly differentiated from College-Only students in terms of their responses to a set of non-validated questions about college preparation and support and college advisor access at Time3, with CTSP students reporting greater college preparation and support from high school teachers and college advisors, and less support from siblings, when compared to College-Only peers. CTSP students also reported greater access to their college advisor when compared to College-Only students.

These promising findings were not limited to self-report measures. When students in the CTSP intervention were compared to their College-Only peers in terms of college persistence and weighted cumulative college GPA, they outperformed their peers. CTSP students were more likely to maintain college enrollment and more likely to earn higher cumulative GPAs than College-Only students.

CHAPTER IV

DISCUSSION

This study sought to increase our understanding of the impact of a College Transition Support Program on the first year college experiences of transitioning alternative high school students. In this study, a group of 34 alternative high school students participating in the College Transition Support Program (CTSP) were compared to 34 students in a non-equivalent comparison group – College-Only students who came from alternative high school backgrounds and navigated themselves to the community college without CTSP or other targeted, formalized high school-based transition support programming. These two groups were compared to evaluate whether the CTSP would differentially be related to growth on measures of (a) college self-efficacy, (b) outcome/future expectations as measured by (b_1) hope, (b_2) future educational aspirations and goals, (b_3) academic achievement-related expectations, (b_4) academic achievement-related fears, and (b_5) academic achievement-related expectation-fear balance; (c) perceived barriers, (d) perceived support, (e) locus of control, (f) depression, (g) anxiety, (h) college persistence, and (i) cumulative college GPA.

Results from the study suggest that the CTSP program was effective in influencing several relevant student outcomes, including college retention and college GPA. In the following paragraphs, I summarize and discuss the findings of the study. Additionally, I highlight strengths and limitations of this study and discuss implications for practice and research.

To examine the differential relationship between CTSP versus the non-intervention College-Only condition and student outcomes of interest, DMRM-ANOVAs

were conducted with CTSP as a between-subjects factor and time as a within-subjects factor. Effects were assessed according to participants' self-reported growth on multiple measures thought to be related to educational achievement: (a) college self-efficacy, (b) outcome/future expectations as measured by (b_1) hope and (b_2) future educational aspirations and goals, (c) perceived barriers, (d) perceived support, (e) locus of control, (f) depression, and (g) anxiety.

Results of the DMRM-ANOVA revealed a main effect for time. That is, over time, and when collapsed across groups, students tended to look better on the group of outcome measures of interest. Measures of locus of control, college self-efficacy, and anxiety best defined this change over time, with locus of control and self-efficacy loading positively and anxiety loading. Thus, students reporting higher locus of control and self-efficacy and lower anxiety best define longitudinal changes of the overall sample of students on the discriminant function over time. Furthermore, introduction of a propensity score covariate to simultaneously account for all 14 demographic variables collected at Time1 did not change the statistical significance of the multivariate main effect of time. That is, the statistically significant main effect of time held up even when variance associated with participants' baseline differences from one another were accounted for.

These results suggest that alternative high school students entering community college tend to look better over time in terms of a combined discriminant function of self-reported college self-efficacy, hope, education-related future aspirations and goals, perceived barriers, perceived support, depression, and anxiety. The transition year following high school is one of positive change for many academically at-risk students

who enter the community college setting. Consistent with the emerging adulthood literature (see Arnett, 2000, 2004), late adolescence and early adulthood are critical times for personal development, representing a period of growth and change, as well as an opportunity for intervention.

As hypothesized, the CTSP program moderated the main effect of time at the multivariate level. CTSP and College-Only groups were differentiated over time in relation to the discriminant function. The trend over time on the discriminant function that best differentiated the groups was defined by college self-efficacy, future aspirations and goals, and locus of control. Students with increasing self-efficacy scores contributed the most – nearly twice as much as other measures with high discriminant function weights – to differentiating the two groups over time. Students with increasing future aspirations and goals scores and decreasing locus of control scores also contributed significantly to the weight of the discriminant function that distinguished the two groups over time.

The CTSP intervention was effective in supporting a positive first-year college transition for many participating students. The CTSP intervention seemed to have the most impact on participants' self-efficacy, education-related future aspirations and goals, and locus of control. These variables represent key cognitive mechanisms that have been related to other positive youth outcomes, including achievement of education- and work-related tasks and attainment of education- and career-related goals (Albert & Luzzo, 1999; Kenny, Blustein, Chaves, Grossman, & Gallagher, 2003; Luzzo & McWhirter, 2001; McWhirter, Torres, Salgado, Valdez, 2007).

Although this result is promising, it is important to note that the introduction of a propensity score covariate to simultaneously account for all 14 demographic variables collected at Time1 changed the statistical significance of the multivariate effect of condition by time, rendering the test non-significant. Baseline demographic differences between the two groups, the majority of which were statistically non-significant, still contributed variance to the overall model. When variance associated with these variables was removed using the single propensity score as a covariate, results of the overall condition by time DMRM-ANCOVA were statistically non-significant.

To provide more information about the relationship between student outcomes and CTSP participation, a series of univariate repeated measures tests followed the DMRM-ANOVAs. In all but one of the measures (i.e., perceived social support), a main effect of time was found. For self-efficacy, locus of control, and anxiety, the main effect of time was linear. For hope, future aspirations, perceived barriers, and depression, the main effect of time was quadratic. All main effects of time were in the positive direction, with the full sample of students looking better over time in relation to outcomes. Results related to condition by time are explored in more detail below.

On the self-efficacy and locus of control measures, repeated measures ANOVAs revealed a linear effect for condition by time, with CTSP students reporting improved college self-efficacy and locus of control in comparison to their College-Only peers, particularly at Time3. Students in the intervention tended to look better over time in relationship to these measures, while College-Only students' scores remained relatively unchanged over time. Over their first year in the intervention, CTSP students appear to develop increased confidence in their ability to complete college-related tasks and

succeed in college, reporting an increasingly strong sense of control over education-related tasks.

Social Cognitive Career Theory suggests that sense of agency related to academic tasks predicts persistence toward related endeavors (Bandura, 1997; McWhirter, Rasheed, & Crothers, 2000; Paa & McWhirter, 2000). To examine persistence, CTSP and College-Only groups were also examined in terms of college retention over the course of the 2010-2011 academic year. As expected, findings revealed a statistically significant linear relationship between condition and change in college retention over time, with CTSP students demonstrating increasing enrollment and College-Only students demonstrating decreasing enrollment over time.

CTSP students did not just persist in college; they performed well. In terms of differences in cumulative college GPA, as expected, a statistically significant difference between CTSP and College-Only students was found, with CTSP students earning a B-average overall, compared to a C- average for College-Only students. The group difference of an average B- grade for CTSP students to a C- grade for College-Only students is made more meaningful in that nearly 75% of CTSP students performed above the cut-point that marks both "completed" and "passed" coursework. While C- grades may be considered "passing" as they fall above the cut-point of failing (i.e., "F" grades), course grades of C- do not allow a student to move forward in a course sequence, such as math or writing, and often do not meet minimum degree requirements. This means the grades CTSP students earned were consistently moving them closer to completion of a degree or certificate, while the lower quartile grades earned by College-Only students fell

below the “passing” reference point, indicating that a considerable portion of the grades earned by these students fell below a C- grade.

When the propensity score representing all 14 baseline demographic variables was introduced into the retention/persistence analysis as a covariate, the relationship between condition and enrollment status over time became non-significant. However, when propensity score covariance was included in the GPA analysis, the relationship between condition and cumulative GPA maintained statistical significance. Even when the variance associated with baseline differences between students was removed from the analysis, CTSP students earned statistically significantly better grades than their College-Only peers.

On the future aspirations and goals measure, a repeated measures ANOVA revealed a convex quadratic effect for condition by time, with CTSP students reporting higher future aspirations and goals at Time1 and Time3 and lower aspirations and goals and depression at Time2. It appears that CTSP students experience a dip in future aspirations and goals during Time2 relative to Time1 and Time3, with improved education-related attitudes and plans at Time3. In contrast, College-Only students demonstrate a flat trend related to future aspirations and goals. CTSP students experience an initial dip in their attitudes toward and goals related to college as they transition into the college context. By Time3, CTSP students experience some recovery of their initial education-related aspirations and goals. It is unclear whether this positive trend continues for CTSP students over time.

On the depression measure, a repeated measures ANOVA revealed a convex quadratic effect for condition by time, with CTSP students reporting consistently low

symptoms of depression over the course of the year, whereas College-Only students displayed a pattern of reporting depression at Time1 and Time3 and lower depression at Time2.

Exploration of the Possible Selves Questionnaire yielded interesting findings. Although no statistically significant differences between CTSP and College-Only students on trends of endorsing academic achievement expectations over time were observed in this sample, when collapsed across groups, students reported more expectations over time. Typical academic achievement expectations in this sample included "passing my classes/earning passing grades," "graduating/finishing school," "earning good grades/earning As and Bs," "doing my homework," "turning in all my assignments," and "choosing a major/program."

A statistically significant difference between CTSP and College-Only participants' patterns of endorsing academic achievement fears was found. While College-Only participants demonstrate a flat pattern over time in relation to endorsing academic achievement fears, CTSP students increase their reports of academic achievement fears over time. Common academic achievement fears endorsed in this sample included "failing school," "dropping out," "not having a major," and "getting bad grades." In the absence of significant differences between the groups in terms of anxiety, and the low, flat trend in depression for CTSP students, and within the framework for understanding Oyserman and Marcus's (1990) Possible Selves measure, CTSP students' increasing reports of academic achievement-related fears were not considered to be a negative outcome.

Students in the CTSP and College-Only groups were also compared on their balance over time in relationship to academic achievement expectations-fears. A statistically significant linear difference between CTSP and College-Only participants' patterns of endorsing balanced sets of academic achievement expectations-fears was found. While College-Only participants demonstrate a marginally negative pattern over time in relation to endorsing academic achievement expectation-fear balance, CTSP students increase their balance over time. Oyserman and Marcus (1990) argue that the condition of holding both an expectation and a related fear is associated with greater goal-directed behavior, over and above the influence of holding an expectation of success. Thus, CTSP students' increase in academic achievement expectation-fear balance might be protective; holding a goal and a related fear might be associated with greater goal-directed, negative outcome avoidant behavior.

These promising results map onto students' reports of perceived college preparation and support, with CTSP students reporting that they felt prepared for and received support related to college tasks at Time3, sharing that this support came from CTSP staff – high school teachers and college advisors. Related to college advisors, CTSP students were also more likely to report that they had reliable access to and felt comfortable contacting their CTSP-staff college advisor, when compared to College-Only students. Access to caring and knowledgeable adults, both at the high school and college, could be a protective factor for CTSP students. As Paa & McWhirter (2000) suggest, interventions that aim to increase the environmental supports available through adults with significant contact with students are likely to be more effective than those that rely on individuals with infrequent contact with students.

