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# The impact of a mentoring/financial incentive program on at-risk high school students

Sean Timothy Galvin

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THE IMPACT OF A MENTORING/FINANCIAL INCENTIVE PROGRAM ON AT-  
RISK HIGH SCHOOL STUDENTS

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Dissertation

Submitted to the Department of Leadership and Counseling

Eastern Michigan University

In partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

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July 2015

Ypsilanti, Michigan

**DEDICATION**

I dedicate this project to my parents, Joan and Kevin Galvin, who are directly responsible for any and all positive aspects of my character. I must have picked up the negative ones from a schoolyard chum.

## ACKNOWLEDGEMENTS

I've been fortunate to encounter more than my share of influential people on the road to completing this dissertation. The Eastern Michigan University College of Education has provided me with high quality professors and classmates, not to mention some stellar facilities.

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I appreciate the support of the Wayne-Westland School District, particularly the staff at Wayne Memorial High School, who have permitted my research and encouraged me all the way. WMHS Principal Kevin Weber was particularly helpful by taking an interest in my research and helping me think things through.

Thank you to Richard Helppie, Jeff Styers, and the Champions of Wayne Board of Directors for cheering me on throughout this process.

Also, thank you to my good friend Austin Meibers, who continues to teach me about perseverance.

**ABSTRACT**

This mixed methods study describes some outcomes of “Champions of Wayne,” a privately funded mentoring/incentive program at an impoverished high school near Detroit. Over 500 students enroll in the program annually. The program involves providing high school students who choose to participate both adult mentoring and a \$200 incentive to improve one’s grades each semester. The quantitative component of this study analyzes GPA data, while a multiple case study of six participants explores mentoring relationships and experiences. In a comparison of the GPA of participants versus non-participants, program participants significantly improve their grades when compared to those students who do not participate in the program. The study revealed that though students initially enroll because of the \$200 incentive, they describe the achievement and mentoring to be most influential in the end. A trusting relationship with an educationally successful adult has potential to make a particularly positive impact on an at-risk student from a family with little (or no) educational tradition. The study concludes with recommendations for school leaders interested in implementing a similar program, as well as a speculative discussion of how the program may have a ripple effect on other teacher-student relationships and the overall culture of the school.

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## CHAPTER I

### INTRODUCTION

Public schools that are home to a large number of at-risk students are generally home to low student achievement, low motivation, and high levels of student apathy. Declining student achievement has many educators scrambling for solutions. While a panacea has yet to be discovered, mentoring programs have shown to be helpful (Grossman & Tierney, 1998; DuBois, Holloway, Valentine, & Cooper, 2002; Holt, Bry, & Johnson, 2008; DuBois, Portillo, Rhodes, Silverthorn, & Valentine, 2011; Herrera, Grossman, Kauh, & McMaken, 2011; Grossman & Bulle, 2006; Thompson & Kelly-Vance, 2001; Grossman & Rhodes, 2002), and research suggests that financial incentives can have an impact as well (Fryer, 2011; Raymond, 2008; Hahn, 1994).

Home to many affluent families in the 1960s and 1970s, Wayne, Michigan, has gone through challenging economic times over the course of the past few decades (Malinoff, 2002). As the demographics of Wayne have changed, so too have the demographics of Wayne Memorial High School. As poverty has set in at Wayne Memorial, achievement has gone down and the school's reputation has declined with it (Malinoff, 2002). Certain areas, particularly the Nor-Wayne neighborhood, have become especially impoverished and run-down. Home now to drug addiction, unemployment, and violence, these areas have contributed to the challenges faced by the community and the schools.

Bill Gray (WMHS School Psychologist 1988-2013) and Valerie Orr (WMHS Principal 2008-2013, Assistant Principal 2006-2008, and 1993 WMHS graduate) became well aware of the declining student achievement and took action to counteract it. During

the 2008-2009 school year, Gray and Orr initiated what came to be known as the “Champions Program.” A self-proclaimed “trophy enthusiast,” Gray went out and bought the largest trophy he could find (four feet tall), and approached students with the idea of the new program. The idea was simple: Students would sign up for Champions by setting a grade point average (GPA) goal for the semester and agreeing to meet regularly with Mr. Gray and/or Mrs. Orr throughout the semester. If the goal was achieved at the end of the semester, the successful student would have his/her name engraved on the trophy and would forever be known as a Champion. Despite lackluster results from the initial semester, Gray decided to continue developing Champions into an established mentoring program.

At the conclusion of the 2008-2009 school year, Gray met Richard Helppie, a 1974 Wayne Memorial graduate who was recognized as the 2009 WMHS Distinguished Alum at that year’s graduation ceremony. Helppie, a successful entrepreneur and philanthropist, was open to Gray’s idea to “add some firepower” to the newly created Champions Program by adding a financial incentive. Initially, Gray’s idea for the incentive was some sort of stipend toward higher education. Helppie, owner of several businesses in the private sector, thought that money paid directly to the students would be much more motivating. Helppie informed Gray and Orr that the only way he would provide the financial incentive would be if payments went directly to the students, and ultimately got his way.

As one might expect, the introduction of the financial incentive caused the popularity of Champions to soar. Enrollment in the program increased from 50 students in 2009, to over 500 students in 2015. The Champions program is popular among the

staff as well. What began as a program with a “handful” of teachers volunteering to mentor has now grown to over 130 mentors program-wide. Over 90% of the Wayne Memorial staff has volunteered to mentor, and almost the entire staff at Tinkham Alternative High School is also on board with Champions.

The popularity of Champions has also created a need for a management staff. A full-time executive director was hired before the start of the 2011-2012 school year, and a full-time assistant director was brought on before the 2013-2014 school year.

Additional donors have joined Richard Helppie in recent years. Jeff Styers, a successful entrepreneur and 1984 graduate of Wayne Memorial, has made significant contributions to Champions since the summer of 2013, and has pledged to support Champions in the future. Further, a “Hollywood Comes to Wayne”-themed movie premiere fund-raiser took place in September, 2013, and raised \$48,000 for the program.

As the program continues to develop, a board of directors is in the works. This board will consist of committee chairs, who lead initiatives such as fund-raising, operations, public relations, board development, and event-planning. Richard Helppie has an extensive background in business development and organizational growth, and guides the program accordingly.

