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THE EFFECTS OF PROFESSIONAL CAREER EXPERIENCES ON CHILDREN'S CAREER
GOALS

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ABSTRACT

The achievement gap between low and high socioeconomic status (SES) individuals begins in childhood, continues throughout schooling, and persists into adulthood. Low SES children are exposed to fewer professional careers in their homes and communities, and they are thus less likely to pursue higher levels of education that lead to professional careers. This research study introduces low-income, minority fourth grade students to career explorations with guest speakers for the purpose of exposing students to individuals and activities related to professional careers. The present study ultimately seeks to answer the question *how do experiences with career professionals in elementary school influence minority individuals' pursuit of professional careers in adulthood, if at all?* Using qualitative and quantitative data about students' career goals before and after intervention, I was able to note the effects of my career-based interventions on students, including increased knowledge about, interest in, and efficacy beliefs about professional careers. I then used qualitative data from successful adult professionals to uncover influential factors for professional adults, including an emphasis on education growing up, and support of familial and other role models. In response to my overarching research question, I found that career conversations are an effective outlet for exposing students to professional careers, emphasizing education, providing students with professional role models, and increasing students' perceived abilities in pursuing professional careers, all factors that have been shown to be motivating forces in successful professional adults' life paths. The current study aligns with existing research in supporting the following: the use of hands-on activities to activate career interests, the value of explicitly expressing career goals, the importance of encouraging education, and the significance of providing believing role

models. While further research is needed in this field, the present study provides a framework for career conversations, as well as supporting evidence to encourage future implementation of career experience programs with elementary school students in order to close the socioeconomic status and minority career achievement gaps.

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Chapter 1

Introduction

Background

My first true teaching experience was through a summer internship with Breakthrough Collaborative, a program that recruits and mentors low-income, high-achieving middle school students to set them on the path to graduate from high school and to attend four-year colleges. When on the first day of the program 95% of the students who walked through the doors were African American or Hispanic, I was shocked. This program attracts low-income students, but I did not understand why most of these students were minorities. This experience sparked my initial interest in social stratification and in closing the achievement gap for minority students.

As I began to look further at the issue of social divide and the racial and ethnic make-up of social classes, I came to the realization that the problem for minority populations starts well before individuals reach adulthood. An individual does not have to be 18 or 21 to know whether or not he or she is capable of escaping poverty. In fact, a study on early academic warning signs shows that *sixth graders* who obtained failing grades in mathematics or English, who had below 80% attendance for the school year, and/or who received a final “unsatisfactory” behavior mark in a class had at least a 75% chance of dropping out of high school (Neild, Balfanz, & Herzog, 2007). These statistics in conjunction with my work at Breakthrough Collaborative planted the idea in my mind that exposing students to college early on was the answer and would need to be the starting point for breaking the trend of minority populations living in poverty.

However, as I conversed with colleagues about pushing elementary schoolers toward the college pathways, I was faced with a common rebuttal: what about other careers that can lead to upward mobility? As I gave more thought to the possibility of trades and other career options that could also address the cycle of poverty among minority students, I realized that my emphasis did not need to be on college itself. What I felt would interest students and keep them motivated was not an extra four years of schooling, but instead the promise of an enjoyable, stable profession as a result of a specific education path. For some students, this would mean trade school, for others college, and for still others graduate school and beyond. Whatever the means, I felt the ends had the potential to be of greatest interest to students.

Research Question and Sub-Questions

In order to narrow the focus of my project from encouraging elementary school students to pursue any and all careers, I decided to let students know that there are a number of viable options for their future career paths. If I encourage students to reach for careers that require a high level of education, at least four years of college, then they could always pursue less education if they aspired to a career that required less education down the road. Therefore, for the purpose of my research, I developed the term *career experiences* to represent the experiences that students engage in that expose them to professions that require at least four-year college educations. When I mention *my students*, I am referring to the group of twenty-one 4th grade students at Sunshine Elementary School that I worked with for seven days in May of 2015. The students that I worked with in this setting were all Hispanic with the exception of one African American student, and all of these students qualified for Free and Reduced Lunch at school. These students can also be classified as low socioeconomic status, or low SES, which is measured by education, income, and

occupation (Socioeconomic status, 2015). The term *career goals* refers to the careers that my students aspire to and would pursue in an ideal world.

With these terms defined, my overarching research question was: *How do experiences with career professionals in elementary school influence minority individuals' pursuit of professional careers in adulthood, if at all?* Underneath this research question, I am examining two smaller research questions. The first sub-question was: *How do experiences with career professionals influence elementary school students' immediate career goals, if at all?* To answer this question, I used data collected from interviews with, journal entries by, observations and recordings of, and final products of the 4th grade students at Sunshine School to examine students' initial and final career goals, perceptions of career experiences, and reflections on career experiences. My second sub-question was: *What factors influenced adult professionals to pursue professional careers?* To answer this question, I used data collected from interviews with adult guest speakers who worked with my students to learn about the role that academics played, the influence of family background, and the motivating factors associated with career pursuits.

Chapter 2

Literature Review

Bronfenbrenner's Ecological Systems Theory

The current literature on the factors that influence working class and poor children's career aspirations emphasizes the role of the individual in developing his or her career aspirations. The social cognitive career theory delineates the role of three key forces in contributing to individual career aspirations: self-efficacy beliefs, outcome expectations, and personal goals (Lent, Hackett, & Brown, 2008). According to social cognitive career theory, self-efficacy beliefs are defined as "an individual's personal beliefs about his or her capabilities to perform particular behaviors or courses of action" (Lent et al., 2008, p. 1627). Bandura, Barbaranelli, Caprara, and Pastorelli (2001) also note the importance of self-efficacy, describing that children's perceived efficacy for different career pursuits helps to determine the careers that individuals choose to explore, as well as those that they actively avoid or reject (p. 188). The outcome expectations of career goals that Lent and colleagues (2008) describe reflect individuals' beliefs about the outcomes of a particular activity, which then influence the effort that individuals put forth to fulfill an activity. Finally, personal goals, or the intentions to engage in an activity, reflect the combination of one's dynamic beliefs about him or herself and his or her capabilities, and the outcomes that the individual expects to realize (Lent et al., 2008). According to the social cognitive career theory, it would seem as though individuals have complete control over their career aspirations and the career paths that they ultimately pursue; however, the interest model of this theory states, "The types and variety of activities to which

children and adolescents are exposed are partly a function of the context and culture in which they grow up [...] People are most likely to develop interest in activities at which they both feel efficacious and expect positive outcomes” (Lent et al., 2008, p. 1627). While career aspirations do reflect individuals’ perceptions of themselves, these self-perceptions, and even more-so the outcome expectations and personal goals that accompany career self-efficacy, are clearly informed by forces outside of the individual: “Their environments must expose them to the types of direct, vicarious, and persuasive experiences that can give rise to robust efficacy beliefs and positive outcome expectations” (Lent et al., 2008, p. 1629).

While I do believe that children possess some degree of agency in the career aspirations that they allow to inform their career paths, I also recognize that there are larger forces at work, especially in the lives of children (whose voices are lacking in the literature), and I therefore propose that career paths of children can be situated in Bronfenbrenner’s ecological systems theory. According to this theory, a number of forces act on an individual, starting with those that an individual interacts with daily and moving outward to the societal forces that are abstractly represented in the child’s world through institutional and even individual values (Bronfenbrenner, 1994). By situating career paths of low income children within Bronfenbrenner’s framework, we can examine the forces that act on these children that may lead to not only lower career aspirations, but also lower understanding of career paths and lacking efforts to change these trends. Exposure to opportunities for career development is outside of the control of young children and thus falls onto the responsibility of the forces that children depend on for development in their microsystems.

Microsystemic Influences

In Bronfenbrenner's systems model of spheres that influence individuals, the most proximal sphere that influences a child is the microsystem, composed of environments that an individual directly interacts with regularly, including family, peer group, and school (1994). The first and most proximal microsystemic sphere that a child interacts with is the family. According to Bandura et al. (2001), familial socioeconomic status plays a role on parents' perceived influence on children, which then affects how children begin to perceive themselves and the academic paths that they situate themselves on (p. 188). According to the U.S. Department of Education (2014), Hispanic and black adults have the highest employment rates in production, transportation, and material moving, as well as in service, and they have the lowest employment in professional jobs when compared to their Asian and white counterparts. Additionally, the unemployment rates of blacks and Hispanics are about twice those of whites (U.S. Department of Education, 2010). Minority adult employment data reflect the limited exposure that minority children have to careers that require higher education.

The family also serves as the starting point for informing an individual's self-efficacy, which plays a critical role in influencing minority youth's career aspirations. Parent efficacy and educational aspirations for their children directly influence the career aspirations that children develop for themselves; Bandura and colleagues (2001) found that the role of SES on children's career aspirations is mediated by parents' valuation of education and efficacy of children in academics, for children ages eleven through fifteen. Contrary to what early literature claimed, low income parents value education (Rosier & Corsaro, 1993). In a study by Rosier and Corsaro (1993), low income black mothers of children who were enrolled in Head Start programs were interviewed about their beliefs on the role of education. The mothers who were interviewed collectively saw education as the route for their children to attain upward mobility in society

(Rosier & Corsaro, 1993). For low income parents, education serves as a way for children to get out of their current lifestyles, and the mothers who were interviewed acted on their value of children's education in order to promote academics for their children (Rosier & Corsaro, 1993). While low income parents have limited resources to provide material means to education within the home, these mothers did all that they could to provide their children with learning activities in the home (with resources within their means) and community activities in their churches and surrounding recreation centers (Rosier & Corsaro, 1993). However, studies with larger samples recognize the limitations of financial constraints on how much parents can really do for their children in terms of providing material academic supports. Corsaro (2015) recognizes the limitation of SES on the resources that working class and poor parents can provide for their children: "In these studies, researchers argue that working-class and poor parents attempt to act and are sometimes successful in acting on these aspirations, although compared to middle-class parents, they lack financial resources, flexible jobs, and knowledge to better cultivate their children for success" (Corsaro, 2015, p. 95). Likewise, Pugh (2009) notes, "Many low-income parents cannot predict when they will be able to afford many expenses that might go beyond rent or food, which impedes any of the sort of regular, planned payments considered routine in more affluent homes – from weekly allowances to after-school lessons or activities" (p. 131). The parents that Corsaro and Pugh describe more clearly illustrate the struggles that low-income parents face in providing educational opportunities for their children in the home, thus contributing to limited academic exposure, which can play a role in children's development of career aspirations.

