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**Examining the Role of Parent Involvement in College Access for
Low-Income Students
A Mixed Methods Study of the FUEL program**

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ABSTRACT

In this dissertation, I examine how one college access program, Families United in Educational Leadership (FUEL), utilizes parents as a strategy to encourage college preparation among low-income students. FUEL serves 500 low-income families in seven sites around Boston by employing a savings incentive plan to help parents of high school students save up to \$3,000 for their children's college education. It also provides parents with information through monthly workshops about how they and their children can prepare for college. Research has shown that parents can play a key role in developing their children's college aspirations, encouraging their academic preparation, providing financial resources, and accessing postsecondary supports, all of which influence college enrollment (Hossler & Gallagher, 1987; Adelman, 1999; Choy, 2002; Tierney & Auerbach, 2005; ACSFA, 2008; Hill & Tyson, 2009). Unlike FUEL, many college access initiatives do not include parents in their efforts to encourage college preparation among the students they serve (Tierney & Auerbach, 2005), and so FUEL has provided a context in which to investigate parental involvement within a college access program.

In this study, I examined 1) if and how the level of parent knowledge about college preparation changes after participating in FUEL; 2) how parents make sense of their experiences with FUEL and how they use the information learned; and 3) students' perceptions of their parents' involvement in FUEL. The research project took place over one academic year at Chelsea High School in Chelsea, Massachusetts. My analysis of data indicate that FUEL encouraged behavior among families to prepare for college; increased college-going expectations among parents; made the college preparation process more manageable by offering extensive and organized information about college choice and financial aid, reminders about deadlines, and recommendations for other sources of guidance; positively impacted relationships between parents and children; and created an important support structure for participating families that altered their experiences with the college preparation process. These findings demonstrate the vital role that parents play in the college preparation process and describe key strategies used by FUEL that could be replicated by other college access efforts as they aim to expand college enrollment and success for low-income students and families.

TABLE OF CONTENTS

ABSTRACT	II
INTRODUCTION.....	1
LITERATURE REVIEW AND BACKGROUND	4
I. CURRENT STATE OF COLLEGE ACCESS AND BARRIERS TO ACCESS.....	4
II. THE ROLE OF PARENTS IN COLLEGE ACCESS	7
III. THE ROLE OF COLLEGE ACCESS PROGRAMS.....	10
IV. PARENTS AND COLLEGE ACCESS PROGRAMS	13
V. PARENT INVOLVEMENT THROUGH FUEL	14
RESEARCH METHODOLOGY	17
I. RESEARCH QUESTIONS	17
II. STUDY PARTICIPANTS AND SITES.....	17
III. DATA COLLECTION AND ANALYSIS.....	18
<i>Surveys</i>	19
<i>Focus Groups</i>	21
<i>One-on-One Interviews</i>	24
IV. LIMITATIONS OF THE STUDY	25
FINDINGS	27
OVERVIEW OF INITIAL STUDY PARTICIPANTS	27
PARENTS' INITIAL PERCEPTIONS AND KNOWLEDGE	28
FINAL RESULTS	33
CONCLUSIONS AND IMPLICATIONS	63
REFERENCES.....	73
APPENDICES	81
APPENDIX A: FUEL 2012-2013 MONTHLY WORKSHOP CURRICULUM	81
APPENDIX B: CRITERIA FOR MEMBERSHIP IN FUEL	82
APPENDIX C: TIMELINE FOR DATA COLLECTION	83
APPENDIX D: SAMPLE SIZES.....	84
APPENDIX E: PRE-ASSESSMENT SURVEY INSTRUMENT FOR FUEL PARENTS IN FALL 2012	85
APPENDIX F: POST-ASSESSMENT SURVEY INSTRUMENT FOR FUEL PARENTS IN SPRING 2013	94
APPENDIX G: FOCUS GROUP INTERVIEW PROTOCOL FOR FUEL PARENTS IN FALL 2012	102
APPENDIX H: FOCUS GROUP INTERVIEW PROTOCOL FOR FUEL PARENTS IN SPRING 2013.....	104
APPENDIX I: FOCUS GROUP INTERVIEW PROTOCOL FOR FUEL STUDENTS IN SPRING 2013	107
APPENDIX J: ONE-ON-ONE INTERVIEW PROTOCOL FOR FUEL PARENTS IN SPRING 2013.....	109
APPENDIX K: LIMITATIONS OF USING FOCUS GROUPS TO COLLECT DATA	111
APPENDIX L: LIMITATIONS OF USING A LANGUAGE INTERPRETER TO COLLECT DATA	112
APPENDIX M: INITIAL SURVEY RESULTS	115
APPENDIX N: FINAL SURVEY RESULTS.....	121

INTRODUCTION

The United States relies on a highly-skilled and educated workforce to maintain its leadership in the global marketplace. Many have projected continual increases in jobs requiring a college degree (Carnevale et al., 2010; Bureau of Labor Statistics, 2007; Murnane and Levy, 2005). Access to a postsecondary education requires that students have developed college aspirations, prepared academically, acquired the financial resources to pay for college, and obtained information to plan for college (Hossler & Gallagher, 1987; Adelman, 1999; Choy, 2002; ACSFA, 2008). Yet, many low-income students are unable to acquire these key elements (Stanton-Salazar, 1997; Hossler et al., 1999, Tierney & Auerbach, 2005), and therefore, do not enroll in college at the same rate as their high-income peers (ACSFA, 2008). In 2004, 86 percent of high-income students who were academically qualified to attend college were enrolled in a four-year college compared to only 55 percent of college-qualified, low-income students (ACSFA, 2008).

Research has shown that guidance offered by parents can influence the negative effect that low socioeconomic status has on college enrollment (Plank & Jordan, 1997, 2001). A study by Rowan-Kenyon, Bell, and Perna (2009) found that "parents support and encourage college opportunity through their expectations for their children's educational and occupational attainment, discussions with their children about college-related activities, efforts to take their children to visit colleges, and ability and willingness to pay college prices" (p. 571). Numerous other research has shown that parents play a key role in developing their children's college aspirations, encouraging their academic preparation, obtaining and providing financial resources, and accessing postsecondary supports (Cunningham, Erismann, and Looney, 2007; Hill & Tyson, 2009; Paulsen, 1990; Perna, 2005; Hossler et al., 1999; McDonough, 2004; Savitz-Romer & Bouffard, 2012). However, many parents who are low-income, who did not attend college themselves, who are newcomers to the United States, or who have limited social networks need the support of schools and college access programs to obtain the necessary information to assist their children in preparing for and reaching their postsecondary and career goals. Acquiring key information and obtaining various types of support from college access organizations can help to reinforce parents' educational expectations for their children and can help them better support their children's college aspirations (McDonough, 2004; Patrikakou, 2004; Rowan-Kenyon, Bell,

& Perna, 2008; Wimberley & Noeth, 2005). Nevertheless, many college access programs focus exclusively on students and do not involve parents in their outreach efforts (Tierney & Auerbach, 2005).

In this study, I highlight research that has documented the importance of students acquiring college aspirations, academic preparation for college, financial resources, and access to college planning support, as these four elements have been shown to have an impact on college enrollment. I also show how students with low-income backgrounds often do not adequately develop or obtain each of these critical components to enroll in college (Stanton-Salazar, 1997; Hossler et al., 1999; Tierney & Auerbach, 2005). Next, I discuss how parents can play a vital role in developing their children's college aspirations, supporting their children's academic preparation, obtaining and providing financial resources for college, and ensuring access to college planning support systems (Cunningham et al., 2007; Hill & Tyson, 2009; Paulsen, 1990; Perna, 2005; Hossler et al., 1999; McDonough, 2004; Savitz-Romer & Bouffard, 2012). I also describe the role that college access programs can play in improving the level of information low-income students and families have about the college preparation and enrollment process. Lastly, I describe how the efforts most college access programs make to incorporate parents are insufficient to successfully overcome the negative effects of socioeconomic status and to improve college aspirations and preparation among low-income students (Tierney & Auerbach, 2005).

Building from these past studies, I investigate a model of parent involvement within a college access program by focusing on the Families United in Educational Leadership (FUEL) program, one of only a few college access organizations in the nation that explicitly targets parents in its work to improve college preparation within low-income families. Specifically, FUEL helps low-income families save for college and provides in-depth college preparation-related information (both academic and financial). In so doing, it aims to give parents cultural and social capital often possessed only by high-income families (Tierney & Auerbach, 2005). These parent involvement strategies have not yet been investigated within the context of a college access program. Thus, my dissertation study explores 1) if and how the level of parent knowledge about college preparation changes after participating in FUEL; 2) how parents make sense of their experiences with FUEL and how they use the information learned; and 3) how students perceive their parents' involvement in FUEL. Through the use of a mixed methods

research design including surveys, focus groups, and interviews, this study fills a gap in our understanding about how college access programs play a role in changing parental involvement in the college preparation process.

The results suggest that the FUEL program influenced the perceptions, knowledge, and behaviors of parents as they supported their children in preparing for a college education. Through the use of paired t-tests and narrative analysis, I argue that FUEL played an important role in encouraging behavior among families to prepare for college; increasing college expectations among families; making the college preparation process more manageable; influencing relationships between parents and children; and implementing key program elements that altered the experiences of participating families in the college preparation process. These thematic findings indicate that FUEL has been able to maintain the attention of the families it serves and is able to adequately serve their needs because it provides two important services. It gives parents an experience at each monthly meeting that encourages them to keep returning and participating in the program. It also offers them a support structure that helps them feel as though college preparation assistance is readily available and easy to access. The program also relies heavily on the relationships it has built over the years to connect students and families with others in the community who may be able to best assist them in their preparation for college, such as other college access programs, other families, universities, and scholarship programs. Lastly, much of FUEL's influence on the Chelsea families it serves resides in the knowledge and charisma of its facilitators as they recruit families and offer information and guidance to them throughout the academic year. The findings from this study demonstrate the vital role that parents can play in their children's college preparation and therefore should be considered as college access programs plan to improve their efforts in reaching low-income students. This study also highlights several key strategies used by FUEL that could be replicated by other college access efforts so that they may better reach out to parents as they aim to expand college enrollment and success for low-income students and families within their communities.

LITERATURE REVIEW AND BACKGROUND

I. Current State of College Access and Barriers to Access

Researchers have repeatedly shown that a postsecondary education increases the likelihood that individuals reach and maintain a middle-class family income (Bureau of Labor Statistics, 2012; Carnevale, Smith, & Strohl, 2010). A postsecondary education also allows individuals to offer their societies greater benefits. For example, a college education allows individuals to be better informed about topics such as health and human safety. Second, their higher salaries enable them to financially contribute more to their communities (Baum, Ma, & Payea, 2013). Six out of every ten jobs today must be filled by people who have completed at least some postsecondary education to maintain the “knowledge-based economy” that we have in the United States (Carnevale & Desrochers, 2003). However, low-income students do not enroll in postsecondary education at the same rate as their high-income peers and therefore do not obtain the training necessary for many high-paying jobs. In 2004, 86 percent of high-income students who were academically qualified to attend college were enrolled in a four-year college compared to only 55 percent of college-qualified, low-income students (ACSFA, 2008).

Scholars point to several agents that can encourage college preparation and enrollment. First, students develop aspirations to attend college before they begin to plan for it (Hossler & Gallagher, 1987). This development of aspirations for college often happens between the eighth and tenth grades (Choy, 2001). However, there is a direct and positive relationship between college aspirations and family income, meaning that students from higher-income families report higher college aspirations than students from low-income families (Hossler & Stage, 1992; Paulsen, 1990). More recent research by the College Board (2011) found that low-income students have similar college aspirations to their high-income peers, but when their actual enrollment behavior was examined, there was a greater “melt” between their aspirations and their college enrollment compared to their high-income peers, indicating that although the college aspirations of low-income students may have increased over the years, they do not lead to higher enrollment rates. The students in the study did not enroll in college at the rate that their aspirations predicted they would. This could be due to a host of reasons, including a lack of

academic preparation, lack of financial resources, and a lack of information and support regarding college admission and access.

Second, students must be academically prepared to gain admission into college and progress through college successfully without experiencing such hurdles as having to take preparatory or remedial courses before they are able to enroll in college-level and college-credit classes. Academic indicators such as high school GPA, test scores, completion of high-level mathematics classes, and participation in a college preparation track in high school are all positively related to likelihood of college enrollment (Adelman, 1999; Hossler et al., 1999; Perna, 2000). Yet opportunities to complete high-level coursework are not equally provided to students of different socioeconomic backgrounds (Berkner & Chavez, 1997; Cabrera & La Nasa, 2000). For example, low-income students are less likely than students at the highest socioeconomic quintile to attend secondary schools that offer calculus as a course option (Kuh et al., 2006).

Third, students must have the financial resources and information about affordability before they make decisions about college. Numerous reports have highlighted the rising cost of tuition at public universities and colleges as well as the inability of financial aid to keep up with these rising costs. After accounting for a family's financial contribution, loans, and scholarships, their unmet need is still substantial, averaging \$5,911 (Long & Riley, 2007). With such costs in mind, low-income students face a greater financial burden in affording to enroll in a postsecondary institution compared to their high-income peers (ACSFA, 2006; Ehrenberg, 2002; Presley & Cleary, 2001). Undocumented students face even greater financial barriers as they are ineligible to receive federal financial aid and in most states, state financial aid. Their family income levels also tend to be quite low, and many undocumented students live below the poverty level. Furthermore, these students often do not qualify for in-state tuition, exacerbating the financial barriers they face as they attempt to enroll in a four-year public college. Therefore, for all three of these reasons, the unmet financial need for undocumented groups is even higher than documented students and so they often experience low rates of college attendance (Holguin, 2010). Students' perceptions of affordability are also important as they may be linked to their decisions to prepare for college. Research has shown that low-income students are much more likely to be concerned about college costs in comparison to their high-income peers (College Board, 2011). If students and families perceive college as unaffordable, then students may decide

not to put forth the time and effort costs of preparing for and pursuing college (Case & McPherson, 1987; Hartle, 1998; Long, 2004, ACSFA 2008).

Finally, access to postsecondary planning support is critical for students to make the best decisions about college (ACSFA, 2008; Tierney & Venegas, 2007). This includes accurate information about the academic and financial preparation necessary for college along with knowledge of the admissions process. However, students from low-income families are often made aware of the college admissions process too late to take the appropriate college-preparation courses and college-entrance exams, and often need assistance in completing the forms necessary to apply for financial aid programs (ACSFA, 2008; McDonough, 1997; Rainwater & Venezia, 2003). Hoxby & Avery (2013) found that high-achieving, low-income students often do not apply to selective colleges because they come from districts too small to support selective public high schools, do not attend school or live among a critical mass of fellow high achievers, and are unlikely to encounter a teacher who attended a selective college. Therefore, these students have limited exposure to important college planning resources and do not attend schools that are specifically conducive to the rigorous academic preparation that is often required to enroll in a selective college.

Access to postsecondary support also includes information about where to attend college, as college choice can determine not only whether students gain access to college but whether they complete their college degree. Many low-income students are not provided with information about appropriate college choice options for them, and therefore face numerous hurdles in their attempts to complete a degree. For example, attending a two-year community college may provide a low-cost and local alternative for many students who cannot afford to attend a four-year institution (Gándara & Bial, 2001). However, attending a two-year college can also be an additional hurdle towards achieving a four-year degree (Rendón and Garza, 1996). Research has shown that students who begin at a community college tend to be less likely to complete a bachelor's degree (Long & Kurlaender, 2007). A recent study by Hoxby and Avery (2013) also showed how a lack of postsecondary support affects where low-income students apply to college. The study found that many low-income, high-achieving students do not apply to four-year, selective colleges that may offer them much more financial aid than non-selective colleges because they simply lack the information or encouragement that high-income, high-achieving students receive. Postsecondary planning support for low-income students would help to

ameliorate the issues described above and would also ensure that students enroll in the type of college that is best suited for their needs, are able to persist through college, and are able to complete their degrees.

II. The Role of Parents in College Access

While low-income students face obstacles to planning and preparing for a postsecondary education, certain types of parental guidance can help to minimize these barriers (Plank & Jordan, 1997, 2001). First, parents can guide their children's educational trajectories through the educational expectations they set for their children, which can influence the academic encouragement they provide (Patrikakou, 2004; Wimberly & Noeth, 2004; Cunningham et al., 2007; Hill & Tyson, 2009). Academic encouragement – characterized by communicating expectations for achievement, discussing school matters and learning strategies, and preparing for the future – has been shown to improve educational achievement for students across all populations. Research has shown that support and encouragement from parents are associated with greater educational aspirations among students (Berzin, 2010). Since college aspirations are often shaped between the eighth and tenth grades (Choy, 2001; Hossler, Schmidt, & Vesper, 1999), early and sustained conversations with parents prior to senior year have been found to benefit students, mainly by encouraging certain college-planning behaviors such as taking the SAT and researching colleges (Plank & Jordan, 1997, 2001). Research has demonstrated that students who are strongly encouraged by their parents to enroll in college are more likely to attend a postsecondary institution compared to students who do not receive that kind of support (Paulsen, 1990; Hossler et al., 1999).

Second, parents influence the college enrollment behavior of their children through their support of academic preparation. Scholars have shown that parent involvement both at home, through the monitoring of behavior and homework, and at school, through communication with school staff, is correlated with higher rates of student achievement, attendance, homework completion, graduation, and college enrollment (Choy, 2002; Henderson & Berla 1997; Scott-Jones, 1995; Tierney & Auerbach, 2005). However, although research demonstrates the importance of home-school relationships, many schools of low-income students do not reach out to parents to involve them in the academic preparation of their children (Henderson & Mapp,

2010; Louie, 2012; Patrikkou, 2004). Affluent communities tend to experience more positive involvement from families than low-income communities (Epstein, 1995). Schools located in low-income communities often contact families regarding the problems and difficulties their students are having rather than building more positive home-school partnerships that encourage parental engagement (Epstein, 1995).

Parental academic engagement may be particularly critical for families of color and low-income families who are more likely to face discriminatory course-placement structures and low-quality schools. Darling-Hammond (2014) argues that students of color face large differences in educational funding, teacher quality, curriculum, support services, and class sizes, and these differences have resulted in lower achievement levels among these students. Academic tracking systems have exacerbated these inequalities in achievement. However, a meta-analysis by Jeynes (2005) shows that parent involvement in the form of reading and communicating with one's child has positive impacts on student educational outcomes, and that these effects tend to be largest for African American and Latino children.

For parents who are immigrants, supporting their children in their academic preparation can be especially challenging. Many immigrant parents are unfamiliar with the education system of the United States, making them less able to support their children. Parents who are immigrants may not know the daily academic requirements their children face in school and are unable to help them with learning strategies (Louie, 2012). Second, some immigrant parents are unable to support their children's academic preparation, specifically related to helping them with academic content, because of their own lack of comparable education (Zarate, 2007). Lastly, many immigrant parents who academically support their children have a style of support that looks different than the type of support that schools expect from parents (Zarate, 2007; Louie, 2012). Louie (2012) details how many immigrant families from urban settings focus on family discipline, limiting time their children spend with friends and ensuring that adult supervision is provided at all activities. Many families provide verbal and moral support instead of homework help. Parents who have limited English proficiency are even more limited in their ability to engage with their children's schools as they cannot speak with teachers, understand homework assignments, or know what is expected of them from schools (Suárez-Orozco, Gaytán, et al., 2010). However, they are still able to focus on verbal discipline and support despite their language differences.

Students' academic preparation is also strongly influenced by the decisions their parents make about the communities in which they live. While environmental and housing racism may prevent parents from freely choosing where to live (Bullard, 2004; Feagin, 1994), students whose families live in communities that offer positive educational opportunities may be more likely to achieve their academic goals (Clark, 1983; Gandara, 1995). However, in instances where communities do not offer high-quality, positive educational opportunities, research shows that many working-class parents leverage their own contacts to find good schools and after-school programs so that their children have access to high-quality schooling and academic support programs (Louie, 2012).

Third, parents are often responsible for providing the financial resources that their children need to attend college and even convey messages about affordability that influence their children's decisions to attend college. For example, low-income students who receive college information and expect that their parents will provide financial support for college are 66 percent more likely than other students to plan on attending a four-year college (King, 1996). In addition, parents' knowledge and perception of college costs and financial aid play an important role in shaping college enrollment behavior among low-income students (Tierney & Auerbach, 2005). Parents who are aware of available financial aid resources have higher degree aspirations for their children than parents who are unaware of such resources (Horn, Chen, & Chapman, 2003). However, most parents overestimate the cost of attending college (McDonough, 2002; Horn, Chen, & Chapman, 2003), which can restrict options for low-income students, as low-income families tend to be loan averse and are more sensitive to the opportunity costs of pursuing college (Olson & Rosenfeld, 1984; Tierney & Auerbach, 2005). Finally, a parent's willingness to share financial information is necessary for students to apply for financial aid. Reluctance to share such information creates a barrier to student enrollment in college (Burdman, 2005).

Lastly, parents influence their children's college enrollment by providing and accessing postsecondary planning support (Bouffard & Stephen, 2007). Postsecondary planning support helps students develop their educational and professional goals and includes information on how to prepare for college and how to apply for admission and financial aid. The earlier this planning begins, the more prepared students become (McDonough, 2004; Cunningham et al., 2007, Hill & Tyson, 2009). However, if information about and support for college is not provided to students

before they reach their senior year in high school, they may make decisions that do not prepare them for college or may decide not to attend at all (ACSFA, 2008). Postsecondary planning necessitates parent knowledge about college and career requirements, financial aid, and the college application process, which includes knowledge about testing, deadlines, and applications. An evaluation of the Parent Institute for Quality Education (PIQE) by the Harvard Family Research Project (HFRP) found that youth whose parents are familiar with college preparation requirements and are engaged in the application process are most likely to graduate high school and attend college (HFRP, 2006). However, for parents who have never been to college or who have limited social networks as a result of being a newcomer to the United States, postsecondary planning can be a challenge. In these cases, parents require assistance from schools and college access programs to become acquainted with the necessary information so that they can best support their children's college and professional goals. Information about these topics can inform and reinforce parents' educational expectations for their children and can also shape how they support their children's postsecondary aspirations (McDonough, 2004; Patrikakou, 2004; Rowan-Kenyon, Bell, & Perna, 2008; Wimberley & Noeth, 2005).

III. The Role of College Access Programs

College access programs play a large role in providing information to parents and students about college preparation and enrollment. As mentioned earlier, this information is vital in helping families, especially low-income families who face numerous informational barriers, make appropriate decisions about preparing for, attending, and financing a postsecondary education. According to the National College Access Network (2014), there are a total of 2,600 college outreach programs that exist to date. They can be categorized by the services they offer, the target population they serve, program operators, service locations (schools, campuses, homes), their funding, the types of parent services they offer, and the challenges they encounter (NCAN, 2014). If programs are categorized according their financing structure, as defined by Gandara and Bial (2001) and by their program operators (NCAN, 2014) then "pre-college outreach programs" can be identified as private non-profit, university based, sponsored by a state government, sponsored by the federal government, community based, and incorporated within a K-12 school system.

Private non-profit programs, such as FUEL and uAspire (both based in Boston), CollegeBound (based in Baltimore), or Sponsor a Scholar (based in Philadelphia), have more flexibility than many other programs in serving particular groups of students and families, and rely heavily on private donations to continue serving their particular communities. Their structures and their missions are heavily influenced by boards and committees that are made up of individuals who have the financial or knowledge base to support the program. Often, these non-profit programs focus their efforts on specific communities within towns or regions and are better able to modify their programs and what they offer based upon the changing needs of the communities they serve.

University-based, or K-12 school-based programs are similar to private non-profit programs in that they often target particular communities within their surrounding communities. However, in most cases, universities and schools do not operate alone in providing services for students and families. In some cases, universities partner with the federal government to offer the Department of Education's Upward Bound or Talent Search programs on their campuses. Both of these programs specifically work with low-income students to help them prepare for and apply to college. Universities and schools also partner with state or local governments to offer program services. For example, the Liberty Partnerships Program at Le Moyne College focuses on advising and tutoring for underperforming high school students to help them graduate from high school and enter either postsecondary education or a career of their choice (NCAN, 2014).

Programs sponsored by the state and federal governments target larger audiences, as they offer their services to everyone within a particular state or within the United States who meets certain criteria. They often work in partnership with schools or with colleges to directly offer information, mentor, and prepare students for the college and financial aid application processes. As mentioned earlier, Upward Bound partners with particular universities to offer after school and summer programs to students who come from low-income families or families where neither parent holds a bachelor's degree. The program specifically focuses on tutoring, counseling, assistance with applying to college, and the financial literacy of students, but this and similar programs often restrict their services. The students who benefit from government college access initiatives must meet strict income or other guidelines. Although some flexibility is provided to universities or schools that house these programs, they tend not to be as adaptable as private programs.