### **Statement of the Problem**

While the effectiveness of financial incentives on high school academic achievement is largely debatable (Fryer, 2011; Slavin, 2010; Spencer, Noll, & Cassidy, 2005), there is no doubt that mentoring programs can have a significant impact on academic achievement, as well as a child’s overall sense of well-being (Dubois et al., 2011; Grossman & Tierney, 1998; Grossman & Bulle, 2006; Grossman & Rhodes, 2002;

Thompson & Kelly-Vance, 2001). Currently, there exists very little research on educational programs that combine mentoring and financial incentives. It is possible that this combination has a unique impact on at-risk student achievement.

Informal interviews with Champions of Wayne officials suggest that, while many Wayne students may not jump at the idea of signing up for an academic mentoring program, the \$200 incentive makes even the most resistant student give the program a chance. Many successful students have reported that, while the monetary incentive was significant in getting them to join Champions, the relationship with their mentor and the satisfaction of achieving their goals were stronger sources of motivation in the end.

Research strongly suggests that, if at-risk youth willingly enroll in a mentoring program, there is potential to overcome large hardships in their respective personal lives (DuBois et al., 2002; Grossman & Tierney, 1998; Thompson & Kelly-Vance, 2001). Effective school-based mentoring programs, especially those implemented at schools with substantial at-risk populations, have potential to uplift both achievement and enrollment. (Grossman & Bulle, 2006).

### **Purpose of the Study**

The purpose of this study was to explore what motivated students at Wayne Memorial to join the Champions of Wayne program, how participation in the program affected them as young adults, and how it influenced their academic performance. Wayne Memorial is home to a large proportion of at-risk students, with over 80% of the student body eligible for a free or reduced-price lunch. Program officials tout Champions of Wayne as an innovative and unique program that has significantly changed the lives of Wayne Memorial students since 2009.

**Significance of the Study**

Researchers generally agree that support and guidance from adults are instrumental in the growth of adolescents into responsible citizens (Grossman & Tierney, 1998; Grossman & Rhodes, 2002; Thompson & Kelly-Vance, 2001)). In fact, people often attribute their success to an adult who came into their lives at the right time and paid attention to them. Historically, Americans have relied on families, schools, and neighborhoods to provide this support for youth. However, these institutions have changed to the point where they no longer have the capacity to deliver such support. There are fewer adults in families today, and half of the current generation will live in a single-parent household during some part of their childhood (Grossman & Tierney, 1998). As of 2012, more than one in five American children under the age of 18 was living in poverty (United States Census, n.d.).

Exposure to poverty, dangerous neighborhoods, and family dysfunction often results in children being labeled as “at-risk” (Thompson & Kelly-Vance, 2001). Adolescents whose family income falls in the bottom 20<sup>th</sup> percentile are six times more likely to drop out of school compared to those in the top 20<sup>th</sup> percentile (Holt et al., 2008). Research has shown that at-risk students are likely to have a history of tardiness, unexcused absences, and behavioral problems. Further, at-risk students have less self-confidence as learners and have a locus of control that is much more externally oriented (Thompson & Kelly-Vance, 2001). Children who do not graduate from high school face a bleak future. Over 80% of prison populations are comprised of high-school dropouts, and the majority of those who are law-abiding end up in dead-end careers (Kim, 2013).

### **Research Questions**

This study focused on four main questions:

1. What motivated students to sign up for Champions of Wayne?
2. How did students describe the impact that participation in Champions of Wayne had on their personal lives?
3. How were students' perceptions of school and their academic abilities changed as members of the Champions of Wayne program?
4. How did participation in Champions of Wayne affect students' performance in school?

### **Conceptual Framework – Self-Efficacy Theory**

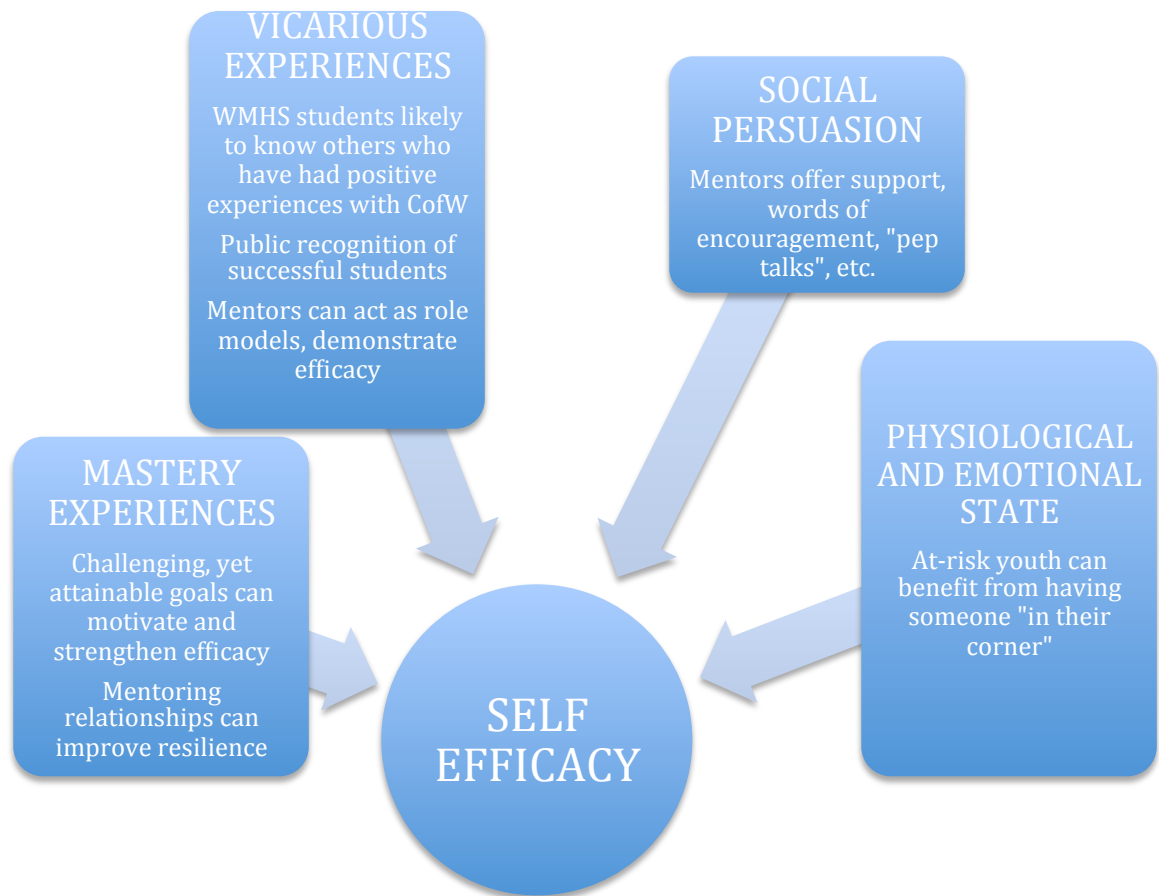
The mentoring and financial incentive components of Champions of Wayne seem to have potential when considering student motivational theory. According to Bandura (1986), motivation is heavily influenced by predictions of the outcomes of a given behavior. When considering delving into a task, human beings often imagine future consequences or results of these actions. These predictions are based on what Bandura refers to as a person's "self-efficacy," which he defines as a given person's belief in his/her own capabilities.