The family is the first and closest microsystem that influences child development, but it is by no means the only microsystem: "Children in modern societies, however, begin to participate

in other institutional locales with other children and adults who are not family members at an early age. It is in these institutional fields, as well as in the family, that children begin to produce and participate in a series of peer cultures” (Corsaro, 2015, p. 25). The peer groups that children choose to join reflect the parent efficacy and child self-efficacy that are described above (Bandura, 2001). In a 2.5-year longitudinal study with a classroom of kindergartners (finishing the study in second grade), Rist (1970) noticed that high status students in the elementary school tended to develop a strong sense of group position with one another. This high status group reflected teachers’ expectations for student success and involved gradual and explicit exclusion of low status students, who just so happened to also be students from low SES families (Rist, 1970). In defining the stages of circumscription to career aspirations that children go through, Gottfredson (2002) emphasizes the importance of social valuation for children ages nine to thirteen. At this age, children are highly sensitive to both peers and the larger society, and therefore have their own sense of awareness of what “high” and “low” occupations are (Gottfredson, 2002). Children at this age know that they should avoid low-status occupational goals, but the pressure to avoid these goals is much greater for students in the middle and upper classes (Gottfredson, 2002). At this age, children have awareness of the occupational hierarchy, as well as the “ceilings” and “floors” for their own career goals, and for low SES students, these imposed peer-group expectations may lower children’s career goals: “Low-social-class background and low ability dampen aspirations by, respectively, lowering what is acceptable and what is possible [in terms of careers]” (Gottfredson, 2002, p. 98). Upper elementary school students are highly responsive to the messages that they receive from their social world. Peer influences on career aspirations have the potential to limit low income children’s desired careers because they impose ceilings on low-status individuals that are reflective of the larger society

and project children born into low-SES families as future residents of the lower adult social classes.

Peer groups are not the only microsystemic forces that affect children in the school setting; the relationships that students have with their teachers can prove to be quite influential in career development. Revisiting the work of Rist (1970), teacher expectations can play a huge role in the academic and career paths that children aspire to. In the kindergarten classroom that Rist's (1970) study focused on, children were placed into reading groups at the beginning of the school year not based on any clear measure of academic potential, but on the kindergarten teacher's initial perceptions of the children's ability and potential in reading. Rist (1970) writes, "The kindergarten teacher possessed a roughly constructed 'ideal type' as to what characteristics were necessary for any given student to achieve 'success' both in the public school and in the larger society. These characteristics appeared to be, in significant part, related to social class criteria" (p. 413-414). While the sample size of one specific kindergarten class may not be telling for all mixed social-class school settings, ability grouping is a common practice among elementary school teachers. The ability groups that children were given at the start of kindergarten not only determined peer groups (as described by the microsystem above), but they also determined how children were grouped all the way through second grade, at which time they were grouped based on ability. The higher SES students were actually attaining higher reading levels at this point and remained in groups with one another as a result (Rist, 1970). In this case, the kindergarten teacher's initial perception of the students' abilities influenced her expectations of them; students in different reading groups were treated differently in the classroom practices the teacher used with them for the remainder of kindergarten and into later school years, reflecting a self-fulfilling prophecy trend, with high SES students achieving higher reading levels

than low SES students (Rist, 1970). Rist (1970) summarizes the trend that she saw in the longitudinal data: “The formulation of the system of stratification of the children into various reading groups appears to gain a caste-like character over time in that there was no observed movement into the highest reading group once it had been initially established at the beginning of the kindergarten school year. Likewise, there was no movement out of the highest reading group” (p. 442). Social immobility in schools reflects children’s expectations and achievements in reading, and the idea of teacher-imposed limitations and resulting student self-fulfilling prophecies reflect a challenge that low SES children face.

One explanation of the initial grouping of children in Rist’s (1970) study of kindergarteners might be that low income and minority students are more likely to come into school with learning difficulties than their middle and high income peers; however, rather than provide them with extra support to get them back on track with their peers, these students are identified as “low ability” early on and are placed in low track classes (Oakes, 1990). As Rist (1970) found, once students are placed in lower tracks, they tend to stay in lower tracks. Oakes (1990) shows that low income and minority students are overrepresented in low ability tracks; these students tend to have less exposure to science and mathematics in lower tracked classes (Oakes, 1990). The perceived low science and mathematics ability levels of low income students reflect the lack of enrichment opportunities that they receive in these subjects (Oakes, 1990). Beyond specific teacher treatment of low SES versus high SES students, the actual school context that children are interacting in reflects different trends for low and high SES students. A review by Oakes (1990) shows that teacher shortages have the greatest negative effect on low income and minority students. Oakes (1990) also show that high poverty schools have approximately three times as many low ability groups as high wealth schools, relative to school

distribution of ability groups (p. 42). The distribution of all students within all schools reflects the socioeconomic crisis that our nation faces: “Yet the kind of schools low-income children go to – as characterized by their resources, their teachers, and their peers – matters in terms of shaping their opportunities for the future [...] Research has consistently found that vast inequality in the contexts of children’s lives contributes to inequality in the outcomes they experience” (Pugh, 2009, p. 179). Thus, the association between social class and academic and career aspirations is clear in children’s microsystems: home, peer groups, classrooms, and schools. But do microsystemic beliefs simply stem from the individuals in them? The disparities in capital that parents can provide, peer groups that children interact in, and treatment of children within the school setting reflect a larger trend that can be explained by the macrosystemic level of Bronfenbrenner’s ecological framework.

Macrosystemic Influences

As Bronfenbrenner (1994) explains, the macrosystem serves as the overarching societal sphere that informs individual microsystemic interactions. Within the macrosystem, certain institutional trends dictate the way that microsystems respond to students’ social classes, therefore influencing their academic paths, which in turn affect their career paths. One major macrosystemic influence in minority children’s lives is poverty. As a result of the employment statistics of minority adults, minority children are not only exposed to fewer potential career options at home (if any at all), but they are also about three times more likely to live in poverty than their majority counterparts. The cycle is endless; children who grow up in poverty have lower school completion rates, and even for those students who do stay in school, the math and reading achievement gaps set minority students far behind whites (Brooks-Gunn & Duncan, 1997; National Center for Education Statistics, 2007). Those who are born into poverty pursue less education and are thus

more likely to end up in the same low income careers as their parents (if in any career at all), simply perpetuating a vicious cycle (U.S. Department of Education, 2010).

As a major institutional force in the U.S., the education system reflects a glaring societal issue in catering to the middle class. Because the majority of politicians, policy makers, and administrators involved in the structural framework of education come from the middle or upper classes, or at the very least have been employed in these classes for a number of years, the system itself is being created by the class that it just so happens to be best serving. In Rist's (1970) study, the kindergarten teacher at the beginning of the year tended to align her "ideals" for students with the middle class values that she grew up around. Likewise, the world of education tends to align our expectations of students in the school system with the middle class, as this is the class that is creating legislation and the class that we want all students to strive to be a part of (at the very least). Rist (1970) writes, "Thus the system of public education in reality perpetuates what it is ideologically committed to eradicate – class barriers which result in inequality in the social and economic life of the citizenry" (p. 449). If schools are structured to meet the middle class's needs and to reward those who best fit the middle class mold, then our school system is simply perpetuating the classes that already exist.

The elementary school is the first of many institutions that low income children encounter that place them at a disadvantage as a result of the resources and parenting styles that these children grew up with. As Lareau (2011) writes:

For working class and poor families, the cultural logic of child rearing at home is out of synch with the standards of institutions. As a result, while children whose parents adopt strategies of concerted cultivation appear to gain a sense of entitlement, children [of the working and poor classes] appear to gain an

emerging sense of distance, distrust, and constraint in their institutional experiences. (p. 3)

Corsaro (2015) builds on Lareau's argument by adding, "Working-class and poor children, on the other hand, develop an emerging sense of constraint and resignation to the limitations of their life circumstances. Thus, their chances for upward mobility are less likely. In short, the practices of the two social-class groups contribute to social reproduction and social inequality" (p. 94). Not only do children face inequality within the school system directly, but as children move up through the system, the gap between social classes only grows, and the further behind low SES children fall, the more difficult it becomes to achieve any type of upward mobility.