Lastly, community-based college access organizations include private, public, or nonprofit organizations that work to address college access and success problems within particular geographic areas. The Institute for Higher Education Policy (2012) has categorized community-based college access programs into four different types. First, direct service organizations provide college information, offer financial aid nights, and provide application assistance to students and families. Second, youth development organizations offer extended learning opportunities for students, such as after school activities, internships, summer travel, and college campus activities. Third, integrated student services organizations utilize resources from community agencies, such as health care and social services, to provide support to students who face both academic and non-academic problems. Lastly, community mobilization coalitions leverage community resources to focus on measurable community goals, such as doubling the number of high school graduates. Research on the impact of community-based organizations is limited, though one study demonstrated positive outcomes from mobilizing community resources and stakeholders. These positive outcomes included stronger partnerships between high schools and colleges, increased use of data, and the growth of new partners who became invested in increasing college completion rates (Yohalem & Jensen, 2012).

Often, college access programs offer one or more of the following services: counseling which provides students with information about the admissions and enrollment process; academic preparation and enrichment; parent involvement; personal enrichment and social integration which allows for opportunities such as engaging with speakers and attending college visits; one-on-one mentoring; and scholarships or other financial aid (Gandara, 2001). Each of these components directly target key predictors of college enrollment. For example, academic enrichment addresses inadequate academic preparation; counseling and parent involvement can help to minimize gaps in parents' family cultural and social capital; and personal enrichment can affect students' educational aspirations (Gandara, 2001). Similarly, scholarships and financial aid directly address students' needs for financial resources to attend college. Although no empirical research has been done to determine what may be the most effective of the strategies used by college access programs, research has demonstrated that the use of the strategies above in combination with one another may be the most useful manner by which to support students in their college preparation and in meeting their postsecondary goals (Tierney, Corwin, and Colyar, 2004; ACSFA, 2008).

IV. Parents and College Access Programs

While parents have been shown to play a pivotal role in the development of their children's college aspirations and preparation, college access programs rarely incorporate parents in any significant way (Tierney & Auerbach, 2005). First, few college access programs include parents, as most find it challenging to do so (Swail & Perna, 2002; Clarke et al., 2005; Tierney, 2002). Some programs incorporate parents but do so by making parental involvement a mandatory component of their program (Tierney & Auerbach, 2005). Puente, the University of Southern California's Neighborhood Academic Initiative (NAI), and the Hispanic Mother Daughter Program (HMDP) at Arizona State University are three examples of programs that make family involvement integral in their efforts to better reach students. NAI requires parents to attend 80 percent of the seminars they offer to families in order for their students to be selected as part of the program, while Puente offers bilingual workshops for families (Tierney & Auerbach, 2005). The Hispanic Mother Daughter Program (HMDP) at Arizona State University offers Hispanic female students an opportunity to connect to Arizona State University by offering them resources, professional networking, scholarships, information about internships and other enrichment programs, and academic support. This program requires that both mothers and daughters who are admitted to the program participate in several workshops together over the course of each year from eighth grade through twelfth grade. However, like these three initiatives, very few programs are able to maintain parental involvement without making it an explicit requirement.

Second, most college access programs do not provide opportunities for repeated interaction with parents (Jun & Tierney, 1999). They offer only brief information to parents without teaching them how to advocate for themselves and their children and how to best support their children in their academic and financial preparation efforts for college (Savitz-Romer & Bouffard, 2012). This kind of support often requires more prolonged involvement, but efforts to include parents are frequently limited to orientations, fund-raising, and voluntary meetings or social events (Tierney & Auerbach, 2005). Involving parents in one-on-one FAFSA (the Free Application for Federal Student Aid) preparation and having financial aid nights, as many college access efforts have done, can be helpful in providing parents with more information

(Bettinger et al., 2012), but sustained participation by families is likely to be more useful in supporting students (ACSFA, 2008; Plank & Jordan, 1997, 2001; Jun & Tierney, 1999).

Third, while some college access programs offer financial incentives for participation, there has been little research on how effective these programs are in encouraging parent participation or how financial incentives work to encourage college planning and preparation. Research in school settings has shown the benefit of using financial incentives alongside other strategies, such as contracts, to attract hard-to-reach parents. Pairing contracts with financial incentives increases parent self-efficacy and improves their comfort-level with participation in their children's education (Smith, Wohlester, Kuzin, & De Pedro, 2011).

There are several reasons why college access programs have not prioritized partnerships with parents. First, program administrators may not be convinced that one of the most effective ways to improve college access may be by targeting parents. They exclusively focus on students because they may believe students' own aspirations and behaviors are the primary mechanisms that play a role in their college enrollment outcomes (Tierney & Auerbach, 2005). Second, program staff who conduct outreach to parents often experience frustration when they are unable to reach their intended audiences due to parents' work schedules and language barriers, for example, and therefore do not make parent involvement an integral part of their program model (Tierney & Auerbach, 2005). Third, program staff often times do not have training or experience in working with families (Tierney & Auerbach, 2005). Lastly, Tierney (2002) found that college preparation programs suffer from underfunding, short staffing, and lack of evaluations, each of which may prevent them from prioritizing parental involvement. In a national survey conducted by Swail and Perna (2002), 27 percent of program informants responded that working with parents was problematic or that it required more funding. It is clear that more evaluations and training are necessary to determine the best ways to more successfully involve parents in the efforts of college access programs (Tierney & Auerbach, 2005).

V. Parent Involvement through FUEL

The FUEL program, a private, non-profit organization, is one of only a few programs in the nation that explicitly targets parents in its work to improve college preparation within low-income families. FUEL operates with the program theory that the low-income parents it serves

will set educational expectations for their children and make financial decisions that could positively influence the resources available for their children's college education. The program works with seven different partner sites in three different cities (Chelsea, Lynn, and Boston). In 2013, it worked with 500 families, serving 600 students from seventh through twelfth grades, the time period during which many families are preparing for college and many students develop their college aspirations. The largest of FUEL's seven sites is Chelsea High School, the site for this study. FUEL serves over 200 students in Chelsea, which is a predominantly Hispanic community. Sixty-six percent of the population in Chelsea speaks a language other than English at home. Almost 25 percent of the Chelsea community lives below the poverty line and the city's bachelor's degree rate is 14 percent (Bureau of the Census, 2010).¹ Families who participate in the FUEL program in Chelsea reflect the largely Spanish-speaking, low-income, immigrant population of Chelsea.

The particular model of parent involvement used by FUEL requires that parents open a FUEL college savings account when they sign up, offers financial incentives for families to save for college and attend monthly workshops, and provides opportunities for repeated interaction with parents through monthly workshops and the savings account. FUEL is similar to other college access programs in that it provides college access information at its monthly workshops. The workshops include topics such as the types of courses and examinations students should take in high school, financial aid options, and questions that parents should ask guidance counselors about how they can best support their child's academic and financial preparation for college. See Appendix A for the full 2012-2013 FUEL monthly workshop curriculum.

However, FUEL is unique in comparison to other programs in that one of its key components is the encouragement it provides parents to open a FUEL college-savings account. FUEL, with the support of large private grants and donations, matches any funds parents place into their accounts, up to \$1,500. Through their FUEL savings accounts, parents have the ability to save up to \$3,000 for their child's postsecondary education. Additionally, at each workshop, parents who attend are entered into raffle drawings for family gift certificates, student scholarships, and student laptops. Through these various incentives, FUEL aims to encourage parent attendance at workshops. Through savings accounts and monthly workshops, FUEL

¹ Chelsea's bachelor's degree attainment rate is similar its neighboring communities. Revere, which lies northeast of Chelsea, has an 18.5 percent bachelor's degree rate. 16.5 percent of Everett's population (northwest of Chelsea) has bachelor's degrees.

provides opportunities for repeated interaction with parents and attempts to make them more familiar with the academic and financial preparation necessary for students to apply and enroll. These repeated interactions with parents are rare in other college outreach programs. FUEL is able to encourage repeated parental involvement in a way that other college access programs are unable because it offers financial incentives through its matching savings program and its raffles, which other programs cannot. With strong financial support, FUEL aims to incentivize parental involvement and intends to enable low-income parents to encourage their children's postsecondary goals.

Parents in Chelsea are recruited into FUEL through a parent coordinator who conducts presentations at school parent nights and other venues around the Chelsea community to encourage parent participation. Once parents sign up and start a FUEL-coordinated college-savings account, they are invited to attend FUEL's monthly informational workshops. This allows parents to voluntarily sign up for FUEL if they are interested in the support it offers. Once parents sign up, they must agree to save \$15 per month in their FUEL savings accounts and attend six monthly workshops per year in order to participate in the program. See Appendix B for a full list of the criteria for membership in FUEL. Although the program is intended for low-income families, the savings and workshop attendance criteria may screen out parents who do not have resources to save \$15 each month for college and who do not have the time to attend the workshops.

There have been numerous descriptive studies examining the relationship between parental involvement and the academic achievement of students, but there is a gap in the literature that investigates how parents are meaningfully targeted in college access programs to better provide college preparation and planning for low-income students and what their experiences are in a program that targets them. This study contributes to the literature by examining what parents report they learn from FUEL, how parents make sense of their experiences with FUEL, how they use the information provided to them, and how students perceive their parents' involvement in the program.

RESEARCH METHODOLOGY

I. Research Questions

This study is designed to address several holes in the research literature, namely what information parents may learn in a college access program that exclusively targets them; how parents perceive a college access program that specifically targets them; how students perceive their parents' involvement in a college access program that seeks to improve their college enrollment outcomes; and what college preparation behaviors parents and students report as a result of having participated in a college access program geared towards parents. I will answer the following research questions:

1. Prior to their involvement in FUEL, what knowledge do low-income parents have about the college preparation necessary to access higher education in the United States?
2. How does involvement in FUEL change parent knowledge about college preparation and college access?
3. How do parents make sense of their experiences in FUEL and do they use the information offered to them?
4. What are students' perceptions of their parents' involvement in FUEL?

II. Study Participants and Sites

For parents who participated in FUEL during the 2012-2013 academic year, consent for participation in the research study was obtained in person at Chelsea High School during the first monthly workshop in the fall of 2012. As described in Appendix C, obtaining consent for the year-long study was the first step in the timeline for data collection. Although the goal of the consent process has been to include all participants in the FUEL program in Chelsea, participation was voluntary. To obtain consent from participants for the study, a short presentation about the purpose of the overall evaluation study and the various ways in which families could participate was made at the first FUEL workshop in both Spanish and English in

October 2012. Participants were recruited at both of the Thursday evening workshop for parents who work during the day and at a Tuesday morning workshop for parents who work in the evenings or nights. My study sample included approximately 93 parents or guardians. As shown in Appendix D, these parents made up 70 percent of those that participated in FUEL during the 2012-2013 academic school year.² The study sample was largely reflective of the overall FUEL parent population in Chelsea. The number of English versus Spanish-speaking parents who consented to the study was proportional to the English versus Spanish speakers in the Chelsea FUEL program. Proportional numbers of males versus females also consented to the study. Lastly, the number of parents whose students were in ninth, tenth, eleventh, and twelfth grades in FUEL was proportional to the number of parents who participated in the study.

III. Data Collection and Analysis

I used a four-pronged strategy throughout the 2012-2013 academic year to answer my research questions. First, I used pre- and post-surveys, offered to parents in the fall and spring, to explore the change in the level of knowledge that parents gained about college preparation through participation in the FUEL program. Second, through parent focus groups, I investigated how parents believed the FUEL program informed their support of their children's college preparation. Third, through follow-up parent interviews, I probed further into how parents have made sense of their experiences with FUEL and how they used the information provided to them. Lastly, through focus groups with Chelsea Public Schools students, I explored student perceptions of their parents' involvement with the FUEL program.

The nature of my research questions, which aim to contribute to knowledge about parent perspectives about their involvement in a college access program, supported the use of grounded theory analysis, which allowed for more purposeful data collection. The use of grounded theory required that I start with my initial data, analyze it by developing initial codes through a line-by-line analysis, and use those analyses to revise the collection and analysis of remaining data (Charmaz, 2006). Therefore, once I analyzed initial focus group and survey data, I was able to more purposefully seek new data from subsequent focus groups and interviews that built upon

² IRB approval for this study was received from Harvard University's Committee on the Use of Human Subjects in Research.

the theories and themes I developed amidst initial data collection. I conducted more focused coding in the latter part of my analysis.

Surveys

The first survey was offered in the fall of 2012 to all parents who participated in FUEL. As Appendix E shows, the pre-assessment survey instrument for FUEL parents inquired about student and family background and parents' initial knowledge about college access and financial aid before they obtained college-related information from FUEL. The second survey was offered in the spring of 2013, after parents spent almost a full school year attending FUEL workshops, and asked about the level of knowledge gained by parents during that time. See Appendix F for the post-assessment survey instrument for FUEL parents.³ I developed the parent surveys through the use of literature pertaining to the type of knowledge that parents and students need to know about academic and financial preparation for college (ACSFA, 2008; Mac Iver & Messel, 2012). Second, I asked two individuals who have knowledge about college access to review the survey to ensure that the questions asked sought information that parents should know about college. Lastly, I designed the two surveys to provide insight into parent knowledge at the start and finish of a one-year experience with the FUEL program.

Survey implementation took place at Chelsea High School, where the FUEL monthly workshops were conducted. A short presentation about the purpose of the overall evaluation study and how families would be able to participate was made at the first FUEL workshop in both Spanish and English in October 2012. Parents voluntarily filled out the fifteen-minute survey after signing a consent form to participate in the study. As an incentive to encourage survey completion, I offered a \$10 gift card to parents who completed each survey. Parents were asked to voluntarily fill out the follow-up final survey at the final FUEL workshop in May 2013. Parents who were new to the study in May 2013 because they had not attended the fall FUEL workshop or were new to the FUEL program were asked to provide their consent to participate in the overall study before filling out the final survey at the end of the year.

³ FUEL participants were surveyed at the start and end of the year-long study regardless of the number of FUEL meetings they attended.

To analyze parent survey responses, I conducted paired t-tests to test for differences in college preparation knowledge reported by parents over the course of the 2012-2013 academic school year. Quantitative data from surveys were analyzed using Stata 11.1. Qualitative survey data were coded and analyzed using grounded theory. Open coding of the initial fall survey was used to develop a codebook that guided focus group codes (see below) and to develop themes that could supplement my focus group findings. Survey findings were used to answer my first two research questions.

A total of 93 parents consented to take part in the overall evaluation, meaning they took part in either the fall survey, spring survey, or both surveys. A total of 75 parents filled out the initial parent survey and a total of 67 parents participated in the final spring survey. However, only 46 of the parents who had filled out the initial fall survey responded to the final spring survey. Several reasons exist as to why more of the same parents did not fill out both the initial and final surveys. The 21 parents who had only filled out the final spring survey were either parents that were recruited into the FUEL program over the course of the 2012-2013 school year or were parents who had not attended the first FUEL meeting in October 2012, and therefore, did not fill out the initial fall survey. Also, some of the parents who filled out the initial fall survey did not attend the last meeting of the year when the final spring survey was administered, while others dropped out of the FUEL program altogether. For the purposes of this study, the survey findings include data reported by only the 46 parents who participated in both fall and spring surveys to determine how the knowledge and behavior of FUEL parents changed over the course of the academic year in which they participated in the FUEL program. See Appendix D for the sample sizes that participated in each component of the study.

As shown in Appendix N: Table N1, sixty-seven percent of the parents who completed both fall and spring surveys were Spanish-speaking and 87 percent were born outside of the United States. Seventy-five percent of the parents at the FUEL Chelsea site who participated in the fall and spring surveys considered themselves Latino. These numbers suggest that parents who participated in the study were culturally and ethnically representative of the larger Chelsea community. Although no questions were asked about family income, the FUEL program collects information about its participants' income backgrounds. In 2012, nearly 70 percent of FUEL parents at Chelsea claimed to have a household income of \$30,000 or less. In 2013, 62 percent of FUEL's Chelsea parents claimed to have a household income of \$30,000 or less. These income

levels suggest that FUEL participants are economically similar to those who make up the greater Chelsea community.

Focus Groups

I also gathered data through semi-structured, in-depth focus groups with parents and students who participated in FUEL during the 2012-2013 academic year. Focus groups are often used when there is a gap in understanding about a particular topic (Morgan, 1997). The inclusion of focus groups in this study provided insight into how parents believed the FUEL program has informed their support of their children's college preparation. Furthermore, focus groups allowed me to develop a greater understanding of how parents and students make sense of their involvement in the FUEL program and whether they believe it to have shaped how they prepare for college. A variety of research has demonstrated that there are several methodological advantages to using focus groups.⁴ First, the use of focus groups provides a democratization of the research process, allowing participants more ownership of the research process (Kamberelis & Dimitriadis, 2011). Second, focus groups also offer insights into how individuals interpret meanings through interaction within a group (Kamberelis & Dimitriadis, 2011). For example, one person's discussion of a topic may remind others of similar experiences they might share, allowing me to collect data from different viewpoints. Third, the use of focus groups reduces overlap and repetition among responses, as can occur in one-on-one interviews (Morgan, 1997). Lastly, conducting multiple focus groups with parents and students, as I did with this study, also creates a validity measure as their experiences could be tested against each other.

A total of twenty-one parents voluntarily participated in the parent focus group interviews at Chelsea High School. Focus group recruitment took place in two phases. First, parents were asked whether they would be interested in being contacted to participate in focus groups throughout the year on their initial study consent form at the first FUEL savings circle workshop (in the fall of 2012). Second, parents who consented to being contacted about the focus groups were contacted by phone, either by me or by the Spanish-speaking interpreter, two weeks prior to each focus group date. They were also reminded of the focus group date, time, and location two

⁴ A description of the limitations of using focus groups is located in the Limitations section of the proposal and within Appendix K.

days prior to the focus group. The same parents who participated in the fall focus groups were asked to participate in the spring focus groups so that any change in reported behavior or perspectives over the course of their year-long participation in FUEL could be identified.

Two of the open-ended focus group interviews were conducted in Spanish with the assistance of a Spanish-speaking interpreter.⁵ Each focus group lasted no longer than 1.5 hours. A \$25 gift card was offered as incentive to each parent focus group participant. Over the course of four sessions, I included a purposeful sample of 21 parent focus group participants to ensure that focus group participants represented the group of parents who had consented to the larger study and to the larger group of FUEL parent participants that year. Parent focus group participants were recruited based on the following criteria:

- I gathered almost equal numbers of Spanish-speakers and English-speakers to gain the perspectives of both groups of people.
- I ensured that the focus groups included similar numbers of parents of students across grades nine through twelve.
- I included more female parents than male parents to reflect the make-up of FUEL parent participants.

Additionally, two 1.5 hour student focus groups, consisting of students whose parents participate in the FUEL program, were held at Chelsea High School. A total of fourteen students voluntarily participated in the student focus groups. Student focus group recruitment also took place in two phases. First, FUEL parents were asked on their initial study consent form at the first FUEL savings circle workshop (in the fall of 2012) whether they would be interested in being contacted to have their child participate in a student focus group that year. Second, parents who consented to being contacted about their child's participation in a student focus group were contacted by phone, either by myself or by the Spanish-speaking interpreter, two weeks prior to each student focus group date. Families were also reminded of the student focus group date, time, and location two days prior to the student focus group. A \$25 gift card was offered as incentive to each student focus group participant. Student focus groups were conducted in English and, over the course of the two sessions, included fourteen participants. These student participants volunteered to offer their perspectives on FUEL and on their college aspirations

⁵ A description of the limitations of using a language interpreter to gather data is located in the Limitations section of the proposal and within the Appendix.

through the student focus groups. Appendix D shows the number of students in each grade level who offered their perspectives in the student focus groups. Eight of the students (57 percent) were in tenth grade, so their attitudes on college and career were still shaping. Five students were in eleventh and twelfth grades, and were able to offer their perspectives on topics such as college entrances examinations, college visits, and college applications. Student focus group participants represented the population of students whose parents participated in FUEL and who consented to the larger FUEL study, as most FUEL families had students in tenth and eleventh grades.

Both parent and student focus group interview protocols asked participants to self-reflect and identify instances, particularly relating to the FUEL program, which may have influenced student educational aspirations and college preparation. See Appendices G and H for the full focus group interview protocols for FUEL parents and see Appendix I for the focus group interview protocol for FUEL students. Once each focus group was conducted and transcripts were created, I developed informal research memos. These memos were not coded but were used to outline themes noticed in each focus group. Specifically, I outlined my own reactions to focus group interviews, the themes that stood out within each focus group, quotes that were representative of those themes, and their implications for my research questions. This framework assisted me with the larger analysis as it consolidated my thoughts about the focus groups, allowed me to reflect upon responses, and contribute to validity (Glaser, 1998; Luttrell, 2009; Maxwell, 2005).

The focus group interviews were professionally transcribed and translated from Spanish to English by Datagain, a transcription and translation service. Transcripts and interviewers' notes were entered into MSWord files and then coded, annotated, analyzed, and interpreted using NVivo10, a qualitative data analysis software tool. An open-coding system was used to capture interviewees' words and interpretations, and this emic codebook also used to construct conceptual themes and matrices within and across interviews (Miles & Huberman, 1994). These themes and matrices were used to develop narrative summaries of the findings.

Attention to my role as a researcher was necessary throughout the focus group data collection and grounded theory analysis (Dirks & Mills, 2011). This type of analysis required that I be self-aware, as my own experience as a low-income, first-generation student could have affected how I reacted to comments made during focus groups. To ensure that my previous experience would not affect my ability to interpret the data, I needed to be vigilant in separating

my own experiences from the experiences of my study participants. Also, I shared my codebook with another researcher and had the second researcher code several of the transcripts separately. We discussed various codes and interpretations of data that we differed upon and came to agreements about how I could best analyze the remaining data. Using this process, I was able to compare findings and ensure inter-rater reliability throughout the coding process.

One-on-One Interviews

I conducted one-on-one follow-up interviews with ten parents to collect additional data, minimize validity threats of using focus groups as the sole qualitative data-gathering technique, and to ensure that the themes arising from all four focus groups were relatively consistent across the interviews.⁶ The parent interview protocol reflected large themes that emerged from parent focus groups. Appendix J shows the one-on-one interview protocol for FUEL parents. I used the protocol to probe further about parents' perspectives of FUEL and their behavior and conversations with their children regarding college preparation.

The ten interview participants were gathered from among the parents who participated in focus groups. Therefore, the sample of interview participants had similar characteristics to those who participated in parent focus groups and those who consented to the overall study. Slightly more Spanish-speaking parents than English-speaking parents participated in the interviews, which reflected the makeup of the larger group who consented to the study and who participate in the Chelsea FUEL program. However, unlike the group of parents who consented to the larger study and who make up the FUEL program, equal numbers of male and female participants and equal numbers of parents of students in grades ten through twelve volunteered to participate in the interviews. This breakdown of sample sizes for participants in each component of the study is also shown in Appendix D. Although the interview participants did not represent the grade level and gender make-up of those who consented to the larger study, this was not a large concern as the purpose of the interviews was mainly to verify focus group findings. Parents were recruited for the one-on-one interviews at the last two focus groups in the spring of 2013 and over the phone. They were then mailed consent forms to formally agree to their interview participation.

⁶ The number of interviews conducted depended on the saturation of the data (i.e. when the same themes kept arising from the data)

Once those consent forms were received, parents were contacted to schedule a time for a one-on-one phone interview. I conducted four of the one-hour interviews in English, over the telephone, after all parent focus groups were complete.⁷ Six of the interviews were conducted in Spanish, over the telephone, with the assistance of a Spanish-speaking interpreter.⁸ As an incentive for participation, I offered a \$25 gift card to each parent interview participant. Parent interviews were analyzed in the same manner as the focus groups.

IV. Limitations of the Study

As this study focused solely on one community, findings were limited to the population of students and parents in Chelsea who participated in FUEL at one particular point in their lives, for the one year of the study. As mentioned earlier, Chelsea is largely a low-income, Hispanic community. Therefore, although findings from this study may help us to understand how a college access program like FUEL can influence the level of parental support for college preparation, results need to be considered in light of the particular population of Chelsea and Chelsea Public Schools.

Another limitation of this study was that families self-selected into the FUEL program. Parents who sign up for a college access program like FUEL may be more committed to the academic and college outcomes of their children compared to parents who do not choose to participate in the program. They may also have more money to be able to save fifteen dollars each month and have more stability, in their jobs and their families, to attend each FUEL monthly meeting. Additionally, their children may be more academically prepared compared to other students. Therefore, any findings pertaining to parents' perceptions of how FUEL may have influenced the college preparation of their children and the support they offer their children need to be interpreted with caution and in the context of families having had meaningful opportunities for parental involvement.

Third, a key limitation of the study was the use of focus groups. As discussed earlier, some focus group participants may have felt uneasy providing their personal perspectives in the

⁷ Interviews were conducted in English to ensure that the themes found from English-speaking parents (in both the focus groups and interviews) matched the themes found from Spanish focus groups with parents.

⁸ A description of the limitations of using a language interpreter to gather data is located in the Limitations section of the proposal and within the Appendix.

presence of others, and they may have felt inclined to provide responses they deemed acceptable in a group environment (Krueger, 1988; Morgan, 1997). They may have also felt pressure to provide certain responses to me that they may have believed I wanted to hear because they may not have wanted to be perceived as uncaring or uninvolved parents (Morgan, 1997). These focus group limitations are more fully described in Appendix K. To address concerns regarding the use of focus groups, I included in the student focus groups several students whose parents participated in the parent focus groups to ensure what was reported by their parents was accurate. Second, I conducted ten interviews with parents to ensure that the themes that arose from the interviews were consistent with data provided in focus groups.