Bandura (1986) identified four (and only four) factors that comprise a person's self-efficacy on a given task: Mastery experiences, vicarious experiences, social persuasion, and physiological/emotional states. Mastery experiences, the most influential of the four factors, are the person's direct experiences with a given task. Those who have experienced failure will likely expect to fail, whereas those who have performed similar tasks with success are likely to have high expectations of their abilities.

Vicarious experiences, second-most powerful, occur when one observes someone else either succeeding or failing at a given task. The effect on efficacy is enhanced by how closely the observer identifies with the model being observed (Hoy & Hoy, 2006). When models perform well, efficacy improves. However, when models struggle and fail, efficacy suffers.

Social persuasion is not as powerful as mastery and vicarious experiences, and is not likely to create enduring increases in efficacy. However, effective “pep talks,” words of encouragement, and coaching have potential to create a short-term boost in efficacy that can lead to heightened effort (Hoy & Hoy, 2006). Social persuasion can often combat setbacks and episodes of self-doubt. The potential of persuasion is largely dependent on the credibility, trustworthiness, and competence of the persuader (Bandura, 1986).

Finally, self-efficacy is also determined by the physiological and emotional state of the subject. If the person facing the task is nervous, anxious, or worried, efficacy is lowered. However, if the person is excited, well-rested, or “pumped up,” efficacy is enhanced (Hoy & Hoy, 2006).



Bandura's theory of self-efficacy aligns well with the research questions for this study. The first question has to do with motivation to sign up for the program. Champions of Wayne has been rapidly growing in popularity since inception in 2009, expanding from 50 to over 500 students in 2015. Bandura (1986) explains that a key ingredient to a given student's self-efficacy on a given task has to do with vicarious experiences, which in this case are observed experiences of the student's peers. Champions of Wayne publicly celebrates successful students by way of formal banquets, a significant social media presence, and other media outlets (newspaper, television, radio, etc.). Further, students receiving the \$200 rewards are likely to tell their friends and



classmates about it. It is possible that these vicarious experiences have led to many students signing up for Champions of Wayne (“yes, they really pay you!”). Beyond that, students are likely to know someone who has been successful in developing a relationship with an adult at school and improving his or her long-term academic performance.

Question two involves the personal lives of the students. According to Grossman and Rhodes (2002), mentoring relationships have potential to challenge negative views that adolescents may have of their futures, their relationships with others, and other areas of their respective lives. Bandura (1989) explains that beliefs of one’s efficacy apply to relationships, future aspirations, and perseverance in the face of difficulty.

Gecas (1989) states that self-efficacy begins to develop as an infant begins to interact with the environment. The family, then, becomes the most important environment for development of self-efficacy, and the parents are the most significant figures for the child. These early interactions are significantly related to the development of a child’s self-esteem, achievement motivation, interpersonal competence, and social behavior. Children are likely to learn to be efficacious by observing efficacious parents (Gecas, 1989).

Given this research, one begins to understand how at-risk students may be at a disadvantage in areas other than academics. Gecas (1989) further explains that class-related variables such as income, education level, and employment status are strong contributors to the development of self-efficacy. These variables also contribute directly to a student being labeled as at-risk (Thompson & Kelly-Vance, 2001).

Question three has to do with a given student's perception of his/her academic abilities. Perception of ability is the definition of self-efficacy. While participation in Champions of Wayne cannot change the experiences a given student has had in the past, students who participate in Champions of Wayne are likely to have had vicarious experiences with peers who have participated in the program in the past. Further, participating students are likely to have the social persuasion of their mentors (pep talks, words of encouragement, etc.), and may be in a better physiological/emotional state as a result of having a caring and responsible adult supporting them at school.

The financial incentive aspect of Champions of Wayne also has potential to affect students' self-efficacy. Bandura (1997) states that challenging, yet attainable goals that are coupled with enticing incentives not only serve as motivators, but also help to build and strengthen efficacy.

Lastly, question four involves actual performance in school. According to Bandura (1989), greater self-efficacy leads to increased effort and greater resilience in the face of setbacks. There is evidence to show that a high degree of self-efficacy will increase motivation, even if the efficacy is unrealistically high (Hoy & Hoy, 2006). If students at Wayne Memorial High School are able to increase their self-efficacy when it comes to their schoolwork, it is quite possible that their grades will improve as well.

This study is presented in six chapters. This first chapter provides an introduction, the conceptual framework, and the four research questions. The second chapter presents a review of the existing research that is relevant to this study, as well as key terms and their definitions. The methodology for this mixed-methods study is presented in the third chapter, as is a rationale for the chosen design. The quantitative

analysis of grade point average (GPA) data is presented in chapter four, followed by the qualitative analysis in chapter five. Finally, chapter six provides the conclusion and recommendations for future research.

## CHAPTER II

### REVIEW OF LITERATURE

The majority of students enrolled at Wayne Memorial High School during the 2014-2015 school year were considered to be “at-risk.” Champions of Wayne involves mentoring and financial incentives in an effort to bolster academic achievement and enhance relationships for students and staff at Wayne Memorial.