Differential treatment in schools may reflect teachers' responses to societal trends. In Rist's (1970) study on kindergarten grouping based on initial perceived ability, teacher treatment of different student groups reflected class differentiation in the larger society. Rist (1970) posits that teacher separation of high, middle, and low ability groups (and especially the separation of high from middle and low) reflects the teachers' preconceived notions that in an elementary school in the "ghetto," most of the students would end up failing to thrive in the school system. Therefore, it was the teachers' job to make sure that students who were on track to succeed were not negatively influenced by their already scholastically poisoned and therefore overwhelmingly hopeless peers. This teacher's differential treatment of students based on ability groups reflected the larger societal roles she expected them to pursue based on her (immeasurable) ability judgments: "To maintain within the larger society the caste aspects of the position of the poor *vis a vis* the remainder of the society, there has to occur the transmission from one generation to another the attitudes and values necessary to legitimate and continue such a form of social organization" (Rist, 1970, p. 446). The expectation that social class differences are

predetermined by social class of origin influences teacher treatment of students, which in turn eliminates any opportunity for upward mobility, as students who are expected to be low achievers are already receiving lesser education by the time that they really have any autonomy over their educational experiences. If children are to achieve upward mobility, this potential (in select few low SES students) needs to be recognized and nourished from the start of a child's educational experience in order for it to play out and affect ultimate social class. The macrosystemic force at work in the education system specifically is the impossibility of upward mobility and the fixed nature of social classes set up by the current system of career attainment.

Existing Research on Education and Career Goals

Yet despite all of the evidence stacked against low income, minority students, there are students who make it. As an educator, I find that it can be valuable to identify a problem or a need, but dwelling on this problem without working toward a solution can be suffocating. Instead, it is important to look beyond the statistics for evidence of students who do succeed, against the odds, and to figure out how they did it. An article by Harper and Associates (2014) reports both quantitative and qualitative data from approximately 325 Black and Hispanic male college-bound high school juniors and seniors who shared variables that were crucial to their academic success. The research project engaged students in one-on-one interviews that unfolded success stories of participants. This study highlights key factors that successful Black and Hispanic adolescents reported essential to their academic success, including but not limited to: families that value schooling as a means of achieving higher-status and more socially respected jobs, high expectations that lead to high self-perceptions, and the desire to move out of current lifestyles and into more comfortable means (Harper & Associates, 2014, p. 15). This research offered themes to

listen for as I interviewed my adult participants, and it also provided justification for my work, which sought to emphasize schooling, increase self-efficacy, and highlight upward mobility.

Existing research on career aspirations focuses mainly on adolescence or early adulthood, so I expanded my search beyond childhood when looking at trends specific to children from the poor and working classes. Hill, Ramirez, and Dumka (2003) interviewed 31 low SES early adolescents (average age of 12.9 years) from four different ethnic groups (European American, Mexican American, Mexican immigrant, and African American) to find that their career aspirations reflected a range of career options, from doctor to teacher to professional athlete. While the authors predicted that these children would have lower career aspirations than their middle class counterparts as a result of limited exposure to options, limited educational opportunities, and limited access to role models, approximately 75% of the careers suggested by the students required some degree of college education or higher (Hill et al., 2003). Note that literature comparing college-requiring career goals of comparable working class and middle class children does not currently exist, as career goals of elementary school students are relatively unexplored. However, while many low income students had high career goals, only about half of the students had clear career goals *and* knew what was required to achieve these goals (Hill et al., 2003). The majority of the low SES students seemed to recognize the importance of education in pursuing their career goals, but fewer were able to list actual steps needed to achieve these goals, let alone the correct steps. Phipps (1995) found that high and low SES children also had different motivations for the types of careers they were aspiring to attain: “Higher, more frequently than lower, SES children were motivated by their interests or by altruism. Lower SES children were relatively more likely to be motivated by role models or by economics” (p. 27). I believe that Phipps’s finding is supported by the flexibility that higher SES

students have. Because their families are already financially stable, these children can explore careers that are interesting to them, with the latent belief that college will definitely be a next step for them. Because lower SES children are not typically raised with parents who went to college, these students are motivated by the desire to move out of their current financial situations, or the desire to be like or please influential adults in their lives (Harper & Associates, 2014). The goal of my research is to appeal to both motivating factors for low SES students by providing a range of professional role models who have careers that can improve children's current economic situations in adulthood.

Through looking at the outcomes of participation in GEAR UP, a college preparatory program aimed at helping high school students transition to college, researchers found another key factor in increasing enrollment and graduation numbers for low income students: structured support (Knaggs, Sondergeld, & Schardt, 2015). The findings showed that GEAR UP students who received family support and engagement in hands-on community and enrichment activities were more likely to attend and persist in four-year colleges than non-GEAR UP students. Qualitative data explained that the GEAR UP college preparatory program helped students develop, articulate, and achieve realistic personal goals. The study is applicable to my work because it justifies that college attendance can be improved with early and hands-on intervention. Also, the study brings up a phenomenon called "goal commitment," which states that students are more likely to persist in college when they have a major in mind. This supports my emphasis on careers for young children; by giving students tangible long-term goals and reasons to go to college, they are more likely to persist through it.

I aim to tackle career aspirations and increasing self-efficacy through microsystemic spheres of children early in their school experience. Adolescents' SES is traditionally positively

associated with occupational attitudes and expectations (McDonald & Jessell, 1992).

Membership in a social class affects adolescents well before seventh grade and well beyond available opportunities in the environment (McDonald & Jessell, 1992). Socialization of low SES children has set the stage for their self-concepts, therefore essentially determining social behavior and academic and career expectations (McDonald & Jessell, 1992). By middle school, children's perceptions of the career options that are realistically attainable have already been decided and socially and culturally reinforced; thus intervention in elementary school may combat repeated reinforcement of low career goals before they become engrained in children's minds. In order to provide equal opportunities for low income students, it is important to target their needs (including what their microsystems fail to provide them, such as resources, role models, and social support) through academics and interest-driven career exposure (and steps toward career attainment) opportunities.

Within Bronfenbrenner's ecological framework, the macrosystemic forces that constrain an individual seem nearly impossible to overcome. The microsystemic overarching patterns that emerge in literature reflect the influences of the macrosystem on daily forces that children and adolescents interact with regularly: family, peers, teachers, and schools. However, I believe that there is a way for microsystems to counter the negative macrosystemic influences, in efforts to not only positively influence individuals, but to also collectively change the flaws in the macrosystem. If schools and teachers can implement a program that exposes low income students to career options (and the steps needed to attain these careers) while also conveying efficacy to children about these career options (e.g., through relatable role models), the teachers and schools can help to promote child self-efficacy. Likewise, if schools and teachers involve parents in these interventions, then parents' beliefs about and support of high career goals in their

children can increase children's career self-efficacy as well. Finally, peer support will follow with the exposure to career opportunities for all children, regardless of social class, within the social setting of school, where peer groups in childhood and early adolescence most regularly interact. The issue of limited career aspirations in low income children, as well as limited awareness of how to achieve high status careers, presents a gap in both the literature and the interventions tried to close any gaps that reflect the larger society. For this reason, I have chosen to examine the relationship between SES and career goals in elementary school children. I am now aware of the lack of literature, but I am also hopeful about the room for interventions that can be implemented in the near future to close the academic and career gaps and to allow for upward mobility for low SES children.

Chapter 3

Methods

Research Questions

The following methods were carried out to answer the research question: *How do experiences with career professionals in elementary school influence minority individuals' pursuit of professional careers in adulthood, if at all?* In order to answer this overarching question, I pursued research related to two sub-questions: 1) *How do experiences with career professionals influence elementary school students' immediate career goals, if at all?*, and 2) *What factors influenced adult professionals to pursue professional careers?*

Context and Intervention

Based on the prior work that has been done in the field, I decided to introduce a class of fourth grade students at Sunshine Elementary School to opportunities by bringing in guest speakers to engage these students in specific careers choices through grade appropriate activities. I recruited eight guest speakers, all of whom work in professional positions that require college degrees, through university alumni networks and professional minority organizations in the surrounding town of the school. Prior to the first day that the guest speakers came in, I conducted a 1.5 hour session with the students during which students brainstormed what they already knew about careers, learned about different careers one can obtain with each successive level of education, and were introduced to the format of the career experiences that were to come. Throughout the following six days, each guest speaker came in to talk to the students for one to two hours. During this time, the guest speakers shared their individual backgrounds to relate to the students

(similarities ranged from experiencing elementary school at some point [many speakers provided pictures of themselves in or around fourth grade] to family background [one guest speaker was an immigrant from Mexico, which a number of my students could relate to on some level]). Guest speakers also shared about their interests and educational paths that led them to their careers, and they presented the expectations of their current careers in comprehensible terms. The students then engaged in a question-and-answer session with each guest speaker, and finally, the students spent over half of each session participating in a hands-on activity that exposed them to the profession in a way that was developmentally appropriate for them. Refer to Appendix E for descriptions of the eight guest speakers and activities that they did with students related to their careers.

Data Sources, Collection, and Analysis

In order to formally conduct research with students, I submitted a proposal to the Institutional Review Board for Human Subject Research through The Pennsylvania State University. When I was going through the Institutional Review Board process, my research plan was still in its early stages. While some procedures changed from submission to execution, the core purpose of educating students with positive intentions remained. See Appendix F for the informed consent form approved by the Institutional Review Board.

While I was interested in the short-term results of career experiences with elementary school students, my motivation for exploring this issue reached far beyond what I could gather in seven days with these students. I was interested in learning about the long-term effects of career-based intervention with individuals and was curious to know if my work with these students had the potential to affect their career paths someday. Since it was not feasible for me to follow these students into adulthood, I decided to utilize the career professionals that spoke with my students.

These guest speakers came from a range of backgrounds, and I was curious to know what factors influenced them to pursue professional careers in adulthood. If I could figure out what factors led professional adults to their current careers, I could reflect on the career experiences I did with my students to see if these experiences aligned with influential factors that successful adults identified. In order to learn about how these adults attained their current levels of education and careers, I conducted one-on-one interviews with as many of the professional adults who spoke with my students as possible; ultimately, I was able to conduct phone interviews with four of the guest speakers and one other supportive mentor who was familiar with this project. These interviews lasted approximately one hour and revolved around the interview questions in Appendix B. The interview format of data collection encouraged the guest speakers to share more about their own experiences through personal anecdotes and supporting examples.