Lastly, I used a Spanish interpreter to help gather data during two of the parent focus groups and six of the one-on-one interviews with Spanish-speaking parents, which could have introduced several threats to my research. See Appendix L for a full discussion of the limitations of using a language interpreter to collect data and the threats to the validity of my research that this method introduces. One of these threats included any unfamiliarity the translator may have had with the material discussed during the focus groups and interviews, inhibiting the translator from interpreting or asking follow-up questions about the topic (Temple & Edwards, 2002). Also, the translator could have been an “insider,” familiar with the participants’ cultural norms, and may not have probed into issues that were more familiar to him or her (Murray & Wynne, 2001). To address these issues, I interviewed the interpreter to discuss the purpose of the project and ensure that the interpreter had extensive experience in conducting focus group interviews with a variety of populations. I also conducted briefing and debriefing sessions with the interpreter to discuss issues that may have arisen amidst interviews and how to address them for future interviews. Lastly, I asked and reminded the interpreter to always ask clarifying questions during the focus groups and interviews regardless of the topic discussed (Murray & Wynne, 2001).

FINDINGS

In this study, I find that the FUEL program influenced the perceptions, knowledge, and behaviors of parents as they helped their children prepare for a college education, and it did so because of its various program elements. On the other hand, FUEL had less of an impact on changing parents' beliefs about the importance of college, as many parents who join the program do so because they have strong initial beliefs about the importance of pursuing postsecondary education. Below, I provide a demographic overview of the sample of 75 FUEL participants who initially agreed to participate in the study. Next, I highlight the findings from the initial parent survey to which they responded. I discuss the study participants' initial perceptions and knowledge about college and college preparation. Lastly, I describe the final results from the study, highlighting findings from both the initial and final parent surveys, parent and student focus groups, and parent interviews. The final results are categorized in a specific order that ranges from most simple to more large-scale. More specifically, the first themes discussed focus more on the variety of information parents learned from FUEL, the middle themes highlight the variety of behaviors parents reported exhibiting as a result of their participation in FUEL, whereas the final theme describes the overall experience parents had with the FUEL program.

Overview of Initial Study Participants

The families that FUEL serves in Chelsea tend to be low-income, though there are no income criteria that are required to participate in the program. In 2012, nearly 70 percent of FUEL parents at Chelsea claimed to have a household income of \$30,000 or less. In 2013, 62 percent of FUEL's Chelsea parents claimed to have a household income of \$30,000 or less. Although no survey, focus group, or interview questions inquired about family income, 70 percent of parents who participated in FUEL in 2012 participated in this study, and therefore, likely reflect a low- or moderate-income socioeconomic status that is common among FUEL parents.

A total of 75 parents filled out the initial parent survey. These survey respondents were 90 percent female and 60 percent Spanish-speaking, almost proportional to the number of females and Spanish-speakers in the FUEL program overall. As shown in Table 1, approximately 70 percent were Latino, 60 percent spoke Spanish, and 85 percent were born outside of the

United States. Thirty-one percent of the parents who filled out the initial survey had children who were born outside of the United States indicating that a large number of families were newcomers to the country and may have joined FUEL to benefit from the information about college admissions and enrollment in the United States that they may not have had before. Approximately 57 percent of survey-takers had a child in eleventh or twelfth grade, suggesting that they were at the stage where they were investigating colleges seriously and were possibly taking steps to have their children apply and enroll within the following one or two years.

Table 1. Demographic Information for Fall 2012 (Initial) Survey Respondents

	Parents (%) (Fall 2012 survey)	N	Students (%) (Fall 2012 survey)	N
Female	90.4%	73	54.7%	75
White (non-Hispanic)	6.7%	71	4.2%	71
African American / Other Black	12.0%		9.9%	
Chicano/Mexican American/Puerto Rican	6.7%		14.1%	
Other Latino / Hispanic	70.7%		63.4%	
Native American	0.0%		5.6%	
Asian	1.3%		1.4%	
Multiple Race/Ethnicity/Other	2.7%		1.4%	
Born in U.S.	14.6%	75	69.3%	75
Married	57.3%	75	-----	-----
Age (2012-2013)	45.1 (7.82)	69	15.8 (2.0)	71
Below 9 th Grade	-----	-----	1.3%	1
9 th grade	-----	-----	17.1%	13
10 th grade	-----	-----	21.1%	16
11 th grade	-----	-----	27.6%	21
12 th grade	-----	-----	29.0%	22
Other	-----	-----	4.0%	3

Notes: This table includes survey results from only the Fall 2012 (initial) survey (n=75). Total observations for all grade levels exceed 75 because some parents listed the grade levels for multiple children.

Parents' Initial Perceptions and Knowledge

Initial Parent Perceptions of their Children's Academic Preparation

Parent respondents to the initial survey, on average, seemed to have a strong understanding of the importance of the GPA and SAT (or ACT). As shown in Table 2, they had marked 6.39 and 6.55, respectively, on a 7-point scale when asked about how important each of

those components was in the preparation for college. However, parent participants, on average, marked that their children were only somewhat prepared for college, as the average mark was 4.4 on a 7-point scale when respondents were asked how academically prepared they thought their child was for college. Additionally, only 47.8 percent of parents had children whom they claimed had started to prepare for the SAT or ACT examination. These data indicate that parents, in the initial fall survey, did not perceive that their children were absolutely prepared for college and some were not taking the steps necessary to apply and enroll.

Table 2. Initial Parent Perceptions of their Children’s Academic Preparation

	Mean	N
How academically prepared do you think your child is for college?	4.42 (1.823)	66
How important do you think your child's high school GPA is in helping your child get into a good college?	6.55 (0.883)	69
How important do you think your child's SAT or ACT score is in helping your child get into a good college?	6.39 (1.149)	64
	Parents who marked “Yes” (%)	N
Has your child started to prepare for the SAT or ACT examination?	47.8%	43

Notes: This table includes survey results from only the Fall 2012 (initial) survey. Parents were asked to rate their perceptions on a scale of 1 through 7, with 1 being “not prepared at all” or “not important” and 7 being “very prepared” or “very important”.

Initial Parent Knowledge about College Benefits and Costs

While a large number of parents who took the initial survey indicated that their children had already made choices regarding careers (65 percent) and majors (49 percent) to pursue, and 58 percent of parents stated that they expected their children to attain at least a bachelor’s degree, few had accurate knowledge about the financial benefits and costs of obtaining a college degree (See Tables 3, 4, and 5). Only about 35 percent of parent respondents knew what the average income was for someone with a bachelor’s or associate’s degree. And no more than 20 percent of parents correctly estimated the costs of attending the various types of colleges in Massachusetts. However, many parents had better knowledge about trends such as the difference in cost between attending college in-state versus out-of-state and the general cost of course materials and books than they had about specific costs for individual types of institutions in Massachusetts.

Table 3. Parents' Initial Expectations for their Students' College Attainment

	Mean	N
What is the highest level of education that you expect your child to attain?	5.06 (0.165)	63

Notes: This table includes survey results from only the Fall 2012 (initial) survey. Parents were provided with the following options when asked about the highest level of education they expected their child to attain: 1 – High school degree or GED, 2 – Work Certificate, 3 – Associate's degree, 4 – Bachelor's degree, 5 – Master's degree, 6 – Ph.D., 7 – Professional degree (e.g. Law or Medical degree), 8 – I do not know / My child does not know, and 9 – Other. No parent marked "Other" and 7 parents marked "I don't know/My child does not know". These 7 parents were excluded from this analysis.

Table 4. Parent's Initial Perceptions of their Children's Career and College Major Choices

	Parents who marked "Yes" (%)	N
Has your child chosen a career to pursue in the future?	64.8%	71
Has your child chosen a major to pursue in college?	49.3%	71

Notes: This table includes survey results from only the Fall 2012 (initial) survey. All Yes/No/I don't know questions were coded as "3" = Yes, "2" = No, and "1" = I don't know. The percentages calculated above include only those parents who marked "Yes" to each question.

Table 5. Initial Parent Knowledge about the Financial Benefits & Costs of College

	Percent who Correctly Answered	N
On average, how much does an individual with a bachelor's degree (from a university) make each year by age 25? (Correct answer: \$55,000/year)	34.9%	63
On average, how much does an individual with an associate's degree (from a community college) make each year by age 25? (Correct answer: \$40,000/year)	36.2%	58
What is the tuition cost to attend a two-year public commuter college in Massachusetts for one year as a full-time student and as a resident of Massachusetts? Do not include the costs of room, board, books, or other optional fees. (Correct answer: \$500 - \$1,000)	13.6%	66
What is the tuition cost to attend a University of Massachusetts institution (Amherst, Dartmouth, Boston, or Lowell) for one year as a full-time student and as a resident of Massachusetts? Do not include room, board, books, or other fees. (Correct answer: \$1,001 - \$2,000)	12.5%	64
What is the tuition cost to attend a four-year public state university in Massachusetts (e.g. Framingham University) for one year as a full-time student and as a resident of Massachusetts? Do not include room, board, books, or other fees. (Correct answer: Between 901 - \$1,100)	19.7%	61
What is the typical cost of total student fees for a resident of Massachusetts who wants to attend a public university in Massachusetts? (Correct answer: More than \$3,000)	61.0%	59
What is the average cost of books and course materials for each year of college for a full-time student? (Correct answer: Over \$850 a year)	47.6%	63

Notes: This table includes survey results from only the Fall 2012 (initial) survey. Parents were asked to choose the correct answer from among various options for each question.

Initial Parent Knowledge about Financial Aid

Parents on the initial survey seemed to have a good understanding of general knowledge about financial aid. This included knowing the difference between various types of financial aid, such as grants versus loans, the difference between federal versus private loans, and what the FAFSA is. As shown in Table 6, 74 percent of survey respondents stated that they planned to apply for financial aid and 60 percent claimed to be saving for their child’s college education. Additionally, forty percent of parent participants stated that they or their children were already applying for scholarships. All of these data indicate that families had already been making several steps to prepare financially for their children’s college attendance at the start of the study.

Table 6. Parents’ Initial Plans on Paying for College

How do you hope to pay for your child's education?	Parents (%)	N
Apply for federal financial aid	74.3%	65
Save for child’s college education	60.0%	65
Have you or your child started to research possible scholarships?	40.0%	60

Note: This table includes survey results from only the Fall 2012 (initial) survey. Parent respondents answered “Yes” or “No” to the questions/options provided above.

Initial Parent Expectations of FUEL

Thirty-seven percent of initial survey-takers had started with FUEL during the year of the evaluation and a large majority of survey participants claimed that they received much of their knowledge about college from FUEL (See Tables 7 and 8). As shown in Table 9, approximately 80 percent of survey respondents stated that they hoped, over the course of the year, to gain information from FUEL about the different types of colleges available, college costs, financial aid, and savings. Almost 90 percent of respondents indicated that they hoped to learn about how to help their child academically prepare. This shows that the parents who participated in the FUEL program during the year of the study claimed to be invested in their children’s future and claimed to be taking steps to ensure that their children were academically ready for college.

Table 7. Parents' FUEL Participation as Reported by Fall 2012 Parent Survey Respondents

How many years have you been part of FUEL?	Parents (%)	N
I just started this year	36.8%	
1 year	19.1%	
2 years	26.5%	68
3 years	16.2%	
More than 3 years	1.5%	

Note: This table includes survey results from only the Fall 2012 (initial) survey. Parent respondents marked only one of the above options (n=68).

Table 8. Sources of Information as Reported by Fall 2012 Parent Survey Respondents

From where do you receive information about college?	Parents (%)	N
My child	34.6%	
Other family members	12.0%	
Friends	17.3%	
My child's school	26.7%	75
FUEL	88.0%	
Another college prep program	8.0%	
Other	4.0%	

Note: This table includes survey results from only the Fall 2012 (initial) survey. Parent respondents answered "Yes" or "No" to each of the options provided above (n=75).

Table 9. Types of Information Fall 2012 Parent Survey Respondents Sought in the FUEL Program

What types of information do you hope to get from FUEL?	Parents (%)	N
Information about how to help my child academically prepare for college	89.4%	
Information about the different types of colleges available	81.8%	66
Information about college costs	78.8%	
Information about financial aid	81.8%	
Savings information	80.3%	

Notes: This table includes survey results from only the Fall 2012 (initial) survey. Parent respondents answered "Yes" or "No" to each of the options provided above (n=66).

Although 75 parents filled out the initial survey, not all of them participated in the spring survey. A total of 93 parents consented to take part in the overall evaluation, meaning they took part in either the fall survey, spring survey, or both surveys. However, in order to determine how the knowledge and behavior of FUEL parents changed over the course of the academic year in which they participated in the FUEL program, the survey findings discussed throughout the remaining of the findings includes data reported by only the 46 parents who participated in both fall and spring surveys.

Final Results

In the next section, I present five major findings that describe the study participants' perspectives on their experiences with FUEL during the 2012-2013 academic school year. These themes arose from conducting a narrative analysis with focus group and interview data in which an open-coding system was used to capture interviewees' words and interpretations. A codebook was used to develop conceptual themes across the interviews, and these themes were then used to construct narrative summaries of the findings. More specifically, only student and parent perspectives were included in the final themes if they repeatedly appeared, and were coded, in the data. Survey data were then used to supplement the focus group and interview findings, as they provided perspectives from a larger group of FUEL participants. Although participants discussed a variety of topics, only those that pertained to parent and student experiences with the FUEL program were included in the final themes. For example, students highlighted several other sources from which they gathered college preparatory information and guidance, such as their teachers, other college access programs, and their school. However, only their experiences with their parents and the FUEL program were included in the development of the final themes. In addition, some parents discussed in great detail the undocumented statuses of their children, describing their fear that their children would not be able to pursue a postsecondary education due to a lack of access to federal financial aid. However, only their experiences with the FUEL program were included in the final findings as they described FUEL staff directing them towards other support systems and alternative sources of funding.

First, parents reported that their experiences at FUEL encouraged them to change their behavior to immediately support their children's preparation for college and enabled them to financially prepare for it. More specifically, the program equipped families with critical financial information, both about the benefits and the costs of a college education, and the various forms of financial aid and how to apply for it. It also encouraged many families to begin saving for college, not only through their FUEL savings account, but also on their own through other methods. Second, parents reported that they had higher college expectations for their children as a result of the FUEL savings-matching program, the information offered, and other types of support provided by FUEL. Several parents claimed how FUEL "made it possible" for their children to go to college through its discussions about planning for college and its encouragement to save for college. Parents of undocumented students described how they

participated in FUEL because of the reassurance it provided them and the connection it gave them to other sources of support. Third, students and parents believed that FUEL made the college application process more manageable for them, encouraging parents to become involved in their children's college choices and directing families to a variety of resources that were targeted towards the specific needs of each family. Fourth, new information offered by FUEL encouraged parents to change their parenting behaviors. Parents reported becoming more focused on academic preparation, becoming more involved in their children's college preparation, planning more college visits, experiencing a strengthening of their relationships with their children, teaching their children about financial responsibility, and discussing with their children their own educational experiences in the hopes of providing them with greater encouragement. Lastly, parents reported that FUEL delivered its services in a way that altered their experiences with the college preparation process, making them feel like they were part of a community in which they could meet others who faced similar challenges and providing them with immediate guidance to support their children's college preparation. Each of the thematic findings is described in greater detail below.

1. Encouraged Behavior to Prepare for College

According to the interviews, focus groups, and survey data, study participants detailed the various ways in which FUEL provided them and their families with the motivation to prepare for college, both academically and financially. Parents described how FUEL's emphasis on a timeline towards college enrollment helped them realize that they did not have much time left before college admissions and enrollment and there were steps they needed to take immediately to have their child academically prepare, such as encouraging them to improve their GPA and take the appropriate examinations. Student participants described how one of the most critical realizations they, and their parents, gained from FUEL was how little time they had to academically prepare. FUEL helped them to break down the steps they needed to take on a yearly basis so that it would not become too overwhelming. Parent and student participants also described how the information FUEL offered about college costs and financial aid made them feel as though they needed to begin financially investing immediately, through college savings, and they needed to make some sacrifices to do so.

Developed a sense of urgency among families

Parent participants highlighted throughout focus groups and interviews that they received many reminders about the college application process from FUEL that helped them to realize that they and their children needed to move quickly to prepare for college. These reminders included information about what steps to follow, university options, college requirements, important deadlines by which to apply for college or financial aid, and meeting their own personal savings goals. Parents recognized that having FUEL provide this information was helpful for them and their children to know at what times in the year they needed to take the appropriate steps to ensure that they gained admission and sufficient financial assistance to attend college. One parent, Jennifer, stated “. . . and then when the final year comes, which is senior year, all the information that you’ve gathered throughout the three years becomes very handy when it comes time to start filling out all these applications—college applications, financial aid applications.” For other parents, the reminders that FUEL offered helped them feel a sense of immediacy around preparing for their child’s college education in every way they could. One of the most commonly discussed impacts of FUEL that parents described was feeling as though the program prepared and had continued to prepare them in advance of the college admissions timeline. One parent, Joy, discussed the urgency she now felt as a result of becoming more aware of this timeline.

It’s constant. It’s not like you think about it every month, you kind of have to when you’re here. I don’t think without FUEL I probably wouldn’t even start thinking about it until she’s in the eleventh grade. So I started thinking about it last year. Because like you said, when they’re in the ninth or tenth grade it’s like, “Oh, I’ll deal with that later,” but it’s coming and it comes quicker. So it kind of just makes it more realistic.

Several parents remarked during focus groups and interviews that they were previously not aware of the important dates by which their children needed to take certain examinations and apply to college and financial aid. Some attributed this gap in knowledge to the lack of familiarity they had with the American education system, while others attributed it to their own lack of higher education. Many of the parents mentioned that they gained this information through the FUEL program and the reminders it offered at multiple times throughout the year as important deadlines approached. Student focus group participants agreed with this sentiment and described how much of the information their parents initially learned about college was through the FUEL program. This new information was helpful in having their parents support them in

their educational goals. One student, Basimah, described how FUEL provided her mother with certain information that allowed her to understand and participate in the college admissions process in a way that she could not formerly do so.

And also they helped me with... I know these things – they tell us in school, but they don't tell your parents. Your parents are kind of in the dark about it, especially if they come from another country and they're not used to the system. So FUEL will explain everything to my mom in terms that she got it and she's on the same page with me and when I tell her, "Oh, we need to make an appointment with TRIO to fill this out or we need to send this out," she knows what I'm talking about... It's a good way of telling the parents cause kids might not be able to explain as well as FUEL does.

Student participants discussed how FUEL's regular reminders about important dates and its timelines highlighting the tasks students should be doing at each point in their high school career had been helpful in getting them on track towards what they needed to do to prepare for college. They described how FUEL offered them reminders about deadlines regarding scholarships, college applications, and financial aid that were helpful not just in terms of completing these tasks but also in helping them face the fact that college was coming soon. One student, Jaime, illustrated how FUEL encouraged him to become more responsible regarding college preparation because it reminded him of how little time he had left to prepare.

Yeah, my freshman and sophomore year I just wanted to have a good time in high school. I wasn't really thinking about going to college or majoring in something that I would want to do until my junior and senior year. In FUEL they were talking about colleges and scholarships and all that. I'm like, "Oh, I need to get ready for college and I'm not prepared." I felt like I wasted two years of high school just fooling around. And then in junior and senior year I had to get serious cause I know it's important to go to college and to be ready for college cause if not, I'm going to be in big trouble.

Encouraged families to financially prepare for college

Focus group and interview data indicated FUEL helped parents to financially prepare for college in two ways. First, FUEL equipped families with critical information about college costs, described the financial aid process in great detail, and discussed financing options so that families could make more informed choices about paying for college and about college choice. Second, FUEL encouraged families to financially prepare for college through its emphasis on saving for college, particularly through its matching savings program. It was through the particular information that FUEL provided and its emphasis on savings that families felt as though they became more attuned to the financial requirements and preparation for their child's college education.

Equipped Families with Critical Financial Information

Many parents reported utilizing new information they learned from FUEL about the financial aspect of attending college to better prepare for their child's college education. First, parents described how, at FUEL savings circles, they learned about the difference in costs by type of college and discussed how they were better able to calculate the cost of each college that their children were considering using the information and the tools that FUEL provided them. They also expressed how this information had allowed them and their children to become more aware and make the most affordable college choices.

Second, parents mentioned how FUEL facilitators discussed the FAFSA and the types of financial aid they could receive by filling it out, as well as learning how they needed to fill it out every year – not just once. According to the parent survey, there was a significant growth in the number of FUEL parents who knew what the FAFSA was over the course of the academic year and the number of parents who knew that they would have to apply for financial aid every year that their child would be in college (See Table 10).

Third, parents described how FUEL informed them about a number of different scholarships for which their children could apply. Many participants remarked how they did not previously have knowledge about specific scholarships and loans that could be available for their children. However, when parents were asked, through the survey, if they or their children had started to work on scholarship applications, the number of parents who marked “yes” significantly grew over the course of the academic year (See Table 10). This finding is not surprising because students and parents had a full school year in which to begin researching and working on scholarship applications. Many students may have been accepted into college and may have been looking into options that could help them to finance their education. However, both parents and students described through the focus groups and interviews that they received much scholarship information from FUEL and that because of this new information, parents tended to place more pressure on their children to apply for those scholarships. For undocumented families, knowledge about specific scholarships was crucial as it was one of the only forms of financial aid for which their children could apply and obtaining them would make a great difference in their children's ability to enroll in college.

Table 10. Parent Knowledge of Critical Financial Information – Yes and No Questions

	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
Do you know what the FAFSA is?	38	0.684 (0.076)	0.947 (0.037)	0.263 (0.082)	3.224	0.003**
Have you or your child started to work on scholarship applications?	40	0.075 (0.042)	0.450 (0.080)	0.375 (0.078)	4.837	0.000**

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. All Yes/No questions were coded as “1” = Yes and “0” = No.

Lastly, data show that FUEL emphasized to parents the importance of prioritizing “free” money, or scholarships, grants, and savings before taking out loans to attend college. According to the parent survey, in both fall and spring, parents were asked how they hoped to pay for their child’s education. The most popular answers, as shown in Table 11, were that they planned to apply for financial aid from federal, state, and institutional sources and that they planned to save money for college. More parents in the spring compared to the fall stated that they would apply for federal aid and college aid, though these changes were not statistically significant. The least popular responses included taking out private bank loans and receiving financial support from other family members.

Table 11. Parents' Plans on Paying for College

How do you hope to pay for your child's education?	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
Apply for federal financial aid	39	0.743 (0.071)	0.794 (0.066)	0.051 (0.073)	0.703	0.487
Apply for state financial aid	39	0.717 (0.073)	0.692 (0.075)	-0.026 (0.101)	-0.255	0.800
Apply for financial aid from each college that my child hopes to attend	39	0.538 (0.081)	0.615 (0.079)	0.077 (0.068)	1.138	0.262
I am saving money for my child's college education	39	0.615 (0.079)	0.667 (0.076)	0.051 (0.090)	0.572	0.571
I will receive money from family members to help pay for my child's college education	39	0.026 (0.026)	0.103 (0.049)	0.077 (0.057)	1.356	0.183
I will take out the government student loans	39	0.358 (0.078)	0.307 (0.075)	-0.051 (0.090)	-0.572	0.571
I will take out private bank loan(s)	39	0.077 (0.043)	0.051 (0.036)	-0.026 (0.045)	-0.572	0.571
My child will get a job	39	0.256 (0.071)	0.307 (0.075)	0.051 (0.104)	0.495	0.623
I don't know yet	39	0.103 (0.049)	0.077 (0.043)	-0.026 (0.045)	-0.572	0.571
Other	39	0.103 (0.049)	0.026 (0.026)	-0.077 (0.057)	-1.356	0.183

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. Parent respondents answered "Yes" or "No" to each of the options provided above. "Yes" was coded as "1" and "No" was coded as "0". If the mean is closer to 0, more parents marked "No". If the mean is closer to 1, more parents marked "Yes". If the difference in means is negative, this indicates that more parents marked "No" in the spring compared to the fall.

Although the survey did not indicate that parents changed their perspectives about the topic over the course of the year, most parents who participated in focus groups and interviews described learning information about prioritizing types of financial support through the FUEL savings circles, while others learned particular details during one-on-one meetings with Laura, the Chelsea FUEL facilitator. They described how FUEL advised them to try to manage college costs without taking out too many loans. Parents also described learning about the importance of keeping good credit so that they could obtain loans if they still needed them. They learned about the differences between government versus private loans, and some parents described learning about the importance of avoiding high interest rates of private loans. As shown in Table 12,

survey findings indicate a growth from fall to spring, although not significant, in the number of parents who accurately responded “true” to the statement that “it is always better to receive a college student loan from the federal and state government than to receive financial aid from a bank” and who accurately responded “false” to the statement that “federal loans and private loans have the same interest rate”.