This chapter provides a summary of the existing research on at-risk youth, financial incentives for academic achievement in schools, and mentoring programs. A list of key terms and their respective definitions is at the end of this chapter.

#### **Challenges of At-Risk Students**

In a study of at-risk students, Aronson (2001) identifies eight barriers that at-risk subjects have in common: Poverty, racial and ethnic identity, isolation and lack of exposure, hostile environments, lack of educational history (learning how to learn), linguistic and cultural adjustment, conflict between school and home, and neglect/abuse.

**Poverty.** There are obvious financial challenges for those growing up in poverty, but Aronson (2001) found underlying challenges that may be even more significant. Respondents in her study described feelings of being labeled and stigmatized by lower-class status, distractions from schoolwork, and heightened racial tensions for minorities.

In a study of the impact of economic hardship on families, McLoyd (1990) found that poverty increases the risk of emotional distress in adults and renders them more vulnerable to the debilitating effects of negative life events (job loss, eviction, etc.). This emotional distress is further intensified if the adult is a single parent, is a minority, is socially isolated, or if he/she takes the blame for the economic difficulty.

McLoyd (1990) also found that poor parents are more likely to use power-assertive parenting techniques in disciplinary situations than their affluent counterparts, and are generally less emotionally supportive of their children. Lower-class parents often issue commands without explanation and are less likely to consult their children about their wishes. In many poor families, harsh and authoritative parenting strategies are met with growing resentment and resistance from children.

**Racial and ethnic identity.** Aronson (2001) found that, while none of the white respondents to her study raised the issue of race as a challenge, all of the non-white respondents described their “non-whiteness” as a barrier to be accounted for. “If being white is perceived as the norm, anyone non-white will at least carry an awareness of his/her ‘difference’, an awareness that can become a heavy burden, especially when combined with poverty.” (p. 13) McDermott & Varenne (1995) state that children from a minority cultural background, mixed with teachers from the dominant cultural background, often suffer enough miscommunication and alienation to give up on school despite the fact that they are, in terms of potential, fully capable.

McLoyd (1990) found that low wages, unemployment, and an increasing proportion of African-American families headed by a single mother are threatening the economic well-being of African-American children. These pressures weaken individuals’ ability to cope with new problems, making poor African-Americans more likely to succumb to the debilitating effects of negative life events.

**Isolation.** At-risk students often have feelings of isolation and a general lack of exposure to the educational and cultural opportunities enjoyed by their more privileged

peers (McDermott & Varenne, 1995). As a result of this, at-risk students often feel that they are constantly behind, and constantly playing “catch up.”

**Hostile environments.** Another common characteristic of at-risk students is exposure to hostile environments. Impoverished parents are more likely to discipline their children with verbal and/or physical abuse than affluent parents, thus making home an unpleasant place to be (McLoyd, 1990). Also, low-income schools are often home to negligent and indifferent teachers and counselors, exposing poor children to unpleasant interactions with other adults. Further, impoverished neighborhoods often are home to dangerous activity, negative influences, and harsh bullying (Thompson & Kelly-Vance, 2001).

**Educational history.** Aronson (2001) also found that at-risk students face adversity in a lack of educational tradition, and in learning how to learn. This concept refers to having little (or no) value placed on education in the home, having little help with homework, being given few tools for studying, and having no exposure to a culture of education. This condition has been identified as a main cause of the achievement gap between privileged and underprivileged students (Alexander, Entwisle & Horsey, 1997).

**Cultural adjustment.** At-risk students often are forced to assimilate to cultures different than those they are raised in, which results in a sense of alienation and a difficulty learning new concepts (Aronson, 2001). Often, there is a distinct conflict between values at school versus those at home (James, 2011).

**Abuse/neglect.** Lastly, Aronson (2001) found that many (but not all) at-risk students endured physical and emotional abuse during their childhood. When these

challenges are faced, academic success becomes more of a distant dream than a feasible goal.

At-risk students respond to these hardships in a variety of ways. Aronson (2001) categorized the stories of her respondents into six main themes: Fear and anxiety, resentment, internalization, early maturity, shame, and self-protection.

The fear and anxiety felt by at-risk students often inhibit their social skills, study habits, curiosity, and ease of expression. All of these are qualities that lead to academic achievement (Aronson, 2001). Further, feelings of fear and anxiety lead to feelings of resentment, a sense of injustice, and a feeling of powerlessness to reverse the unfortunate conditions (James, 2011).

At-risk students also have a tendency to internalize the image projected upon them by their adversity. Aronson (2001) found that, to varying degrees, all subjects in her study became convinced that they were incapable of overcoming the odds against them. Even those who have seemingly beaten the odds and “made it” still admit to struggling with this psychological challenge.

Another common response to growing up at-risk is a feeling of shame. McLoyd (1990) found that at-risk youth often feel the shame of being poor and the shame of not belonging. Poor children often take on responsibilities such as caring for younger siblings and working to help with family finances, causing them to grow up faster than their more affluent peers.

Lastly, the adversity faced by at-risk students often results in their tendency to create a wall around themselves and to protect themselves from further hardships

(Aronson, 2001). Many lose motivation, others develop into disruptive students, and some slowly become what Aronson refers to as “invisible pupils.” (p. 15)

### **Financial Incentives**

Basic economic theory suggests that human beings will increase output if provided a significant monetary incentive (Pink, 2010). Monetary rewards for achievement are common practice in the business world; however they are rarely used in schools (Spencer et al., 2005), and the mere mention of doing so is controversial (Fryer, 2011). In recent years, however, policy makers and education researchers have become increasingly interested in the potential of incentives in education (Bettinger, 2012).

**Controversy.** Although the idea of incentivizing student achievement with money has been supported by many (Bettinger, 2012; Fryer, 2011; Slavin, 2008; Spencer et al., 2005; Flora & Flora, 1999), others have approached the concept with great skepticism and indignation (Raymond, 2008; Kohn, 1993). In fact, more Americans support spanking in public schools (26%) than they do financial incentives (23%) (Allan & Fryer, 2011).