As I used an inductive approach to analyze my research, I did not exactly know what specific themes I was looking for prior to data collection. The use of an inductive approach allowed me to paint a picture of my students' career goals based on the information that they gave me through all of my data collection methods (see Appendix A for details on each data collection method and how data was analyzed). I conducted analysis by keeping data notes in my working research journal; by annotating interviews, journal entries, and student work; by compiling quantitative data in Microsoft Excel; and by transferring prominent findings into Microsoft Word. To ensure participant confidentiality, I removed personal identifiers from data and kept my notebooks and personal computer used for data analysis locked when I was not working with the data.

Throughout the research process, I was sensitive to my own assumptions by recognizing that I was taking both an emic and etic position in relation to my target students and this research.

I recognized that yes, I was a member of the classroom culture who was invested in education, just as the members of the Sunshine School community, but I was also new to the classroom. I am not of Hispanic or African American descent, and I am not from a low income family. I am older than my student participants and younger than my adult professional participants and am therefore separated from the groups that I was studying in many ways. In order to address my etic perspective, I was cognizant of stereotypes that my target populations face and revisited every question that I asked and analysis that I conducted multiple times to ensure that I was avoiding conclusions that were not grounded in facts, nor projecting biases onto my findings. I continually reminded participants that participation was completely voluntary, and I thought before responding to participants so that I did not place participants at risk of psychological harm from conversations. I remained open to shocking or surprising evidence by approaching the research inductively and by not assuming that any one particular type of result should or would be present. I also recognized that a significant part of this research was balancing support for upward mobility with respect for students' and families' current situations. I did not want to disparage family members and friends employed in working class jobs; however, I did still want to introduce students to the benefits of professional careers. To strike this balance in my research, I spent my first day with the students describing the different career paths that they could take, starting with pursuing a career right out of high school, discussing two-year institutions and trade schools, and finally highlighting four-year colleges that lead to professional careers. When I presented these options, I kept my language entirely positive, and I simply presented each career path as an option. I shared the fact that with a college education, an adult has more options for the careers that he or she can pursue, but I discussed each path as just that, a path, and attempted to emphasize the positive aspects of each, and especially of professional career paths, without putting down other alternatives, such as the

careers that they might see at home or in the community. As a part of this research process, I remained mindful of the negative stereotypes that exist about low income, minority students and used the data that I collected to advocate for upward mobility for these capable elementary school students.

Chapter 4

Findings

How do experiences with career professionals influence elementary school students' immediate career goals, if at all?

Hands-on experiences with careers increase student knowledge about, interest in, and self-efficacy in new career options. Interviews with students prior to career conversations revealed that four out of twenty students have no working parents or guardians in their home. When asked about the careers of the parents/guardians, only two students listed careers that require formal postsecondary education (both in nursing), and one of these students is also one of the students who has no working guardians at home currently. Only two students have family members currently enrolled in college, and the rest have parents and guardians that are either working in service jobs or manual labor, or are not working at all. One student Jorge said, "Dad works two jobs at the same time, like at Dunkin Donuts and McDonalds. But right now he is looking for a job." All influential adults that the students identified in their home lives are immediate or extended family members, providing the students with limited career options.

The students' limited exposure to careers beyond what they see at home and in their daily lives was expanded as a result of the career conversations. In one mid-intervention journal entry, Sara reflected, "I learned a lot about doctors," a career she had not written about in her journal prior to this reflection. In his final journal entry about his reflections on the career conversations as a whole, Lucas wrote, "I learned more about careers," and his classmate Vicente echoed, "I learned a lot." Not only did the students gain new knowledge about careers, but they also gained interest in new careers. The transcript provided in Appendix C illustrates the newfound interest that Natalia discovered in engineering as she completed the hands-on bridge-building activity.

While Natalia's interest is fleeting, it reflects the interest that the guest speakers sparked in students through the hands-on activities that they engaged students in. Natalia's classmate David wrote a similar response to the engineering activity in his journal: "Engineer: This is my favorite thing because we did the bridges." David's response supports the use of tangible career activities; David's interest in engineering was a result of the hands-on activity that he was able to do with the guest speakers.

Additionally, the professional-led hands-on activities increased students' self-efficacy in new careers. During the engineering activity, as he was building his bridge with his partner, Vicente exclaimed, "Look what I am doing! Natalia!" Vicente showed a sense of pride in his work and demonstrated increased self-efficacy in engineering his bridge. This exclamation (pulled from an audio recording of the task) supports the claim that hands-on experiences with careers increase students' self-efficacy in these careers. As Mia reflected in her final journal entry, "I felt like a real doctor, and I can imagine myself in the future becoming a doctor." Mia's reflection on her experience with the doctor shows that the career experience influenced Mia's perceived ability to pursue a career of being a doctor. Similarly, Ian wrote, "I felt like a real doctor. I really enjoyed [using the stethoscope when Dr. Ramos came in]. [...]. That inspires me to be a surgeon and help people and wear cool and awesome gear to protect themselves. And use a robot called the DaVinci robot." In addition to evidence of new knowledge in his response, Ian used the words, "I felt like a real doctor" to support the finding that hands-on experiences increased students' self-efficacy in new careers, as Ian had never before mentioned an interest in or desire to pursue medicine.

From the beginning to the end of the career sessions as a whole, students demonstrated a shift in how they thought about career goals, from prescribed and/or concrete to malleable. Prior to hearing from the career guest speakers, students provided responses that suggested a fixed

understanding of career goals. In his initial journal entry, Lucas wrote, “The career is to be a vet.” His sentence suggests that he understands career goals as set-in-stone careers that are a statement of fact, rather than a decision that evolves and is pursued over time. Similarly, Daniel wrote, “My career is to play basketball,” suggesting the fixed nature of students’ initial perceptions of career goals.

In their journals, students recorded their career goals before any of the career sessions and after all of the career sessions. For the 17 students who completed before- and after- journal entries, or provided both initial and final career goals in conversations or session recordings, over half of the students either added to or changed their initial career goals. Eight students stated that they had the same career goal before and after the sessions; six students kept their initial career goal but also added other career goals to develop or build a list; and three students changed their career goals completely. In her final journal entry, Mia wrote, “I felt good when the guest speakers came in the classroom and now I feel like I can change what I want to be.” Mia initially wanted to be a professional soccer player, but by the end of the sessions, she recorded that she “can imagine [herself] in the future becoming a doctor.” Mia’s journal entry shows that she now feels comfortable picturing herself in a new career, and she also acknowledges that she is able to change her career goals. Similarly, Jorge closes his last journal entry with, “I might change [my career goal].”

Additionally, when students shared their initial career goals, only one student listed multiple career goals. In their final journal entries, six students listed at least two careers that they would like to pursue. By the end of the career sessions, students were more open to the idea of pursuing multiple careers, and they felt comfortable explicitly stating their uncertainty in definite career pursuits while still expressing current thoughts/interests. When I first met one student,

Shantana, she voiced concern about her indecisiveness between lawyer and fashion designer and shared rationales for both options. By the middle of our time together, Shantana devoted an entire page in her journal to listing her career options (see Appendix D). Shantana's initial apprehension about having multiple career goals shifted completely, as she listed eleven career options and even provided rationale for two of her new considerations, showing that she underwent a shift from viewing career goals as singular to confidently considering a wide range of options. Likewise, Renata, a student who was confident that she wanted to be a neurosurgeon from the second that I arrived and who shared this career goal with at least three of the guest speakers from different career fields, expressed a new career goal in her final journal entry: "My career has a back up plan for being an engineer [...] [The guest speakers] made me change my mind a little about being a neurosurgeon. I might be an engineer." Renata expanded her initially narrow career interest, not by replacing her dream job, but instead by simply adding to it.

What factors influenced adult professionals to pursue professional careers?

Growing up, adult professionals were consistently reminded of the importance of education. All five adults interviewed noted the importance of education in their households/families from the beginning of their educational careers. When asked about family background and the role that family played in academic success, Kayefi Attah said, "[My parents] really wanted to hammer home the importance of getting a good education [...] growing up, a B wasn't good enough, B+'s weren't good enough, and A's were expected." When asked when she knew that she would graduate from high school and go on to college, she responded, "Not graduating from school was never even something that entered my mind." Beth Wilson explained that in her family, "[There were] a lot of teachers, so everybody just understood the value of education." Similarly, Maya Bala-Walsh, a mentor interviewed for this project, shared that

growing up she was told, “You’re going to college,” and the value of education was never questioned in her household. For adult professionals whose parents modeled the value of education by pursuing it themselves, working hard in school was an expectation from the start.

Even for professionals who did not have parents that successfully achieved college educations like those detailed above, education was still valued. In fact, for Amara Moore and Rosa Ramos, education was viewed in their homes as the pathway to avoid the difficult working class labor that their parents endured. Amara stated, “As a child, my father was really involved in my academics.” She shared that her father, a self-employed carpenter, moved to an apartment located in a better school zone so that she and her siblings could attend one of the best elementary schools in the city. Although neither parent attended college, education was always emphasized: “School was major [...] we could not miss a day of school. You were going to school. Period.” Similarly, Rosa shared that although her parents were always working to support their immigration from Mexico to the U.S., they were “still always emphasizing that we have to get a good education – [this was] never disregarded.” Although neither of Rosa’s parents were able to graduate from high school because of family responsibilities, they still instilled in their children an understanding of the importance of education. Rosa recalls, “My mom, even though she didn’t finish high school, would go up to teachers and ask them, you know, was there anything she could do to help me?” Rosa’s parents were constantly looking for ways to improve her education because they understood its importance to her future success, and as a result, this value was passed on to Rosa.