Table 12. Parent Knowledge of Critical Financial Information – True and False Questions

	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
It is necessary to apply for financial aid every year that your child is in college. (Answer: True)	39	0.795 (0.066)	0.949 (0.036)	0.154 (0.059)	2.629	0.012**
It is always better to receive a college student loan from the federal and state government than to receive financial aid from a bank. (Answer: True)	36	0.833 (0.063)	0.917 (0.047)	0.083 (0.083)	1.000	0.324
Federal loans and private (bank) loans have the same interest rates. (Answer: False)	37	0.081 (0.045)	0.027 (0.027)	-0.054 (0.038)	-1.434	0.160

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. The statements in blue were “true” and the statements in orange were “false”. “True” was coded as “1” and “False” was coded as “0”. If the mean is closer to 0, more parents marked “false”. If the mean is closer to 1, more parents marked “true”. If the difference in means is negative, this indicates that more parents marked “false” in the spring compared to the fall.

Many parents commented that knowing that various resources were available, such as scholarships, gave them and their children hope that college was financially feasible for them and their children. Others described how FUEL, through its information about costs and support, encouraged them to have conversations with their children about college affordability and how to best pay for it. One parent, Marta, elaborated on these discussions with her children.

Definitely getting a better understanding of the costs, like I said, as far as the grants versus the loans and so on. All of that has been helpful. We somewhat played with the whole calculating piece of it to try to figure out what we can afford. And all of that came through me being part of FUEL and knowing that I could look to those resources.

Several student participants also described how the FUEL workshops have opened their eyes to the financial hardships their own families were facing. Discussions about college affordability at the monthly savings circles made them more careful about the types of colleges

they were considering. Several students remarked that they felt they needed to make sure that their college choice would not place a large burden on their families' finances. Through focus groups and interviews, parents and students expressed how this information has allowed them to make the most affordable college choices. One student, Oliver, commented on how his parents had become much more aware of college costs and how this new knowledge helped them to better prepare for the future

I personally haven't changed but my parents have been focused on the schools I've been accepted to – how much are they going to pay and how much does it cost and they can be more worried about if they're gonna financially pay for it. And they don't want to see me in debt later on and... [they] can use different websites and use different calculators to see how much my parents are expected to pay like that. So they're trying to balance it out.

Some students also described becoming more attuned themselves to how expensive college was and the costs associated with attending college. This made them more aware of the importance of applying for financial aid and various scholarships. Information learned from FUEL about college costs also made several students feel as though they needed to do more research to determine which colleges would be most affordable for them and their families. Basimah remarked on her concern about the affordability of the college she would decide to attend as a result of her new knowledge about college costs.

I don't think my career choices, they haven't really changed, but I've realized that college is more expensive than I thought. Like I used to think that it was just tuition but then I found out there's like books and fees and health stuff and all these other costs that I didn't realize before. And I realize how important it is to apply for scholarships... Yeah, I used to say, "Oh whatever college I'm accepted to, I'll go there," but now I'm like I have to sit down and really look at who's offering me the most money and who will be the least stress on my parents and that's what I'm going to base my decision on.

Others described how the realization of their family's financial struggles motivated them to attend and complete college so that they could have the ability to help their families better cope with their financial difficulties in the future. Jaime elaborated on his desire to financially assist his family.

...I've been thinking about that I'm at an age where I should be having a job and helping him pay the bills. Actually I should be taking care of him. Yeah, that has made me more motivated on going to college and finding a better job, like a better future and have the ability to actually help him out...

Saving for College

A second way in which FUEL encouraged families to financially prepare for college was through its emphasis on savings. Parents repeatedly described throughout the focus groups and

interviews how FUEL had taught them the importance of savings and how to save for college. Table 13 shows how parent perceptions on the importance of saving for their children’s college education significantly grew over the course of the academic year. These perceptions manifested themselves through parents’ reported behavior as well. According to Table 14, parents, on average, responded in the survey that they had saved about \$500 - \$999 for their children’s college education in the fall, whereas this number increased by spring. In the spring, parents, on average, reported saving closer to \$1,000 - \$1,999, and this change was statistically significant (at the $p < .05$ level) indicating that the college savings for FUEL families increased throughout their participation in the program.

Table 13. Parents’ Perceptions on the Importance of Savings

	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
How important do you think it is to save for your child’s college education?	43	6.349 (0.173)	6.791 (0.103)	0.442 (0.161)	2.751	0.009**

* $p < .10$ ** $p < .05$

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. Parents were asked to rate their perceptions on a scale of 1 through 7, with 1 being “not important” and 7 being “very important”.

Table 14. Parent’s Reported Savings Behavior

		Fall	Spring	Diff in means	t	Significance (2-tailed)
Right now, how much money have you saved for your child to go to college?	40	3.15 (0.260)	3.8 (0.251)	0.65 (0.195)	3.34	0.002**

* $p < .10$ ** $p < .05$

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. Parents were asked how much money they had saved for their child to go to college. Answer choices were coded as follows: 1 – “\$0 - \$99”, 2 – “\$100 - \$499”, 3 – “\$500 - \$999”, 4 – “\$1,000 - \$1,999”, 5 – “\$2,000 - \$4,999”, 6 – “\$5,000 - \$9,999”, and 7 – Over \$10,000.

Parents described through focus groups and interviews that FUEL helped them realize that they may not receive sufficient financial aid to pay for all of their child’s college expenses, and that saving was necessary for them to prepare for their child’s education. They also described how FUEL encouraged them to start saving and made it manageable to do so because the program had monthly incremental goals that, over time, could help in making a large contribution to their child’s college education. Parents also described how FUEL provided them

with the motivation to save, mainly through its matching program, as parents learned that each dollar they saved would be worth more because of the \$1500 matching incentive offered by the FUEL program. Several commented on the matching structure of the FUEL savings account being the driving force behind their initial involvement in the program and how it was an encouragement for them to continually save for their child's education. Parents also mentioned how saving a total of \$3,000 helped them alter their expectations so that college could be a real possibility for their children. Lastly, parents described how FUEL's encouragement to save through its FUEL savings program inspired them to open other savings accounts to save even more money for college, and to encourage their children to save their earnings and gift money to help pay for college expenses. Jennifer highlighted the encouragement she received from FUEL to save and how she used the inspiration to save money using other accounts in addition to the one she received from FUEL.

...They tell you that at the FUEL meetings, that you should keep saving up money, too. They don't just tell you, all the kids have to do really good so they can get a scholarship. They always talk about as parents, saving, trying to save ourselves, too. I mean putting the money in the FUEL account, but also try to save extra money somewhere else because the FUEL account is only \$1,500 and it only goes up to \$3,000. So they always talk about saving—save, save, save.

Many student focus group participants also remarked on how their parents had started to save for their college education since joining FUEL. They mentioned how they, and their families, had not started saving for college prior to joining the FUEL program, and many did not know where to start doing so. As one student stated, "It was like a wakeup call for my parents..." Some students described how this savings behavior was particularly crucial, as family financial hardships would make it difficult for their parents to put forth money towards college unless they prepared for it over a longer period of time.

2. Increased Expectations Among Families

The urgency around college preparation that parents felt as a result of their participation in FUEL and the encouragement to financially prepare propelled a change in parent perspectives about whether their children would be able to pursue a postsecondary education. A common theme parent participants discussed was how FUEL had altered their expectations for their children. Parents described how before joining FUEL, they were ambivalent about their children's prospects for attending college primarily because of its cost. Since joining FUEL, they felt like college could be a possibility for their children, in large part due to the savings-matching

program but also because of the information and support that FUEL offered to help families with the whole college preparation and admissions process. Survey findings in Table 15 also show that parents' expectations for their children's higher education attendance significantly increased from fall to spring during the year of their participation, and this change was significant (at the $p < .05$ level). In the fall, parent responses about expectations for their child's education averaged at "Master's degree," whereas in the spring the parent response average increased to "Ph.D.," One parent, Marta, remarked in one of the focus groups that FUEL helped her eliminate any doubt she had about her children going to college.

It's definitely that you're going to college. It's not really a choice. I think through the FUEL process that's just been the expectation, the ongoing meetings, the ongoing conversations, that's what it's going to be.

Table 15. Parents' Expectations for their Children's Educational Attainment

	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
What is the highest level of education that you expect your child to attain?	43	5.154 (0.203)	5.795 (0.263)	0.641 (0.283)	2.262	0.030**

* $p < .10$ ** $p < .05$

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. Parents were provided with the following options when asked about the highest level of education they expected their child to attain: 1 – High school degree or GED, 2 – Work Certificate, 3 – Associate's degree, 4 – Bachelor's degree, 5 – Master's degree, 6 – Ph.D., 7 – Professional degree (e.g. Law or Medical degree), 8 – I do not know / My child does not know, and 9 – Other. No parent marked "Other" and 4 parents marked "I don't know/My child does not know". These 4 parents were excluded from this analysis.

“Made it possible” to attend college

For those parent participants whose children had graduated or were close to the college application process, a common topic that arose was the feeling that FUEL made it possible for their children to attend college. Parents directly attributed their children's enrollment in a particular college to the FUEL program, either because of the savings matching program that made it possible for them to afford the institution, because of the Compact Scholarship program that allows the children of FUEL parents to enroll in particular Massachusetts institutions for free, or because of the motivation and preparation that FUEL offered their families. Jesus illustrated the usefulness of the savings program in helping his son attend a local community college.

My son is going to study at Bunker Hill. They help him there; he doesn't have to pay anything. The cost will be only about 400 dollars, but since we have savings because of FUEL, we don't have to run around looking for this; the money is there, so we're able to pay.

Provided Hope for Undocumented Families

While several study participants who did not have legal documentation or had children who were undocumented expressed disappointment over the limited help they could receive from FUEL to pay for college due to their documentation status, several parents mentioned that the reason they attended the FUEL sessions was so that they could obtain some indication that there were funds available for their undocumented children. Although parents received information from FUEL about the academic components to college preparation, parents who were concerned about their children's ability to attend due to undocumented status claimed that they attended FUEL sessions for reassurance and for the connections FUEL provided them to financial sources. These parents expressed gratitude and felt that FUEL had provided them with numerous resources, outside of applying for federal financial aid, which allowed them to look into other scholarships and funding sources for their children. One of these parents, Anita, described the encouragement FUEL provided her in seeking other resources.

The problem you have as an immigrant is always how, you have this weight on your shoulders, how am I going to do this, when the time comes, because of my own situation. But they mentioned that there are places that you don't need that, right? That even though you don't have it, if your child was born here, it's like there is – there's always help.

However, despite the support that FUEL provided and the optimism that some of the parents expressed, many parents who had undocumented children described their ambivalence over whether their children would be able to enroll and complete college due to their inability to obtain federal financial aid. They often stated how they continued to encourage their children to academically prepare in the hopes that their children would receive an academic scholarship. They also looked into affordable options for their children, such as community college, and encouraged their children to pursue those affordable paths to enroll in and complete college.

3. Made the College Preparation Process More Manageable

One way in which FUEL seemed to have enhanced parent expectations about college enrollment was by using various approaches to make the college preparation process more manageable for families. A critical theme that emerged from the data was how FUEL not only helped parents learn about the college selection and application processes, but it also simplified the process through its thorough explanations and the resources to which it directed families. Survey findings, as shown in Table 16, indicated that most parent participants, in both the fall

and the spring, claimed that they received information about college from the FUEL program. Parents spoke extensively in focus groups and interviews about being exposed to various colleges and universities through guest speakers, conversations with other parents, and savings circle presentations as they participated in the FUEL program. They described how FUEL offered various strategies that could help them overcome key obstacles and make it possible for their children to attend college, such as starting out at a two-year school and applying for very specific types of scholarships and financial aid options. Parents also indicated that they received many reminders about the college application process from FUEL, including information about what steps to follow, university options, college requirements, and important deadlines by which to apply for college and financial aid.

Table 16. Sources of Information for Fall & Spring Survey Participants

From where do you receive information about college?	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
My child's school	45	0.467 (0.075)	0.644 (0.072)	0.178 (0.092)	1.943	0.058*
Family members	46	0.130 (0.217)	0.217 (0.061)	0.087 (0.075)	1.159	0.253
An after-school college prep program	46	0.087 (0.042)	0.152 (0.054)	0.065 (0.065)	1.000	0.322
Friends	46	0.217 (0.061)	0.239 (0.064)	0.022 (0.073)	0.299	0.767
FUEL	46	0.913 (0.042)	0.957 (0.030)	0.044 (0.044)	1.000	0.323
I research and read about colleges and college preparation	46	0.196 (0.059)	0.152 (0.054)	0.044 (0.069)	-0.628	0.533
Other	46	0.434 (0.030)	0.434 (0.030)	0.000 (0.031)	0.000	1.000

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. Parent respondents answered “Yes” or “No” to each of the options provided above. “Yes” was coded as “1” and “No” was coded as “0”. If the difference in means is negative, this indicates that more parents marked “No” in the spring compared to the fall.

Data from both students and parents suggest that the support parents received from FUEL in navigating the college choice and admissions process helped to clarify misperceptions parents had about higher education and helped them better support their children. In particular, parents utilized their new knowledge to provide verbal encouragement to their children, remind their

children about deadlines and requirements, attend college visits, help their children make college and career choices, and provide academic encouragement whenever they could. Parents also described how the support FUEL provided them in understanding the college preparation process helped them to better prepare for college in advance of the college admissions timeline, before their children become seniors in high school.

Helped Parents and Students Make College Choices

Parents spoke extensively about being exposed to various colleges and universities throughout their participation in the FUEL program and how this new information helped them to better support their children in making college choices. Parents described feeling ambivalent at times about how they would send their children to college, especially after finding out about all of the costs associated with college attendance. Both parent and student participants mentioned throughout the focus group and interviews that FUEL kept informing them that there are “different ways to attend college.” Some of these strategies included starting out at a two-year school; other strategies included applying for all different types of scholarships and financial aid options affiliated with each type of school. Parents, in general, seemed very encouraged by the advice FUEL gave to them, mainly that there were always options for parents and students to utilize. They explained how FUEL introduced them to several in-state institutions, and described the differences between the different types of institutions, so that they would be aware of the types of schools available for their children. The program also invited speakers from these various institutions and provided parents with follow-up information if they needed it. According to parent participants, FUEL emphasized affordability in the options that it presented in two different ways. First, parents described how FUEL taught them that it did not matter where their children started their college education, and that in the end, the degree would be what would matter most. This helped parents gain some perspective on what they, and their children, needed to focus on when making college choices and has allowed parents to discuss college choices with their children. Carolina described how she utilized information she learned at FUEL to help her child plan to attend college in an affordable manner.

What I always think and recommend to my son when I speak to [him], because he wants to go to medical school, I tell him there is Bunker Hill. You can start in Bunker Hill doing the small courses, look for his little part-time job, and that way he'll get ahead. If he goes first to the university, the university will cost a lot more money per credit than what he can pay in a community college. This is also something they've shown here in FUEL...

Second, parents also mentioned how they learned about FUEL's Compact Scholarship, a full scholarship offered to students of FUEL parents. In order to receive the scholarship, a student whose family income is below a certain threshold must gain acceptance at one of the four colleges in Massachusetts that has a partnership with FUEL.⁹ Parents discussed how enticing these scholarships were, and how their efforts in FUEL would be worth all of the time and energy they had put in if their children would qualify and obtain one of the Compact Scholarships. Several parents described how they and their children were concentrating on gaining admission to the schools that affiliated with the FUEL Compact Scholarship. Although only a few students mentioned the Compact Scholarship, it seemed as though it was an alluring possibility for them as well, as it would allow for a relatively free college education if they qualified. Focus group and interview data demonstrate that FUEL's Compact Scholarship program helped many parents and student participants focus on specific colleges that were most affordable for their families and that would leave them with little debt.

Many of the FUEL parent participants described how they took the information they learned at FUEL and talked to their children about which colleges to attend, specifically guiding them towards colleges with which FUEL had partnered and which were cheaper. Because many of the parent participants faced extensive financial hardships that they believed would be significant barriers to paying for their child's college education, they guided their children, with the new knowledge they possessed through FUEL, towards schools that were less expensive than large four-year private colleges. Student participants also described in great detail how involved their parents had become about college and career decisions, often asking them about their college choice and career preferences and discussing affordable college options and lucrative and interesting careers. This was a particularly important finding as FUEL operates on the theory that parents will take the information they learn at FUEL workshops and utilize it to help their children make affordable college choices.

Survey findings, as shown in Table 17, also indicated that parents became more involved in helping their children make college choices over the course of the academic year. When parents were asked whether they and their children identified some of the colleges to which their

⁹ The Compact Scholarship includes Salem State University, University of Massachusetts – Boston, University of Massachusetts – Lowell, and Bunker Hill Community College.

children would apply, there was a significant increase in the number who responded “yes” from fall to spring, indicating that more families were making college choice decisions, possibly together, over the course of the year. There was also an increase, although not significant, from fall to spring, in the number of parent respondents who claimed that they had spoken to a guidance counselor or teacher about the steps they and their children should take to prepare for college and who claimed that they had attended workshops about how to apply for college or financial aid. Although these findings only indicate a growth in parent involvement and do not explicitly point to FUEL as the reason why parents became more involved, focus groups and interviews with students and parents, as described earlier, do demonstrate that FUEL may have played a large role in developing greater parent involvement.

Table 17. Parents’ Reported Behavior Regarding the College Admissions Process

	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
Have you and your child identified some of the colleges your child will apply to?	43	0.465 (0.077)	0.651 (0.074)	0.186 (0.101)	1.838	0.073*
Have you spoken to your child's guidance counselor about the steps you and your child should take to financially and academically prepare for college?	44	0.295 (0.070)	0.341 (0.072)	0.045 (0.090)	0.530	0.599
Have you spoken to a teacher at your child's school about the steps you and your child should take to financially and academically prepare for college?	44	0.364 (0.073)	0.477 (0.076)	0.114 (0.087)	1.301	0.200
Have you attended any workshops about how to apply for college or for financial aid?	45	0.8 (0.060)	0.889 (0.047)	0.089 (0.070)	1.274	0.210

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. Parent respondents answered “Yes” or “No” to each of the options provided above. “Yes” was coded as “1” and “No” was coded as “0”. If the difference in means is negative, this indicates that more parents marked “No” in the spring compared to the fall.

One common issue related to college choice decisions that student participants raised during their focus groups was that many of their parents wanted them to live at or close to home when attending college. Many of the students mentioned frequent discussions they had with their parents in which their parents wished for them to attend college close to home for safety reasons, to save on living costs, and to protect them from negative influences at college. While some students did not mind staying close to home, others felt strongly about their need for independence or their wish to feel less limited in their options. While the issue of moving away for college was a topic many students discussed, it is important to note that this was a frequent topic of discussion between parents and students, indicating a strong level of parent involvement in the college choice decisions of their children.

Directed Parents to Other Sources of Guidance

Participants highlighted through interviews and focus groups that FUEL encouraged them to seek other resources to learn more about scholarships, colleges, financial aid, college costs, and other topics relating to college preparation. Parents described how they had come to understand that FUEL was just a starting point and that they needed to go and do more research to fully obtain detailed information about the college application process and about related topics in which they were most interested. Both parents and students described how FUEL directed them towards other organizations that could simplify the process of college admission and enrollment for them and that would be better equipped to provide them with more specific information and support. Specifically, parents discussed during focus groups and interviews how FUEL introduced them to other resources using various strategies. First, FUEL invited guest speakers to the savings circle workshops. These included representatives from colleges, school guidance counselors, and financial aid organizations that could provide families with one-on-one support in applying for financial aid. Second, FUEL facilitators discussed with parents at FUEL savings circles how parents could best approach others who may be able to help them, such as guidance counselors, and highlighted to parents the types of questions they could ask these administrators. Third, FUEL directed them towards alternative sources of funding for college. For parents whose children had documentation issues that prevented them from obtaining financial aid from government and state sources, information about private scholarships was helpful and timely in addressing how to pay for college. Lastly, parents learned about after-

school tutoring programs that their children could utilize if they were struggling with their classes. Two parents, Jennifer and Francisco, illustrated how FUEL was the starting point from which they sought out other resources that could help them pay for their children's education.

I kind of picked it up from FUEL and then what we have to do is go online and do our own research on how much each one costs. It's not like they say, "Oh, Boston College costs whatever amount or Tufts University costs whatever." They just give you an idea of the difference, of the money. And sometimes they talk about kids want to go to the most prestigious school, not realizing that the parents cannot afford it and that they can go to a community college and still get the same education. But they don't give you an exact amount on how much they cost; that we, as parents, can do if we go online and start researching each college individually.

Not only FUEL, but in its majority has been FUEL, but it has been also the initiative to get the information in places and not only depend on FUEL. Opening doors, and then you have to be like an octopus with tentacles here and put other tentacles there, take a little of everything in order to take the correct path.

Students also mentioned that FUEL, through their parents, provided them with a gateway to other sources of assistance that helped them prepare for and navigate the process of applying for college. These sources mainly included TRIO and Upward Bound programs. Several students described the TRIO program working alongside FUEL, where FUEL provided the overarching information to families and TRIO carried out sustained contact with students at Chelsea High School. Students mentioned that TRIO took them on college visits, expanding their college considerations. The quotes below from two student participants, Oliver and Michael, demonstrate how FUEL's partnership with several other organizations pointed students toward those resources to better prepare them for college enrollment.

Without FUEL I probably wouldn't have done Upward Bound and with Upward Bound I've been able to do everything I've wanted. At FUEL they keep telling me to do the applications and at Upward Bound I do my applications, all my application work and they're very supportive over there of what I want to pursue and where I want to go... Actually I found out about Upward Bound here in my freshman year and I didn't take it seriously. Then my mom told me more about it and she brought me an application and I joined, I signed up.

Also, I learned a lot of new things because of FUEL. Like I knew about the SATs and things like that, I knew that you could get scholarships and whatnot, but I didn't really know how to get them or what you had to actually do or work hard in to actually be able to like get them or where to sign up or where to look for differ stuff, like different sources or whatnot. Also like, FUEL has done a great job in bringing representatives from other colleges and also, like things like that that actually help you to be able to talk to somebody that actually works for the college, or is from the college or knows more knowledge than FUEL would.

These students indicated how FUEL was the focal point from which they and their parents had learned about other resources that were necessary for their college preparation, such as the Upward Bound program or contacts with specific colleges. Obtaining these links was key

in bringing them closer to learning more about the process of applying to and preparing for the colleges they wanted to attend.

4. Influenced Relationships between Parents and Children

New knowledge from FUEL regarding academic preparation for college encouraged changes in parenting, which affected the relationships between parents and children, as described by both students and parents. Data from parents suggest that FUEL emphasized some very specific topics pertaining to academic preparation including (1) the importance of the grade point average (GPA), how it functions, what it tells colleges, and how students can improve their GPA; and (2) information about the MCAS and various college entrance examinations. Parents described how they changed their parenting behaviors after learning about such information. First, said they began to place a greater sense of importance on academic preparation for college, focusing intensely on their child's grades, monitoring progress reports, and encouraging their children to improve their grades quickly. Some parents noted that they placed more restrictions on the amount of free time they granted to their children and the amount of time they were able to spend outside of the home on social activities. Second, students claimed that their parents were better able to encourage them and became involved in different ways at school. Third, parents reported that they began to engage in their children's college exploration process by planning college visits with them. Fourth, several parents described how learning about the particular details regarding academic preparation and college admissions through their participation in FUEL inspired a strengthening of their relationships with their children because this knowledge allowed them to demonstrate more concern over their children's achievements and future prospects. Fifth, many parents described a desire to teach their children some responsibility, specifically financial responsibility, so that they would understand the sacrifices they needed to make to go to college. Lastly, parents described attempting to motivate their children to academically prepare for college by speaking with them about their own experiences and the difficulties they faced in their lives to better help their children understand the importance of dedicating time and effort to their academics and obtaining a college degree.

Parents Placed Greater Emphasis on Academic Preparation

Almost all of the parents in focus groups and in one-on-one interviews discussed how FUEL taught them about the importance of academic preparation and the specific academic components or steps that their children needed to take to prepare for college in advance of 12th grade. They were also advised to have their children take advanced placement classes and to compile a list of activities and accomplishments (academic and otherwise) that they had completed. Anita, whose son was in the earlier high school grades, stated that she learned the importance of academic preparation from FUEL and how crucial it was for her child not to delay this preparation.

That they should prepare themselves from the first year... This is not something to wait and not worry about it because I still have four years left. No, it's very important to start to prepare right away... And above all, the grades. They have to have high grades, like they say... From the first year, because that helps them with their GPA... They also speak about the high test scores; also, their behavior, their participation.

Parents described learning about some very specific topics pertaining to academic preparation. The first included the importance of the grade point average (GPA), how it functioned, what it would tell colleges, and how students could improve their GPA. Roberto discussed the growth in knowledge he experienced regarding the GPA as a result of his participation in the FUEL program.

Look, the truth is I didn't know. I didn't know until I went there, in fact I didn't know what a GPA was but when I went there I found out all about it. It's also because of the system, because you know... I'm really grateful to this girl, [Laura] from FUEL, she has a lot of patience when she explains really, it's not because she's... she has a lot of charisma, she's very patient when she explains things, and if you ask her again she explains it again...