**Intrinsic and extrinsic motivation.** Those opposed to financial incentives in education often cite the relationship between extrinsic and intrinsic motivation (Kohn, 1993; Benabou & Tirole, 2003). Extrinsic motivators such as rewards are often used to get individuals to engage in behaviors they might not otherwise engage in (Deci, Koestner, & Ryan, 1999). Extrinsic motivators have long been a part of schools, and have traditionally been advocated by many educators (Deci, Koestner, & Ryan, 2001).

Recently, however, attention has been drawn to psychological experiments that have demonstrated negative effects on students’ intrinsic motivation caused by extrinsic



rewards. A common argument against extrinsic rewards is that, while the frequency of the wanted behavior will increase in the short term, when the reinforcement is later withdrawn, students will engage in the activity even less than they did before the reinforcement was initiated (Deci et. al, 1999; Benabou & Tirole, 2003). As part of his argument against rewards in education, Kohn (1993) claims to have “irrefutable evidence that people who are trying to earn a reward end up doing a poorer job on many tasks than people who are not.” (p. 49) Further, Deci and Ryan (1985) have long argued that intrinsic motivation results in creativity, flexibility, and spontaneity; whereas extrinsic motivation results in pressure, tension and anxiety.

Others, however, argue that extrinsic motivation often leads to intrinsic—even after the extrinsic motivation is taken away. In a study of the “Book It!” children’s reading program’s impact on the reading habits of college students, Flora and Flora (1999) found that external motivation can serve as a great base for future intrinsic motivation. Also, a meta-analysis of 96 experimental studies conducted by Cameron and Pierce (1994) found that extrinsic rewards do not negatively impact intrinsic motivation. Further, Cameron and Pierce make an important distinction between types of rewards: When rewards are delivered contingent upon some level of performance, positive results often occur. However, when rewards are contingent upon engagement on a given task, regardless of the subjects’ level of performance, an undermining effect is possible (Cameron & Pierce, 1994).

When applied to the theory of self-efficacy described by Bandura (1986), a mastery experience is a mastery experience, regardless of the motivation for doing so. When working with at-risk youth who have experienced failure, Nunn and Parish (1992)

suggest providing youth with opportunities for success, and subsequently focusing on that success over any previous failures.

In sum, some researchers believe that extrinsic motivators will reduce intrinsic motivation in the long term, while others see no harm whatsoever. Perhaps Deci (1975) articulates it best, “If a person’s feelings of competence and self-determination are enhanced, his/her intrinsic motivation will increase. I suggest that some rewards or feedback will increase intrinsic motivation through this process and others will decrease it.” (p. 41)

**Effects of financial incentives on achievement.** Effects on motivation aside, several studies have been conducted to determine the effects of financial incentives on student achievement (Fryer, 2011; Hahn, 1994; Rodriguez-Planas, 2012; Slavin, 2010; Spencer et al., 2005; Raymond, 2008; Bettinger, 2012). Generally, these studies are in agreement that financial incentives have at least a small positive impact on student achievement. The most effective ways to structure and implement incentive programs, however, are debatable as incentive programs can be structured in a multitude of ways. Districts and schools can pick and choose which behaviors and tasks to provide incentives for, the amount to be paid, and the frequency of payment (Fryer, 2011).

In a comprehensive study of 21 different incentive programs around the world, Slavin (2010) found that, overall, incentive programs have potential. His findings, however, were mixed. He found the effects of incentives on volitional outcomes—school attendance, participation in exams, etc.—to show modest gains in secondary schools, but not for primary schools. Further, the outcomes of incentives not directly volitional—such as grade attainment and learning—were found to be minimal.

In a large study of incentive programs involving 250 schools and roughly 36,000 students, Dr. Roland Fryer of Harvard University set up differently structured incentive programs in five large U.S. cities (Chicago, Dallas, Houston, New York, and Washington, DC). Two of these programs incentivized what Fryer calls academic outputs (grades and test scores), while the other three programs focused on academic inputs (attendance, behavior, reading books).

The setup of the Chicago experiment was very simple. Students would be rewarded with \$50 for each “A” on their report card, \$35 for each “B,” \$20 for each “C,” and no reward for a “D” or a failing grade. The average student in this experiment received \$695.61 for the school year, but surprisingly, the incentives did very little to increase achievement, “treatment students passed approximately one-half a course more on average than control students.” (Allan & Fryer, 2011)

In New York, students were incentivized to perform on standardized tests. Students were offered a small stipend (\$5 to \$10) for completing the exam, and more money (\$25 to \$50) for a perfect score. The results showed no statistical improvement. In some instances, incentivized students actually scored lower than those in the control group (Allan & Fryer, 2011).

Fryer suggests that programs based on outputs are ineffective. He found that virtually all students were excited about the idea of getting paid to perform academically, but they had little idea of how to actually raise their achievement. When asked how they would improve, students generally responded that they would try harder or read test questions more carefully. Rarely did these students answer that they would attend school

more often, complete homework assignments, or ask for help with confusing topics.

(Allan & Fryer, 2011)

While the output programs were ineffective, Fryer found success with programs based on inputs that students could more easily comprehend and control. These programs incentivized students to read books (Dallas), attend school and complete assignments (Washington), and master math objectives (Houston).

In Washington, students were given as much as \$10 per day to attend class, behave, wear a uniform, and complete assignments. Students in the treatment group responded with increased attendance, decreased behavior issues, and improved academic performance.

Fryer and his team also had success in Houston, where students were incentivized with two dollars for each mathematics quiz they passed. These students ended up mastering 125 percent more math objectives than their counterparts in the control group.

The most successful of Fryer's incentive programs took place in Dallas, where students were incentivized to read books. If participating students could pass a brief quiz to prove they read a given book (over 80,000 to choose from), they would be rewarded with two dollars. Fryer concluded that, "paying students to read books yields large and statistically significant increases in reading comprehension." (2011)

In sum, Fryer found the output programs had a statistical impact of zero. There were marginal improvements, but nowhere near statistically significant. The input programs, however, showed much stronger results. Fryer explained his reasoning behind this, "Despite showing that students were excited about the incentive programs, the qualitative data also demonstrate that students had little idea about how to translate their

enthusiasm into tangible steps designed to increase their achievement” (2011). Fryer concludes that students understand how to control inputs such as attendance, punctuality, and homework completion. If they can push themselves to accomplish the incentivized inputs, the outputs (grades and test scores) will follow (2011).