Adult professionals received guidance from trusted adults, starting with parents and family members, and then expanding to include mentors outside of the family. Of the five adults that I interviewed, all of them mentioned their parents as being the most influential adults in their lives. However, all of the interviewees also attributed their professional success to the help of additional

mentors. Following her mom and dad, Kayefi reported her third most influential adult role model as, “I’m gonna say my teachers as a collective.” She went on to narrow her teachers down to one specific adult: “My speech teacher [...] had an incredible amount of faith in my abilities [...] [she] boosted my confidence.” Rosa shared a similar experience with a teacher who nominated her to attend a middle school for gifted children:

The teacher who nominated me for the program was probably the first teacher mentor I had [...] I remember thinking, why does he care? And I remember him telling me, you know, you have more potential than what [your current school] can provide you with [...] I look back and am so grateful for that because he truly advocated for me and no one had ever done that for me before, so, yeah, that was a defining moment for me.

Beth explained the way that invested teachers motivated her to succeed: “You just wanted to do well for the teachers you really like, and they were supportive, too.” For Kayefi, Rosa, and Beth, teachers who went above and beyond their job description filled the role of invested adults outside of the family.

Rosa also recalls high school and college mentors who helped her with her homework through the Boys and Girls Club. Rosa shared that it was these mentors who first inspired her to apply to college, as they were going through the process when she knew them: “But I think it was just the whole idea of having older teens who all seemed really cool and who seemed social and happy and outgoing [...] I just wanted to be like them.” Amara shared that her greatest motivator for her professional success was “probably [her] manager at the insurance agency who advised [her] to pursue [her insurance] designation.” Amara described her manager as a “mentor and friend” who became very involved in her life. Both Rosa and Amara attribute their success to the

help of invested role models who fostered the potential that they saw in their mentees. Maya, an adult professional who initially expressed interest in this research project because of her passion for mentorship, shared the wide range of mentors that motivated her outside of her family, including her high school guidance counselor, college professors, TA's, her graduate advisor, and teachers who "got her excited about science." When asked what her ideal take-away for my students would be, Maya answered, "It's okay to seek out a caring adult to guide you through it [...] always have someone who has your back, and seek this out and do not be afraid of this." The adult professionals that I interviewed all reflected on adult role models outside of their families that influenced their academic and career paths. Whether they wanted to please mentors like Beth did or be their mentors like Rosa did, professionals were driven by older role models throughout their youth.

How do experiences with career professionals in elementary school influence minority individuals' pursuit of professional careers in adulthood, if at all?

Career experiences introduce elementary school students to mentors outside of their families who emphasize the importance of education for career success *and* communicate their belief in the students' ability to succeed. All adult professionals interviewed noted that an emphasis on education within their families from the beginning of their educational careers was a major factor contributing to their academic and professional success. In their final journal entries reflecting on their experiences with the career guest speakers, both Mateo and Samuel expressed a change in their perceptions of careers in relation to education. Samuel, a struggling English-speaker and fourth grader who was not taking the journal assignment seriously until an aide came to work with him wrote, "The guest speakers made me feel that I should do better in school." The career experiences helped Samuel to realize that he needs to work hard in school in order to have

the successful academics that led professionals to their current careers. Mateo wrote, “I learned things are harder than they seem,” providing evidence that as a result of the career sessions, he learned more about the challenges that can come with attaining a professional career. Whether or not education is emphasized to students at home, the emphasis that career professionals placed on education either confirmed the already enforced belief that education matters, or planted the seed in students’ minds that education matters.

Beyond emphasizing the importance of education, the career professionals conveyed to my students the belief that they had in the students’ abilities to achieve success in whatever fields they pursue. When asked what one most important take-away she would want students to remember from her time with them, Amara answered, “For this particular class, I would want them to know that they can do, be, and go anywhere they want. I noticed the neighborhood and the behavior, and I don’t want these kids to be a product of their environment. I want them to know that they can pursue anything, and I want them to actually do it!” Along the same vein, Rosa’s answer to the same interview question was that she would want students to “believe in yourself and [know] that hard work and perseverance will pay off if they are committed to making their dreams come true.” The professional guest speakers came into career conversations with the intent of conveying to students a sense of efficacy in their ability to pursue different careers; after meeting the students, the guest speakers shared an even greater sense of purpose for communicating this message. The intent of the guest speakers to communicate belief in these students proved successful, as reflected in Mateo’s final journal entry: “The guest speakers made me feel good. It was nice having people skipping work just for us.” Not only did the guest speakers evoke positive emotions in all of the students (observed through session recordings and explicitly stated in final journal entries), but Mateo’s quote shows that he was aware of the sacrifice that guest speakers made for him. Ideally,

when reflecting on this sacrifice in the future, Mateo will draw the conclusion that the guest speakers took off of work to speak to his class because they were invested in the students and saw potential in them that they wanted to share. Reflecting on a picture of himself and guest speaker Beth Wilson, Christopher wrote, “[The picture] reminds me of me and my sister helping me do my homework.” As successful adults shared, their primary adult role models are found within the family and then expand outward to include role models like teachers and mentors. Christopher’s connection of Ms. Wilson to his sister shows that the mentorship of the guest speakers reflects mentorship that he receives at home. The parallel between Beth and Christopher’s sister proves promising for the potential impact that guest speakers can have on students, as Beth is compared to an at-home role model who likely plays a major role in the student’s life. This quote supports the finding that career conversations expanded students’ network of role models beyond the home and into adults in the community who have pursued professional careers that differ from the career examples students see at home.

Chapter 5

Discussion and Conclusions

This study was an effort to introduce low-socioeconomic status fourth grade students to professional careers using diverse professional adults in various career fields. These professionals engaged students in discussions and hands-on activities about a range of careers that require at least a four-year college education. The purpose of this study was to expose low SES students to a greater range of professional careers in hopes of closing the gap between minority and majority students in careers that require four-year degrees. In reflecting on my interventions with fourth grade students, I sought to compare my interventions to the factors that proved to be influential in the professional pursuits of the adult career guest speakers that worked with my students. The research question that I sought to answer was: *How do experiences with career professionals in elementary school influence minority individuals' pursuit of professional careers in adulthood, if at all?* Underneath this research question, I examined two smaller research questions: 1) *How do experiences with career professionals influence elementary school students' immediate career goals, if at all?*, and 2) *What factors influenced adult professionals to pursue professional careers?*

In comparing the current study to existing literature, the findings mostly confirm current claims about career experiences with low-income, elementary school students. The impact of **hands-on experiences in increasing student knowledge about, interest in, and self-efficacy in new career options** supports Knaggs and colleagues' (2015) work that states that active participation in a range of experiences can “motivate [students] to overcome the discomfort that can come with taking risks and trying new experiences in order to benefit from them in both

holistic and specific ways” (p. 20). Likewise, in the current study, David and Ian (among other students) referenced the enjoyment they gained from getting to actively engage with careers (building bridges and using a stethoscope), supporting the existing claim that hands-on experiences can encourage students to try new activities and to grow in meaningful ways. Aligned with Lent and colleagues (2008), when students are given opportunities to engage with new and positive experiences, their levels of self-efficacy, outcome expectations, and personal goals are changed. When students in this study were engaged in professional career activities, they were able to see themselves in these careers. Their eyes were opened to new options, and the message was conveyed to them that they are capable of engaging in these types of careers. Increased communication of efficacy corresponded with increased self-efficacy in new careers. Additionally, career goals changed as a result of exposure to new experiences.

While my research findings showed that students built upon or changed their career goals as they became aware of the malleability of career goals, one finding from the GEAR UP study states that students are more likely to persist in college when they enter with a clear goal in mind (Knaggs et al., 2015, p. 23). Although my findings seem to contradict the concept of “goal commitment” described in Knaggs and colleagues’ (2015) work, the students in the current research did vocalize and informally “commit” to pursuing specific career goals. Some listed multiple goals, and others listed completely new ideas, but all students were able to **identify and state at least one career goal that they felt compelled to strive for**. Because the students in the current research are in fourth grade, the malleability of their current career goals, while contradictory to the GEAR UP study’s findings, may prove to be valuable for the time being. Knaggs and colleagues’ (2015) participants for qualitative data were all at least high school seniors and can therefore benefit more in their current schooling when an explicit career path is declared.

However, because the students in the current study are only in elementary school, the finding of career malleability is similar to current research because students are able to vocalize at least one career goal, and is different because the students are young and are still exploring new careers that they may decide to commit to as they approach the age of the GEAR UP participants.

Additionally, the results of the current study support the factors that lead professional adults to academic and career success. Harper and colleagues (2014) found, “Most [students] recalled parents and other family members conveying to them at a young age powerful messages about the value of schooling” (p. 15). Likewise, all of the professional adults interviewed for this study noted the **importance of schooling in their upbringing**, specifically as it was emphasized at home. Harper and colleagues (2014) even reference the moves that some parents make so that their children could have better educational opportunities, similar to Ms. Moore’s experience. In addition to emphasis on education, the adult professionals also reported the **strong influence that adult role models had on their educational and career successes**. Referring back to Phipps (1995), “Higher, more frequently than lower, SES children were motivated by their interests or by altruism. Lower SES children were relatively more likely to be motivated by role models or by economics” (p. 27). In students’ initial journal entries, six students defined careers in terms of making money or posed a question about how much money can be made in a career. The current study confirmed the motivating potential of economics for low-SES students. Through my interviews with adult professionals, I found that regardless of socioeconomic background, role models proved to be a motivating force for success. Of the adults that I interviewed, only three came from lower-middle class backgrounds; however, all of the adults reported a number of important role models that influenced their career successes, regardless of social class. While the current study does not provide enough data to confirm or refute Phipps’s comparison of motivating

factors for higher- versus lower-SES individuals, the current work does report that for all professional adults interviewed, lower-middle class included, role models serve as an important motivator for academic and career success. This finding justifies the professional role models that students were exposed to through career experiences in the current study.