Parents also claimed to have learned about various college entrance examinations. Specifically, they learned about the importance of the MCAS and how students could obtain scholarships based upon their MCAS score. Parents also learned about registration dates for the SATs as well as the different tests that some bilingual students would need to take before enrolling in college. As shown in Table 18, survey findings indicated that parents had a greater understanding about the importance of the GPA and the SAT in the spring compared to the fall, although this change in perception was not statistically significant.

Table 18. Parents' Perceptions of the Importance of GPA and SAT

	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
How academically prepared do you think your child is for college?	39	4.462 (0.302)	4.897 (0.284)	0.435 (0.254)	1.716	0.094*
How important do you think your child's high school GPA is in helping your child get into a good college?	44	6.614 (0.131)	6.682 (0.133)	0.068 (0.182)	0.374	0.710
How important do you think your child's SAT or ACT score is in helping your child get into a good college?	37	6.405 (0.196)	6.432 (0.192)	0.027 (0.207)	0.131	0.897

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. Parents were asked to rate their perceptions on a scale of 1 through 7, with 1 being “not important” and 7 being “very important”.

Several parents described how they began to focus more on their child’s academic life by placing limitations on the amount of free time they granted their children and the amount of time they were able to spend outside of the home on social activities. They started to place strong importance on academic preparation for college, focusing heavily on their child’s grades, monitoring progress reports, and encouraging their children to improve their grades quickly. Parents largely attributed their own behaviors regarding recent emphasis on academic preparation to FUEL, where they learned about the importance of academic preparation in college access and college readiness. Survey findings, as shown in Table 18, supplemented with focus group and interview data indicate that parents, on average, believed their children to be more academically prepared at the end of the year in comparison to the start of the year. This change in perception regarding their children’s academic preparation could be attributed to greater knowledge about what academic preparation entails, but it could also be attributed to greater parental oversight and attention towards academic growth and achievement. Francisco’s experience illustrates the type of attention and oversight some parents provided to their children when interacting with them about their academic preparation.

First, the example I give to my daughter. I sit down and talk to her, “Daughter, I want you to be better than I am. And to achieve that, I am going to work very hard for you to go to a university. FUEL is giving me an opportunity, and I want to use it to the maximum. The day that we have the meeting with FUEL, I want you to go with me because it is for you, it is not for me. I want to see your grades. If I see that you have a C, you will have problems with me. How am I going to motivate you? Buying you things, helping you in English and Math. Here is your computer, and

focus on studying. Don't be in touch with people that don't have a future because that is a waste of time. Starting by dating, going to the mall, going shopping, that doesn't work with me. From Monday to Friday, I want you at home, and I want to see your homework. Saturday and Sunday, you want to go out, you go with your mom. You want to see a boyfriend or girlfriend, he/she can come to visit here. But more me the most important thing is that you get focused. Because one thing is that when you are studying in the United States, your record is very important.

Greater Encouragement and Involvement from Parents

Students described how since joining FUEL, their parents had started to encourage them to do well in school, and began to pay greater attention to their GPA and their grades. Students remarked how their parents' lack of information prior to joining FUEL prevented them from being more engaged, but now that their knowledge about college preparation was increasing, they were able to focus on particular academic components. Cassandra discussed how her father had altered his parenting style and became much more attentive to her grades and the college entrance examinations she had to take.

My dad is far more strict than he was before because he had known a little, like the SATs and stuff like that, and now he's pressuring me to take them and all the tests that we have to do, and my grades.

Some students remarked on how their parents were able to become more involved in their school as a result of learning more information at FUEL. They mentioned that their parents had started to attend more parent-teacher conferences while others described how their parents felt more comfortable coming into the school and discussing certain academic or college-related topics with their guidance counselors. This was a particularly interesting finding as it demonstrated how FUEL might have helped to make parents more familiar with the school setting and empowered them to approach school administrators.

Parents Took their Children on College Visits

One key finding that emerged from the data was how parents were more inclined after spending time participating in the FUEL program to explore college options with their children through college visits. Survey findings showed a growth over the course of the year in college visitation behavior of parents. Table 19 shows that parents, on average, responded that they had visited one to two colleges with their children in the fall, whereas this number increased to three to four colleges visited by spring. This change was statistically significant (at the $p < .05$ level).

Table 19. Parents' Reported Behavior Regarding College Visitations

	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
How many colleges have you visited with your child?	43	2.349 (0.119)	2.558 (0.107)	0.103 (0.103)	2.034	0.048**

*p<.10 **p<.05

Note: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. Respondents were asked about the number of colleges they visited with their children. Answer choices were coded as follows: 1 – “0 colleges”, 2 – “1-2 colleges”, 3 – “3-4, colleges”, and 4 – “5 or more colleges”.

Although the FUEL program did not coordinate these visitations, parent focus group and interview participants described how FUEL mentioned in its savings circles how important it was for families to visit different colleges. Parent participants mentioned that while their children’s school had set up opportunities for college visits, they themselves had also visited colleges with their children or intended on visiting colleges with their children in the near future. Jennifer described her intentions to visit a college with her daughter for the first time.

And I think they offered the program that she wants to go into. So they called her and asked her if she wanted to go meet with them and talk to them about the college and what she wants to do. She made the appointment and we’re supposed to go this Tuesday coming up. I’m going to be going with her. But she said the only reason why she made it on Tuesday is because she has to take public transportation and she’s not used to doing that by herself. She said, “You’re going to have to come with me.” This is the first time that we’re going to be visiting a college together... it will be my first experience.

Several students also remarked on their parents’ increasing involvement in their college application and selection process, specifically by visiting colleges with them. Students claimed that their parents were able to do so because they were more informed by FUEL about the particular steps required for college admission, and had started to understand the importance of college visitations. Basimah described how her parents were much more willing to make the effort to take her on a college visit because they were better informed of its value in preparing for college.

For me I notice that they’re more willing to do stuff for me like if they hadn’t know about all this college stuff and how important it is, I don’t think... cause my parents actually drove all the way to [a specific college] just to go to an open house and before I think they would have been like, “You don’t need to go. Why do you want to go there so much?” Or like, “Why do you care?” But they actually took the time out of their day to drive those two hours and I thought that was real nice.

However, another reason for the growth in college visits among FUEL families could have been that the majority of survey respondents were parents of eleventh and twelfth grade

students who could have been investigating college options anyway and attended college visits through their school or other programs. Findings from focus group and interviews also indicated that parents of eleventh and twelfth grade students had visited or were planning to visit colleges, while parents of younger students (in the ninth and tenth grades) often claimed that they had not yet taken steps to visit specific colleges.

Strengthened Parent-Child Relationships

Several parent participants described how their relationships with their children had been positively affected by their involvement in the FUEL program. Parents described how their participation in FUEL inspired a better relationship with their children because the program would inform parents about the particular details regarding academic preparation and college admissions, and would therefore, empower parents, through this new knowledge, to demonstrate more concern over their child's achievements and future prospects. Parental concern, consequently, encouraged their children to care more about school and alter their behavior to better prepare for college. Jesus described this phenomenon in his own relationship with his children.

Oh, well what I understand is that the FUEL program does, it unites families, because what is happening is that kids don't participate with their parents. They live their life the way they want, and that's why a lot of kids are not lost, they're using drugs from a very young age and that isn't very good. FUEL, in that way, is helping a lot because kids are sharing time with their parents instead of doing other things on their own... kids [can] say, "Oh, my parents are worried about us, why don't I worry too" and that is very important for them... If a parent doesn't worry about their child, imagine what the child will think? "You didn't do anything for me, you didn't even move. You just stood there, they asked you to do this and you didn't do anything, no you come and tell me this?"

Parents Taught their Children about Responsibility

Although several FUEL parent participants stated that they would be willing to financially support their children to attend college and to help them obtain financial aid, there was a strong sense among parent participants that their children needed to put in a lot of time and effort into their schoolwork and college preparation in order to "deserve" financial assistance. Some parents described the respect that they expected their children to give them and how they expected their children to work very hard. Other parents described how it was important for their children to understand the importance of saving for college themselves, and to take on some responsibility themselves to pay off loans that would be owed. Several parents believed that it

was important for their children to work alongside attending school so that they would understand the financial sacrifices that would be necessary to afford college. Roberto spoke extensively about his beliefs regarding the financial responsibilities that students needed to take on in order to go to college and fully understand the value their parents' efforts.

... You must also make him work so he can support himself as well; that's also the goal, that they'll will also learn and see the sacrifice the parent is making, because many times when you make it all easy to your children, they don't value your effort like they should.

One way in which parents taught their children to take responsibility for their college education was through encouraging them to save their money to help pay for college or college-related expenses. While most parents placed their own money into their child's FUEL savings account, Jennifer described teaching her daughter financial responsibility by strongly encouraging her to save money in her FUEL savings account while she, herself, saved money for her daughter's college education using various other savings accounts.

I also, like the savings account from FUEL, I make her save that. She had a part time job so I make her pay for it. So when she graduates she's going to be able to say "I came up with that money." So those are the things I do for her. I don't know if they're good but I hope they help her out.

Parents Used their Own Experiences to Encourage their Children

FUEL parent participants spoke of using their own experiences to help their children understand the need to dedicate time and effort to their academics. They talked to their children about the difficulties they faced in their lives to help them recognize the importance of obtaining a college degree so that they would not repeat the mistakes of their parents. Although FUEL did not urge parents to share their own educational experiences with their children, this was a common practice that many of the parents discussed. Javier described how he often tried to help his children understand that they have to work even harder than someone who was born here, or someone who already had their documentation to live in the United States, because they have more at stake than their counterparts.

What we're going to do is, they understand that they need to study, that they dedicate their time to studies so that they can do something with their life. They don't have to do what we are doing, they don't have to suffer because one suffers anyway – the immigrant life is not easy here in this country. We have to work really hard...

5. Key Program Elements Altered Parent Experiences

Participants attributed much of the college preparation information they learned and the behavioral changes they reported to their participation in the FUEL program. This study found, however, that it was not simply the information that FUEL provided that encouraged parents to continue participating in the program. According to study participants, the way in which FUEL delivered its services was important to their participation. FUEL created a support structure for parents that altered parent experiences. Although not a direct reason for their participation, parents explained that it was inspiring to see families excited about college and to see how FUEL had worked to improve the reputation of Chelsea. They felt that the FUEL experience provided through its savings circle meetings motivated students and their families within the Chelsea FUEL community to reach for the same goal of college enrollment. They also believed that FUEL had developed, through its various programmatic components, a sense of common purpose for the families who participate in the program. Roberto described FUEL's positive impact on the mentality of the parents and students that it served.

They're a bit more aware, and besides being aware they motivate them so they can move forward... look, for example, this school, Chelsea has been like a blessing, the FUEL program, do you know why? Because the area where we live at is an area where almost all are Hispanic, so when the school system says, no, the kids from Chelsea, it's like they tend to, I don't know, I have the sensation that it's like... when they mention Chelsea if you compare them with other cities, for example, cities such as... where there are mostly white people, they see it like it's a bit, I don't know, I hope I'm wrong, but it's like if its something that has less quality, but here at Chelsea, look, lately they're playing a really important role, and that also has a lot to do with FUEL because it motivates the kids, and the kids have that mentality and not that the education they provide at Chelsea is inferior, and they have motivated them so they know that's not true, several students have graduated here and moved on to college, and they just graduated from Chelsea, thanks to the program.

Parents described how the structure of the FUEL meetings helped them feel like they were not alone in addressing the challenges associated with preparing for college. Having a workshop experience where they could meet with other parents and listen to their questions, where many were advised in their first language (Spanish), and where they were provided with meals such as dinner or breakfast, helped them feel as though they were welcome and part of a greater community of people who had the same challenges and goals as they did. Lastly, FUEL's raffles incentivized parents to keep up their attendance even when they did not win, as they enjoyed the anticipation of waiting to find out if they would win and found it exciting to see other parents and families receive prizes for their participation.

Met other Parents

One notable finding from focus groups and interviews was the social benefit parents described receiving from attending FUEL meetings and participating in the program. Parent participants described making friends and using that network to discuss college and their children. One parent, Anita, appreciated being able to exchange ideas and information with other parents about what they were doing to prepare for their children's college education.

You also meet more parents, families. You can talk, exchange ideas, experiences; you can make friends, also, with other parents... Because there are parents that have their children in a higher grade and you can ask them how – right? Like exchange ideas... “This is what I've done,” and they say, “No, this and that.”

One-on-one Support with Individual Concerns

A few participants mentioned that FUEL provided follow-up support to parents and students outside of the FUEL workshops to help them in navigating the college application and enrollment process. Most parents at the FUEL Chelsea site interacted with Laura, the Chelsea FUEL facilitator, and participants elaborated on the numerous and positive experiences they had with her. They described how she was available for one-on-one support when they had specific questions pertaining to their eligibility for financial aid and that she provided encouragement and support when parents and students faced specific problems in the college enrollment process. Hiba's experience with Laura helped her to feel less overwhelmed about taking on college loans for her daughter.

[Laura] helped me a lot, because I was panicking. The moment I learned that my daughter has denied those loans, I'm like “I don't know how I'm going to make up the balance.” And I called her and she said, “Come in. Don't worry. Don't scream. It's okay.” So I went to her office and she made me feel really better.... She really explained it. When I came out of her office I felt really much better. So I know that if I have something to pay I can ask for a payment plan and pay in small installments until I'm done with it. Then I asked her about the loan. I said, “Is it okay, can I pay these loans as we go on, as the child goes to school?” And she said, “Yes.” So these are things that I was really worried about so much. FUEL has helped me alleviate a little bit of my fear.

Some parents also described how FUEL's one-on-one support helped to provide them with information about how to apply for financial aid if they were single parents or in the process of updating their immigration status. While they acknowledged that they were not undocumented and, therefore, did not have to deal with the complexity of paying for college in that situation, they did express concern over being a single parent or having alternative situations that, they feared might make it difficult for them to apply for aid or might make it more challenging for

them to pay for college. These parents described how they were able to seek out individualized support from FUEL facilitators to address these fears and to learn more about what their options were. Marta described how FUEL's one-on-one support helped her to allay her fears about her status as a single parent and its implications for her ability to pay for her child's education.

Of course as a single mom and their dad's not really at all contributing. But knowing that he's there, of course that made me worry when they talked about how both [parents'] information would be needed. I worried about it in the sense that I would have to be providing his information even though he's not contributing. But of course it was talked about because they did help us understand. I know that a lot of folks in Chelsea have to deal with immigration issues and those types of documentation, but for me it was more the absent parent and how to know what my options were. They made me understand that. That was my fear and they did help me to understand that more... They did help clarify it as far as whose income to report and who was in the household and so on, so they did clarify it for me, at least for me personally.

Incentives

Parents described how the various incentives FUEL offered them for their participation encouraged them to come to each of the FUEL meetings because they 1) made it easier for parents to participate in FUEL and 2) helped parents look forward to each meeting. First, the offer of dinner or breakfast at each of the FUEL savings circles seemed to make it much easier for parents to come to the meetings, as many described not having time after work to go home to cook food nor sufficient funds to purchase food on the way to the meeting. Several parents described how FUEL gave out turkeys to each family at the savings circle prior to Thanksgiving and the program offered a large celebration with cake at the end of the year to congratulate seniors and their families on graduation and college admission. Many parents also mentioned how FUEL offered raffles in which they gave out \$25, \$50, and \$75 in cash prizes at every savings circle. These cash prizes helped parents pay for costs such as car fuel and their child's school supplies. Other parents described placing these cash prizes into their children's FUEL account to add to their college savings. A few parents mentioned winning, or wanting to win, raffle prizes in the form of \$500 scholarship vouchers that would be given to students when they graduate from high school. Other parents described winning laptops, which were raffled off periodically at the savings circles. These parents highlighted that these laptops were particularly useful as they saved them from having to purchase laptops for their children to use in college. Parents also described being offered cash incentives if they recruited others to join the program.

Addressed Language Issues

One component of the savings circles that parents mentioned was very helpful for them was the division of the savings circles into English and Spanish sections. Several parents described how FUEL used to offer one section that was presented in English, with a Spanish translator that would translate for Spanish-speaking parents, but that this process was very inefficient and slow. Parents, in general, seemed happy with the separate sections. Several Spanish-speaking participants described how they felt very comfortable being able to ask questions in Spanish. Being able to use their own language at the meetings also provided some Spanish-speaking parents with more confidence in asking about the college-going process. They appreciated that Laura, the Chelsea facilitator, served as an effective interpreter when individuals from other organizations would come to FUEL to present college-related information.

CONCLUSIONS AND IMPLICATIONS

Many low-income students in communities like Chelsea fail to develop college aspirations and do not have the academic, financial, or college planning resources to meet their needs. FUEL aims to meet these needs by involving parents in the college planning process. This study is a first step in understanding how parents and students perceive the targeted outreach that FUEL offers parents. However, the findings from this study also have implications beyond the FUEL program, specifically for college access organizations, schools, and school districts.

We know that parent involvement tends to be an under-utilized strategy in encouraging college enrollment among low-income and first-generation students. The findings of this study can help inform efforts to alter this trend. The study shows that FUEL utilizes a variety of strategies that have had an influence on parental engagement and involvement in the college preparation process. Educational organizations specifically aiming to improve college access within their communities could use the findings of this study to understand parents' experiences when they are targeted and included in the college preparation process. Programs can also learn how parents use those experiences to help their children gain access to college. The study's investigation of FUEL's strategies can be useful for schools and school districts as they encourage parental involvement to help their low-income and minority populations better pursue their postsecondary education goals. Schools and districts can also use the findings of this study to understand how parents and students respond to some of the tactics FUEL uses and consider if and how these strategies should be implemented among the students and families that they serve. Ultimately, this study fills a gap in our understanding about the role of parent involvement in college access efforts and provides a relevant contribution to discussions about how to best encourage college attendance for low-income populations. I discuss the implications of the findings of this study below.

Implication #1: A strong programmatic support structure that incentivizes parent attendance at program events should be prioritized by other programs seeking to emulate FUEL's model of parent involvement.

Findings from this study indicate that parents learned important information about college academic and financial preparation from the FUEL program and utilized that information

to better support their children. FUEL was able to successfully transfer this knowledge to parents by actively building a support structure that encouraged regular attendance at monthly informational workshops. These workshops allowed parents to meet together in large groups and learn from each other in languages that were most familiar to them. Workshop facilitators were approachable and food was served to families, creating an environment that was comfortable and welcoming. These regular meetings made the college preparation process less overwhelming for parents by celebrating the prospect of college and framing college as a goal they shared with the community. Lastly, FUEL's monthly raffles and savings incentives were instrumental in inspiring families to attend the workshops, but also represented a celebration of their efforts to support their children's college preparation. FUEL's strong programmatic structure, in combination with a powerful incentive system, is the most crucial component of the FUEL program. It is the primary driving force that encourages the specific behaviors that the program seeks from parents – engagement in their children's college preparation process through financial, academic, and other forms of support.

The findings from this study indicate that the particular combination of FUEL's strategies creates the program's support structure, but this model may not be appropriate for all college access efforts. Many college access organizations do not have the resources to provide the families and students they serve with savings and cash incentives, one-on-one support, meals, and language translators in order to encourage parent involvement in the college preparation process. For example, FUEL's savings incentive program may be difficult to implement and manage for many public school systems, as partnerships with private banks and additional staffing would be necessary. FUEL's strategies may not be suitable in every setting because each college access program exists within a unique set of constraints.

It is important to note that although FUEL's approach to parent outreach is costly, it is effective at encouraging parent participation in the college preparation process. Therefore, adapting its outreach model by eliminating some of the specific strategies that it uses may have negative implications on the college outcomes sought among students and families. As such, it is in the best interest of other college access initiatives to focus their efforts on gathering resources in order to fully adopt FUEL's model. Developing a similar savings incentive system, hiring facilitators who have an understanding of the barriers the families with which they work face, serving food, and developing a community in which parents feel comfortable are some of the

essential components of the overall experience that a program should include to ensure longer involvement from parents' in the college preparation process.

Before FUEL's model can be employed by other organizations, more research on the FUEL program and on how to implement their parental engagement strategies in a cost-effective manner is needed. More specifically, it would be useful to examine more closely the matching incentives that FUEL offers and whether similar large incentives would be necessary to observe changes in parent involvement behavior. It would also be useful to further investigate which of FUEL's strategies are most effective in encouraging parental engagement in the college preparation process. With this information, programs and schools would then be able to prioritize their resources to focus their efforts on those approaches. Lastly, more analysis into FUEL's business model may help other programs understand how FUEL's financial structure has helped it to develop the program that it has, and may even provide other programs with a model from which to gather insight about developing their own financial structures to support similar programs.

Implication #2: College access programs should seek to alter parent behavior as a means to improve parent and student relationships, an important short-term outcome in college preparation.

One of the most significant findings in this study is the degree to which FUEL influenced relationships between parents and their children. Both parents and students described in their focus groups and interviews the level to which their relationships changed and became more positive and supportive as a result of parental participation in the FUEL program. Parents explained that once they began contributing financially to their children's postsecondary education, they became more involved in their children's academic preparation and college choice and applications processes. They also felt more likely to advocate for their children's educational opportunities, both in and beyond high school. As students perceived this shift in their parents' priorities, they also began to understand the importance of academic preparation and pursuit of a postsecondary education and adjusted their behavior accordingly.

The findings from this study suggest that programs may need to take their efforts beyond simply providing information by encouraging certain parent behaviors, such as saving or taking their children on college visits, as FUEL did. It is important to note, however, that certain

mechanisms would need to be in place to do so. For example, it might be necessary to partner with banks or local colleges to develop specific programs to foster college preparation behaviors within families. College access programs might also decide to include joint attendance at SAT preparation classes or joint financial literacy classes where both students and parents benefit from immediate assistance and effects may be multiplied if parents continue to support their students even after the events take place.

More research is needed to determine how parent behaviors can be best influenced within particular communities and what programs or interventions can be used to alter parent behaviors. Offering incentives may be one mechanism that could influence parent behaviors, as this study has shown, though little other research exists on how incentives have been used to influence parent participation and parent investment in college preparation. Focused programming that mandates the inclusion of parents in programs that are geared for students, such as college visits, could also be examined. Few organizations, such as FUEL, offer such programming, but those that do might find it useful to evaluate these particular interventions in isolation of other strategies. If such interventions are found to be effective, then college outreach organizations could implement them to yield beneficial results for parent and student relationships, ultimately influencing how parents support their children in their college preparation for several years.

Implication #3: College access organizations should build and foster relationships with community organizations and colleges.

FUEL relies heavily on the relationships it builds with community groups to better assist Chelsea families in their preparation for college. By partnering with other local college access programs and local colleges and universities FUEL enabled parents to connect to resources to which they would not otherwise have access. FUEL's Compact Scholarship program played a key role in many families' continued involvement in the program, as it guaranteed their children a postsecondary education without the burden of paying tuition and other costs if their children qualified. Its partnerships with Upward Bound and TRIO, two other college access programs, were vital in connecting families to resources that would work directly with their children to improve their academic preparation and help them with the college application process. The relationships that FUEL developed with both parents and community organizations over time reinforced the program's efforts by encouraging many of the participants to return to the FUEL

program on monthly and yearly bases and consistently seek out assistance on behalf of their children.

College access programs that seek to include parents and families should consider the efforts FUEL has made and the strategies it uses in building relationships with both families and community organizations. The colleges with which FUEL chooses to partner have been selected specifically for their affordability after families are provided with some amount of financial aid. The program has developed important partnerships with organizations that work specifically with students to complement the efforts that FUEL is making with parents. Additionally, FUEL has developed alliances with a variety of organizations around the Boston area to help themselves develop strategies to meaningfully target particular families throughout the area and redesign its programs to be more effective for its primary audience. Other college outreach initiatives should consider adopting similar partner development strategies to minimize challenges in implementing their own programs and to help them critically evaluate their programs in order to better meet the needs of their particular communities.

It is important to note, however, that FUEL is based in an urban area where many colleges and community organizations that specifically work to address the needs of underprivileged communities are available to partner with other organizations doing similar work. A program that seeks to emulate FUEL's model of parent involvement may face more challenges in garnering support from local community organizations and colleges if it were located in a rural area where fewer community organizations and colleges work with underprivileged populations. Therefore, FUEL's strategy to develop and cultivate college and community partnerships to reach its organizational goals may not be as effective if implemented in rural areas. Also, higher education in Boston is dominated by private institutions and underfunded public colleges. This means that FUEL is serving families in an area where colleges are more expensive than they would be in most other cities. If a program like FUEL wanted to target families in states like California or Texas, where the public college systems are better funded, the relationships that the organization builds with families and colleges in those locations may have more of an impact than is seen in and around Boston. Therefore, the college partnerships that FUEL has developed as part of its Compact Scholarship program are likely to have even greater results if similar partnerships were developed in states with better-funded public higher education programs.

Implication #4: Program leaders and workshop facilitators can greatly influence program outcomes and therefore should be trained in college support or counseling.