It is important to note that all five of Fryer’s major experiments involved underachieving districts, four of which had over 90% of students receiving a free or reduced lunch (Washington, DC, had more than 70% meet this criterion). Generally speaking, the majority of the students involved in these experiments were low achievers.

Research suggests that incentives may be more effective when dealing with high-achieving students from low socioeconomic districts (Spencer et. al, 2005). In a study of an existing program set up to incentivize high achieving high school students (grades 9-12), researchers found that, not only did incentives persuade students to achieve more, but it also helped them to overcome obstacles in their lives. “For students who live in poor, under resourced neighborhoods, the impact of monetary rewards may provide not only financial but also psychological relief...monetary rewards may be especially beneficial to these youth because they may alleviate the stress associated with economic challenges.” (p. 218)

While researchers generally agree that properly-structured incentive programs have potential, there is also agreement that incentives are not a panacea (Fryer, 2011).

### **Mentoring**

Mentoring programs offer another possible solution to the complexity of problems at-risk youth face (Thompson & Kelly-Vance, 2001). The concept of mentoring dates back to ancient Greek mythology. In Homer’s *The Odyssey*, a character named Mentor is

entrusted with the responsibility of drawing out the full potential of Telemachus, another character in the story (Anderson & Shannon, 1998). Contemporary definitions of mentoring generally include a one-on-one relationship between two people, one of whom is older and more experienced in a certain capacity (Thompson & Kelly-Vance, 2008).

Research strongly suggests that a strong relationship with a mentor can significantly change the life of an at-risk child (DuBois et al., 2011; Grossman & Bulle, 2006; Grossman & Tierney, 1998). As a result, there are over 5,000 youth mentoring programs operating in the United States today, and an increasing amount of public money is being allotted to such programs (DuBois et al., 2011).

**Potential impacts of mentoring.** Over the past few decades, researchers have determined that at-risk youth who participate in high-quality mentoring programs are more likely to improve their behavior and attendance in school (Holt et al., 2002; DuBois et al., 2002), reduce their use of drugs and alcohol (Grossman & Bulle, 2006) improve perceptions of their futures (DuBois et al., 2002), and improve their overall academic performance (Grossman & Tierney 1998, Dubois et al. 2002, Holt et al. 2002). Also, at-risk youth who spend sufficient time with a mentor are more likely to be connected to their school environment and to view adults in the school as helpful and caring (Holt et al., 2002).

Additionally, some existing research suggests that mentors may have a positive impact on adolescents' relationships with their families, friends, teachers, and other adults in their lives. Positive mentoring relationships have potential to challenge negative views that adolescents may hold of various relationships they have with others, and

demonstrate that positive, caring relationships with these people are possible (Grossman & Rhodes, 2002).

Resiliency, defined as the ability to rebound after an upset or trauma and the resourceful use of support networks, has proven to be a vital attribute of a successful student (Grossman & Bulle, 2006). Findings from a longitudinal study that lasted over 40 years reveal that one of the key distinguishing features separating resilient at-risk youth from those who fall behind is a meaningful, long-lasting relationship with a caring, responsible adult (Werner & Smith, 1992).

**School-based mentoring.** Because youth spend almost a third of their waking hours at school (Herrera et. al, 2011), school-based mentoring programs allow mentors convenient access to youth on a regular basis. The benefits of school-based mentoring, however, do not end at convenience. Studies have shown that participation in school-related activities has a positive impact on students' sense of school belonging, which can lead to increased attendance and overall academic performance (Grossman, Walker, Kotloff, & Pepper, 2001). Also, peers may see attention from adults in a very positive light, thus boosting the status of the mentored child (Grossman & Bulle, 2006).

**Peer influence.** In general, children become increasingly influenced by their peers as they transition from childhood to adolescence (Fuligni, Eccles, Barber & Clements, 2001). In a three-year longitudinal study of nearly 7,000 adolescents (grades 9-11) in Wisconsin and California, Mounts and Steinberg (1995) found adolescent academic achievement to be influenced by peers, both positively and negatively. They also found adolescent drug and alcohol use to be largely influenced by peers.

Research has also shown peer influence to extend to adolescents' choice of extracurricular activities. Mahoney and Stattin (2000) found that youth were more likely to participate in a given activity if one of their friends was planning on participating as well. Further, the study observed that students who participated in structured activities after school reported larger peer groups and were less likely to engage in antisocial behaviors such as delinquency, criminality, school dropout, and alcohol/drug use.

**Natural relationships vs. planned relationships.** According to Floyd (1993), there are two types of mentoring relationships: Natural relationships and planned relationships. Natural mentoring occurs through friendship, coaching, teaching, and counseling. Planned mentoring, on the contrary, occurs through structured programs in which mentors and mentees are matched through a formal selection process. While natural relationships have proven to be most successful, planned relationships have potential to be just as effective if planned properly. According to Grossman and Bulle (2006), most people feel comfortable at the beginning of a relationship with people who are similar to themselves in some way. Thus, identification of shared interests between mentor and mentee is important to a planned relationship.

While school-based mentoring programs tend to focus on the academic success of a given student, there is considerable research supporting the idea that the most effective mentoring relationships are derived from informal or social interactions (Herrera et al., 2011). Further, mentoring tandems who play games, eat lunch together, and just “hang out” are more likely to report having a close relationship than those who spend a majority of their time together on schoolwork (Grossman & Bulle, 2006).



**Challenges of mentoring programs.** While most researchers agree that mentoring programs can have a positive effect on at-risk youth, there is also agreement that poorly structured programs can actually have a negative effect on those they serve (Smith & Stormont, 2011). In fact, it is estimated that only about half of planned youth mentoring relationships last beyond a few months (Spencer et al., 2005). When relationships terminate prematurely, they have potential to do much more harm than good (Grossman & Rhodes, 2002).

Adolescents are especially vulnerable to issues of acceptance and rejection, especially when family dynamics are unstable (Lerner & Galambos, 1998). If a mentoring relationship were to become negative, fall apart, or end early, mentees may end up with profound feelings of disappointment, rejection, and betrayal (Rhodes, Liang, & Spencer, 2009).