Adult role models at home and in school represent the importance of children's microsystems in influencing their career aspirations. The adults interviewed all described adults in their families or schools that motivated them to work hard in school and to pursue professional careers, emphasizing the effects of Bronfenbrenner's ecological framework. While the macrosystemic forces that perpetuate social immobility are daunting, microsystems can work against constraining forces. The microsystems of family and school positively encouraged the adult participants to pursue professional careers through academics. Although Bronfenbrenner situates microsystems in a larger macrosystem, microsystems can work against macrosystemic forces, as was evidenced through both the literature and my research. In these situations, individual and group values can have greater influence on individuals, as could be seen through adult career professionals' successes, sometimes against what one would suspect based on macrosystemic constraints. Microsystemic influences affect individual academic and professional pursuits.

Finally, the current study supports the finding from Harper and colleagues' (2014) work: "Numerous [students] said that people saw something in them at an early age that they had not yet come to realize for themselves" (p. 15). As interviewee Kayefi Attah explained about her most influential teacher, "She had an incredible faith in my ability [...] made me feel like I was the Queen of England; she treated me like royalty essentially [...] I mean she really really praised me and saw a lot of potential in me." For the professionals that I interviewed, **influential adults who believed in their abilities and supported them in their pursuits played a significant role in**

their successes. The guest speakers sought to do the same for the fourth graders in the current study, as Rosa Ramos stated that she wants students to remember that, "If you want it, you can do it." Just as was found in existing literature, adults who believe in children's ability have the power to motivate them toward academic and career success. Overall, my results confirm what has been found in prior research; hands-on experiences, emphasized education, and positive role models have the power to influence individuals' career pursuits and ultimately successes.

The current research proves that career conversations provide low-income students with adult role models who believe in said students and emphasize education, two influential factors for career success in adulthood. Career sessions also provide students with hands-on experiences that spark interest in new careers and encourage students to explore multiple career interests at a young age. Moving forward, the field of education can use the present study to inform career exposure programs in elementary schools. Statistics on minority adults' career pursuits and socioeconomic statuses support the need for action in children's lives early on. Findings show that career conversations in this study have the potential to expose students to more diverse career goals, provide students with supportive mentors, and emphasize the importance of education in pursuing career goals; these results provide evidence that talking to students about careers early on can influence their life trajectories. A next step in this research is to track a cohort of elementary school students who receive career interventions through high school, college, and into their careers. While the current study works backward to compare the influential forces in successful adults' lives to the support that career conversations offer students, a longitudinal investigation of the effects of career conversations would be beneficial for exploring a correlational relationship between career conversation involvement and career success. Another next research step for the current study would be to explore all of the effects of career conversations on students, reaching

beyond career goals to consider self-efficacy, academic engagement, and autonomy in the classroom.

While the current study focuses on a small population of elementary school students and an even smaller population of successful adults, the results still support the development of career intervention programs in elementary schools, especially for low-income students who are exposed to few career options at home. Ideally this research would inspire teachers and principals to implement similar programs in their own schools. Because the research process was experimental and changed from day to day, my hope is that teachers and principals would use this research as a starting point for implementation of their own career exposure programs. The foundational idea of introducing elementary school low-income students to a range of professional careers has the potential to grow and change with each individual community, and as teachers and principals experiment with similar programs, I urge them to collect and disseminate research to add to this work on the effects of career exposure programs. Once more substantial evidence in support of career conversations is found, funding can be justified and career exploration can be offered where it is needed to move low-income students one step closer to breaking the cycle of poverty, starting early on in their educational pursuits.

Appendix A

Data Collection Methods

Method	Purpose	Analysis
One-on-one interviews with students	<p>At the start of my research, I interviewed students about what they want to be when they grow up and why, what education they will pursue, and what adult role models they have in what careers outside of the classroom. I conducted 12 complete interviews with students. I also conducted 8 partial interviews, during which I only asked students about the adults that they lived with and these adults' careers.</p> <p>Interviews allowed me to get to know the students' backgrounds so that as I analyzed my data, I could be mindful of any external influences on students' career interactions.</p>	<p>I looked for what initial career goals students identified (and common careers that emerged), as well as what adult role models the students looked up to and what their professions are (and common careers that emerged). I quantitatively analyzed what careers students aspired to at the beginning of the career sessions, as well as what careers they were exposed to at home, and I utilized any student quotes that supported my findings as qualitative data.</p>
Student journal entries	<p>Throughout data collection, I asked students to reflect on career experience sessions. Students were also encouraged to write down questions that they had about certain careers or career terminology, and they were at times prompted to do something other than reflect – like draft adjectives that describe them, or fill out a Know-Want-Learn chart. The journals are valuable because they give me insight into my students' thoughts and feelings as they moved through the sessions, as well as any evidence of what was learned. 21 students wrote in journals. Each journal varies in the number of entries recorded, from one to five entries, based on the student's attendance during allotted journaling class time.</p>	<p>I paid particular attention to any new career ideas that students wrote about that differed from their initial career goals as the journal entries progressed, as well as phrases like "I liked..." or "I feel..." that may have indicated student reactions to guest speakers and/or careers. The final entry was particularly valuable because students were asked to identify their career goals again and to reflect on whether they were the same as or different from their initial career goals. I looked at the final career goals quantitatively and compared them to initial career goals, and I also qualitatively examined specific quotes that students wrote that explained why their career goals may or may not have changed.</p>
Video and audio recording	<p>I used iPads to either video or audio record either pieces of or the entire guest speaker presentations and the question-and-answer sessions. I also recorded the hands-on student activities. These recordings helped me to learn which students were engaged in the presentations, discussions, and</p>	<p>I looked and listened for which students responded to or asked questions, both during the presentations and the activities, as well as (if video recorded) students' body language during presentations (if students were lying down on desks, raising hands eagerly, etc.). I looked for which students were involved in which guest speaker</p>

	activities, as well as what types of involvement these students showed.	experiences, as well as if level of engagement changed at all for specific students when they transitioned from listening to the speaker to engaging in the hands-on activity. I also looked at engagement in specific career experiences in relation to initial and final career goals, as well as individual interactions with the guest speakers. <i>While I gained valuable insight into student engagement and efficacy during career sessions, most of my findings from this data collection method did not answer my research question.</i>
Student work	Students created final products based on a few of the hands-on activities, including posters branding their classroom and themselves, and K'NEX bridges built to hold a free weight. By looking at the final products that students produced, I was able to record students' engagement with different career activities. I also looked for the role that hands-on activities played in the career sessions. Finally, student work helped me to investigate students' autonomy and interest in each career activity.	My analysis of student work was based on how well the students' products aligned with the guest speakers' instructions, as well as how much ownership the students took over their own work. These pieces of data helped me to determine how engaged with a career activity the students were. I then compared student products to students' career interests to see if engagement and outcomes aligned with interests. <i>While I gained valuable insight into student autonomy and interest during career sessions from these final products, most of my findings from this data collection method did not answer my research question.</i>
One-on-one interviews with professional adults	From interviews with five adults, I learned what motivated adults to pursue professional careers. I used the data I collected to answer my overarching research question. While not all of my guest speakers were minority individuals, I recognized that they could all offer insight into motivating factors common among all individuals, and by interviewing four guest speakers and one mentor, I could also look at the results from minority speakers to see if any common themes emerged within their answers that were unique to minorities and thus especially important to my research question.	I looked for common themes that arose in the interviewees' responses, especially regarding <i>motivating factors</i> and <i>the role of education</i> . I pulled out themes that were referred to in multiple interviewees' answers, such as "parent support" and "good teachers." Focusing on these terms when analyzing my data helped me to understand the most important factors in influencing adults to pursue professional careers.

Appendix B

One-on-one interview questions for interviews with adult career professionals

1. Tell me about your family background. This can include race/ethnicity, parents' education levels, SES, where you grew up, etc.
2. Describe the role that your family background played in your academic and professional success.
3. Think back to when you were in fourth grade. What did you want to be when you grew up? Why?
4. When did you decide to pursue the career that you have now? Tell me more about this decision and how you came to it.
5. Did you always know that you wanted to go to college? Tell me more.
6. Who or what was the greatest motivator for your academic success?
7. Growing up, how was school viewed in your household? How did this shape your own view of school?
8. Which was emphasized to you growing up – education, the results of education, both, or neither? Explain.
9. Who were the most influential adults in your life growing up? (This could be teachers, parents, etc.)
10. Without _____, I would not be where I am today in terms of my career. What would you fill in the blank with?
11. Can you think of one specific moment when you knew that you would graduate from high school, go to college, and get a professional career? Or was this more of a gradual process?
12. What was the greatest obstacle that you faced in achieving your academic or career goals, and how did you overcome this obstacle?
13. What compelled you to come in to speak to my students?
14. If the students were to remember one most important thing from their time with you, what would you want that one thing to be?