FUEL relies heavily on the efforts of its savings circle workshop facilitators to be the face of FUEL as they lead the workshops, maintain contact with families, and offer accurate and helpful advice to parents and students. The findings from this study indicated how much and how often parents relied on support from Laura and Michelle, two of the Chelsea savings circle facilitators, during the year of this study. Parents sought out advice from these two women regarding a wide range of topics including scholarships, financial aid processes, college admissions, and issues regarding documentation. Some parents even discussed how the facilitators offered them emotional support during the stressful college application process and the discouraging moments when they faced insufficient financial support to pay for their children's college education. Survey data indicated that most parents who participated in the study received key college preparation information from FUEL, and for many of these families FUEL was the only source of college information.

In addition to delivering factual information, the FUEL program facilitators are also offering parents their recommendations about which kinds of institutions and even which colleges are the preferable choices for their children. Although this study shows that the FUEL program facilitators provided participating parents with a very positive experience, parents received the advice of workshop facilitators as "truth", which can have undue influence, especially when that advice falls in the category of subjective interpretation. Given the significant influence that counselors and facilitators in many college access programs have, it is critically important that they are properly equipped for the important function that they serve. This is especially the case for college access initiatives that work with vulnerable populations, such as low-income, immigrant, or undocumented students and families, as these populations are more susceptible to making decisions with less information and may have little familiarity with the college preparation process in the United States.

Requiring that facilitators be trained in the field of college support or counseling would ensure that parents receive accurate information about each topic and minimize the proliferation of misinformation. College access initiatives could also take further steps to make sure that their facilitators are up to date with the most current information on financial aid policy, college

admissions timelines, college entrance examinations, and other such topics by providing their facilitators with opportunities for professional development necessary to stay informed about the important issues that they discuss daily with families.

Implication #5: Future research should examine the benefits of utilizing culturally relevant outreach staff and programming that reflect the cultural and linguistic identity of the families served.

FUEL's model satisfies the community that it serves in Chelsea. Families participating in the study indicated that they felt welcomed by FUEL because it offered support in their language, food of their ethnic origin, and camaraderie with fellow participants based on shared experiences such as immigration and documentation issues. It is reasonable to assume that other communities that are served by FUEL would require alterations to the model employed at the Chelsea site based primarily on differences in language barriers, racial makeup, and documentation issues. Therefore, this study provides a conservative estimate of the effect that FUEL, or another program like it, could have in other settings where community members do not face such severe obstacles to college. For low-income, African-American students, a group that currently faces and has historically faced a variety of discriminatory policies but does not have citizenship and language issues, effects may be larger. For low-income White students, a group that is also poor but does not face the challenges of race, language, and citizenship, effects may be even larger than what are seen in this study.

As FUEL expands into other communities, it is important for it, and other college access efforts like it, to consider the various communities and their contexts when developing program structure so that it can continue to improve the experience that parents have with the program. For example, if FUEL were to expand into an environment where it served families that were largely African-American, it could consider inviting representatives from Historically Black Colleges and Universities (HBCUs) to speak at the monthly workshops. FUEL could also grow its Compact Scholarship to include HBCUs in order to provide its constituents a wider array of culturally supportive postsecondary education options. Reinforcing the importance of its culturally relevant programming in this way would allow FUEL to remain community-centric and effective in its communities, as it does with Chelsea.

More research is required to identify the most effective strategies for improving the college-going rates of specific ethnic and racial populations. Specifically, it would be helpful to learn the extent to which a program staff's own ethnic background plays a role in the effectiveness of its message and its programs. The findings of this study demonstrate the value of having key program staff, such as Laura, who became the "face" of the FUEL program for many families, speak the same language and share the same cultural background as the parents and families they serve. Further analysis would be needed to determine whether having program staff share the same cultural or racial background as the target community is a determining factor in the effectiveness of a college outreach program.

Implication #6: College access programs should help families set up college savings plans.

Study findings indicated that FUEL parents became more motivated to financially prepare for college as a result of participating in FUEL's college savings matching program. Focus groups and interviews with both parents and students indicated that once families took initial steps to save through the FUEL savings program they became more invested in the process of saving. Families then began to start other savings accounts outside of FUEL, became more careful about how they spent their money, and developed a greater motivation to prepare for college in other ways. FUEL's efforts demonstrate the importance of college savings plans in initiating a host of behaviors among families that are conducive to better preparation for college. Therefore, college access initiatives that aim to make a noticeable difference in the preparation that students and families make for college should enable families to financially prepare by assisting them in starting college savings plans. Assisting families in starting college savings plans, regardless of the age of their students, is likely to help families prepare for all types of college costs, such as transportation, books, tuition, and rent.

Additionally, programs should consider developing a savings structure that families could follow that would help them to save on a consistent basis for their children's college education. FUEL's matching savings program prescribes that parents save at least fifteen dollars per month to remain a FUEL member. They must also save a total of \$1,500 in order to earn another \$1,500 from FUEL. A savings requirement, such as fifteen dollars per month, ensures that parents are saving a manageable amount each month towards their children's postsecondary education. A goal of saving \$1,500 to earn another \$1,500 provides parents with a strong incentive to save

more than fifteen dollars per month. Similarly, other programs should consider developing structured systems that require parents to save a certain amount but also provide them with an important goal to meet so that they attempt to save above the minimum if they can. It is important to note that setting a matching incentive that is similar to FUEL's incentive program could become very expensive for many programs. A smaller incentive or another prize to help families save more for college could also be effective. The key purpose in developing savings goals is to help families meet short-term goals so that they may, in the end, help their children meet their longer-term goal of college enrollment. The development of a savings structure that takes into consideration regular savings commitments and overall savings goals is essential to ensuring that families make the most of their new college savings plans. By enabling families to save through college savings accounts and structured savings plans, a college access program can serve as a strong community force that relays the importance of saving for college to the specific families that it serves.

Implication #7: College access initiatives should seek to build community among parents so that they may serve as a support system for each other.

One notable finding from focus groups and interviews was the social benefit parents described receiving from their participation in the FUEL program. Parent participants highlighted how they used their new network to exchange ideas and information with other parents about what they were doing to prepare for their children's college education. This new social capital was analogous to the types of social capital that many high-income families use when helping their children prepare for college and to connect them to resources that could help them prepare for college. The FUEL parent network was instrumental in ensuring that the information that FUEL offered would be reinforced and used by parents and by others in the Chelsea community.

College access initiatives that wish to experience similar successes with parental involvement should consider fostering a community among parents so that they may serve as a strong support system for each other. A strong community of parents could help an initiative ensure that its messages are being reinforced by its constituents and could also help parents rely on each other for some support in absence of the program itself. A parent community such as the one that FUEL has worked to develop could greatly benefit families that face severe challenges

in accessing a higher education for their children. For many families who recently immigrated to the United States, who face language barriers, financial barriers, and cultural barriers, it may be very useful to have exposure to other families like them and to learn from their experiences. It is important to note, however, that cultural similarities among families, such as those within the FUEL program, contribute greatly to the development of a parent community. More research would be needed to determine whether similarly powerful parent networks develop among families that do not come from similar cultural backgrounds, and how these networks among different groups of families affect the supports they are able to offer their children in accessing college.

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APPENDICES

Appendix A: FUEL 2012-2013 Monthly Workshop Curriculum

Date	Topic
September 13 th	Introduction to FUEL
October 11 th & 16 th	Becoming a Strong College Candidate
November 8 th & 13 th	Higher Education Options & Costs
December 13 th & 18 th	College Application
January 10 th & 15 th	Financial Aid 101 – FAFSA and Other
February 14 th & 19 th	Merit Scholarships
March 14 th & 19 th	Financial Aid Letter
April 11 th & 16 th	Managing Loans and Debt
May 9 th & 14 th	Post-college Admission
June TBD	Graduation

Appendix B: Criteria for Membership in FUEL

<p>What is the minimum amount of money parents need to start a FUEL savings account to join FUEL?</p> <p>Do parents need to maintain some level of contribution each month?</p>	<p>A minimum of \$15 per month is required. This is monitored quarterly to ensure that families save 3 months in a row. If they are behind over \$45 at each quarterly check-in, they receive a phone call to make sure that they are still invested in the program.</p> <p>Families can save up to \$1,500 over their time in the program to receive a full match (for a total of \$3,000 in their account).</p>
<p>What is the number of meetings FUEL requires parents to attend?</p>	<p>FUEL requires that parents attend at least 6 meetings per year to be in good standing.</p>
<p>What is the income threshold FUEL uses to determine whether a family qualifies for FUEL?</p>	<p>There are no explicit criteria, as FUEL takes all interested parties. However, FUEL only offers its services in areas that are largely low-income throughout the Boston area.</p>

Appendix C: Timeline for Data Collection

Month	Data Collection
October 2012	<ul style="list-style-type: none"> ▪ Obtain consent for study participation from parents ▪ Pre-Assessment Parent Survey
November 2012	<ul style="list-style-type: none"> ▪ Parent Focus Group #1 - Spanish
December 2012	<ul style="list-style-type: none"> ▪ Parent Focus Group #2 - English
January 2013	<ul style="list-style-type: none"> ▪
February 2013	<ul style="list-style-type: none"> ▪ Student Focus Group #1 – English
March 2013	<ul style="list-style-type: none"> ▪ Student Focus Group #2 - English
April 2013	<ul style="list-style-type: none"> ▪ Parent Focus Group #3 - English
May 2013	<ul style="list-style-type: none"> ▪ Parent Focus Group #4 – Spanish ▪ Post-Assessment Parent Survey ▪ Begin One-on-One Parent Interviews
June 2013	<ul style="list-style-type: none"> ▪ Complete One-on-One Parent Interviews

Appendix D: Sample Sizes

Table D1. Sample Sizes

	FUEL parents (2012- 2013)	Fall Parent Survey	Spring Parent Survey	Fall & Spring	Parent Focus Groups	Parent Interviews	Student Focus Groups
N	132	75	67	46	21	10	14
Male	22	15	-	10	6	5	8
Female	110	53	-	33	15	5	6
English- speaking	46	29	20	15	10	4	10
Spanish- speaking	86	43	47	31	11	6	0
Student - Below 9th grade	27	1	3	1	0	0	0
Student - 9th grade	33	14	7	4	4	1	1
Student - 10th grade	41	21	17	13	5	3	8
Student - 11th grade	47	22	22	16	7	3	2
Student - 12th grade	24	13	16	12	5	3	3

Appendix E: Pre-Assessment Survey Instrument for FUEL Parents in Fall 2012

CHELSEA PUBLIC SCHOOLS - PARENT SURVEY FALL 2012

The purpose of this survey is to find out what information you have on academic preparation and financial aid for college. This survey will ask questions about your background, your child's background, your understanding about college access and financial aid issues as they pertain to your family, and the steps you and your family have taken to financially and academically prepare for college. There are no right or wrong answers, and your responses will be kept confidential.

Note: The survey will ask many questions about your high school child. If you have more than one child in high school, please answer the survey questions based on your *oldest* child in high school.

BACKGROUND INFORMATION

1. Your gender (Circle one):
Male Female
2. Your race/ethnicity (Circle all that apply):
 - a. White (non-Hispanic)
 - b. African American/Other Black
 - c. Chicano/Mexican American/Puerto Rican
 - d. Other Latino/Hispanic
 - e. Native American
 - f. Asian American/Other Asian
 - g. Multiple Race/Ethnicity/Other
3. Were you born in the U.S. (Circle one)?
Yes No
4. What is your age? _____
5. Are you married?
Yes No
6. Your high school child's gender (Circle one):
Male Female
7. Your high school child's race/ethnicity (Circle all that apply):
 - a. White (non-Hispanic)
 - b. African American/Other Black
 - c. Chicano/Mexican American/Puerto Rican
 - d. Other Latino/Hispanic
 - e. Native American
 - f. Asian American/Other Asian
 - g. Multiple Race/Ethnicity/Other
8. Was your child born in the U.S. (Circle one)?
Yes No
9. What is the age of your child? _____
10. What is your child's grade level? (Circle one)
 - a. Below 9th grade
 - b. 9th grade
 - c. 10th grade
 - d. 11th grade
 - e. 12th grade
 - f. Other _____

11. From where do you receive information about college? (Circle all that apply)
- a. My child's school
 - b. Family members
 - c. An after-school college prep program
 - d. Friends
 - e. FUEL
 - f. I research and read about colleges and college preparation
 - g. Other _____

12. Does your child attend Chelsea Public Schools?
- Yes No

ACADEMIC PREPARATION FOR COLLEGE

This section includes several questions that ask about your understanding the academic preparation required for college. It also asks questions about your child and his or her academic preparation.

1. How academically prepared do you think your child is for college? (Circle a number on the scale below)

Not at all prepared						Very prepared
1	2	3	4	5	6	7

2. What is your child's academic GPA? (Circle one)
- a. Mostly As
 - b. As and Bs
 - c. Mostly Bs
 - d. Bs and Cs
 - e. Mostly C's
 - f. Cs, Ds, and Fs
 - g. I don't know

3. How important do you think your child's high school GPA is in helping your child get into a good college? (Circle a number on the scale below)

Not at all important						Very important
1	2	3	4	5	6	7

4. How many hours a week does your child spend studying, reading, completing assignments and projects, and writing papers/reports for school? (Circle one)
- a. 0 hours/week
 - b. 1-5 hours/week
 - c. 6-10 hours/week
 - d. 11-15 hours/week
 - e. 16-20 hours/week
 - f. 21-25 hours/week
 - g. 26-30 hours/week
 - h. 30+ hours/week

5. How many hours a week does your child spend on co-curricular activities (organizations, music/theater/drama programs, student government, or sports, etc.)? (Circle one)
- a. 0 hours/week
 - b. 1-5 hours/week
 - c. 6-10 hours/week
 - d. 11-15 hours/week
 - e. 16-20 hours/week
 - f. 21-25 hours/week
 - g. 26-30 hours/week
 - h. 30+ hours/week

6. Has your child started to prepare for the SAT or ACT examination? (Circle one)
- a. Yes
 - b. No
 - c. I don't know

7. Has your child taken the official SAT or ACT examination at least once? (Circle one)
- a. Yes, and he/she does not plan to take it again
 - b. Yes, and he/she plans to take it again
 - c. No
 - d. I don't know

8. How important do you think your child's SAT or ACT score is in helping your child get into a good college? (Circle a number on the scale below)

Not at all important						Very important
1	2	3	4	5	6	7

9. Is your child taking any Advanced Placement courses this year? (Circle one)
- a. Yes
 - b. No
 - c. I don't know

10. Has your child taken any Advanced Placement courses in the past? (Circle one)
- a. Yes
 - b. No
 - c. I don't know

11. How many colleges have you visited with your child? (Circle one)
- a. 0
 - b. 1-2
 - c. 3-4
 - d. 5 or more

12. Have you and your child identified some of the colleges your child will apply to? (Circle one)
- Yes No

13. Have you spoken to your child's guidance counselor about the steps you and your child should take to financially or academically prepare for college? (Circle one)
- Yes No

14. Have you spoken to a teacher at your child's school about the steps you and your child should take to financially or academically prepare for college? (Circle one)
- Yes No

15. Have you attended any workshops about how to apply for college or for financial aid? (Circle one)
- Yes No

16. Has your child attended any workshops or help sessions about how to apply for college or for financial aid? (Circle one)
- a. Yes
 - b. No
 - c. I don't know

17. Does your child attend a college preparatory program (Upward Bound, ACCESS, College Bound, or others) that meets outside of school?
- a. Yes Which program or programs?

 - b. No

CAREER PLANS AND POTENTIAL BENEFITS TO ATTENDING COLLEGE

1. Has your child chosen a career to pursue in the future? (Circle one)
- a. Yes
 - b. No
 - c. I don't know

2. Has your child chosen a major to pursue in college? (Circle one)
 - a. Yes Name of major
(_____)
 - b. No
 - c. I don't know

3. What is the highest level of education that you expect your child to attain? (Circle one)
 - a. High school degree or GED
 - b. Work Certificate
 - c. Associate's degree (community college degree)
 - d. Bachelor's degree (university degree)
 - e. Master's degree (includes MBA, M.Ed., etc.)
 - f. Ph.D.
 - g. Professional Degree (e.g., Law Degree, Medical Degree)
 - h. I do not know / My child does not know
 - i. Other _____

4. On average, how much does an individual with a bachelor's degree (from a university) make each year by age 25? (Circle one)
 - a. \$25,000 per year (\$480 per week)
 - b. \$40,000 per year (\$770 per week)
 - c. \$55,000 per year (\$1,050 per week)
 - d. \$70,000 per year (\$1,350 per week)
 - e. \$100,000 per year (\$1,920 per week)

5. On average, how much does an individual with an associate's degree (from a community college) make each year by age 25? (Circle one)
 - a. \$25,000 per year (\$480 per week)
 - b. \$40,000 per year (\$770 per week)
 - c. \$55,000 per year (\$1,050 per week)
 - d. \$70,000 per year (\$1,350 per week)
 - e. \$100,000 per year (\$1,920 per week)

COLLEGE EXPENSES

This section will ask about your knowledge about the various expenses associated with attending college.

1. Which college costs more? (Circle one)
 - a. A college or university within my state
 - b. A college or university outside of my state
 - c. I do not know

2. What is the tuition cost to attend a two-year public commuter college in Massachusetts for one year as a full-time student and as a resident of Massachusetts? Do not include the costs of room, board, books, or other optional fees. (Circle one)
 - a. Less than \$500
 - b. \$500 - \$1,000
 - c. \$1,001 - \$1,500
 - d. \$1,501 - \$2,000
 - e. More than \$2000

3. What is the tuition cost to attend a University of Massachusetts institution (Amherst, Dartmouth, Boston, or Lowell) for one year as a full-time student and as a resident of Massachusetts? Do not include the costs of room, board, books, or other optional fees. (Circle one)
 - a. Less than \$500
 - b. \$500 - \$1,000
 - c. \$1,001 - \$2,000
 - d. \$2,001 - \$3,000
 - e. More than \$3,000

4. What is the tuition cost to attend a four-year public state university in Massachusetts (e.g., Framingham State University) for one year as a full-time student and as a resident of Massachusetts? Do not include the costs of room, board, books, or other optional fees. (Circle one)
- Less than \$500
 - Between \$500 and \$700
 - Between \$701 and \$900
 - Between \$901 and \$1,100
 - Higher than \$1,100
5. Aside from tuition costs, universities and colleges will charge fees for your child's college attendance. These fees can include costs for health insurance, courses, career advisement, activities, and university operations. What is the typical cost of total student fees for a resident of Massachusetts who wants to attend a four-year public university in Massachusetts?
- Less than \$1,000
 - \$1000 - \$2,000
 - \$2,001 - \$3,000
 - More than \$3,000
6. What is the average cost of books and course materials for each year of college for a full-time student? (Circle one)
- Less than \$100 a year
 - Between \$100 and \$350 a year
 - Between \$351 and \$600 a year
 - Between \$601 and \$850 a year
 - Over \$850 a year
8. Taking Advanced Placement (AP) classes in high school can help to fulfill college credit and may help you graduate from college earlier.
- True False
9. Room and board always costs the same regardless of which college your child attends.
- True False
10. Attending college within my state costs less than going to college out of state.
- True False
11. Universities and colleges pay for the textbooks my child will use in college
- True False

PAYING FOR COLLEGE

1. Which type of financial aid does not need to be repaid? (Circle one)
- Grants
 - Scholarships
 - Loans
 - Income
 - Work-study
 - Tuition waivers
2. Which type of financial aid can your student use at any college recognized by the federal government? (Circle all that apply)
- Grants
 - Scholarships
 - Loans
 - Income
 - Work-study
 - Tuition waivers

Please circle true or false for each of the following statements:

7. Tuition expenses are only a part of the overall cost of college.
- True False

3. What sorts of information does the government take into consideration when awarding your child financial aid to attend college? (Circle all that apply)
 - a. Family income
 - b. Family assets (homes, businesses, bonds, stocks, etc.)
 - c. Family savings
 - d. Number of pets in household
 - e. Number of people in household
 - f. Unemployment of family members
 - g. Number of bedrooms in home

4. What is the maximum amount of time per week that a college student should work in order to maintain focus on his or her studies? (Circle one)
 - a. 5 hours
 - b. 10 hours
 - c. 15 hours
 - d. 20 hours
 - e. 25 hours
 - f. 30 hours
 - g. Other _____

Please circle true or false for each of the following statements:

5. Private, four-year institutions have a greater ability to provide you with financial aid, helping to reduce what it will cost your child to attend.

True False

6. Some public and private institutions provide financial aid for low-income students that covers 100 percent of a student's cost of attendance.

True False

7. It is always better to receive a college student loan from the federal and state government than to receive loans from a private bank.

True False

8. Student earnings from summer employment do not affect how much financial aid they can receive.

True False

9. How much you save for college affects how much you need to borrow to send your child to college.

True False

10. Grants and scholarships are money you need to pay back.

True False

11. Loans are an investment in your child's education.

True False

12. Federal loans and private (bank) loans have the same interest rates.

True False

13. Interest rates can greatly affect your monthly payments when you or your child pay back student loans.

True False

14. How do you hope to pay for your child's education? (Circle all that apply)
- a. Apply for federal financial aid
 - b. Apply for state financial aid
 - c. Apply for financial aid from each college that my child hopes to attend
 - d. I am saving money for my child's college education
 - e. I will receive money from family members to help pay for my child's college education
 - f. I will take out the government student loans
 - g. I will take out private bank loan(s)
 - h. My child will get a job
 - i. I don't know yet
 - j. Other

15. Have you or your child started to research possible scholarships? (Circle one)

Yes No

16. Have you or your child started to work on scholarship applications? (Circle one)

- a. Yes
- b. No
- c. I don't know

17. How important do you think it is to save for your child's college education? (Circle a number on the scale below)

Not at all important						Very important
1	2	3	4	5	6	7

18. Right now, how much money have you saved for your child to go to college? (Circle one)
- a. \$0 - \$99
 - b. \$100 - \$499
 - c. \$500 - \$999
 - d. \$1,000 - \$1,999
 - e. \$2,000 - \$4,999
 - f. \$5,000 - \$9,999
 - g. Over \$10,000
19. What do you use to save money for your child's college? (Circle all that apply)
- a. 529 savings plan
 - b. Coverdell education savings account
 - c. Bank savings account
 - d. Savings bond
 - e. CD
 - f. Other _____
 - g. I have not yet started saving for college

GETTING FINANCIAL AID

1. Do you know what the FAFSA is?
- Yes No
2. Where can you access the FAFSA? (Circle all that apply)
- a. My child's school
 - b. Public library
 - c. Online
3. How often should you (or your child) fill out the FAFSA while your child is in college? (Circle one)
- a. Every year
 - b. Every two years
 - c. Every semester
 - d. Only once, when my child is in 12th grade

4. Which of the following do you need when you fill out the FAFSA form to apply for financial aid? (Circle all that apply)
 - a. An online PIN
 - b. College applications
 - c. Completed tax forms
 - d. Utility bills
 - e. W-2 employment tax forms

Please circle true or false for each of the following statements:

5. It is possible to receive fee waivers to pay for the SAT and ACT examinations so that the examination can be free.

True False

6. Some states and schools require you to fill out a separate financial aid forms in addition to the FAFSA if you want to apply for financial aid.

True False

7. It is not possible to negotiate with colleges for more financial aid.

True False

8. The financial aid your child receives will remain the same amount for each year.

True False

9. It is necessary to apply for financial aid every year that your child is in college.

True False

QUESTIONS ABOUT FUEL

1. How many years have you been part of FUEL? (Circle one)
 - a. I just started this year
 - b. 1 year
 - c. 2 years
 - d. 3 years
 - e. More than 3 years

2. How did you find out about FUEL?

3. Why did you decide to participate in FUEL?

4. What types of information do you hope to get from FUEL? (Circle all that apply)
 - a. Information about how to help my child academically prepare for college
 - b. Information about the different types of colleges available
 - c. Information about college costs
 - d. Information about financial aid
 - e. Savings information

Appendix F: Post-Assessment Survey Instrument for FUEL Parents in Spring 2013

CHELSEA PUBLIC SCHOOLS - PARENT SURVEY SPRING 2013

The purpose of this survey is to find out what information you have on academic preparation and financial aid for college. This survey will ask questions about your background, your child’s background, your understanding about college access and financial aid issues as they pertain to your family, and the steps you and your family have taken to financially and academically prepare for college. There are no right or wrong answers, and your responses will be kept confidential.

Note: The survey will ask many questions about your high school child. If you have more than one child in high school, please answer the survey questions based on your *oldest* child in high school.

BACKGROUND INFORMATION

1. From where do you receive information about college? (Circle all that apply)
 - a. My child’s school
 - b. Family members
 - c. An after-school college prep program
 - d. Friends
 - e. FUEL
 - f. I research and read about colleges and college preparation
 - g. Other _____

2. How many years have you been part of FUEL? (Circle one)
 - a. I just started this year
 - b. 1 year
 - c. 2 years
 - d. 3 years
 - e. More than 3 years

1. How academically prepared do you think your child is for college? (Circle a number on the scale below)

Not at all important						Very important
1	2	3	4	5	6	7

2. What is your child’s academic GPA? (Circle one)
 - a. Mostly As
 - b. As and Bs
 - c. Mostly Bs
 - d. Bs and Cs
 - e. Mostly C’s
 - f. Cs, Ds, and Fs
 - g. I don’t know

3. How important do you think your child’s high school GPA is in helping your child get into a good college? (Circle a number on the scale below)

Not at all important						Very important
1	2	3	4	5	6	7

ACADEMIC PREPARATION FOR COLLEGE

This section includes several questions that ask about your understanding the academic preparation required for college. It also asks questions about your child and his or her academic preparation.