In sum, CTSP participation was associated with growth over time on several positive student outcomes, including college self-efficacy, education-related future aspirations and goals, academic achievement-related expectation-fear balance, academic locus of control, and college persistence/retention. In addition, CTSP students earned significantly higher cumulative college GPAs over their first year at the community college. At Time3, students in the CTSP intervention were also more likely to report that they felt prepared for and received support related to college, indicating that this support came from high school teachers and college advisors, who are CTSP staff. Finally, at Time3 CTSP students were more likely to report that they had reliable access to and felt comfortable contacting their CTSP-staff college advisor. Furthermore, no unexpected negative outcomes were found to be associated with CTSP participation. The College Transition Support Program appears to support the successful first-year transition experience of participating students, and appears to pose no harm to transitioning alternative high school students.

Limitations of the Study

This study has several important limitations, suggesting that findings should be interpreted with some caution. First, this study did not utilize random assignment, so relationships between intervention condition and outcome variables cannot be regarded as reflecting causation. Although propensity scoring seeks to mimic random assignment by generating unbiased estimates of the CTSP condition effect, propensity scoring is only as powerful as the dataset is rich (Hong & Yu, 2008; Rosenbaum & Rubin, 1984). Given that only 14 baseline demographic variables were assessed and included in the propensity

score, there is a very good chance that unmeasured variance exists, and that inclusion of these covariates would further influence and inform findings.

Mindful of the likelihood of the existence of unmeasured group differences, it is important to emphasize that inclusion of the full 14-variable propensity score affected the statistical significance of several tests. Inclusion of the propensity score rendered the multivariate condition by time effect non-significant. In addition, statistically significant differences in college retention disappeared once group differences were accounted for through use of a propensity score covariate. This is important information to consider as results from the study are interpreted. Tests with marginal, although statistically significant, *p* values, were rendered non-significant when a propensity score was included as a covariate in the current study.

A second limitation of this study was small sample size. Although 76% of the total population of 362 students who were eligible to participate were recruited and there was only a 5% attrition rate over the course of three waves, the groups participating in repeated measures were still relatively small ($n = 34$). The lack of measured bias in baseline scores on the dependent measures suggests that CTSP and College-Only participants are reflective of the high school populations from which they were drawn. However, with such small samples, it is difficult to draw strong conclusions. Because of small sample size, cell sizes are limited and compromise the utility and generalizability of the findings. Small cell sizes reduce statistical power and increase the likelihood of committing a Type II error by failing to identify differences between conditions when differences actually exist (Kazdin, 2002). While the overall longitudinal sample of 68

students is acceptable for exploratory research, this sample was too small for detailed demographic subgroup analyses.

A third limitation of the study was that the assessment packets did not utilize counterbalancing. It is possible that the order of the items/measures influenced participants' responses to items/measures that occurred later in the packet, that fatigue affected responses to items that occurred later in the packet, or that participants experienced a practice effect, getting more comfortable answering questions as they moved through the packet. There is no way to test for order, fatigue, or practice effects because counterbalancing was not utilized (Kazdin, 2002).

A fourth limitation of the study was that one of the measures did not perform well. The Reliable Alliance and Guidance subscales of the *Social Provisions Scale* were meant to measure students' perceptions of support available to them, particularly in relationship to support with college tasks. This measure yielded no main effects – students all reported flat perceptions of support over time, and groups had parallel lines. This measure provided important information about personal, emotional support available to students, but did not tap support related to college transition tasks. Two measures, *College Preparation and Support* and *College Advisor Access*, were created during the course of this study and were included in the last wave of data collection, but results from these non-validated measures were not collected over time, so it was only possible to use a cross-sectional approach to understand the data. Inclusion of validated measures similar to those that were created/included across all time points would have improved the overall study.

A fifth important limitation inherent in these analyses was that dosage of the CTSP intervention was not carefully monitored. Students in the CTSP condition were assumed to fully participate in the CTSP intervention components, although this may not have been the case. For example, some CTSP students engaged in the intervention in less than optimal ways, failing to complete or not earning a passing grade in the first-term *College Success: High School Transitions* course (n = 5; 15%). With dosage data for each participant, we could more carefully track participation in the intervention and better understand related outcomes.

Finally, the current study followed students for one year (i.e., three college terms), but did not track students long enough to assess graduation/completion rates, transfers to universities, stopping out/dropping out, or eventual employment status.

Limitations suggest that findings from this study should be interpreted with some caution. The extent to which one generalizes findings from this study to other alternative high school populations should be limited, and results should not be used to inform transition support programs for students who differ substantially from the alternative high school students included in this sample.

Strengths and Implications for Practice

This dissertation study aimed to address deficits in the literature and contribute to the discipline's understanding of educational and personal development for transitioning alternative high school students, with a two-pronged goal to improve intervention efforts at the local level and inform other interventions aimed to support transitioning alternative high school students.

Although small, the study involved a majority (76%) of the eligible participants based on selection criteria. Based on results of the study, recommendations are being made to the alternative high school and community college partners to assist them in their efforts to promote successful postsecondary transitions of alternative high school students. Chiefly, results have been used to support the continued funding of the CTSP program, reinforcing what had been informally presumed by involved parties – that participating CTSP students were benefitting from the intervention. Because CTSP students are at relative risk academically, it was especially important to carefully explore the program to determine whether it should continue, or whether changes should be made.

For example, based on results of the College Preparation and Support measure used at Time3, a specific recommendation to combine the role of the *College Success: High School Transitions* course instructor with the role of the college academic advisor has been made. Prior to the data collection year, these two roles had been performed by the same person. During data collection, it was not possible to identify a single person to serve in both roles. Given the finding that CTSP students were no more likely to report that a college instructor had been a source of support, and mindful that students had heavily accessed that instructor when s/he serves as both advisor and instructor, we hope the program will be more effective. Other transition support programs, including the larger *Gateway to College* program (Gateway to College, 2012), use this combined instructor-advisor model to support student-faculty relationship development during the first critical transition terms.

This research is also relevant to current federal educational policy initiatives. In their summary of findings from two literature reviews on postsecondary education transitions, the U.S. Department of Education (DOE) identified academically at-risk youth as worthy of postsecondary education transition program support and described extant transition support programs designed for these youth. Their review resulted in identifying three intervention components including (a) academic preparation interventions (b) supportive interventions, and (c) policy interventions (U.S. Department of Education, 2010). The transition support program described in this study includes elements of all three types of transition programs – (a) academic and placement testing preparation at the high school level, (b) direct high school and college-based supports to students, and (c) collaborative efforts between community college and public secondary school partners with potential implications for broader educational policy.

Specifically, the CTSP intervention involved both academic preparation and supportive interventions, as recommended by the Department of Education (2010). In terms of academic preparation, CTSP includes a high-school based review of remedial reading, writing, and math content and targeted preparation for college placement tests, as well as mandating that participating students begin their college experience with a *College Success* skill development course, followed by core reading/writing and math coursework. These academic preparation components occur within the context of a series of high school and college-based supportive interventions, including support and guidance provided by a targeted college advisor and a high school-based transition support specialist. CTSP aimed to surround transitioning alternative high school students with supports using an intrusive advising model, paired with positive reinforcement of

goal-directed behaviors and academic accomplishments. Together, these academic preparation and supportive interventions assist students to develop and practice the academic and personal skills associated with college success. Per the Department of Education's (2010) recommendations, and based on promising findings from this study, future interventions designed to support alternative high school and other academically at-risk students should aim to include both academic preparation and supportive intervention elements.

In addition, evidence documenting the promising effectiveness of the College Transition Support Program (CTSP) could be used by those who work with these youth to advocate for implementation of similar transition support programs, as well as to influence educational policy at the local and state levels. When we know that alternative high school students can successfully transition to the community college setting with the appropriate academic preparation and supportive interventions, we have a responsibility to provide such interventions. There are more than half a million alternative high school students in the U.S. (Carver & Lewis, 2010); promising results from this study support further research to determine whether a public policy mandate to make college transition support programs available to as many of these students as possible is warranted. Programs similar to CTSP, which include academic preparation and supportive interventions, in addition to screening and orientation, career exploration and planning, improved initial access to college services, and college service navigation support (Lindstrom et al., 2009) may be especially impactful.

Some researchers argue that "college-for-all" standards that encourage nearly all students to engage in postsecondary education/training lead to "unrealistic" educational

plans for students who are "unprepared" for college (Deil-Amen & Turley, 2007, p. 2356). As educators and social scientists, mindful of the many ecological barriers at-risk students experience, it is critically that we carefully examine our notions of who has the authority to determine who is "prepared" for college, what constitutes "preparation," and our ideas about whether this is an intrapersonal or contextualized phenomenon. Many people, including the general education instructors who taught the participating CTSP students prior to their enrollment in the alternative high school dual enrollment program told these students they were not "college material" or "college bound" (R. Cole & R. Gourgey, personal communication, October 8, 2010). It is possible that these students would be perceived as "unprepared" for college. Indeed, on average their academic records indicate that many of them may be academically underprepared for the rigors of postsecondary education. This lack of preparation is precisely the reason that effective transition support programs are needed. Rather than waiting for youth to "figure it out," educators and social scientists ought to partner to design and provide carefully scaffolded exposure to the community college context through dual high school and college supports. Such efforts offer a means to prepare otherwise underprepared alternative high school students for success in college, as well as readiness for the changing world economy. Results from this study suggest that interventions can make significant differences for students in terms of several student outcomes.

Students who leave the education system and who are not prepared to fully engage in the workforce are at risk of poor outcomes including poverty, underemployment/unemployment, and depression (Carruthers et al., 1996; Cox, 1999; Cox, Davidson, & Bynum, 1995; Lehr et al., 2009; Munoz, 2005). The College

Transition Support Program, by providing a pathway for academically at-risk students to transition to the community college, may serve to reduce the likelihood that participating students will experience some of these negative outcomes, helping youth improve their self-efficacy, future aspirations and goals, locus of control, college retention, and college cumulative GPA, while helping youth reduce symptoms of depression. As demonstrated in this study, efforts to support alternative high school students, when carefully designed and implemented over time, may have powerful and positive effects.

As Goldrick-Rab and colleagues (2009) advise, community colleges are particularly well-suited to provide college transition support services such as the CTSP intervention. With dual commitments to serve older, returning students and those who transition more directly from high school contexts, community college administrators and staff may use findings from this study to support use of structured, targeted advising and instruction services to serve academically at-risk youth. Supports that involve community college collaborations with public school partners may be particularly impactful. It is possible that providing these targeted transition support services during the critical period of emerging adulthood could help these students set a positive course to adulthood. Such programs play dual roles of intervention and prevention, helping students develop necessary skills to be successful in the college context, while also reducing the likelihood that these youth will experience any number of the adverse social and economic factors that are linked to lower educational attainment (Carruthers et al., 1996; Cox, 1999; Cox, Davidson, & Bynum, 1995; Lehr et al., 2009; Miech & Shanahan, 2000; Munoz, 2005).