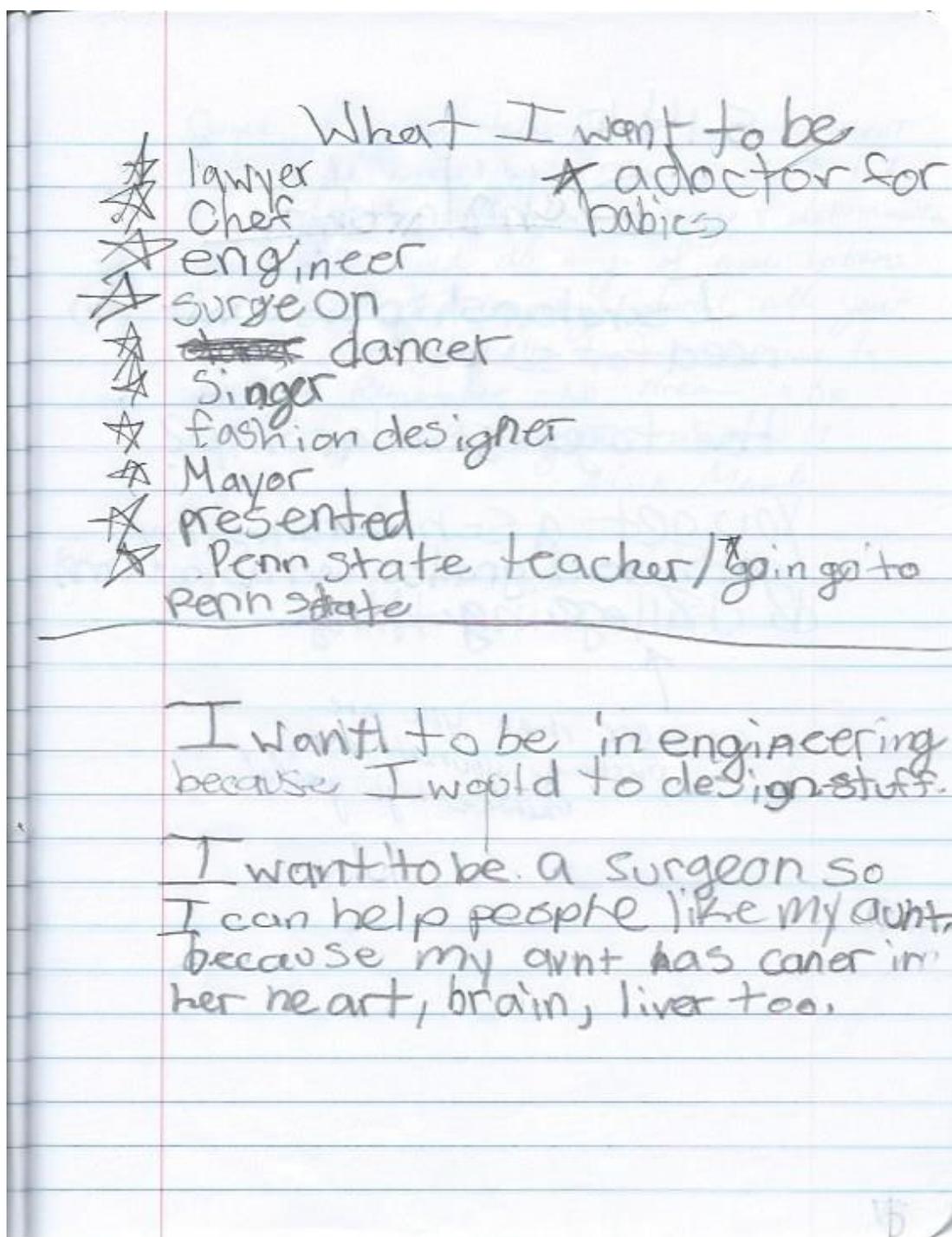
Appendix C

Transcript from bridge-building dialogue

Natalia: "I love this [building bridges with K'NEX]"
Vicente: "Oh my god, yeah"
Natalia: "I wanna be a...um...uhh...uhh..."
Vicente: "Engineer"
Natalia: "Builder"
Vicente: "Engineer"
Natalia: "Yeah, engineer when I grow up"
Vicente: "I'm still sticking with my career, though. I mean I like building and all, but it's not really my big thing, I mean"
Natalia: "When I grow up, I want to be in the army, my stepdad said"
Vicente: "Why, is he going to send you to military school?"
Natalia: "He's Mexican!"

Appendix D

Shantana's journal entry from middle of career sessions



Appendix E

List of guest speakers and activities

Name	Profession	Background	Activity	Phone interview?
Beth Wilson	Journalist, blogger, teacher, and recruiter	White, middle class	Interviewing peers and creative writing about career interests	Yes
Jacob Vasquez	Chemical engineer	Hispanic	Building bridges with K'NEX	No
Sofia Garza	Civil engineer	Hispanic	Building bridges with K'NEX	No
Demetrius Williams	Plastic surgeon	--	Playing operation and engaging in anatomy activity with speaker; trying on medical equipment	No
Kayefi Attah	Brand manager	Nigerian, lower-middle class	Branding classroom and selves using images, words, taglines, etc.	Yes
Rosa Ramos	Neonatologist	Mexican, lower-middle class	Identifying babies on APGAR scale; using medical equipment	Yes
Shana Johnson	Pediatrician	African American	Giving and receiving parts of physical exams	No
Amara Moore	Insurance underwriter	African American, lower-middle class	Reviewing insurance case studies	Yes

Appendix F

Informed Consent Form Approved by Penn State IRB

CONSENT FOR RESEARCH
 Penn State College of Education
 The Pennsylvania State University

Title of Project: The effects of "College Talks" on elementary school students: A mixed methods research study on the influence of college focused discussions on children's understanding of and relationship to college

Principal Investigator: Taylor Manalo

Address: 1510 Candlewood Dr.
 Pittsburgh, PA
 15241

Telephone Numbers: (412) 992-6622.

Subject's Printed Name (child): _____

We are asking you to be in a research study.
Whether or not you take part is up to you. You can choose not to take part. You can agree to take part and later change your mind. Your decision will not be held against you.
This form gives you information about the research. Please ask questions about anything that is unclear to you and take your time to make your choice.

1. Why is this research study being done?

We are asking your child to be in this research because he or she is a student enrolled in kindergarten through 4th grade attending elementary school.

This research is being done to find out whether or not discussion of college with elementary school students at young ages informs their understandings of what college is and whether or not college is a path that they are interested in pursuing.

Approximately 10 people will take part in this research study at [x] elementary school.

2. What will happen in this research study?

What are my responsibilities if I take part in this research?

If you take part in this research:

The student's major responsibilities will include:

1. Attend preliminary college discussion (1 hour) after school (week one).
2. Attend "college talks" (1 hour each) after school (weeks two – seven).
 - o College talk sessions include a 30-minute presentation and activity from a current college student or professional working in a degree-required field, followed by a 30-minute debrief of the session. A snack will be provided during the debrief.
 - o The 30-minute presentation/activities presented by visitors to the sessions will involve visitors sharing about their academic majors and academic experiences in college. They will also share personal stories of how they got to college and how college has impacted their lives in order to expose children to the processes and experiences of college life. These visitors are meant to serve as positive role models for participants.
 - o **College talk sessions will be structured and run as an after school club.** The setting will be social and relatively informal. Sessions are structured to encourage student participation through hands-on activities and engaging discussion topics. The sessions are designed to be enjoyable for research participants.
 - o Student is urged to attend all "college talks."
 - o If a student is unable to attend a "college talk," the parent should notify Taylor Manalo using the provided contact information.
3. Attend closing college discussion (1 hour) after school (week eight).
4. Students will be invited to engage in group discussions and one-on-one interviews as part of the session debrief. Participation in discussions and interviews is voluntary. A student will **not** be asked to leave if he or she chooses not to participate in these discussions and interviews. All a student is required to do to be a part of the study is to attend the college talk, preliminary, and closing sessions.
5. Students will be given "college journals" at the preliminary college discussion. College journals are a completely optional part of the research process. Participants will be invited to write about his or her ideas related to college and future academic opportunities at any point during the study, either during or outside of sessions.

The parent or legal guardian's major responsibilities will include:

1. Picking your child up from after school sessions or sending another adult to pick your child up and notifying the researcher ahead of time.
2. Fill out preliminary and closing questionnaires. Questionnaires are optional. Subjects are free to skip any and all questions they would prefer not to answer.

3. What are the risks and possible discomforts from being in this research study?

The study poses the social risk of children sharing thoughts and personal information with their peers during college talk debrief sessions. While the child will never be forced to speak during sessions, students will be asked questions and encouraged to

answer them and to engage in group conversation, as well as in one-on-one interviews. The social risk involves other children in the group knowing a student's thoughts, experiences, or backgrounds.

4. What are the possible benefits from being in this research study?

4a. What are the possible benefits to me?

There is no guarantee that you or your child will benefit from this research. The possible benefits you may experience from this research study include increased awareness about college, increased involvement in your child's academic opportunities related to college and academic growth, and increased interest from your child about the future. The possible benefits your child may experience from this research study include increased awareness about college, increased sense of relationship between self and college, increased social connections with peers over academic goals, increased relationships with adults who have pursued or are pursuing college degrees, and increased recognition of academic opportunities. **The talks are geared toward elementary students, and speakers will be selected based on students' interests. Sessions are designed to be enjoyable for students.**

4b. What are the possible benefits to others?

The results of this research may guide the future discussion of college with elementary school students. Long-term, this study could possibly benefit individuals who might not have attended college otherwise realize college-focused aspirations. Society may gain an increased population of college-educated adults as a result of college talks with elementary school students.

5. What other options are available instead of being in this research study?

You may choose not to be in this research study. Participation in this study will have no bearing on your student's academic standing in the school, grades, etc.

6. How long will I take part in this research study?

If you agree to take part, it will take you about eight weeks to complete this research study. You will be asked to return to the research site eight times.