4. How many hours a week does your child spend studying, reading, completing assignments and projects, and writing papers/reports for school? (Circle one)

- a. 0 hours/week
- b. 1-5 hours/week
- c. 6-10 hours/week
- d. 11-15 hours/week
- e. 16-20 hours/week
- f. 21-25 hours/week
- g. 26-30 hours/week
- h. 30+ hours/week

5. How many hours a week does your child spend on co-curricular activities (organizations, music/theater/drama programs, student government, or sports, etc.)? (Circle one)

- a. 0 hours/week
- b. 1-5 hours/week
- c. 6-10 hours/week
- d. 11-15 hours/week
- e. 16-20 hours/week
- f. 21-25 hours/week
- g. 26-30 hours/week
- h. 30+ hours/week

6. Has your child started to prepare for the SAT or ACT examination? (Circle one)

- a. Yes
- b. No
- c. I don't know

7. Has your child taken the official SAT or ACT examination at least once? (Circle one)

- a. Yes, and he/she does not plan to take it again
- b. Yes, and he/she plans to take it again
- c. No
- d. I don't know

8. How important do you think your child's SAT or ACT score is in helping your child get into a good college? (Circle a number on the scale below)

Not at all important						Very important
1	2	3	4	5	6	7

9. Is your child taking any Advanced Placement courses this year? (Circle one)

- a. Yes
- b. No
- c. I don't know

10. Has your child taken any Advanced Placement courses in the past? (Circle one)

- a. Yes
- b. No
- c. I don't know

11. How many colleges have you visited with your child? (Circle one)

- a. 0
- b. 1-2
- c. 3-4
- d. 5 or more

12. Have you and your child identified some of the colleges your child will apply to? (Circle one)

- Yes
- No

13. Have you spoken to your child's guidance counselor about the steps you and your child should take to financially and academically prepare for college? (Circle one)

- Yes
- No

14. Have you spoken to a teacher at your child's school about the steps you and your child should take to financially and academically prepare for college? (Circle one)

- Yes
- No

15. Have you attended any workshops about how to apply for college or for financial aid? (Circle one)

Yes No

16. Has your child attended any workshops or help sessions about how to apply for college or for financial aid? (Circle one)

- a. Yes
- b. No
- c. I don't know

17. Does your child attend a college preparatory program (Upward Bound, ACCESS, College Bound, or others) that meets outside of school?

- a. Yes Which program or programs?

- b. No

CAREER PLANS AND POTENTIAL BENEFITS TO ATTENDING COLLEGE

1. Has your child chosen a career to pursue in the future? (Circle one)

- a. Yes
- b. No
- c. I don't know

2. Has your child chosen a major to pursue in college? (Circle one)

- a. Yes Name of major
(_____)
- b. No
- c. I don't know

3. What is the highest level of education that you expect your child to attain? (Circle one)

- a. High school degree or GED
- b. Work Certificate
- c. Associate's degree (community college degree)
- d. Bachelor's degree (university degree)
- e. Master's degree (includes MBA, M.Ed., etc.)
- f. Ph.D.
- g. Professional Degree (e.g., Law Degree, Medical Degree)
- h. I do not know / My child does not know
- i. Other _____

4. On average, how much does an individual with a bachelor's degree (from a university) make each year by age 25? (Circle one)

- a. \$25,000 per year (\$480 per week)
- b. \$40,000 per year (\$770 per week)
- c. \$55,000 per year (\$1,050 per week)
- d. \$70,000 per year (\$1,350 per week)
- e. \$100,000 per year (\$1,920 per week)

5. On average, how much does an individual with an associate's degree (from a community college) make each year by age 25? (Circle one)

- a. \$25,000 per year (\$480 per week)
- b. \$40,000 per year (\$770 per week)
- c. \$55,000 per year (\$1,050 per week)
- d. \$70,000 per year (\$1,350 per week)
- e. \$100,000 per year (\$1,920 per week)

COLLEGE EXPENSES

This section will ask about your knowledge about the various expenses associated with attending college.

1. Which college costs more? (Circle one)
 - a. A college or university within my state
 - b. A college or university outside of my state
 - c. I do not know
2. What is the tuition cost to attend a two-year public commuter college in Massachusetts for one year as a full-time student and as a resident of Massachusetts? Do not include the costs of room, board, books, or other optional fees. (Circle one)
 - a. Less than \$500
 - b. \$500 - \$1,000
 - c. \$1,001 - \$1,500
 - d. \$1,501 - \$2,000
 - e. More than \$2000
3. What is the tuition cost to attend a University of Massachusetts institution (Amherst, Dartmouth, Boston, or Lowell) for one year as a full-time student and as a resident of Massachusetts? Do not include the costs of room, board, books, or other optional fees. (Circle one)
 - a. Less than \$500
 - b. \$500 - \$1,000
 - c. \$1,001 - \$2,000
 - d. \$2,001 - \$3,000
 - e. More than \$3,000
4. What is the tuition cost to attend a four-year public state university in Massachusetts (e.g., Framingham State University) for one year as a full-time student and as a resident of Massachusetts? Do not include the costs of room, board, books, or other optional fees. (Circle one)
 - a. Less than \$500
 - b. Between \$500 and \$700
 - c. Between \$701 and \$900
 - d. Between \$901 and \$1,100
 - e. Higher than \$1,100
5. Aside from tuition costs, universities and colleges will charge fees for your child's college attendance. These fees can include costs for health insurance, courses, career advisement, activities, and university operations. What is the typical cost of total student fees for a resident of Massachusetts who wants to attend a four-year public university in Massachusetts?
 - a. Less than \$1,000
 - b. \$1000 - \$2,000
 - c. \$2,001 - \$3,000
 - d. More than \$3,000
6. What is the average cost of books and course materials for each year of college for a full-time student? (Circle one)
 - a. Less than \$100 a year
 - b. Between \$100 and \$350 a year
 - c. Between \$351 and \$600 a year
 - d. Between \$601 and \$850 a year
 - e. Over \$850 a year

Please circle true or false for each of the following statements:

7. Tuition expenses are only a part of the overall cost of college.
True False

8. Taking Advanced Placement (AP) classes in high school can help to fulfill college credit and may help you graduate from college earlier.

True False

9. Room and board always costs the same regardless of which college your child attends.

True False

10. Attending college within my state costs less than going to college out of state.

True False

11. Universities and colleges pay for the textbooks my child will use in college

True False

PAYING FOR COLLEGE

1. Which type of financial aid does not need to be repaid? (Circle one)

- a. Grants
- b. Scholarships
- c. Loans
- d. Income
- e. Work-study
- f. Tuition waivers

2. Which type of financial aid can your student use at any college recognized by the federal government? (Circle one)

- a. Grants
- b. Scholarships
- c. Loans
- d. Income
- e. Work-study
- f. Tuition waivers

3. What sorts of information does the government take into consideration when awarding your child financial aid to attend college? (Circle all that apply)

- a. Family income
- b. Family assets (homes, businesses, bonds, stocks, etc.)
- c. Family savings
- d. Number of pets in household
- e. Number of people in household
- f. Unemployment of family members
- g. Number of bedrooms in home

4. What is the maximum amount of time per week that a college student should work in order to maintain focus on his or her studies? (Circle one)

- a. 5 hours
- b. 10 hours
- c. 15 hours
- d. 20 hours
- e. 25 hours
- f. 30 hours
- g. Other _____

Please circle true or false for each of the following statements:

5. Private, four-year institutions have a greater ability to provide you with financial aid, helping to reduce what it will cost your child to attend.

True False

6. Some public and private institutions provide financial aid for low-income students that covers 100 percent of a student's cost of attendance.

True False

7. It is always better to receive a college student loan from the federal and state government than to receive financial aid from a private bank.
 True False
8. Student earnings from summer employment do not affect how much financial aid they can receive.
 True False
9. How much you save for college affects how much you need to borrow to send your child to college.
 True False
10. Grants and scholarships are money you need to pay back.
 True False
11. Loans are an investment in your child's education.
 True False
12. Federal loans and private (bank) loans have the same interest rates.
 True False
13. Interest rates can greatly affect your monthly payments when you or your child pay back student loans.
 True False

14. How do you hope to pay for your child's education? (Circle all that apply)
- a. Apply for federal financial aid
 - b. Apply for state financial aid
 - c. Apply for financial aid from each college that my child hopes to attend
 - d. I am saving money for my child's college education
 - e. I will receive money from family members to help pay for my child's college education
 - f. I will take out the government student loans
 - g. I will take out private bank loan(s)
 - h. My child will get a job
 - i. I don't know yet
 - j. Other

15. Have you or your child started to research possible scholarships? (Circle one)
 Yes No

16. Have you or your child started to work on scholarship applications? (Circle one)
- a. Yes
 - b. No
 - c. I don't know

17. How important do you think it is to save for your child's college education? (Circle a number on the scale below)

Not at all important						Very important
1	2	3	4	5	6	7

18. Right now, how much money have you saved for your child to go to college? (Circle one)
- \$0 - \$99
 - \$100 - \$499
 - \$500 - \$999
 - \$1,000 - \$1,999
 - \$2,000 - \$4,999
 - \$5,000 - \$9,999
 - Over \$10,000

19. What do you use to save money for your child's college? (Circle all that apply)
- 529 savings plan
 - Coverdell education savings account
 - Bank savings account
 - Savings bond
 - CD
 - Other _____
 - I have not yet started saving for college

GETTING FINANCIAL AID

- Do you know what the FAFSA is?
Yes No
- Where can you access the FAFSA? (Circle all that apply)
 - My child's school
 - Public library
 - Online
- How often should you (or your child) fill out the FAFSA while your child is in college? (Circle one)
 - Every year
 - Every two years
 - Every semester
 - Only once, when my child is in 12th grade

- Which of the following do you need when you fill out the FAFSA form to apply for financial aid? (Circle all that apply)
 - An online PIN
 - College applications
 - Completed tax forms
 - Utility bills
 - W-2 employment tax forms

Please circle true or false for each of the following statements:

- It is possible to receive fee waivers to pay for the SAT and ACT examinations so that the examination can be free.
True False
- Some states and schools require you to fill out a separate financial aid forms in addition to the FAFSA if you want to apply for financial aid.
True False
- It is not possible to negotiate with colleges for more financial aid.
True False
- The financial aid your child receives will remain the same amount for each year.
True False
- It is necessary to apply for financial aid every year that your child is in college.
True False

QUESTIONS ABOUT FUEL

How helpful have you found the following aspects of the FUEL program in helping you and your child prepare for college? (Circle a number on the scale below)

1. Monthly informational workshops?

Not at all Helpful							Very helpful
1	2	3	4	5	6	7	

2. Information about financial aid?

Not at all Helpful							Very helpful
1	2	3	4	5	6	7	

3. Information about the academic preparation necessary for college?

Not at all Helpful							Very helpful
1	2	3	4	5	6	7	

4. Assistance provided in saving for college?

Not at all Helpful							Very helpful
1	2	3	4	5	6	7	

5. Have you been able to use any of the tips provided by FUEL this year to help your child academically prepare?

Yes No

6. Do you have any suggestions for improvement to the FUEL program?

Thank you for your time!

Appendix G: Focus Group Interview Protocol for FUEL Parents in Fall 2012

FUEL STUDY PARENT FOCUS GROUP - FALL PROTOCOL

CONSENT PROCESS *(to be discussed by the interviewer)*

By agreeing to participate in this evaluation study, you are consenting to take part in a focus group interview, which is an informal interview conducted with a small group of people. The interview will be semi-structured and last no more than 1.5 hours. It will be conducted in Spanish and it will be audio-recorded. You will be asked questions about how you provide encouragement and academic support to your high school child, how helpful FUEL has been in providing you with the tools to better support your child in his or her path to college, and the challenges you continue to face in supporting your child's educational future.

Confidentiality

All personal information from this project will be kept private and confidential, and many steps will be taken to protect your personal information.

- Only the researchers will be allowed to use these data. The consent forms, recordings, and list of participants will be kept in a locked file cabinet.
- Your responses to focus group interview questions will be kept confidential. With the focus group recordings, you will each be assigned a pseudonym (i.e. false name). The recording will be erased as soon as it has been transcribed.
- To further protect your privacy, research analyses will be performed on password-protected computers.

Additionally, the nature of a focus group prevents the study team from guaranteeing confidentiality of everything that is said during the focus group sessions. I would like to remind all participants to respect the privacy of fellow participants and not repeat anything that is said in a focus group session to others.

Uses of the Data

The findings from this focus group will be used for an evaluation of the FUEL program and a dissertation thesis. The analysis may be used as the basis for articles or presentations in the future. Research reports, publications, and presentations would not include any information that identifies a specific person or family.

Compensation: You will receive a \$25 gift card for your participation in the parent focus group.

Participation and Withdrawal

Your participation in this study is completely voluntary, and you may refuse to participate without penalty or loss of benefit to which you may otherwise be entitled. You may withdraw by informing me that you no longer wish to participate. You may skip any question during the focus group, but continue to participate in the rest of the focus group. Whether you decide to participate or not will not affect your current or future relationship with Chelsea High School, FUEL, or any college or government program.

INTERVIEWER QUESTIONS

1. What are your expectations for your child's education?

[Prompts: institutions likely to attend, type of degree(s), coursework trajectory, skills]

2. What interactions have you had with your child about college and college preparation?

[Prompts: financial aid, academic assistance, tutoring, saving]

3. What factors made you decide to join the FUEL program?

[Prompts: school administration, peer influence, family influence, location, benefits]

4. What do you hope to gain from participating in the FUEL program?

5. What has been your experience with the FUEL program so far? Have you learned anything since you started the program?

[Prompts: relationship with family, academic behavior, financial aid, academic preparation, time management, change in study/degree plans, career decisions, seeking out resources, college choices, motivation]

6. What encouragement and support do you provide your child in developing plans for post-high school?

7. What factors do you think hinder, or challenge, your child in attending college and attaining a postsecondary degree?

[Prompts: academic, institutional, financial, social, and cultural]

Those are all of my questions. Do you have any final comments?

Appendix H: Focus Group Interview Protocol for FUEL Parents in Spring 2013

FUEL STUDY PARENT FOCUS GROUP - SPRING PROTOCOL

CONSENT PROCESS *(to be discussed by the interviewer)*

By agreeing to participate in this evaluation study, you are consenting to take part in a focus group interview, which is an informal interview conducted with a small group of people. The interview will be semi-structured and last no more than 1.5 hours. It will be conducted in Spanish and it will be audio-recorded. You will be asked questions about your experiences with FUEL and whether and how your involvement with the program has affected the decisions you and your child make about post-high school plans.

Confidentiality

All personal information from this project will be kept private and confidential, and many steps will be taken to protect your personal information.

- Only the researchers will be allowed to use these data. The consent forms, recordings, and list of participants will be kept in a locked file cabinet.
- Your responses to focus group interview questions will be kept confidential. With the focus group recordings, you will each be assigned a pseudonym (i.e. false name). The recording will be erased as soon as it has been transcribed.
- To further protect your privacy, research analyses will be performed on password-protected computers.

Additionally, the nature of a focus group prevents the study team from guaranteeing confidentiality of everything that is said during the focus group sessions. I would like to remind all participants to respect the privacy of fellow participants and not repeat anything that is said in a focus group session to others.

Uses of the Data

The findings from this focus group will be used for an evaluation of the FUEL program and a dissertation thesis. The analysis may be used as the basis for articles or presentations in the future. Research reports, publications, and presentations would not include any information that identifies a specific person or family.

Compensation: You will receive a \$25 gift card for your participation in the parent focus group.

Participation and Withdrawal

Your participation in this study is completely voluntary, and you may refuse to participate without penalty or loss of benefit to which you may otherwise be entitled. You may withdraw by informing me that you no longer wish to participate. You may skip any question during the focus group, but continue to participate in the rest of the focus group. Whether you decide to participate or not will not affect your current or future relationship with Chelsea High School, FUEL, or any college or government program.

INTERVIEWER QUESTIONS

1. What inspired you to join FUEL?
 - a. How did you learn about it?
 - b. Why did you decide to join?
2. What have you learned about college and college planning this year?
 - a. How have you learned this information? Did you learn it through FUEL or elsewhere?
 - b. How have you been able to use what you've learned?
3. Since joining FUEL, what interactions have you had with your child about college or career planning?
 - a. What about paying for college?
 - i. Saving for college?
 - ii. Scholarships? What have you found?
 - b. What about homework? Do you interact with your child about this?
 - i. If so, how do you interact with them?
 - ii. Have you noticed a difference in your child's grades or test scores since you started interacting with them about homework?
 - c. Have you or your child started to look into certain careers or colleges?
 - i. Have you talked about this? If so, what have you talked about?
 - ii. Have you visited any colleges?
 - iii. Are there other things you've done together with regard to thinking about college?
4. What do you think has been FUEL's influence/impact on you?
 - a. Do you talk to your child about their future? What do you say?
 - b. Has your involvement in FUEL changed your thoughts about how you will pay for your child's plans after high school?
 - i. What did you do before and what do you do now?
 - c. Has your involvement in FUEL changed how you think about your child's grades? Test scores?
 - i. What did you think before and what do you think now?
 - d. Has your involvement in FUEL changed how you interact with your child's teachers, school counselor, or principal?
 - i. How did you interact with them before and how do you interact with them now?
 - e. Do you think your participation in FUEL has changed your child's future goals?

- i. Has it changed their career goals? If so, what were their career goals before and what are they now?
 - ii. Has it changed their college choices? If so, what did they want to do before and what do they want to do now?
- 5. How would you describe your experience in FUEL?
 - a. Are there aspects of the FUEL program that you felt were particularly helpful for you and your family?
 - b. Are there aspects of the FUEL program that you felt were not very helpful for you and your family?
 - c. What suggestions do you have for improving the program?
- 6. Is there anything that I haven't brought up that you would like to share?

Those are all of my questions. Do you have any final comments?

Appendix I: Focus Group Interview Protocol for FUEL Students in Spring 2013

FUEL STUDY STUDENT FOCUS GROUP - PROTOCOL

CONSENT PROCESS *(to be discussed by the interviewer)*

By agreeing to participate in this evaluation study, you are consenting to take part in a focus group interview, which is an informal interview conducted with a small group of people. The interview will be semi-structured and last no more than 1.5 hours. It will be audio-recorded. You will be asked questions about what factors have helped you in your learning and your academic success in high school, your educational goals, encouragement and support you receive from your family, challenges you think you will face in your educational future, and your aspirations after you graduate from high school.

Confidentiality

All personal information from this project will be kept private and confidential, and many steps will be taken to protect your personal information.

- Only the researchers will be allowed to use these data. The consent forms, recordings, and list of participants will be kept in a locked file cabinet.
- Your responses to focus group interview questions will be kept confidential. With the focus group recordings, you will each be assigned a pseudonym (i.e. false name). The recording will be erased as soon as it has been transcribed.
- To further protect your privacy, research analyses will be performed on password-protected computers.

Additionally, the nature of a focus group prevents the study team from guaranteeing confidentiality of everything that is said during the focus group sessions. I would like to remind all participants to respect the privacy of fellow participants and not repeat anything that is said in a focus group session to others.

Uses of the Data

The findings from this focus group will be used for an evaluation of the FUEL program and a dissertation thesis. The analysis may be used as the basis for articles or presentations in the future. Research reports, publications, and presentations would not include any information that identifies a specific person or family.

Compensation: You will receive a \$25 gift card for your participation in the student focus group.

Participation and Withdrawal

Your participation in this study is completely voluntary, and you may refuse to participate without penalty or loss of benefit to which you may otherwise be entitled. You may withdraw by informing me that you no longer wish to participate. You may skip any question during the focus group, but continue to participate in the rest of the focus group. Whether you decide to participate or not will not affect your current or future relationship with Chelsea High School, FUEL, or any college or government program.

INTERVIEWER QUESTIONS

1. Have you thought about life after high school? What are you thinking you want to do?

[*Prompts*: college vs. work, career, institutions likely to attend, type of degree(s), amount of time spent in school, coursework trajectory, skills obtained]

2. What types of things have shaped your goals after high school?

[*Prompts*: contact with college official/faculty, degree program, peer influence, family influence, location, cost, courses offered, FUEL program]

a. Have your parents/guardians shaped your educational plans in any way?

3. What has it been like for you since your parents became involved in FUEL?

a. Do your parents know more?

b. Have you noticed any changes in what your parents are doing?

c. Are there other things outside of FUEL that you think have changed your parents' understanding and behavior regarding college planning this year?

4. Have your goals after high school changed since your parents joined FUEL?

a. If so, in what ways have they changed?

[*Prompts*: change in study/degree plans, career decisions, college choices]

b. Do you think FUEL has anything to do with this? How so?

[*Prompts*: relationship with family, academic preparation, seeking out resources, motivation, academic behavior, financial aid]

c. Are there other things going on this year that have changed your goals? What are they?

Appendix J: One-on-One Interview Protocol for FUEL Parents in Spring 2013

FUEL STUDY PARENT INTERVIEW PROTOCOL

CONSENT PROCESS (to be discussed by the interviewer)

By agreeing to participate in this evaluation study, you are consenting to take part in a on-on-one interview. The interview will be semi-structured and last no more than 1 hour. It will be conducted in English and it will be audio-recorded. You will be asked questions about your experiences with FUEL and whether and how your involvement with the program has affected the decisions you and your child make about post-high school plans.

Confidentiality

All personal information from this project will be kept private and confidential, and many steps will be taken to protect your personal information.

- Only the researchers will be allowed to use these data. The consent forms, recordings, and list of participants will be kept in a locked file cabinet.
- Your responses to interview questions will be kept confidential. With the interview recordings, you will each be assigned a pseudonym (i.e. false name). The recording will be erased as soon as it has been transcribed.
- To further protect your privacy, research analyses will be performed on password-protected computers.

Uses of the Data

The findings from this interview will be used for an evaluation of the FUEL program and a dissertation thesis. The analysis may be used as the basis for articles or presentations in the future. Research reports, publications, and presentations would not include any information that identifies a specific person or family.

Compensation: You will receive a \$25 gift card for your participation in the parent interview.

Participation and Withdrawal

Your participation in this study is completely voluntary, and you may refuse to participate without penalty or loss of benefit to which you may otherwise be entitled. You may withdraw by informing me that you no longer wish to participate. You may skip any question during interview, but continue to participate in the rest of the interview. Whether you decide to participate or not will not affect your current or future relationship with Chelsea High School, FUEL, or any college or government program.

INTERVIEWER QUESTIONS

1. What inspired you to join FUEL?
[INSERT THEMES FROM FOCUS GROUPS]

(One theme that emerged from the parent focus groups was ____ [to be determined] _____. Can you tell me whether this has been your experience?)

2. What have you learned about college and college planning this year?
[INSERT THEMES FROM FOCUS GROUPS]
(One theme that emerged from the parent focus groups was ____ [to be determined] ____. Can you tell me whether this has been your experience?)

3. Since joining FUEL, what interactions have you had with your child about college or career planning?
[INSERT THEMES FROM FOCUS GROUPS]
(One theme that emerged from the parent focus groups was ____ [to be determined] ____. Can you tell me whether this has been your experience?)

4. What do you think has been FUEL's influence/impact on you?
[INSERT THEMES FROM FOCUS GROUPS]
(One theme that emerged from the parent focus groups was ____ [to be determined] ____. Can you tell me whether this has been your experience?)

5. How would you describe your experience in FUEL?
[INSERT THEMES FROM FOCUS GROUPS]
(One theme that emerged from the parent focus groups was ____ [to be determined] ____. Can you tell me whether this has been your experience?)

6. Is there anything that I haven't brought up that you would like to share?

Those are all of my questions. Do you have any final comments?

Appendix K: Limitations of Using Focus Groups to Collect Data

Advantage: The use of focus groups allows for high face validity, as they take into consideration that people naturally interact and are influenced by others. It may also be one of the few research tools used to collect data from individuals who are not highly literate (Marczak and Sewell, n.d.). Focus groups also allow the researcher to interact directly with the participants. The discussions allow for clarification through follow-up questions and probing (Morgan, 1997)

Hazards	Solutions
Information given in the presence of peers means people may be influenced by peers to provide a certain type of answer (Krueger, 1988; Morgan, 1997)	Conduct several one-on-one interviews. Cross-reference between parents and students within same family.
Leading the witness – asking questions in a certain way so that parents/students feel as though they should answer in a certain way in a group setting (Krueger, 1988; Morgan, 1997)	Review parent & student focus group protocols and phrase questions so that participants do not feel pressure to come up with responses they expect the researcher to want (Krueger, 1988)
Small numbers or convenience sampling limit ability to generalize to larger population (Marczak and Sewell, n.d.)	Conduct several focus group sessions. Use focus groups in addition to other data sampling techniques.
Requires a trained interviewer who is knowledgeable about group dynamics (Krueger, 1988)	Have previous experience with conducting focus groups under supervision of trained focus group moderator. (Krueger, 1988)
Moderator may unknowingly bias results by providing cues about which responses are desirable. (Krueger, 1988)	Phrase questions so that participants do not feel pressure to respond in ways they believe are more desirable.