Because the processes of changing attitudes, relationships, and perceptions of reality are complex, the benefits of mentoring emerge over a relatively long period of time (Grossman & Rhodes, 2002). In a qualitative study of mentoring relationships, Styles and Morrow (1992) found that mentoring relationships needed to be in place for at least six months before true benefits began to emerge.

**Mentoring AND incentive programs.** Fryer (2011) states that students participating in incentive programs are genuinely excited about improving their academic performance, but generally have little idea as to how to translate this enthusiasm to tangible steps toward success. Given the potential impact of an adult mentor as discussed by DuBois et al. (2011), one wonders if the missing puzzle piece to incentive programs

could be mentoring. Where there is limited research on the power of incentives, research on programs that combine incentives and mentoring is even more scarce.

Hahn (1994) evaluated one significant program that has attempted the combination of mentoring and financial incentives (among a host of other services) in the Quantum Opportunities Program (QOP), which operated in five different communities (Philadelphia, Oklahoma City, San Antonio, Saginaw, and Milwaukee) from 1989 to 1994. The program, funded by the Ford Foundation, randomly assigned 25 9<sup>th</sup> grade students to a treatment and control group (a total of 50 students in each city).

QOP guaranteed participants up to 250 hours of education, 250 hours of development activities, and 250 hours of mentoring services each full year from the ninth grade through graduation (or for four full years for those who dropped out). Incentives of roughly \$1 per hour were offered for participation in programming, with \$100 bonuses set for certain levels of participation achieved. The program was designed to encourage long-term involvement in an array of services, and to provide meaningful relationships with adults without fear of the relationships ending prematurely (Hahn, 1994). On average, \$10,600 was spent on each pupil over four years, with roughly 50% of the money spent on stipends and bonuses to participants, and the other 50% spent on program costs.

In the end, Hahn (1994) found that QOP members were more likely to graduate high school, enroll in post-secondary school, receive an honor or award, be hopeful about their future, and more likely to consider their life a success. Further, QOP members were less likely to be high school dropouts and less likely to have children during their high school years.

Perhaps most encouragingly, Hahn (1994) found that most participants stayed with the program for all four years, and that the consistent mentoring had an impact over time. “If young people are connected with caring adults for sustained periods of time, year-round, results do emerge.” (p. 16)

**Key Terms:**

**Mentoring:** A one-on-one relationship between two people, one of whom is older and more experienced in a certain capacity. Mentoring involves teaching, sponsoring, encouraging, counseling, and befriending (Thompson and Kelly-Vance, 2001).

**At-risk:** Students exposed to poverty, dangerous neighborhoods, and family dysfunction (i.e., single parent homes, abusive/neglectful caretakers, out of home placement, etc.). Often, these factors result in risky behavior (i.e., early sexual behavior, truancy, drug/alcohol use, associating with delinquent peers, etc.) (Thompson & Kelly-Vance, 2001).

**Intrinsic Motivation:** Engagement in a certain behavior for no recognizable reward other than the activity itself (Flora & Flora, 1999).

**Extrinsic Motivation:** Engagement in a behavior because of an incentive that is not a part of the activity (Flora & Flora, 1999).

**Extrinsic Rewards:** Any mechanism intended to motivate or reinforce a given behavior. Examples include financial incentives, gold stars, pizza parties, honor rolls, and even verbal rewards (i.e., “nice job!”) (Deci et al., 2001).

**Educational Autonomy:** The ability to take responsibility for one’s own learning (Moeller, Theiler, & Wu, 2012).

**Role Model:** A person whom others look to as an example to be imitated (Herrera et al., 2011).

**Incentive:** For purposes of this study, incentives will be defined as a payment or concession to stimulate greater output (Fryer, 2011).

**Culture:** A whole way of life of a social group or society through which a social order is communicated, reproduced, experienced and explored (Williams, 1981).

**Self-Efficacy:** An individual's beliefs about his/her personal competence or effectiveness in a given area (Hoy & Hoy, 2006).

### **CHAPTER III**

#### **RESEARCH DESIGN AND METHODOLOGY**

The purpose of this study was to understand the experience of at-risk students involved in the Champions of Wayne mentoring and incentive program at Wayne Memorial High School. While there is an abundance of research on the impact of mentoring programs, as well as a growing body of research on the impact of monetary incentive on at-risk students, very little research exists on the combination of the two. Further, Champions of Wayne is an increasingly popular program that is being replicated at other high schools in the Detroit area, yet the programs exist with little formal evaluation.

This chapter explores the research methods necessary to understand the experience of individual students who enroll in Champions of Wayne.

#### **Self as Researcher**

The motivation to conduct this research came from my current role as Executive Director of Champions of Wayne. The program, which originated in 2009, was facilitated by the school's principal and psychologist until the summer of 2011. That summer, the decision to hire a full time director was made and I was hired from my role at Franklin Middle School (which feeds directly into Wayne Memorial High School). During my time in this role, I have witnessed many hard-working students achieve their goals, and have also observed students who have remained largely apathetic toward their schoolwork and their futures despite enrollment in Champions.

Like many educators, I was interested in the potential of various interventions for at-risk students. Further, it has been beneficial for me as director of the program to gain a deeper understanding of the program I lead and where improvements might be made.

### **Research Tradition – Mixed Methods**

As more and more children fall victim to the perils of growing up in poverty, single-parent homes, and other challenges faced by those labeled “at-risk,” educators are scrambling for ways to counteract these problems. Mentoring and financial incentives have both been looked at as potentially helpful in uplifting children from the cycle of poverty (Hahn, 1994; DuBois et. al, 2002), but both have been found to have their limits (Fryer, 2011; Grossman & Tierney, 1998).

Krathwohl (2009) poses the question, “Is the phenomenon best described in numbers or with words?” (p. 28) When examining the two aspects of Champions of Wayne—mentoring and financial incentives—the answer was both. Looking at the research literature used for this study, I found the vast majority of financial incentive studies to be quantitative, while the vast majority of studies on mentoring have been qualitative. This is largely because, when attempting to answer the question, “Did (or Does) the program work?” different strategies were used to answer the question.