Recommendations for Future Research

Previous studies related to college transitions have neglected alternative high school students, with most focused on the general education and special education populations in traditional high school settings (Brown, 2007; Lehr et al., 2009). Studies that have focused on alternative high school students have failed to employ research design components such as non-equivalent comparison groups and longitudinal analyses (Aron, 2006; Lehr et al., 2009; Ruzzi & Kraemer, 2006). In response to the limitations of prior research regarding transitioning alternative high school students, features of this study were designed to increase the power and utility of the findings. In keeping with recommendations of the Department of Education (2010), the study included validated measures and repeated measurement. Although the current study is relatively small and lacks elements of a rigorous, randomized control trial, results from the study reflect what the DOE describes as "promising practices" in that it (a) shows a change of more than one percent, (b) is at least marginally significant ($p < .10$), and (c) has a comparison group and a sample size of more than ten participants for both intervention and comparison groups (U.S. Department of Education, 2010).

During the course of this investigation, several questions and directions for future research emerged. Results from this study indicate effectiveness of the CTSP program on improving several student outcomes. To verify these results, studies utilizing randomization are recommended to replicate these findings with other samples.

In particular, future studies should include a larger and more representative sample of students in terms of ethnicity. This sample was composed of 58.6% White/European American students. While this sample includes an overrepresentation of

students of color in context of the county from which they are drawn (85% White/European American; U.S. Census Bureau, 2010), future studies should focus on securing larger samples so that more careful subgroup differences may be explored to best support diverse students' successful college transitions. In particular, it would be important to assess whether college transition support programs are differentially effective for students with and without disabilities, and whether the recommendations made by Lindstrom and colleagues (2009) are equally effective for alternative students with and without disabilities. In addition, a larger sample would enable the utilization of multilevel modeling, such as hierarchical linear modeling, to better account for the nested nature of repeated measures data.

Future research should also use counterbalancing to reduce and measure spurious effects, and include validated measures of college preparation/support and college advisor access components. Measures such as these will allow program administrators to assess the direct relationship between high school and college program staff efforts and student outcomes. Previous research has revealed that high school counselors rank low on students' perceived influences (McWhirter & Pa, 2000). CTSP's targeted increase of environmental support and encouragement from high school teachers, transition support specialists, and college advisors may be a critical component of the interventions effectiveness. Including such variables in a repeated measures design will allow us to better understand the program effect in association with college preparation and support and college advisor access.

In future studies, intervention program dosage should be carefully monitored and implementation fidelity checks should be included to ensure that participants receive the

intervention components as intended. Intervention fidelity can be particularly challenging in real-world practice settings with staff and funding changes, as well as differential and evolving priorities of involved individuals and institutions.

To further enrich the transition support program literature, future research should include participant satisfaction surveys to identify elements of the program that are salient and positive for participating students, as well as those that are disliked or perceived as unhelpful. To this end, future studies might also include student focus groups to gather more detailed information about students' transition support program experiences.

If a transition support program is being introduced into an alternative high school context for the first time, it is also recommended that data on school culture and job satisfaction be collected from high school staff and school engagement data be collected from students. Although not tested in the current study, it is possible that introduction of college transition support programming may have an impact on school-wide culture, job satisfaction, and school engagement.

Finally, future studies of alternative high school students' postsecondary educational transitions should collect data over a longer period of time to more accurately assess for polynomial effects, and to track students' longer-term outcomes, including graduation/completion rates and eventual employment status. If studies obtain human subjects approval to collect students' Social Security Numbers, researchers could track the eventual employment outcomes for participating students. Information from these longer and more in-depth studies would allow us to determine whether the impacts of college transition support programs are lasting, and whether they relate to future

employment trends. Little is known about the post-school transitions of alternative high school youth (Lehr et al., 2009), so research that tracks students well past high school completion would contribute significantly to our understanding of the postsecondary experiences of these youth

Conclusion

This study aimed to explore the role that a dual-enrollment College Transition Support Program may play in influencing the first-year experiences of alternative high school students. Results from the study are encouraging and suggest that further research is warranted.

With the increasing importance of postsecondary educational training/preparation in a world economy that is increasingly knowledge-based, and with a widening gap between those who are well-resourced and those who are under-resourced, it is critical that evidence-based, effective interventions be utilized to support the successful transition of at-risk youth.

APPENDIX A

SAMPLE DEMOGRAPHICS AT TIME1

Sample Demographics at Time1

Variable	CTSP		College-Only		HS-Only		*p*		
	M	*SD*	*M*	*SD*	*M*	*SD*	Ct-Co	Ct-HS	Co-HS
Age	18.18	1.09	19.56	1.42	17.6	1.14	< .001	< .001	< .001
College Reading Placement Test	73.18	28.9	83.85	14.2	-	-	-	N/A	N/A
College Writing Placement Test	74.09	31.0	88.03	15.4	-	-	.024	N/A	N/A

Variable	CTSP		College-Only		HS-Only		*p*		
	N	%	*n*	%	n	%	Ct-Co	Ct-HS	Co-HS
Sex							-	-	.005
Female	16	47.1	23	67.6	87	42.0			
Male	18	52.9	11	32.4	120	58.0			
Ethnicity							-	-	-
American Indian/Alaskan Native	1	2.9	0	0	16	7.7			
Asian American/Pacific Islander	0	0	0	0	3	1.5			
Bi-Racial	4	11.8	4	11.9	31	15.0			
Black or African American	0	0	0	0	4	1.9			
Hispanic/Latina(o)/Chicana(o)	2	5.9	1	2.9	23	11.1			
Multi-Racial	1	2.9	3	8.8	6	2.9			
White or European American	24	70.6	25	73.5	114	55.1			
Other	0	0	0	0	3	1.4			
Not reported	2	5.9	1	2.9	7	3.4			

Note: *p*-values represent appropriate *F* or χ^2 test statistics demonstrating a statistically significant difference at Time1. Ct-Co = CTSP compared to College-Only; Ct-H = CTSP compared to HS-Only; Co-H = College-Only compared to HS-Only

Sample Demographics at Time1 (Con't)

Variable	CTSP		College-Only		HS-Only		*p*		
	N	%	*n*	%	n	%	Ct-Co	Ct-HS	Co-HS
SES							-	.022	-
Poor or working poor	4	11.8	12	35.5	35	16.9			
Working class	9	26.5	5	14.7	24	11.6			
Lower middle class	10	29.4	9	26.5	59	28.5			
Middle class	6	17.6	5	14.7	71	34.4			
Upper middle class	2	5.9	3	8.8	9	4.3			
Upper class	0	0	0	0	1	0.5			
Disability Diagnosis							-	-	-
Yes	12	35.3	13	38.2	78	37.7			
No/Don't Know	22	64.7	21	61.8	129	62.3			
Disability Condition							-	-	-
ADD/ADHD	3	8.8	2	5.8	37	17.9			
Emotional/Mental Heath	6	17.6	7	20.6	15	7.3			
Learning Disability	1	2.9	3	8.8	11	5.3			
Physical Disability	0	0	0	0	1	0.4			
Traumatic Brain Injury	0	0	0	0	1	0.4			
Other	2	5.9	1	2.9	13	6.3			

Note: *p*-values represent appropriate *F* or χ^2 test statistics demonstrating a statistically significant difference at Time1.
Ct-Co = CTSP compared to College-Only; Ct-H = CTSP compared to HS-Only; Co-H = College-Only compared to HS-Only

Sample Demographics at Time1 (Con't)

Variable	CTSP		College-Only		HS-Only		*p*		
	N	%	*n*	%	n	%	Ct-Co	Ct-HS	Co-HS
Language spoken in home							-	-	-
Both English and Spanish	2	5.9	0	0	15	7.2			
English	32	94.1	33	97.1	188	90.8			
Spanish	0	0	1	2.9	3	1.4			
Other	0	0	0	0	1	0.5			
Do you have children?							-	-	.016
Yes	4	11.8	8	23.5	19	9.2			
No	29	85.3	26	76.5	185	89.4			
Number of children?							-	-	-
One	4	11.8	7	20.6	16	7.7			
Two	0	0	1	2.9	1	0.5			
More than two	0	0	0	0	0	0			
Current living situation?							-	-	-
On my own	4	11.8	4	11.8	8	3.9			
With partner/spouse	3	8.8	7	20.6	20	9.7			
With relatives including parent	21	61.8	18	52.9	158	76.3			
With relatives other than parent	2	5.9	1	2.9	14	6.8			
With foster parents/guardians	1	2.9	0	0	2	1.0			
In a shelter/homeless	2	5.9	3	8.8	1	0.5			

Note: *p*-values represent appropriate *F* or χ^2 test statistics demonstrating a statistically significant difference at Time1.
Ct-Co = CTSP compared to College-Only; Ct-H = CTSP compared to HS-Only; Co-H = College-Only compared to HS-Only

Sample Demographics at Time1 (Con't)

Variable	CTSP		College-Only		HS-Only		*p*		
	N	%	*n*	%	n	%	Ct-Co	Ct-HS	Co-HS
Employed?							-	-	-
Yes	7	20.6	9	26.5	31	15.0			
No	27	79.4	25	73.5	173	83.6			
Hours per week at job?							-	-	-
1-10 hrs/wk	1	2.9	2	5.9	8	3.9			
11-20 hrs/wk	3	8.8	2	5.9	14	6.8			
21 or more hrs/wk	2	5.9	5	14.7	9	4.3			
Public assistance – historical							-	-	.009
Yes	31	91.2	31	91.2	145	70.0			
No	3	8.8	1	2.9	44	21.3			
Public assistance – current							-	-	-
Yes	22	64.7	28	82.4	136	65.7			
No	11	32.4	6	17.6	62	30.0			
High school status before Alt HS?							-	-	-
I was no longer in HS	6	17.6	12	35.3	40	19.4			
I was home schooled	0	0	1	2.9	4	1.9			
I was at another alt HS	3	8.8	3	8.8	27	13.0			
I was in trad HS, not attending	10	29.4	15	44.1	96	46.4			
I was in trad HS, off schedule to graduate	15	44.1	3	8.8	38	18.4			

Note: *p*-values represent appropriate *F* or χ^2 test statistics demonstrating a statistically significant difference at Time1.
Ct-Co = CTSP compared to College-Only; Ct-H = CTSP compared to HS-Only; Co-H = College-Only compared to HS-Only

Sample Demographics at Time1 (Con't)

Variable	CTSP		College-Only		HS-Only		*p*		
	n	%	*n*	%	n	%	Ct-Co	Ct-HS	Co-HS
Overall HS grades							.020	-	< .001
Mostly As	0	0	3	8.8	10	4.8			
Mostly Bs	5	14.7	14	42.2	27	13.0			
Mostly Cs	17	50.0	13	38.2	89	43.0			
Mostly Ds	8	23.5	2	5.9	41	19.8			
Mostly Fs	2	5.9	1	2.9	36	17.4			
Time out of HS before college?							< .001	N/A	N/A
Between 2-6 mos	2	5.9	14	41.2					
Between 7 mos-1yr	0	0	4	11.8					
1-2 yrs	0	0	4	11.8					
More than 2 yrs	0	0	11	32.4					
College major selection?							< .001	-	< .001
Yes	7	20.6	29	85.3	50	24.2			
No	27	79.4	5	14.7	149	72.0			
Career decision?							-	-	.028
Yes, definitely	6	17.6	13	38.2	43	20.8			
Pretty sure	9	26.5	10	29.4	40	19.3			
Some ideas	17	50.0	9	26.5	98	47.3			
No idea	2	5.9	2	5.9	25	12.1			