Appendix L: Limitations of Using a Language Interpreter to Collect Data

Advantage: When interviewees speak in their second language, researchers have shown that they perceive themselves as less confident, happy and intelligent (Kline et al., 1980; de Zelueta, 1990). To best allow non-English-native speakers to fully express themselves, interpreters can be used to manage the interactions between the researcher and the participants.

Hazards	Solutions
<p>Observations or actions by observers (in this case, the interpreter) may affect what is being observed (focus group responses). This already happens between researcher and participant, but the interpreter is included in this “observer effect”. The interpreter, like the researcher, brings his/her own assumptions & concerns to the interview and research process. Research now becomes subject to “triple subjectivity” (Temple & Edwards, 2002)</p>	<p>Interpreter’s assumptions & concerns need to be made explicit, just like the researcher’s (Temple & Edwards, 2002).</p> <p>Interview the interpreter. Ask him/her about aspects of his/her own life experiences, relationship with the ethnic groups previously worked with, and what issues he/she regards as important in relation to the research & interview topics (Murray & Wynne, 2001).</p>
<p>Translator/interpreter may not know the vocabulary involved to properly talk about the topic (Temple & Edwards, 2002).</p>	<p>Discuss with the interpreter:</p> <ul style="list-style-type: none"> -purpose of the interview -interview protocol -ethical issues, and -your own concerns in interviewing someone from a different culture to be of particular value (Murray & Wynne, 2001)
<p>There may be power issues among people of different roles across cultures, and interpreter may be subject to this (Temple & Edwards, 2002; Murray & Wynne, 2001)</p>	<p>Interview interpreter about the relationship with the ethnic groups with whom they’ve worked.</p> <p>Have an independent source (a second or third interpreter) review the transcript of the focus group or listen to the audio to tell if any discrepancies or problems occurred in how questions/answers were provided to ensure reliability (Murray & Wynne, 2001). This is one way to ensure authenticity of interpreted accounts.</p>
<p>Outsiders vs. insiders</p> <p>An “outsider” can be different from, or similar to, an “insider” in social categories such as age, (physical) ability, ethnicity, caste, gender, mental status, personality,</p>	<p>-Find out how much the interviewer is “interculturally” educated</p>

<p>race, religion, sexual orientation, etc. There is an argument against having an outsider interview a participant as 1) they may not be able to represent or fully understand the experience of the local community 2) they may disrespectfully exploit insider community for outsider gains 3) it is disempowering to have someone else articulate your views for you</p> <p>The language interpreter might be an “insider” and therefore, may not ask questions or probe into issues that he/she may be somewhat familiar with but requires probing. This is also referred to as “collusion.” The insider can also selectively interpret interviewee’s comments to “protect” a community from potential harm. This has implications for validity and authenticity of the interview (Murray & Wynne, 2001).</p> <p>A researcher or interpreter being an insider means that he/she may be responding to participants or analyses of data from a perspective that is other than a researcher’s (Asselin, 2003).</p>	<p>Acknowledge outsider status of both the researcher and the interpreter</p> <p>Being an outsider can be beneficial as it can encourage rigorous analysis by enabling the researcher to maintain critical distance from the data, unaffected by biases from the insider culture</p> <p>Interpreter may be an insider, and therefore, it is important for the insider to be hyper-aware of her status. Have this discussion with the interpreter and push her to probe about topics she may already know about.</p> <p>An insider’s familiarity with the participants’ cultural norms can be advantageous, as he/she has an understanding about the types of questions can be asked and the manner in which they should be asked. They can be perceived as “gatekeepers” and “cultural guides” (Murray & Wynne, 2001). They are more rapidly accepted by participants Kanuha, 2000).</p>
<p>Interpreters should, ideally, have the following qualities. (1) familiarity with qualitative research in general, and the topic of interest in particular (see Freed, 1988) (2) proficiency in both the language of the participant and researcher (Westermeyer, 1990), as well as having the ability to express the same feelings and intonations as the interviewer through verbal and non-verbal means (Freed, 1988); and (3) if possible, a degree of commonality between interpreters and participants, such as age, gender, religion and class (Freed, 1988; cf. Riessman, 1987; Rana, 1998).</p>	<p>This is largely contingent on participants’ personal preferences. Similarities and differences with participants can be advantageous. For example, participants may feel less pressure to conform to masculine and feminine social scripts when someone of the opposite gender interviews them (Murray & Wynne, 2001).</p>
<p>Interpreter may take too large a role in the interview, such as crafting his/her own questions. This can be unnecessarily</p>	<p>Have a briefing session with interpreter to explain the roles of each person in the interview (researcher, interpreter, and</p>

<p>intrusive into the research (Murray & Wynne, 2001)</p>	<p>participant). Sketch out these boundaries beforehand (Murray, 2001). Establish beforehand how directive the interpreter will need to be during the interview. The more directive the interpreter, the more opportunity there is for participants to respond, and the more opportunity there is for the researcher to reflect on responses (Murray & Wynne, 2001).</p>
<p>It is difficult to develop a rapport among three individuals (or groups of individuals) when interviewing, as opposed to two (without the interpreter). This rapport is necessary to discuss sensitive topics freely. Depth of expression is sometimes lacking when an interpreter is involved (Murray & Wynne, 2001)</p>	<p>Have multiple interviews with same people. Interview participants more than once over a prolonged period of time so that this rapport can be developed (Murray & Wynne, 2001).</p>
<p>Confidentiality may be a concern for participants if interpreter comes from the same community they do (Murray & Wynne, 2001)</p>	<p>All participants should be informed about who will have available to them the information from the interview. Researcher and interpreter also need to ensure that the interpreter is aware of ethical principles within the social sciences (has taken a social sciences human research ethics course and has been approved by the IRB)</p>

Appendix M: Initial Survey Results

This section includes all survey tables describing initial (Fall 2012) survey results that are not included throughout the Findings section.

Table M1.1. Initial Parent Perceptions on Savings

	Mean (Std. Error)	N
How important do you think it is to save for your child's college education?	6.49 (0.975)	67

Notes: This table includes survey results from only the Fall 2012 (initial) survey. Parents were asked to rate their perceptions on a scale of 1 through 7, with 1 being "not prepared at all" or "not important" and 7 being "very prepared" or "very important".

Table M1.2. Initial Parent Behavior Regarding Savings

Right now, how much money have you saved for your child to go to college?	Percent (%)	N
\$0 - \$99	21.3%	
\$100 - \$499	6.3%	
\$500 - \$999	23.4%	
\$1,000 - \$1,999	14.1%	64
\$2,000 - \$4,999	17.2%	
\$5,000 - \$9,999	4.7%	
Over \$10,000	3.1%	
What do you use to save money for your child's college?	Fall	N
529 savings plan	15.2%	
Coverdell education savings account	3.0%	
Bank savings account	45.5%	
Savings bond	97.0%	66
CD	4.6%	
Other (all respondents to this option wrote "FUEL")	28.8%	
I have not yet started saving for college	10.6%	

Note: This table includes survey results from only the Fall 2012 (initial) survey.

Table M2.1 Initial Parent Knowledge About the FAFSA

Do you know what the FAFSA is?	Parents who marked “Yes” (%)	N
Yes	65.6%	42
Which of the following do you need when you fill out the FAFSA form to apply for financial aid?	Parents who marked “Yes” (%)	N
An online PIN (n=38)	45.8%	
College applications (n=38)	35.6%	
Completed tax forms (n=38)	64.4%	59
Utility bills (n=38)	18.6%	
W-2 employment tax forms (n=39)	59.3%	
Where can you access the FAFSA?	Parents who marked “Yes” (%)	N
My child's school (n=40)	59.7%	
Public library (n=40)	19.4%	62
Online (n=40)	27.4%	

Notes: This table includes survey results from only the Fall 2012 (initial) survey. Parent respondents answered “Yes” or “No” to the questions/options provided above.

M2.2 Initial Parent Knowledge about College Expenses & Paying for College

	Parents who accurately marked “True” (%)	N
Taking Advanced Placement (AP) classes in high school can help to fulfill college credit and may help you graduate from college earlier.	90.6%	66
Attending college within my state costs less than going to college out of state.	74.6%	63
Some public and private institutions provide financial aid for low-income student that covers 100 percent of a student's cost of attendance.	73.8%	61
How much you save for college affects how much you need to borrow to send your child to college.	40.7%	59
Loans are an investment in your child's education.	82.3%	62
Interest rates can greatly affect your monthly payments when you or your child pays back student loans.	91.5%	59
It is possible to receive fee waivers to pay for the SAT and ACT examinations so that the examination can be free.	61.7%	60
Some states and schools require you to fill out separate financial aid forms in addition to the FAFSA if you want to apply for financial aid.	74.1%	58
It is necessary to apply for financial aid every year that your child is in college.	81.4%	59
	Parents who accurately marked “False” (%)	N
Universities and colleges pay for the textbooks my child will use in college.	93.9%	65
Private, four-year institutions have a greater ability to provide you with financial aid, helping to reduce what it will cost your child to attend.	66.1%	62
Student earnings from summer employment do not affect how much financial aid they can receive.	45.0%	60
Grants and scholarships are money you need to pay back.	88.9%	63
It is not possible to negotiate with colleges for more financial aid.	65.0%	60
The financial aid your child receives will remain the same amount for each year.	85.0%	60

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. The statements in blue were “true” and the statements in orange were “false”.

Table M3.1 Parents' Perceptions Regarding Student Academic Behavior

What is your child's academic GPA?	Percent (%)	N
Mostly As	7.3%	
As and Bs	44.1%	
Mostly Bs	16.2%	
Bs and Cs	11.8%	68
Mostly Cs	8.8%	
Cs, Ds, and Fs	0.0%	
I don't know	11.8%	
How many hours a week does your child spend studying, reading, completing assignments and projects, and writing papers/reports for school?	Percent (%)	N
0 hours	0.0%	
1-5 hours	39.1%	
6-10 hours	24.6%	
11-15 hours	17.4%	69
16-20 hours	4.4%	
21-25 hours	10.1%	
26-30 hours	1.5%	
30+ hours	2.9%	
How many hours a week does your child spend on co-curricular activities (organizations, music/theater/drama programs, student government, or sports, etc.)?	Percent (%)	N
0 hours	4.4	
1-5 hours	41.2	
6-10 hours	22.1	
11-15 hours	14.7	69
16-20 hours	8.8	
21-25 hours	4.4	
26-30 hours	0.0	
30+ hours	4.4	

Note: This table includes survey results from only the Fall 2012 (initial) survey.

Table M3.2 Initial Parent Perceptions Regarding College Preparation

	Parents who marked "Yes" (%)	N
Has your child started to prepare for the SAT or ACT examination?	47.8%	67
Is your child taking any Advanced Placement courses this year?	44.9%	69
Has your child taken any Advanced Placement courses in the past?	49.3%	69
Has your child attended any workshops or help sessions about how to apply for college or for financial aid?	48.6%	70
Does your child attend a college preparatory program (Upward Bound, ACCESS, College Bound, or others) that meets outside of school?	27.1%	70

Has your child chosen a career to pursue in the future?	64.8%	71
Has your child chosen a major to pursue in college?	49.3%	71

Notes: This table includes survey results from only the Fall 2012 (initial) survey. Parent respondents answered “Yes” or “No” to the questions/options provided above.

Table M4.1 Initial Parent Reported Behavior Regarding Involvement in College Preparation

How many colleges have you visited with your child?	Percent (%)	N
0	61.8	
1 to 2	30.9	70
3 to 4	7.4	
5 or more	0.0	

Note: This table includes survey results from only the Fall 2012 (initial) survey.

Table M4.2 Initial Parent Reported Behavior – Yes & No Questions

	Parents who marked “Yes” (%)	N
Have you and your child identified some of the colleges your child will apply to?	41.4%	70
Have you spoken to your child's guidance counselor about the steps you and your child should take to financially and academically prepare for college?	73.9%	69
Have you spoken to a teacher at your child's school about the steps you and your child should take to financially and academically prepare for college?	31.9%	69
Have you attended any workshops about how to apply for college or for financial aid?	72.9%	70
Have you or your child started to research possible scholarships?	40.0%	60
Have you or your child started to work on scholarship applications?	7.7%	65

Notes: This table includes survey results from only the Fall 2012 (initial) survey. Parent respondents answered “Yes” or “No” to the questions/options provided above.

Appendix N: Final Survey Results

This section includes all survey tables describing final survey results (from those that participated in both the Fall 2012 and the Spring 2013 surveys) that are not included throughout the Findings section.

Table N1. Demographic Information

	Parents (%) (Fall 2012 survey)	N	Students (%) (Fall 2012 survey)	N
Female	78.7%	43	56.5%	43
White (non-Hispanic)	11.4%		15.6%	
African American / Other Black	11.4%		11.1%	
Chicano/Mexican American/Puerto Rican	9.1%		13.3%	
Other Latino / Hispanic	65.9%	44	57.8%	44
Native American	0.0%		0.0%	
Asian	0.0%		0.0%	
Multiple Race/Ethnicity/Other	2.3%		6.7%	
Born in U.S.	13.3%	45	31.1%	45
Married	61.4%	44	-----	-----
Age (2012-2013)	45.1 (7.82)	41	16.1 (1.26)	41
Below 9 th Grade	-----	-----	2.1%	1
9 th grade	-----	-----	8.7%	4
10 th grade	-----	-----	28.3%	13
11 th grade	-----	-----	34.8%	16
12 th grade	-----	-----	26.1%	12

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey.

Table N2. Parents' FUEL Participation Duration

	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
How many years have you been part of FUEL?	44	2.477 (0.180)	2.977 (0.188)	0.500 (0.124)	4.039	0.000**

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. Parents were asked how many years they had been part of FUEL. The options were as follows: 1 – I just started this year, 2 – 1 year, 3 – 2 years, 4 – 3 years, and 5 – More than 3 years. Thirty-one of the parents who responded to this question participated in the FUEL program in past years, it is likely that they were already aware of some of the information FUEL offered over the course of the 2012-2013 academic year. This is important to consider as the inclusion of parents who have had

previous exposure to FUEL content from savings circles may affect how much of a change and whether we notice a statistically significant change in parent knowledge or behavior from fall to spring.

Table N3.1. Parent Knowledge about the FAFSA

Which of the following do you need when you fill out the FAFSA form to apply for financial aid?	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
An online PIN	38	0.447 (0.082)	0.605 (0.080)	0.158 (0.103)	1.526	0.136
College applications	38	0.368 (0.079)	0.289 (0.075)	-0.079 (0.087)	-0.902	0.373
Completed tax forms	38	0.711 (0.075)	0.738 (0.072)	0.026 (0.080)	0.329	0.744
Utility bills	38	0.184 (0.064)	0.237 (0.070)	0.053 (0.092)	0.572	0.571
W-2 employment tax forms	39	0.025 (0.081)	0.103 (0.078)	0.077 (0.102)	1.356	0.183
Where can you access the FAFSA?	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
My child's school	40	0.575 (0.079)	0.550 (0.080)	-0.025 (0.091)	-0.274	0.785
Public library	40	0.25 (0.070)	0.35 (0.076)	0.1 (0.078)	1.275	0.21
Online	40	0.775 (0.067)	0.9 (0.048)	0.125 (0.082)	1.533	0.133

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. Parent respondents answered “Yes” or “No” to each of the options provided above. “Yes” was coded as “1” and “No” was coded as “0”. If the mean is closer to 0, more parents marked “No”. If the mean is closer to 1, more parents marked “Yes”. If the difference in means is negative, this indicates that more parents marked “No” in the spring compared to the fall. The correct answers to “Which of the following do you need when you fill out the FAFSA form to apply for financial aid” included “An online PIN” and “Completed tax forms”. When parents were asked “Where can you access the FAFSA”, all options provided in the survey were correct.

Table N3.2. Parent Knowledge about the Financial Benefits & Costs of College

	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
On average, how much does an individual with a bachelor's degree (from a university) make each year by age 25?	40	3.225 (0.178)	3.150 (0.158)	-0.075 (0.207)	-0.363	0.719

On average, how much does an individual with an associate's degree (from a community college) make each year by age 25?	36	2.333 (0.222)	2.056 (0.187)	-0.278 (0.217)	-1.281	0.209
What is the tuition cost to attend a two-year public commuter college in Massachusetts for one year as a full-time student and as a resident of Massachusetts? Do not include the costs of room, board, books, or other optional fees.	40	3.575 (0.214)	2.875 (0.218)	-0.700 (0.266)	-2.631	0.012**
What is the tuition cost to attend a University of Massachusetts institution (Amherst, Dartmouth, Boston, or Lowell) for one year as a full-time student and as a resident of Massachusetts? Do not include room, board, books, or other fees.	39	4.179 (0.183)	3.897 (0.217)	-0.282 (0.246)	-1.145	0.259
What is the tuition cost to attend a four-year public state university in Massachusetts (e.g. Framingham University) for one year as a full-time student and as a resident of Massachusetts? Do not include room, board, books, or other fees.	38	4.342 (0.169)	4.211 (0.181)	-0.132 (0.226)	-0.580	0.565
What is the typical cost of total student fees for a resident of Massachusetts who wants to attend a public university in Massachusetts?	36	3.139 (0.200)	2.778 (0.174)	-0.361 (0.215)	-1.679	0.102
What is the average cost of books and course materials for each year of college for a full-time student?	39	4.000 (0.176)	3.923 (0.174)	-0.077 (0.215)	-0.357	0.723

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. Respondents were given various choices from which to choose the correct answer.

Table N3.3. Parent Knowledge about College Expenses and Paying for College

	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
Taking Advanced Placement (AP) classes in high school can help to fulfill college credit and may help you graduate from college earlier. (Answer:	39	0.949 (0.036)	0.949 (0.036)	0.000 (0.037)	0.000	1.000

True)						
Attending college within my state costs less than going to college out of state. (Answer: True)	37	0.864 (0.057)	0.919 (0.045)	0.054 (0.077)	0.702	0.487
Some public and private institutions provide financial aid for low-income student that covers 100 percent of a student's cost of attendance. (Answer: True)	33	0.758 (0.076)	0.667 (0.083)	-0.091 (0.080)	-1.139	0.263
How much you save for college affects how much you need to borrow to send your child to college. (Answer: True)	34	0.411 (0.086)	0.324 (0.081)	-0.088 (0.098)	-0.902	0.373
Loans are an investment in your child's education. (Answer: True)	34	0.824 (0.066)	0.765 (0.074)	-0.059 (0.084)	-0.702	0.488
Interest rates can greatly affect your monthly payments when you or your child pays back student loans. (Answer: True)	34	0.941 (0.041)	0.882 (0.056)	-0.059 (0.059)	-1.000	0.325
It is possible to receive fee waivers to pay for the SAT and ACT examinations so that the examination can be free. (Answer: True)	33	0.636 (0.085)	0.848 (0.063)	0.212 (0.084)	2.515	0.017**
Some states and schools require you to fill out separate financial aid forms in addition to the FAFSA if you want to apply for financial aid. (Answer: True)	32	0.750 (0.078)	0.750 (0.078)	0.000 (0.127)	0.000	1.000
It is necessary to apply for financial aid every year that your child is in college. (Answer: True)	39	0.795 (0.066)	0.949 (0.036)	0.154 (0.059)	2.629	0.012**
Universities and colleges pay for the textbooks my child will use in college. (Answer: False)	40	0.025 (0.025)	0.025 (0.025)	0.000 (0.036)	0.000	1.000
Private, four-year institutions have a greater ability to provide you with financial aid, helping to reduce what it will cost your child to attend. (Answer: False)	37	0.378 (0.081)	0.351 (0.080)	-0.027 (0.091)	-0.298	0.768

Student earnings from summer employment do not affect how much financial aid they can receive. (Answer: False)	34	0.588 (0.086)	0.676 (0.081)	0.088 (0.122)	0.723	0.475
Grants and scholarships are money you need to pay back. (Answer: False)	36	0.139 (0.058)	0.083 (0.047)	-0.056 (0.068)	-0.813	0.422
It is not possible to negotiate with colleges for more financial aid. (Answer: False)	40	0.400 (0.078)	0.375 (0.078)	-0.025 (0.083)	-0.298	0.767
The financial aid your child receives will remain the same amount for each year. (Answer: False)	36	0.194 (0.067)	0.139 (0.058)	-0.056 (0.068)	-0.812	0.422

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. The statements in blue were “true” and the statements in orange were “false”. “True” was coded as “1” and “False” was coded as “0. If the mean is closer to 0, more parents marked “false”. If the mean is closer to 1, more parents marked “true”. If the difference in means is negative, this indicates that more parents marked “false” in the spring compared to the fall.

Table N4.1. Parents' Perceptions Regarding Student Academic Behavior

	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
What is your child's academic GPA?	44	3.159 (0.226)	2.977 (0.256)	-0.182 (0.257)	-0.709	0.482
How many hours a week does your child spend studying, reading, completing assignments and projects, and writing papers/reports for school?	43	3.558 (0.252)	3.419 (0.238)	-0.14 (0.227)	-0.614	0.542
How many hours a week does your child spend on co-curricular activities (organizations, music/theater/drama programs, student government, or sports, etc.)?	44	3.272 (0.242)	3.114 (0.216)	-0.159 (0.291)	-0.547	0.587

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. The answer choices provided for the question "What is your child's academic GPA" were coded as follows: 1 – Mostly As, 2 – As and Bs, 3 – Mostly Bs, 4 – Bs and Cs, 5 – Mostly Cs, 6 – Cs, Ds, and Fs, and 7 – I don't know. The answer choices offered to parents for the two questions regarding how many hours a week their children spend on academic tasks and on co-curricular activities were coded as follows: 1 – 0 hours/week, 2 – 1-5 hours/week, 3 – 6-10 hours/week, 4 – 11-15 hours/week, 5 – 16-20 hours/week, 6 – 21-25 hours/week, 7 – 26-30 hours/week, and 8 – 30+ hours/week.

Table N4.2. Parent Perceptions Regarding Student College Preparation

	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
Has your child started to prepare for the SAT or ACT examination?	43	0.535 (0.077)	0.674 (0.072)	0.140 (0.712)	1.959	0.057*
Is your child taking any Advanced Placement courses this year?	43	0.477 (0.076)	0.432 (0.076)	-0.045 (0.056)	-0.813	0.421
Has your child taken any Advanced Placement courses in the past?	44	0.522 (0.076)	0.409 (0.075)	-0.114 (0.058)	-1.950	0.058*
Has your child attended any workshops or help sessions about how to apply for college or for financial aid?	44	0.522 (0.076)	0.773 (0.064)	0.250 (0.080)	3.107	0.003**

Has your child chosen a career to pursue in the future?	46	0.652 (0.071)	0.696 (0.069)	0.044 (0.062)	0.703	0.486
Has your child chosen a major to pursue in college?	46	0.543 (0.074)	0.587 (0.073)	0.044 (0.053)	0.814	0.420

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. All Yes/No/I don't know questions were coded as "1" = Yes, "0" = No, and "0" = I don't know.

Table N4.3. Parent Perceptions of their Students' College Access Program Participation

	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
Does your child attend a college preparatory program (Upward Bound, ACCESS, College Bound, or others) that meets outside of school?	29	0.333 (0.071)	0.4 (0.074)	0.067 (0.086)	0.771	0.445

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. Parent respondents answered "Yes" or "No" to each of the options provided above. "Yes" was coded as "1" and "No" was coded as "0". If the mean is closer to 0, more parents marked "No". If the mean is closer to 1, more parents marked "Yes". If the difference in means is negative, this indicates that more parents marked "No" in the spring compared to the fall.

Table N5.1. Parents' Reported Savings Behavior

What do you use to save money for your child's college?	N	Fall	Spring	Diff in means	t	Significance (2-tailed)
529 savings plan	42	0.167 (0.058)	0.167 (0.058)	0.000 (0.083)	0.000	1.000
Coverdell education savings account	42	0.024 (0.024)	0.048 (0.033)	0.024 (0.024)	1.000	0.323
Bank savings account	42	0.571 (0.077)	0.714 (0.091)	0.143 (0.087)	1.635	0.11
Savings bond	42	0.048 (0.033)	0.048 (0.033)	0.000 (0.034)	0.000	1.000
CD	42	0.048 (0.033)	0.048 (0.033)	0.000 (0.048)	0.000	1.000
Other	42	0.310 (0.072)	0.310 (0.072)	0.000 (0.068)	0.000	1.000
I have not yet started saving for college	42	0.095 (0.046)	0.071 (0.040)	-0.024 (0.042)	-0.573	0.570

*p<.10 **p<.05

Notes: This table includes survey results from only those that participated in both the Fall 2012 (initial) and the Spring 2013 (final) survey. Parent respondents answered "Yes" or "No" to each of the options provided above. "Yes" was coded as "1" and "No" was coded as "0". If the mean is closer to 0, more parents marked "No". If the mean is closer to 1, more parents marked "Yes". If the difference in means is negative, this indicates that more parents marked "No" in the spring compared to the fall.