7. How will you protect my privacy and confidentiality if I decide to take part in this research study?

- Any information that is provided by you or your child will be kept confidential. Any information that you provide may be published. However, no names will be disclosed if information you provide is published.

7a. What happens to the information collected for the research?

Efforts will be made to limit the use and sharing of your personal research information.

- Your research records will be labeled with your child's first and last name, age, and grade level, and will be kept in a safe area with the researcher.

- In the event of any publication or presentation resulting from the research, no personally identifiable information will be shared.

We will do our best to keep your participation in this research study confidential to the extent permitted by law. However, it is possible that other people may find out about your participation in this research study. For example, the following people/groups may check and copy records about this research.

- The Office for Human Research Protections in the U. S. Department of Health and Human Services
- The HMC/PSU Institutional Review Board (a committee that reviews and approves research studies) and
- The HMC/PSU Human Subjects Protection Office
- The HMC/PSU Research Quality Assurance Office

Some of these records could contain information that personally identifies you. Reasonable efforts will be made to keep the personal information in your research record private. However, absolute confidentiality cannot be guaranteed.

8. What are the costs of taking part in this research study?

8a. What will I have to pay for if I take part in this research study?

There is no cost for you taking part in this study.

9. Will I be paid to take part in this research study?

You will not receive any payment or compensation for being in this research study.

10. Who is paying for this research study?

The institution and investigators are not receiving any funds to support this research study.

11. What are my rights if I take part in this research study?

Taking part in this research study is voluntary.

- You do not have to be in this research.
- If you choose to be in this research, you have the right to stop at any time.
- If you decide not to be in this research or if you decide to stop at a later date, there will be no penalty or loss of benefits to which you are entitled.

12. If I have questions or concerns about this research study, whom should I call?

Please call the head of the research study Taylor Manalo 412-992-6622 if you have questions, complaints, or concerns about the research.

You may also contact the research protection advocate in the HMC Human Subjects Protection Office (HSPO) at 717-531-5687 if you:

- Have questions regarding your rights as a person in a research study.
- Have concerns or general questions about the research.



APPROVAL OF SUBMISSION

Date: December 17, 2014

From: Jodi Mathieu, IRB Analyst

To: Taylor Manalo

Type of Submission:	Initial Study
Title of Study:	The effects of "College Talks" on elementary school students: A mixed methods research study on the influence of college focused discussions on children's understanding of and relationship to college
Principal Investigator:	Taylor Manalo
Study ID:	STUDY00001447
Submission ID:	STUDY00001447
Funding:	Schreyer Honors College
IND,IDE, or HDE:	Not Applicable
Documents Approved:	<ul style="list-style-type: none"> • IRB Protocol Draft (3), Category: IRB Protocol • Recruitment Flier (0.01), Category: Recruitment Materials • Preliminary Questionnaire (2), Category: Data Collection Instrument • IRB Study Procedures (2), Category: Other • Final Questionnaire (2), Category: Data Collection Instrument • IRB Consent Letter (2), Category: Consent Form
Review Level:	Expedited

On 12/17/2014, the IRB approved the above-referenced Initial Study. This approval is effective through 12/16/2015 inclusive. You must submit a continuing review form with all required explanations for this study at least 45 days before the study's approval end date. You can submit a continuing review by navigating to the active study and clicking 'Create Modification / CR'.

If continuing review approval is not granted before 12/16/2015, approval of this study expires on that date.

To document consent, use the consent documents that were approved and stamped by the IRB. Go to the Documents tab to download them.

In conducting this study, you are required to follow the requirements listed in the Investigator Manual ([HRP-103](#)), which can be found by navigating to the IRB Library within CATS IRB (<http://irb.psu.edu>). These requirements include, but are not limited to:

PENNSTATE



Vice President for Research
Office for Research Protections

The Pennsylvania State University
The 330 Building, Suite 205
University Park, PA 16802

Phone : (814) 865-1775
Fax: (814) 863-8699
Email : oprprotections@psu.edu
Web : www.research.psu.edu/opr

- Documenting consent
- Requesting modification(s)
- Requesting continuing review
- Closing a study
- Reporting new information about a study
- Registering an applicable clinical trial
- Maintaining research records

This correspondence should be maintained with your records.

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Academic Vita

Taylor Manalo

tdmanalo@gmail.com

Education

Master of Education in Curriculum and Instruction

The Pennsylvania State University, University Park, PA

Graduation: May 2016

Emphasis: Language, Culture, and Society

Bachelor of Science in Childhood and Early Adolescent Education, PK-4 Option

Schreyer Honors College

The Pennsylvania State University, University Park, PA

Graduation: May 2016

Minor: Special Education

Academic Honors

College of Education Undergraduate Student Leadership and Service Award (2015)

The President Sparks Award (2014)

The President's Freshman Award (2013)

Dean's List (8/8 semesters)

Schreyer Honors College Scholarship (8/8 semesters)

Chosen as one of 59 Penn State University Elementary Education majors to participate in a collaborative 185 day, full time elementary student teaching internship in a first grade setting in the State College Area School District (Pennsylvania). This program received the 2009 Award for Exemplary Professional Development School Achievement from the National Association for Professional Development Schools, the 2004 Holmes Partnership Award for the best partnership between a university and a school district and the 2002 Distinguished Program in Teacher Education Award from the Association of Teacher Educators (ATE).

Teaching Experience

Professional Development School Intern: Grade 3

August 2015 – June 2016

Park Forest Elementary School

State College, PA

- Prepared and implemented lessons using various technologies for 25 third grade students in all subject areas.
- Differentiated instruction to support various student needs in a diverse classroom setting (including English as a Second Language and Title One Reading students).
- Taught reading and language arts through a balanced literacy program, with emphasis in reading strategy instruction, word work, reading response, independent reading, and individual reading conferences to aid in reading comprehension.
- Utilized the Math Expressions program to help students learn basic mathematics skills through conceptual approaches and project-based learning aligned with the NCTM standards.
- Designed and taught social studies lessons through thematic units of study.
- Engaged students in inquiry-based science, using essential questions to guide student investigations.
- Integrated state and national standards into lesson plans and assessed students formatively and summatively.
- Attended and actively participated in division meetings, unit-planning meetings, faculty meetings, intern meetings, in-service meetings and trainings, and goal setting parent-student-teacher conferences.
- Cooperated as a team with mentor teacher, paraprofessionals, guest substitute teachers, support staff, enrichment teachers, and other teachers in the intermediate division.
- Assisted with classroom routines in a first grade partner classroom weekly.
- Observed and analyzed teaching best practices daily, and reflected with supervisor and peers.

Career Conversations with Elementary School Students: Grade 4

May 2015

Isaac Sheppard Elementary School

Philadelphia, PA

- Implemented career conversations with low-SES students to introduce them to career options.
- Researched effects of career goals on students' academic pursuits and long-term achievements.
- Recruited guest speakers in various careers to engage students in career discussions and activities.
- Collected data on effects of career conversations.

- Conducted individual interviews with students.
- Communicated with students through reflection journals.
- Worked with small groups on hands-on learning activities related to careers

Uncommon Charter Schools Summer Teaching Fellow: Grades 1 and 2 June – July 2015
 Excellence Boys Charter School Elementary Academy Brooklyn, NY

- Taught reading science, and social studies, following a co-teaching model.
- Received one-on-one mentorship in implementing Summer Academy lesson plans.
- Engaged in various professional development sessions, including *Teach Like A Champion* training.

Summerbridge Pittsburgh: Grades 7 and 8 June – August 2013, June – August 2014
 Breakthrough Collaborative Affiliate Sewickley, PA

- Received training in Breakthrough teaching model to teach at-risk students from low-income/minority families who possess high academic potential for college-preparatory high schools and eventually for four-year higher education programs.
- Developed and taught 7th grade mathematics lessons aligned with grade-level learning objectives to two classes of 6-10 students daily.
- Developed and taught 7th and 8th grade creative writing and leadership electives for classes of 6-8 students bi-weekly.
- Mentored 4-6 students in time management, organizational, and study skills.
- Participated in teaching team and content area meetings weekly.
- Received direct mentorship in mathematics instruction.
- Planned and organized additional activities for students, including all school gatherings, mathematics tournaments, high school and college options fairs, and other community building activities.

Discovery Space September 2013 – May 2015
 Children’s Science Museum State College, PA

- Planned and directed children’s science programs based on STEM objectives for children ages 2-12.
- Planned and executed after school science programs for students in grades K-4.
- Volunteered at various science programs for children of all ages, hosted at the museum.
- Supported exhibits and developed signage for children and parents throughout the museum.

Leadership and Extracurricular Activities

- President and member of College of Education Student Council (2013-2016)
- Member of Teaching Elementary Science Leadership Academy (2013-2015)
- Family Relations Chair of Springfield FTK (THON organization) (2013-2014)
- Family and Child Development Lab Research Assistant (2012-2013)
- Tutor for Friendship Tutoring Program (2012-2013)

Conferences/Committees

- National Science Teachers Association (NSTA) Conference (2014)
 - Wrote and presented alongside Penn State faculty and advisors
 - *Teaching Elementary Science Leadership Academy (TESLA): Bringing Together Future Elementary Teachers Around Science Teaching*
- National Issues Forum Moderator (2014)
 - *What is the 21st Century Mission for Our Public Schools?*
- Childhood and Early Adolescent Education Steering Committee (2015)
- College of Education Recruitment and Retention Task Force (2014)

References

Nicholas Reitz, mentor teacher, (770) 856-6298, nar16@scasd.org
 Mary Higgins, supervisor (PDA), (717) 713-7508, meh42@scasd.org
 Sarah Walters, Summerbridge Pittsburgh former executive director, (412) 741-2230, swalters@sewickley.org