Note: *p*-values represent appropriate *F* or χ^2 test statistics demonstrating a statistically significant difference at Time1.
Ct-Co = CTSP compared to College-Only; Ct-H = CTSP compared to HS-Only; Co-H = College-Only compared to HS-Only

APPENDIX B

HUMAN SUBJECTS APPROVAL AND LETTERS OF SUPPORT

UNIVERSITY OF OREGON

September 14, 2010

TO: Rosemarie Downey-McCarthy, Principal Investigator
Counseling Psychology

FROM: Deborah Olson , IRB Chair
Committee for the Protection of Human Subjects
Social/Behavioral Panel – FWA 00005914

RE: Protocol #X34-11, entitled "Postsecondary Educational Transitions for At-Risk Youth: Exploration of the College Transition Support Program"

Your protocol has been REVIEWED and APPROVED by the Committee for the Protection of Human Subjects (CPHS). The materials enclosed with this notice are the official records and must be retained. Only the approved materials may be used for this research. **Please note that although your protocol has been reviewed and approved, finalized copies of the teleformed measures must be on file in the Office for Protection of Human Subjects before these items are implemented.**

The approval of the CPHS is based upon your representations of the nature of the project and the involvement of human subjects. It is the responsibility of the principal investigator to **report adverse events or unanticipated problems involving risks to subjects to the Office for Protection of Human Subjects (OPHS) within 24 hours.** If during the course of your project you change your methodology in any way you are required to submit a MODIFICATION FORM to the CPHS for approval prior to implementation.

This approval expires September 13, 2011. Under the regulations, the CPHS will review projects at least annually, or more often if it deems that the risks to subjects warrant a more frequent review. Investigators will be notified approximately one month prior to expiration of the current approval period that the CONTINUING REVIEW FORM must be completed and submitted, along with a sample of the informed consent form in use, to the OPHS. The continuing review submission deadline for this protocol is .

During that period of the project when human subjects are involved, graduate students must meet the university requirements of continuous enrollment. The student must register for 3 graduate credits each term, excluding summer sessions, to be continuously enrolled. Undergraduate students must be enrolled for at least one credit hour of research.

When the project has been closed (i.e., procedures involving human subjects are completed), the investigator should complete the FINAL REPORT portion of the CONTINUING REVIEW FORM and send it to the OPHS. All records, including signed consent forms, must be retained by the investigator for a minimum of 3 years after the OPHS FINAL REPORT FORM is submitted to the OPHS or the final expenditure report is submitted to the funding agency, unless otherwise specified by the funding agency.

If you have any questions, please contact the OPHS at (541) 346-2510. You may also consult the OPHS website (http://humansubjects.uoregon.edu/).

cc: Elizabeth Stormshak and Lauren Lindstrom, Faculty Advisors

COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS • OFFICE FOR THE PROTECTION OF HUMAN SUBJECTS
1600 Millrace Drive, Suite 105, 5237 University of Oregon, Eugene OR 97403-5237
T 541-346-2510 F 541-346-6224 http://humansubjects.uoregon.edu

July 21, 2010

Rosemarie Downey-McCarthy
655 Kelly Blvd.
Springfield, OR 97477

Re: College Transition Support Program/Pathways Study

Dear Ms. Downey-McCarthy:

Please accept this letter of support for your proposed study. Based on our working relationship and mutual interest in the findings of your study, Lane Community College is confident that we will support your project.

Please note that this letter does not grant formal approval at this time, as we require approval from an Institutional Review Board. Please forward your IRB approval at your earliest convenience and we will expedite the process towards formal approval.

Sincerely,

Laurie Swanson Gribskov, Ph.D.
Dean, High School Connections,
Cooperative Education and Apprenticeship

Eugene School District 4J
200 North Monroe Street
Eugene, OR 97402-4295

September 14, 2010

Rosemarie Downey-McCarthy, MA
University of Oregon Counseling Psychology Department

Re: Protocol X34-11, Postsecondary Educational Transitions for At-Risk Youth: Exploration of the College Transition Support Program

Dear Ms. Downey-McCarthy:

Your request to continue conduct research in Eugene School District 4J has been reviewed and approved for the 2010/11 school year. All researchers must adhere to the Guidelines for Conducting Research in Eugene School District 4J form. The form can be found at www.4j.lane.edu/instruction/research for your reference.

Staff, parent, and student participation in research projects is voluntary. Thus, approval of this study does not guarantee the participation of any teacher, parent or student. Approval does provide you with formal clearance to seek participation and non-personally identifiable student data from the appropriate sites within the district. Should researchers desire to make changes after approval is granted, they must submit changes in writing and receive further approval. Any complaints from parents, subjects, or District staff will be investigated and could lead to a retraction of permission to continue your research.

Upon completion of your research, it is required that a summary report of the results is submitted directly to my office. If you have further questions regarding the implementation of your project, contact me conaghan_j@4j.lane.edu or at (541) 790-7561.

Sincerely,

Jim Conaghan
Research and Assessment Coordinator

Office of the Assistant Superintendent
Lane County School District 52
4640 Barger Drive
Eugene, OR 97402

June 10, 2010

Rosemarie Downey-McCarthy, M.A.
University of Oregon

Re: College Transition Support Study

Dear Ms. Downey-McCarthy,

Please accept this letter of support for your proposed dissertation study. Based on our working relationship and mutual interest in the findings of your study, the Bethel School District is confident that we will support your project.

Please note that this letter does not grant formal approval at this time, as we require approval from an Institutional Review Board. Please forward your IRB approval at your earliest convenience and we will expedite the process towards formal approval.

Sincerely,

Chris Parra
Assistant Superintendent

APPENDIX C

RECRUITMENT MATERIALS

1. Recruitment email to high school transition specialists and teachers – CTSP and HS-Only participants

Hi [insert name],

I hope you had a rejuvenating summer! I am writing to you as a graduate student at the University of Oregon to request your help in the collection of data for my doctoral dissertation. My study is designed to explore the college transition experience of alternative high school students, in an effort to develop the most effective college transition support programming to serve these students. In order to better understand students' experiences, I'll be asking students to share demographic information and answer a variety of questions about their beliefs about themselves. For These surveys will take students approximately 45 minutes to complete, and participating students will be compensated with a school pizza party during completion of the first survey, and $10 for each of three additional surveys. I will be asking you to help me administer and collect these surveys.

I plan to collect data from students participating in the College Transition Support Program three time points throughout the 2010-2011 year – once at the beginning of the year and once at the end of Winter and Spring terms. In addition, I plan to collect fall baseline data from all the juniors and seniors at your high school. To understand students' experience over time, and to link students' ideas about themselves with their academic performance, I will be asking students and parents for consent to access students' relevant college records (i.e., college term-by term enrollment status, college grades, number of credits completed/attempted). I will be analyzing data and providing feedback to schools about aggregated student experience during the 2011-2012 academic year, and I will inform you as soon as results are ready.

I have obtained permission from school district administrators to collect data from [District] students, and [Names of School District Administrators] are eager to see the results of this study. I look forward to talking with you about the survey administration dates, which have been scheduled with [High School Contact] to occur on [day of week, date] during [number] period(s).

If you have any questions regarding this study, contact Rosemarie Downey-McCarthy, Counseling Psychology Program at the University of Oregon, (541) 556-2084. You may also contact my faculty advisor, Elizabeth Stormshak, Ph.D., at (541) 346-2152, 5251 University of Oregon, Eugene, Oregon, 97401. If you have any questions regarding your rights as a research participant, please contact the Office for Protection of Human Subjects at the University of Oregon, (541) 346-2510, 1600 Millrace Drive, Suite 105, Eugene, OR 97403. This Office oversees the review of the research to protect participants' rights and is not involved with this study.

Thank you!

Rosemarie Downey-McCarthy

2. Recruitment letter to CTSP participants

Hi [name],

As a student in the College Transition Support Program at Lane Community College, you are also eligible to participate in a research study. This study is being conducted by Rosemarie Downey-McCarthy, a graduate student in the Counseling Psychology program at the University of Oregon. The purpose of the study is to better understand the college transition experiences of students who have attended alternative high schools.

Your participation in this research project is completely voluntary. If you decide to participate in this study, you will be asked to complete a packet of questionnaires now, as well as at the end of each term during the 2010-2011 academic year. Each packet will take approximately 45 minutes to complete. To understand students' experience over time, and to link students' ideas about themselves with their academic performance, I will be asking students and parents for consent to access students' relevant college records (i.e., college term-by term enrollment status, college grades, number of credits completed/attempted).

For your participation, you will be eligible to participate in a pizza party held here at the high school during completion of the first survey, and you will earn a $10 gift card (e.g. Target, Fred Meyer, etc.) after each of the three remaining surveys.

If you are under age 18, a consent letter has been sent to your parents/guardians via mail to ask for their permission for your participation. If you choose to participate, your parent does not need to return the consent letter. If you have permission and interest to participate, you will be asked to complete the survey on [date – ten days after letters were sent home to parents/guardians] here at your high school, during school time.

If you have any questions regarding this study, contact Rosemarie Downey-McCarthy, Counseling Psychology Program at the University of Oregon, (541) 556-2084. You may also contact my faculty advisor, Elizabeth Stormshak, Ph.D., at (541) 346-2152, 5251 University of Oregon, Eugene, Oregon, 97401. If you have any questions regarding your rights as a research participant, please contact the Office for Protection of Human Subjects at the University of Oregon, (541) 346-2510, 1600 Millrace Drive, Suite 105, Eugene, OR 97403. This Office oversees the review of the research to protect participants' rights and is not involved with this study.

Sincerely,

Rosemarie Downey-McCarthy

3. Recruitment letter from Laurie Swanson-Gribskov at Lane – College-Only participants

Hi [*Name*],
As the Division Dean of High School Connections and Cooperative Education at Lane Community College, I would like to let you know that you are eligible to participate in a research project being conducted by a graduate student from the University of Oregon, Rosemarie Downey-McCarthy. Because you indicated on your application to Lane that you had attended an alternative high school, you are within your first 1-3 terms of college, you are between 16-22 years old, and you are able to read, write, and speak English, you are eligible to participate.

This is a study about college transition experiences of students who have attended alternative high schools. If you decide to participate in this study, you don't need to do anything at this time. In ten business days, we will share your name and contact information with Rosemarie. She will contact you by phone or e-mail to tell you more about the study and ask you to complete a packet of questionnaires soon, as well as at the end of each term during the 2010-2011 academic year. Each packet of questionnaires will take approximately 45 minutes to complete.

For your participation, you will receive a $10 gift card (e.g. Target, Fred Meyer, etc.) immediately after completion of each packet of questionnaires.

If you are under age 18, a consent letter has been sent to your parents/guardians via mail to ask for their permission for your participation. If you choose to participate, your parent does not need to return the consent letter. If you have permission and interest to participate, the next step is to schedule a time for you to meet with Rosemarie to complete the first set of questionnaires.

If you are interested in participating in this study, and you don't want to wait for Rosemarie to contact you, please contact Rosemarie at (541) 556-2084 or rdowneym@uoregon.edu to get started.

If you have any questions regarding this study, contact Rosemarie Downey-McCarthy, Counseling Psychology Program at the University of Oregon, (541) 556-2084. You may also contact Rosemarie's faculty advisor, Elizabeth Stormshak, Ph.D., at (541) 346-2152, 5251 University of Oregon, Eugene, Oregon, 97401. If you have any questions regarding your rights as a research participant, please contact the Office for Protection of Human Subjects at the University of Oregon, (541) 346-2510, 1600 Millrace Drive, Suite 105, Eugene, OR 97403. This Office oversees the review of the research to protect participants' rights and is not involved with this study.

If you <u>do not</u> want to participate in these research surveys, and you <u>do not</u> want us to share your contact information with Rosemarie, please sign the bottom portion of this form and return it to the High School Connections office at Lane Community College using the self-addressed, stamped envelope enclosed by [*2 weeks later*].

- -

I **DO NOT** want to participate in this study. Please DO NOT share my name and contact information with Rosemarie.

Student's name: ____ Date: __________

Sincerely,
Laurie Swanson-Gribskov, Ph.D.
Division Dean, High School Connections and Cooperative Education, Lane Community College

4. Recruitment phone script – College-Only participants

Hello [name]. My name is Rosemarie and I'm a student from the Counseling Psychology program at the University of Oregon. I'm calling to invite you to participate in my research study. This study is about college transition experiences of students from alternative high schools. You're eligible to be in this study because you said on your application to Lane that you went to an alternative high school. I got your contact information from Lane's Institutional Research, Assessment, and Planning Office.

If you decide to participate in this study, I'll ask you to complete a packet of questionnaires two weeks from now, as well as at the end of each term during the 2010-2011 academic year. Each packet will take about 45 minutes to complete. I'll also ask to access your relevant college records, like your enrollment status, grades, and number of credits completed/attempted.

For your participation, you will receive a $10 gift card to a store like Target or Fred Meyer immediately after completion of each packet of questionnaires.

If you are under age 18, Lane Community College mailed a consent letter to your parents/guardians to ask for their permission for your participation. If you choose to participate, your parent doesn't need to return the consent letter. If you have permission and interest, we can go ahead and schedule a time for me to meet with you to complete the first set of questionnaires.

Do you have any questions for me?

If you have any more questions about this process or if you need to contact me about participation, you can reach me at 541-556-2084 or **rdowneym@uoregon.edu**.

Thank you so much!

5. Recruitment e-mail to students – College-Only participants

Hi [*insert name*],

My name is Rosemarie from the Counseling Psychology program at the University of Oregon. I am writing to invite you to participate in my dissertation research study. This is a study about college transition experiences of students who have attended alternative high schools. You're eligible to be in this study because you indicated on your application to Lane that you had attended an alternative high school, you are within your first 1-3 terms of college, you are between 16-22 years old, and you are able to read, write, and speak English. I obtained your contact information from Lane's Institutional Research, Assessment, and Planning Office.

If you decide to participate in this study, you will be asked to complete a packet of questionnaires, as well as at the end of each term during the 2010-2011 academic year. Each packet will take approximately 45 minutes to complete. To understand students' experience over time, and to link students' ideas about themselves with their academic performance, I will be asking students and parents for consent to access students' relevant college records (i.e., college term-by term enrollment status, college grades, number of credits completed/attempted).

For your participation, you will receive a $10 gift card (e.g. Target, Fred Meyer, etc.) immediately after completion of each packet of questionnaires.

If you are under age 18, a consent letter has been sent to your parents/guardians via mail to ask for their permission for your participation. If you choose to participate, your parent does not need to return the consent letter. If you have permission and interest to participate, the next step is to schedule a time for me to meet with you to complete the first set of questionnaires.

If you are interested in participating in this study, please contact me at (541) 556-2084 or rdowneym@uoregon.edu for more information. Thank you very much.

If you have any questions regarding this study, contact Rosemarie Downey-McCarthy, Counseling Psychology Program at the University of Oregon, (541) 556-2084. You may also contact my faculty advisor, Elizabeth Stormshak, Ph.D., at (541) 346-2152, 5251 University of Oregon, Eugene, Oregon, 97401. If you have any questions regarding your rights as a research participant, please contact the Office for Protection of Human Subjects at the University of Oregon, (541) 346-2510, 1600 Millrace Drive, Suite 105, Eugene, OR 97403. This Office oversees the review of the research to protect participants' rights and is not involved with this study.

Sincerely,

Rosemarie Downey-McCarthy

6. Recruitment letter to HS-Only participants

Hi [name],

As a student at [High School name], you are also eligible to participate in a research study. This study is being conducted by Rosemarie Downey-McCarthy, a graduate student in the Counseling Psychology program at the University of Oregon. The purpose of the study is to better understand the high school transition experiences of students who have attended alternative high schools.

Your participation in this research project is completely voluntary. If you decide to participate in this study, you will be asked to complete a packet of questionnaires. The packet will take approximately 45 minutes to complete.

For your participation, you will be eligible to participate in a pizza party held here at your high school during completion of the survey.

If you are under age 18, a consent letter has been sent to your parents/guardians via mail to ask for their permission for your participation. If you choose to participate, your parent does not need to return the consent letter. If you have permission and interest to participate, you will be asked to complete the survey on [date – ten days after letters were sent home to parents/guardians] here at your high school, during school time.

If you have any questions regarding this study, contact Rosemarie Downey-McCarthy, Counseling Psychology Program at the University of Oregon, (541) 556-2084. You may also contact my faculty advisor, Elizabeth Stormshak, Ph.D., at (541) 346-2152, 5251 University of Oregon, Eugene, Oregon, 97401. If you have any questions regarding your rights as a research participant, please contact the Office for Protection of Human Subjects at the University of Oregon, (541) 346-2510, 1600 Millrace Drive, Suite 105, Eugene, OR 97403. This Office oversees the review of the research to protect participants' rights and is not involved with this study.

Sincerely,

Rosemarie Downey-McCarthy

Get paid $25 for 30 minutes of your time!

Thank you for your help with the research study this year!

To continue participating,
simply **fill out the enclosed survey**.
It takes about **30 minutes**, and **<u>you get paid $25</u>**
in the form of a gift card to **Target** or **Fred Meyer**.

To earn your gift card immediately,
complete the survey and call me at **541-556-2084**.
I'll come to pick up the survey from a location convenient for you
(e.g. your home, work, campus) and drop off your gift card.

Surveys are due by **<u>Wednesday, 6/22</u>!**

Return your survey by **SATURDAY, June 11th!** In addition to your $25 gift card, you'll be entered into a drawing to win one of four extra **$50 gift cards!** *(Odds of winning are 1 in 15; winners paid June 12)*		Return your survey by **SATURDAY, June 11th!** In addition to your $25 gift card, you'll be entered into a drawing to win one of four extra **$50 gift cards!** *(Odds of winning are 1 in 15; winners paid June 12)*
Return your survey by **SATURDAY, June 11th!** In addition to your $25 gift card, you'll be entered into a drawing to win one of four extra **$50 gift cards!** *(Odds of winning are 1 in 15; winners paid June 12)*		Return your survey by **SATURDAY, June 11th!** In addition to your $25 gift card, you'll be entered into a drawing to win one of four extra **$50 gift cards!** *(Odds of winning are 1 in 15; winners paid June 12)*

APPENDIX D

CONSENT AND ASSENT MATERIALS

1. Passive consent form – CTSP participants

Your student was recommended to me by his/her teacher because s/he is eligible for the College Transition Support dual enrollment program at [*Name*] High School and Lane Community College.

I am conducting a study to help understand the college transition experience of alternative high school students, and I would like to ask your student to complete a set of 3 questionnaires over the course of the 2010-2011 year. Completion of the surveys is voluntary and will not have any effect on students' eligibility for high school or college programs, or high school or college grades. In addition to these surveys, I will be collaborating with the Institutional Research, Assessment & Planning office at Lane Community College to access participating students' relevant college records (i.e., college term-by term enrollment status, college grades, number of credits completed/attempted).

Students' names and contact information will be collected so that I may follow up with students over the course of the research project. Names and other identifiable information will be kept separately from students' responses to surveys, measurement forms will be coded and no identifiable information will be included on the forms, and all study results will be presented anonymously, so your student's confidentiality will be protected. All completed questionnaires will be securely stored in a locked filing cabinet. The surveys should take about 45 minutes to complete, and survey completion will occur during the high school day.

If your student is interested in participating, s/he will be asked to answer a packet of questions at four points throughout the 2010-2011 year. In addition to demographic information, study questions relate to student perceptions of their academic skills and interests, confidence to overcome obstacles, current feelings about themselves, and ideas about the future. Answering personal questions can be uncomfortable, and could produce negative feelings. Students may skip any questions that make them uncomfortable.

Participation is completely voluntary, students may take breaks during the questionnaires, and students may withdraw from the study at any time. If your student agrees to participate, s/he will be compensated for his/her time with a pizza party during completion of the first set of questionnaires, and a $10 gift card (e.g. Target, Fred Meyer, etc.) after all measures are completed on each additional packet of questionnaires. Although there is no guarantee that students who participate will directly benefit from participating in this study, they may be pleased to know that the information gained may add to our knowledge about the transition to college for students such as themselves.

If you have any questions about the survey administration, you can talk to [name of teacher] at [Name of High School].

If you have any questions regarding this study, contact Rosemarie Downey-McCarthy, Counseling Psychology Program at the University of Oregon, (541) 556-2084. You may also contact my faculty advisor, Elizabeth Stormshak, Ph.D., at (541) 346-2152, 5251 University of Oregon, Eugene, Oregon, 97401. If you have any questions regarding your student's rights as a research participant, please contact the Office for Protection of Human Subjects at the University of Oregon, (541) 346-2510, 1600 Millrace Drive, Suite 105, Eugene, OR 97403. This Office oversees the review of the research to protect participants' rights and is not involved with this study. You are welcome to keep this consent form for your records.

If you <u>DO NOT</u> give consent for you student's participation in these research surveys, please sign the bottom portion of this form and return it to [*Name of HS lead teacher*] by [*10 days later*].

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

Print Parent/Guardian name: _____

Parent/Guardian signature: _____ Date: _____

Sincerely,

Rosemarie Downey-McCarthy, M.A.
Graduate Student, Counseling Psychology
Principal Investigator, University of Oregon

[*School Administrator*]
Title, school

2. Student Assent/Consent Form and survey cover page – CTSP participants

As a student at [High School name], you have been selected to take part in a research project based out of the University of Oregon. This study is designed to help us better understand the college transition experience of alternative high school students.

We will ask you to complete surveys now and at the end of each college term this year. Completion of the surveys is voluntary and has no influence on your eligibility for the program or your high school or college grades. Your name and contact information will be collected separately from the surveys, measurement forms will be coded and no identifiable information will be included on the forms, and all study results will be presented anonymously, so your confidentiality will be protected. All completed questionnaires will be securely stored in a locked filing cabinet. The surveys should take about 45 minutes to complete, and survey completion will occur during the high school day.

If you are interested in participating, you will be asked to answer a packet of questions at three points throughout the 2010-2011 year. In addition to demographic information, study questions relate to student perceptions of their academic skills and interests, confidence to overcome obstacles, current feelings about themselves, and ideas about the future. Answering personal questions can be uncomfortable, and could produce negative feelings. You may skip any questions that make you uncomfortable. In addition to the surveys, I am asking for your permission to access your relevant Lane Community College records (i.e., term-by term enrollment status, grades, number of credits completed/attempted) between 2010 -2015.

Participation is completely voluntary, you may take breaks during the questionnaires, and you may withdraw from the study at any time. If you agree to participate, you will be compensated for your time with a pizza party during completion of the first set of questionnaires, and a $10 gift card (e.g. Target, Fred Meyer, etc.) after all measures are completed on each additional packet of questionnaires. Although there is no guarantee that you will directly benefit from participating in this study, you may be pleased to know that the information gained may add to our knowledge about the transition to college for students such as yourself. If you are under 18 and your parent/guardian agreed that you have permission to take part in the research surveys, your parent/guardian has already given consent.

Consent to complete surveys & access your college student record

- Completion of these surveys is voluntary and has no effect on your grades or eligibility for the CTSP
- The survey should take about 45 minutes to complete.
- Your name and contact information will be collected separately from the survey
- The results of the surveys will be kept confidential and will not be linked to you.
- Your relevant college records will be used only for purposes of the study and will be kept confidential.

<u>If you want to participate in this research, please:</u>

1. Sign this form (place in manila envelope marked “contact sheets and consent forms”)
2. Complete the Contact Information Sheet and detach it from the rest of the packet (place in manila envelope marked “contact sheets and consent forms”)
3. Complete the attached survey (place in manila envelope marked “questionnaires”)

If you have any questions regarding this study, contact Rosemarie Downey-McCarthy, Counseling Psychology Program at the University of Oregon, (541) 556-2084. You may also contact my faculty advisor, Elizabeth Stormshak, Ph.D., at (541) 346-2152, 5251 University of Oregon, Eugene, Oregon, 97401. If you have any questions regarding your rights as a research participant, please contact the Office for Protection of Human Subjects at the University of Oregon, (541) 346-2510, 1600 Millrace Drive, Suite 105, Eugene, OR 97403. This Office oversees the review of the research to protect participants’ rights and is not involved with this study. You are welcome to keep this consent form for your records.

If I write my name on this page that means that the page was read by me/to me, and that I agree to be in the study. I have been told what will happen throughout the study and that if I decide to not be in this study, all I have to do is tell the person in charge. I understand that I do not have to answer questions that make me uncomfortable and that I can stop at any time without penalty. I voluntarily agree to take part in the above described research study:

Student’s signature _____ Student’s name (please print) _____

3. Passive consent form letter from Dr. Laurie Swanson-Gribskov at Lane – College-Only student participants

Dear Lane Community College Parent,

As the Division Dean of High School Connections and Cooperative Education at Lane Community College, I would like to let you know that your Lane Community College student is eligible to participate in a research project because s/he indicated s/he attended an alternative high school on her Lane Community College application.

This study is being conducted by a graduate student from the University of Oregon, Rosemarie Downey-McCarthy, to help understand the college transition experience of alternative high school students. Rosemarie would like to ask your student to complete a set of 4 questionnaires over the course of the 2010-2011 year. Completion of the surveys is voluntary and will not have any effect on students' eligibility for college programs or grades. In addition to these surveys, Rosemarie will be collaborating with the Institutional Research, Assessment & Planning office here at Lane Community College to access participating students' relevant college records (i.e., college term-by term enrollment status, college grades, number of credits completed/attempted).

Students' names and contact information will be collected so that Rosemarie may follow up with students over the course of the research project. Names and other identifiable information will be kept separately from students' responses to surveys, measurement forms will be coded and no identifiable information will be included on the forms, and all study results will be presented anonymously, so your student's confidentiality will be protected. All completed questionnaires will be securely stored in a locked filing cabinet. The surveys should take about 45 minutes to complete, and survey completion will occur during the high school day.

If your student is interested in participating, s/he will be asked to answer a packet of questions at four points throughout the 2010-2011 year. In addition to demographic information, study questions relate to student perceptions of their academic skills and interests, confidence to overcome obstacles, current feelings about themselves, and ideas about the future. Answering personal questions can be uncomfortable, and could produce negative feelings. Students may skip any questions that make them uncomfortable.

Participation is completely voluntary, students may take breaks during the questionnaires, and students may withdraw from the study at any time. If your student agrees to participate, s/he will be compensated for his/her time with a pizza party during completion of the first set of questionnaires, and a $10 gift card (e.g. Target, Fred Meyer, etc.) after all measures are completed on each additional packet of questionnaires. Although there is no guarantee that students who participate will directly benefit from participating in this study, they may be pleased to know that the information gained may add to our knowledge about the transition to college for students such as themselves.

If you have any questions regarding this study, contact Rosemarie Downey-McCarthy, Counseling Psychology Program at the University of Oregon, (541) 556-2084. You may also contact Rosemarie's faculty advisor, Elizabeth Stormshak, Ph.D., at (541) 346-2152, 5251 University of Oregon, Eugene, Oregon, 97401. If you have any questions regarding your student's rights as a research participant, please contact the Office for Protection of Human Subjects at the University of Oregon, (541) 346-2510, 1600 Millrace Drive, Suite 105, Eugene, OR 97403. This Office oversees the review of the research to protect participants' rights and is not involved with this study. You are welcome to keep this consent form for your records.

If you <u>DO NOT</u> give consent for you student's participation in these research surveys, please sign the bottom portion of this form and return it to Laurie Swanson-Gribskov by [*10 days later*].

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

Print Parent/Guardian name: _____

Parent/Guardian signature: _____ Date: _____

Sincerely,
Laurie Swanson-Gribskov, Ph.D.
Division Dean, High School Connections and Cooperative Education
Lane Community College

4. Student Assent/Consent Form and survey cover page – College-Only participants

You have been selected to take part in a research project based out of the University of Oregon. This study is designed to help us better understand the college transition experience of alternative high school students.

We will ask you to complete surveys now and at the end of each college term this year. Completion of the surveys is voluntary and has no influence on your eligibility college programs or your college grades. Your name and contact information will be collected separately from the surveys, measurement forms will be coded and no identifiable information will be included on the forms, and all study results will be presented anonymously, so your confidentiality will be protected. All completed questionnaires will be securely stored in a locked filing cabinet. The surveys should take about 45 minutes to complete, and will be completed at times based on your availability.

If you are interested in participating, you will be asked to answer a packet of questions at four points throughout the 2010-2011 year. In addition to demographic information, study questions relate to student perceptions of their academic skills and interests, confidence to overcome obstacles, current feelings about themselves, and ideas about the future. Answering personal questions can be uncomfortable, and could produce negative feelings. You may skip any questions that make you uncomfortable. In addition to the surveys, I am asking for your permission to access your relevant Lane Community College records (i.e., term-by term enrollment status, grades, number of credits completed/attempted) between 2010-2015.

Participation is completely voluntary, you may take breaks during the questionnaires, and you may withdraw from the study at any time. If you agree to participate, you will be compensated for your time with a $10 gift card (e.g. Target, Fred Meyer, etc.) after all measures are completed on each of four packets of questionnaires. Although there is no guarantee that you will directly benefit from participating in this study, you may be pleased to know that the information gained may add to our knowledge about the transition to college for students such as yourself.

If you are under 18 and your parent/guardian agreed that you have permission to take part in the research surveys, your parent/guardian has already given consent.

Consent to complete surveys & access your college student record

- Completion of these surveys is voluntary and has no effect on your grades or eligibility college programs.
- The survey should take about 45 minutes to complete.
- Your name and contact information will be collected separately from the survey
- The results of the surveys will be kept confidential and will not be linked to you.
- Your relevant college records will be used only for purposes of the study and will be kept confidential.

<u>If you want to participate in this research, please:</u>

1. Sign this form (place in manila envelope marked “contact sheets and consent forms”)
2. Complete the Contact Information Sheet and detach it from the rest of the packet (place in manila envelope marked “contact sheets and consent forms”)
3. Complete the attached survey (place in manila envelope marked “questionnaires”)

If you have any questions regarding this study, contact Rosemarie Downey-McCarthy, Counseling Psychology Program at the University of Oregon, (541) 556-2084. You may also contact my faculty advisor, Elizabeth Stormshak, Ph.D., at (541) 346-2152, 5251 University of Oregon, Eugene, Oregon, 97401. If you have any questions regarding your rights as a research participant, please contact the Office for Protection of Human Subjects at the University of Oregon, (541) 346-2510, 1600 Millrace Drive, Suite 105, Eugene, OR 97403. This Office oversees the review of the research to protect participants’ rights and is not involved with this study. You are welcome to keep this consent form for your records.

If I write my name on this page that means that the page was read by me/to me, and that I agree to be in the study. I have been told what will happen throughout the study and that if I decide to not be in this study, all I have to do is tell the person in charge. I understand that I do not have to answer questions that make me uncomfortable and that I can stop at any time without penalty. I voluntarily agree to take part in the above described research study:

Student’s signature _____ Student’s name (please print) _____

5. Passive consent form – HS-Only participants

Your student was recommended to me by his/her teacher because s/he is a current student at [*Name*] High School.

I am conducting a study to help understand the high school transition experience of alternative high school students, and I would like to ask your student to complete a set of questionnaires at the beginning of the 2010-2011 year. Completion of the surveys is voluntary and will not have any effect on students' eligibility for high school programs or grades.

Students' names and contact information will be collected so that I may follow up with students over the course of the research project. Names and other identifiable information will be kept separately from students' responses to surveys, measurement forms will be coded and no identifiable information will be included on the forms, and all study results will be presented anonymously, so your student's confidentiality will be protected. All completed questionnaires will be securely stored in a locked filing cabinet. The surveys should take about 45 minutes to complete, and survey completion will occur during the high school day.

If your student is interested in participating, s/he will be asked to answer a packet of questions during the next month. Participation is completely voluntary, students may take breaks during the questionnaires, and students may elect to withdraw from the study at any time. If your student agrees to participate, s/he will be compensated for his/her time with a pizza party during completion of the set of questionnaires. In addition to demographic information, study questions relate to student perceptions of their academic skills and interests, confidence to overcome obstacles, current feelings about themselves, and ideas about the future. Answering personal questions can be uncomfortable, and could produce negative feelings. Students may skip any questions that make them uncomfortable. Although there is no guarantee that students who participate will directly benefit from participating in this study, they may be pleased to know that the information gained may add to our knowledge about the transition to college for students such as themselves.

If you have any questions about the survey administration, you can talk to [name of teacher] at [Name of High School].

If you have any questions regarding this study, contact Rosemarie Downey-McCarthy, Counseling Psychology Program at the University of Oregon, (541) 556-2084. You may also contact my faculty advisor, Elizabeth Stormshak, Ph.D., at (541) 346-2152, 5251 University of Oregon, Eugene, Oregon, 97401. If you have any questions regarding your student's rights as a research participant, please contact the Office for Protection of Human Subjects at the University of Oregon, (541) 346-2510, 1600 Millrace Drive, Suite 105, Eugene, OR 97403. This Office oversees the review of the research to protect participants' rights and is not involved with this study. You are welcome to keep this consent form for your records.

If you <u>DO NOT</u> give consent for you student's participation in these research surveys, please sign the bottom portion of this form and return it to [*Name of HS lead teacher*] by [*10 days later*].

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

Print Parent/Guardian name: _____

Parent/Guardian signature: _____ Date: _____

Sincerely,
Rosemarie Downey-McCarthy, M.A.
Graduate Student, Counseling Psychology
Principal Investigator, University of Oregon

[*School Administrator*]
Title, school

6. Student Assent/Consent Form and survey cover page – HS-Only participants

As a student at [High School name], you have been selected to take part in a research project based out of the University of Oregon. This study is designed to help us better understand the high school transition experience of alternative high school students.

We will ask you to complete surveys now. Completion of the surveys is voluntary and has no influence on your eligibility for high school programs or high school grades. Your name and contact information will be collected separately from the surveys, measurement forms will be coded and no identifiable information will be included on the forms, and all study results will be presented anonymously, so your confidentiality will be protected. All completed questionnaires will be securely stored in a locked filing cabinet. The surveys should take about 45 minutes to complete, and survey completion will occur during the high school day.

If you are interested in participating, you will be asked to answer a packet of questionnaires. In addition to demographic information, study questions relate to student perceptions of their academic skills and interests, confidence to overcome obstacles, current feelings about themselves, and ideas about the future. Answering personal questions can be uncomfortable, and could produce negative feelings. You may skip any questions that make you uncomfortable.

Participation is completely voluntary, you may take breaks during the questionnaires, and you may withdraw from the study at any time. If you agree to participate, you will be compensated for your time with a pizza party during completion of the questionnaires. Although there is no guarantee that you will directly benefit from participating in this study, you may be pleased to know that the information gained may add to our knowledge about the transition to college for students such as yourself.

If you are under 18 and your parent/guardian agreed that you have permission to take part in the research surveys, your parent/guardian has already given consent.

Consent to complete surveys

- Completion of these surveys is voluntary and has no effect on your grades or eligibility for high school programs.
- The survey should take about 45 minutes to complete.
- Your name and contact information will be collected separately from the survey
- The results of the surveys will be kept confidential and will not be linked to you.
- Your relevant records will be used only for purposes of the study and will be kept confidential.

<u>If you want to participate in this research, please:</u>

4. Sign this form (place in manila envelope marked “contact sheets and consent forms”)
5. Complete the Contact Information Sheet and detach it from the rest of the packet (place in manila envelope marked “contact sheets and consent forms”)
6. Complete the attached survey (place in manila envelope marked “questionnaires”)

If you have any questions regarding this study, contact Rosemarie Downey-McCarthy, Counseling Psychology Program at the University of Oregon, (541) 556-2084. You may also contact my faculty advisor, Elizabeth Stormshak, Ph.D., at (541) 346-2152, 5251 University of Oregon, Eugene, Oregon, 97401. If you have any questions regarding your rights as a research participant, please contact the Office for Protection of Human Subjects at the University of Oregon, (541) 346-2510, 1600 Millrace Drive, Suite 105, Eugene, OR 97403. This Office oversees the review of the research to protect participants’ rights and is not involved with this study. You are welcome to keep this consent form for your records.

If I write my name on this page that means that the page was read by me/to me, and that I agree to be in the study. I have been told what will happen throughout the study and that if I decide to not be in this study, all I have to do is tell the person in charge. I understand that I do not have to answer questions that make me uncomfortable and that I can stop at any time without penalty. I voluntarily agree to take part in the above described research study:

Student’s signature	Student’s name (please print)

APPENDIX E

MEASURES

***** Contact Information Sheet *****

Name: _____

Study ID: _____

Primary phone number: ( ) _____

Other phone number to reach you at: ( ) _____

E-mail: _____

Remove this cover page from your packet of questionnaires BEFORE answering the questions on the next pages to ensure the confidentiality of your responses.

☺ Thank you again for your contributions to this study! ☺

STUDY ID: _____

This page intentionally left blank to protect the confidentiality of your responses
☺ Turn the page to begin the survey! ☺

Demographics and Background Questionnaire

Instructions: The following questions ask for general information about you. Remember that the information you provide is anonymous. Please respond to the items below by either indicating your response or selecting the one category that best represents you. You may skip any question(s) that you feel uncomfortable answering.

1. Date of Birth (M/D/Y): ___/___/19___

2. Sex:
   _____ Female
   _____ Male
   _____ Other _____ (please specify)

3. Race/Ethnicity: *please mark ALL that apply*
   _____ American Indian/Alaskan Native
   _____ Asian or Asian-American
   _____ Black/African-American
   _____ Hispanic/Latino(a)/Chicano(a)
   _____ Middle Eastern
   _____ Multiracial, Multi-ethnic
   _____ Other (please specify) _____
   _____ Pacific Islander
   _____ White/European-American

4. What language do you usually speak with the people in your family?
   _____ Both English and Spanish
   _____ English
   _____ Spanish
   _____ Other (please specify) _____

5. Do you have children? Yes [ ] No [ ]

   6. If so, how many children do you have? _____

   7. Does at least one of your children live with you most of the time?
      Yes [ ] No [ ]

8. Which of the following best describes your current living situation? (Choose the option that fits you best)
   _____ On my own with/without roommates
   _____ With my boy/girlfriend or partner/spouse
   _____ With relatives/family, including one or more parent
   _____ With relatives/family, other than parent(s)
   _____ With foster parents or guardian(s) who are not related to me
   _____ In a shelter/homeless

9. Do you currently have a job? (if you work only occasional jobs, please choose "no")
   Yes [ ] No [ ]

10. How many hours per week do you usually work?
    _____ 1-10
    _____ 11-20
    _____ 21 or more

11. *In the past*, did you or anyone else in your family receive any form of public assistance (e.g. TANF, free or reduced-price lunch, food stamps, subsidized housing or Section 8, SSI, unemployment)?
    Yes [ ] No [ ]

12. *Currently*, do you or does anyone else in your family receive any form of public assistance (e.g. TANF, free or reduced-price lunch, food stamps, subsidized housing or Section 8, SSI, unemployment)?
    Yes [ ] No [ ]

For the purposes of the next two questions, your "family" is considered to be the household in which you spent most of your time growing up. If you experienced more than one household (for instance, due to divorce or other circumstances), please respond based on the household you considered to be your primary residence.

13. I consider the social class status of my family to be:
    _____ poor or working poor
    _____ working class
    _____ lower middle class
    _____ middle class
    _____ upper middle class
    _____ upper class

14. The approximate annual income of my family is:
    _____ zero or less than $12,000
    _____ $12,000 to $25,000
    _____ $25,000 to 35,000
    _____ $35,000 to 75,000
    _____ $75,000 to 100,000
    _____ Greater than $100,000

15. What is the highest level of education completed by your parent(s)/guardian(s)?

    Person 1: Mother [ ] Father [ ] or other guardian [ ] Specify who:
    _____
    _____ Some high school
    _____ high school
    _____ 2-year college or technical school
    _____ 4-year college
    _____ master's degree
    _____ doctoral degree
    _____ not sure

    Person 2: Mother [ ] Father [ ] or other guardian [ ] Specify who:
    _____
    _____ Some high school
    _____ high school
    _____ 2-year college or technical school
    _____ 4-year college
    _____ master's degree
    _____ doctoral degree
    _____ not sure

    If you have additional parents/guardians please indicate here: [ ] Specify who:
    _____
    _____ Some high school
    _____ high school
    _____ 2-year college or technical school
    _____ 4-year college
    _____ master's degree
    _____ doctoral degree
    _____ not sure

16. Which of the following best describes your high school status before coming to the alternative high school you were most recently (or are still) at?
    _____ I was no longer in high school
    _____ I was home schooled and did not attend a formal high school
    _____ I was in another alternative program

_____ I was in a traditional high school, but not attending class regularly
_____ I was in a traditional high school, but I was not on schedule to graduate on time
_____ Other (please specify) _____

17. How would you describe your high school grades?
    _____ Mostly As
    _____ Mostly Bs
    _____ Mostly Cs
    _____ Mostly Ds
    _____ Mostly Fs

18. If you are NOT dually enrolled in high school at this time, how long had you been out of high school before starting at Lane Community College?
    _____ Less that 1 month
    _____ Between 2 and 6 months
    _____ Between 7 months and 1 year
    _____ Between 1 and 2 years
    _____ More than 2 years

19. Have you ever been diagnosed with a disability?
    Yes [ ] No [ ] Not sure [ ]

20. If yes, what is your disability? (Check all that apply)
    _____ ADD/ADHD
    _____ Emotional/mental health
    _____ Learning disability
    _____ Physical disability
    _____ Traumatic brain injury
    _____ Other (please specify) _____

21. Are you registered with Disability Resources at Lane Community College?
    Yes [ ] No [ ] Not sure [ ]

22. Do you utilize services through Disability Resources at Lane?
    Yes [ ] No [ ]

23. If yes, which services do you utilize?
    _____ Testing accommodations
    _____ Note taking
    _____ Furniture or other physical accommodations
    _____ Tutors
    _____ Orientations/Workshops
    _____ Other: _____

24. Are you connected with a support service office at the college, such as TRiO?
    Yes [ ] No [ ]
25. Have you taken a *College Success* class in college?

Yes [ ] No [ ]

26. Have you taken a career planning or exploration class in college (such as *CG140: Career and Life Planning*)?
    Yes [ ] No [ ]

27. Since the beginning of this school year, have you met with a counselor at the college to discuss your career interests?
    Yes [ ] No [ ]

28. Since the beginning of this school year, have you used an online career exploration tool or career exploration software (such as CIS or OLMIS)?
    Yes [ ] No [ ]

29. Have you selected a college major or program of study? Yes [ ] No [ ]
    If yes, what is your major or program of study? _____

30. Have you decided on a career?
    Yes, definitely [ ] I am pretty sure [ ] I have some ideas [ ] I have no idea [ ]

College Self-Efficacy Inventory

Instructions: Think about yourself as a college student. For each statement below, circle the number that best represents your confidence.

How confident are you that you could successfully complete the following tasks: (Circle one number).

	Totally Unconfident	Very Unconfident	Unconfident	Somewhat Unconfident	Somewhat Confident	Confident	Very Confident	Totally Confident
	1	2	3	4	5	6	7	8
1. Make new friends at college.	1	2	3	4	5	6	7	8
2. Talk to your professors/ instructors.	1	2	3	4	5	6	7	8
3. Take good class notes.	1	2	3	4	5	6	7	8
4. Research a term paper.	1	2	3	4	5	6	7	8
5. Understand your textbooks.	1	2	3	4	5	6	7	8
6. Ask a professor/ instructor questions outside of class.	1	2	3	4	5	6	7	8
7. Write a course paper.	1	2	3	4	5	6	7	8
8. Do well on your exams.	1	2	3	4	5	6	7	8
9. Talk with a school academic or support staff.	1	2	3	4	5	6	7	8
10. Manage your time effectively.	1	2	3	4	5	6	7	8
11. Ask a question in class.	1	2	3	4	5	6	7	8
12. Participate in class discussions.	1	2	3	4	5	6	7	8
13. Keep up to date with your school work.	1	2	3	4	5	6	7	8

Future Aspirations and Goals (Subscale of the Student Engagement Instrument)

Instructions: Using the scale provided, please rate how much you agree with the following statements.

	Strongly Disagree	Disagree	Agree	Strongly Agree
	1	2	3	4
1. I plan to continue my education following high school.	1	2	3	4
2. Going to school after high school is important.	1	2	3	4
3. School is important for achieving my future goals.	1	2	3	4
4. My education will create many future opportunities for me.	1	2	3	4

State Hope Scale

Read each item carefully. Using the scale shown below, please select the number that best describes *how you think about yourself right now*. Please take a few moments to focus on yourself and what is going on in your life at this moment. One you have this "here and now" set, go ahead and answer each item according to the following scale:

1 = Definitely false
2 = Mostly false
3 = Somewhat false
4 = Slightly false
5 = Slightly true
6 = Somewhat true
7 = Mostly true
8 = Definitely true

____	1. If I should find myself in a jam, I could think of many ways to get out of it.
____	2. At the present time, I am energetically pursuing my goals.
____	3. There are lots of ways around any problem that I am facing now.
____	4. Right now, I see myself as being pretty successful.
____	5. I can think of many ways to reach my current goals.
____	6. At this time, I am meeting the goals that I have set for myself.

Possible Selves Questionnaire

Who will you be next year? Each of us has some image or picture of what we will be like and what we want to avoid bring like in the future. Think about your year – imagine what you'll be like, and what you'll be doing next year.

- In the lines below, write what you expect you will be like and what you expect to be doing next year.
- In the space next to each expected goal, mark NO (X) if you are not currently working on that goal or doing something about that expectation and mark YES (X) if you are currently doing something to get to that expectation or goal.
- For each expected goal that you marked YES, use the space to the right to write what you are doing this year to attain that goal. Use the first space for the first expected goal, the second space for the second expected goal and so on.

Next year, I expect to be	**Am I doing something to be that way**		**If yes, What I am doing now to be that way next year**
	NO	**YES**	
(P1)			(s1)
(P2)			(s2)
(P3)			(s3)
(P4)			(s4)

In addition to expectations and expected goals, we all have images or pictures of what we don't want to be like; what we don't want to do or want to avoid being. First, think a minute about ways you would **not** like to be next year – *things you are concerned about or want to avoid being like*.

- Write those concerns or selves to-be-avoided in the lines below.
- In the space next to each concern or to-be-avoided self, mark NO (X) if you are not currently working on avoiding that concern or to-be-avoided self and mark YES (X) if you are currently doing something so that this will not happen next year.
- For each concern or to-be-avoided self that you marked YES, use the space to the right to write what you are doing this year to reduce the chances that this will describe you next year. Use the first space for the first concern, the second space for the second concern and so on.

Next year, I want to avoid	**Am I doing something to avoid this**		**If yes, What I am doing now to avoid being that way next year**
	NO	**YES**	
(P5)			(s5)
(P6)			(s6)
(P7)			(s7)
(P8)			(s8)

Perceptions of Barriers Scale

Below you will find a list of potential barriers that you or someone else might encounter in obtaining further education/training. For each potential barrier in the list, please circle the responses that best fit for you:

First, *HOW LIKELY* is it that this will be a barrier for you?

		Not at All Likely 1			Definitely Likely 4			Not at All Likely 1			Definitely Likely 4
1.	Not enough money	1	2	3	4	**15.**	Pressure from boy/girlfriend	1	2	3	4
2.	Not smart enough	1	2	3	4	**16.**	Sex discrimination	1	2	3	4
3.	Not confident enough	1	2	3	4	**17.**	Racial/ethnic discrimination	1	2	3	4
4.	Friends don't support my plans	1	2	3	4	**18.**	Pregnancy/having children	1	2	3	4
5.	Having to work while going to school	1	2	3	4	**19.**	Lack of study skills	1	2	3	4
6.	Not fitting in at a new school or program	1	2	3	4	**20.**	Not knowing what kind of school or training I want	1	2	3	4
7.	Takes a long time to finish the training or schooling	1	2	3	4	**21.**	None of my friends are doing what I'm doing	1	2	3	4
8.	Being married	1	2	3	4	**22.**	Not being able to get into the program I want	1	2	3	4
9.	Teachers don't support my plans	1	2	3	4	**23.**	Parents don't support my plans	1	2	3	4
10.	Not being interested	1	2	3	4	**24.**	School too stressful	1	2	3	4
11.	Not being prepared enough	1	2	3	4	**25.**	Not wanting to move away	1	2	3	4
12.	Family responsibilities	1	2	3	4	**26.**	School/program very expensive	1	2	3	4
13.	Lack of motivation	1	2	3	4	**27.**	The schooling/training I want not available here	1	2	3	4
14.	Not talented enough	1	2	3	4	**28.**	Others don't think I can do it	1	2	3	4

Social Provisions Scale (Reliable Alliance and Guidance Subscales)

Instructions: In answering the following questions, think about your current relationships with others. Please indicate to what extent each statement describes your current relationships with other people.

	Strongly Disagree	Disagree	Agree	Strongly Agree
	1	2	3	4
1. There are people I can depend on to help me if I really need it.	1	2	3	4
2. There is no one I can turn to for guidance in times of stress.	1	2	3	4
3. If something went wrong, no one would come to my assistance.	1	2	3	4
4. There is someone I could talk to about important decisions in my life.	1	2	3	4
5. There is a trustworthy person I could turn to for advice if I were having problems.	1	2	3	4
6. There is no one I can depend on for aid if I really need it.	1	2	3	4
7. There is no one I feel comfortable talking about my problems with.	1	2	3	4
8. There are people I can count on in an emergency.	1	2	3	4

List the role/relationship of the people who provide you with the most support and guidance. For example, if a parent provides you with a lot of support, write “parent” on one of the lines below:

1. Relationship: _____

2. Relationship: _____

3. Relationship: _____

College Preparation and Support Scale
(developed for this study, included at Time3 only)

Instructions: The following questions concern how academically prepared you feel

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
1. I have had good preparation to start college this year (e.g. support with placement testing, orientation to college, registration assistance)	1	2	3	4	5
2. I know someone who is knowledgeable about college, who I could ask general college questions	1	2	3	4	5
3. I know someone who is available to help me with college homework if I am stuck	1	2	3	4	5
4. There is someone who believes in me and wants me to do well in college	1	2	3	4	5

If you receive any of the above supports, who provides you with assistance? ***(check <u>all</u> that apply).***

☐ Parent(s)/guardian(s)
☐ Sister(s)/brother(s)
☐ Teacher(s) at my high school
☐ College instructor(s)
☐ College advisor(s)/counselor(s)
☐ Friend(s) from my high school
☐ Friend(s) at college
☐ Other: _____

College Advisor Access Scale
(developed for this study, included at Time3 only)

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
1. I know how to reach my college advisor/counselor for registration clearance or other assistance	1	2	3	4	5
2. My college advisor/counselor is available when I have questions or need assistance	1	2	3	4	5
3. I feel comfortable talking to my college advisor/counselor	1	2	3	4	5

Perceived Academic Control Scale

Instructions: The following statements have to do with your academic performance. Remember there are no right or wrong answers; just answer as accurately as possible. Use the scale below to answer the questions, using the number between 1 and 4 that best describes you.

	Strongly Disagree			Strongly Agree
	1	2	3	4
1. I have a great deal of control over my academic performance.	1	2	3	4
2. The more effort I put into my classes, the better I do in them.	1	2	3	4
3. No matter what I do, I can't seem to do well in my courses.	1	2	3	4
4. I see myself as largely responsible for my performance throughout my college career.	1	2	3	4
5. How well I do in my courses is often the "luck of the draw."	1	2	3	4
6. There is little I can do about my performance in college.	1	2	3	4
7. When I do poorly in a course, it's usually because I haven't given it my best effort.	1	2	3	4
8. My grades are basically determined by things beyond my control and there is little I can do to change that.	1	2	3	4

Patient Health Questionnaire - 8

1. Over the last 2 weeks, how often have you been bothered by any of the following problems?

		Not at all	Several days	More than half the days	Nearly everyday
		0	1	2	3
a.	Little interest or pleasure in doing things.	☐	☐	☐	☐
b.	Feeling down, depressed, or hopeless.	☐	☐	☐	☐
c.	Trouble falling/staying asleep, sleeping too much	☐	☐	☐	☐
d.	Feeling tired or having little energy.	☐	☐	☐	☐
e.	Poor appetite or overeating.	☐	☐	☐	☐
f.	Feeling bad about yourself – or that you are a failure or have let yourself or your family down.	☐	☐	☐	☐
g.	Trouble concentrating on things, such as reading the newspaper or watching television.	☐	☐	☐	☐
h.	Moving or speaking so slowly that other people could have notices. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual.	☐	☐	☐	☐

2. If you checked off any problem on this questionnaire so far, how difficult have these problems made it
for you to do your work, take care of things at home, or get along with other people?

Not Difficult at all	Somewhat Difficult	Very Difficult	Extremely Difficult
☐	☐	☐	☐

State-Trait Anxiety Inventory (State Subscale)

Listed below are a number of statements that people have used to describe themselves. Read each statement and circle the response that corresponds to how you **feel right now**, at this moment, using the following scale:

0=Not at all 1=Somewhat 2=Moderately 3=Very much so

1.	I feel rested	0	1	2	3
2.	I feel content	0	1	2	3
3.	I feel comfortable	0	1	2	3
4.	I am relaxed	0	1	2	3
5.	I feel pleasant	0	1	2	3
6.	I feel anxious	0	1	2	3
7.	I feel nervous	0	1	2	3
8.	I am jittery	0	1	2	3
9.	I feel “high strung”	0	1	2	3
10.	I feel over-excited and “rattled”	0	1	2	3

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