Educational programs geared around financial incentives tend to be focused on short-term gains in a given academic area (grades, test scores, attendance, etc.). Across the board, these programs have awarded the financial incentives based on some sort of quantifiable achievement (increase in GPA, achieving a certain test score, attend school a certain number of days per week, etc.). Champions of Wayne is no different, motivating students by setting a customized GPA goal that is based on the career average GPA of

that particular student. This setup begs the question, “Does the incentive work?” Which ties directly into research question #4, “How does participation in Champions of Wayne affect students’ performance in school?” Krathwohl (2009) states that numbers often have the significant advantage over words because we can differentiate far more precisely with numbers. For example, let’s assume one student improves from a 2.3 GPA to a 3.0, and another improves from a 0.3 to a 2.5. Both students have made considerable academic improvements, but their GPAs differentiate them. Thus, a quantitative aspect of this study was necessary.

On the contrary, mentoring relationships are more difficult to quantify, and exploration of an interpersonal relationship seemed best described by words and not numbers. As Krathwohl (2009) points out, “Adding qualitative data to a quantitative study can help keep researchers close to participants so they learn what lies behind the numbers—information crucial to their proper interpretation.” (p. 236) If a student were to significantly improve his/her GPA, it is worthwhile to know what factors led to this improvement. Perhaps the financial incentive fueled the achievement, or perhaps this particular student built a stronger self-efficacy as a result of a positive interpersonal relationship. Qualitative data can provide this crucial information.

A mixed-methods approach, then, was driven by the study’s needs, and not by the “desire to be trendy” (Miles, Huberman & Saldana, 2014, p. 43).

**Multiple Case Study.** While several qualitative approaches to this study may have been appropriate, I chose to use a multiple case study.

Understanding mentoring relationships, self-efficacy of students, and academic performance required a detailed look at students’ lives: Family dynamics, academic

history, attitudes toward school, perceptions of ability, perception of future, etc. A narrative would definitely have provided an understanding of the lives of each subject, but would not have been geared toward understanding their experience with Champions of Wayne. An ethnography, while very interesting, would have focused on understanding the culture of the entire student body and missed out on the details of specific mentoring relationships.

A phenomenological study, which describes the meaning for several individuals who have experienced a concept or phenomenon (Creswell, 2007) was also considered and seems to overlap somewhat with the case study. While students in Champions of Wayne were experiencing the same overall program, it is important to understand that all mentoring relationships are unique, and that students likely had unique experiences as a part of the program. According to Merriam (1998), “Case study has proven particularly useful for studying educational innovations, for evaluating programs, and for informing policy.” (p. 41) Further, considering the complex nature of mentoring relationships, there seems to be an unlimited number of variables that might have influenced a given student’s experience. Merriam (1998) also explains that case studies are particularly advantageous when variables are so embedded in the situation that they are impossible to identify ahead of time.

Considering the size of the Champions of Wayne program (over 500 students enrolled for the semester), an individual case study may have been too narrow to capture the varying experiences of students in the program. Stake (2013) explains that an important reason for multiple case research examine how programs and phenomena interact in different situations. Students at Wayne Memorial came from varying backgrounds, were



paired with varying mentors, and are likely to have had vastly different experiences in the program. To address these variances, a multiple case study was conducted. Merriam (1998) argues that the more cases involved in a study, and the greater the variation across the cases, the more compelling the interpretation is likely to be. Also, a common strategy for enhancing validity and generalizability is to include multiple cases.

According to Creswell (2007), case study research involves the study of an issue explored through one or more cases within a certain setting or context. Case studies are conducted through detailed data collection over a period of time, using multiple sources of information.

To select participants for this study, I used purposeful sampling (Creswell, 2007). Participants in Champions of Wayne varied in terms of grade, GPA, race, gender, socioeconomic status, sexual orientation, and so on. I selected five students who I believed would each show different perspectives on the program. Stake (2013) claims that the benefits of multiple case study will be limited if fewer than four cases are chosen, and will be unmanageable if more than 10 cases are chosen. Further, Miles et. al (2014) suggest “five richly researched cases” (p. 34) for multiple case studies.

The five students were selected from different categories:

- An academically-sound student (2.5 GPA or better) who successfully attains his/her goal for the fall 2014 semester
- An academically-sound student (2.5 GPA or better) who does not achieve his/her goal
- A low-achieving student (below 2.5 GPA) who is successful
- A low-achieving student who is unsuccessful

- The fifth student was selected based on a need for variety and diversity among cases

Stake (2013) suggests that one of the main criteria for selecting cases is to provide diversity across contexts.

### **Data Collection**

Yin (2003) recommends six types of information to collect: Documents, archival records, interviews, direct observations, participant-observations, and physical artifacts.

Documents were obtained in the form of a student's school assignments, Champions contract (with goals, etc.), and other related school paperwork. Archival records such as a student's academic and behavioral history were also used.

The interviews were a key component to understanding each student, their relationships, and their overall experiences as a part of Champions of Wayne. These interviews were conducted in the interest of understanding their experience and the meaning they make of that experience.

I interviewed each of the students following their respective experiences as participants in Champions of Wayne for the 2014-2015 fall semester. In an effort to understand each student as an individual, the interviews were semi-structured.

Krathwohl (2009) explains that, while no interview is entirely unstructured, less-structured interviews provide more opportunity to explore the respondent's view of the world.

While the interviews were relatively unstructured, I approached each interview with a list of issues to be covered. Patton (1987) describes six categories of questions that can be asked during a qualitative interview:

- Experience/behavior – events that could have been observed
- Opinion/belief – respondent’s thoughts regarding their experience and what it means to them
- Feelings – Emotional response to the experience
- Knowledge – Facts that the subject knows
- Senses – What can be seen, smelled, heard, tasted or touched
- Background/demographics – the location of the respondent relative to others

I was sure to cover all six categories of questions with each student, and also attempted to understand basic concepts regarding each student including:

- Family dynamics
- Reasoning for joining Champions of Wayne
- Dynamics of relationship with mentor
- How the \$200 incentive affected personal motivation
- Perceptions of ability
- Perceptions of future

Each interview was what Krathwohl (2009) describes as a “focused interview” (p. 299).

Questions initially searched broad areas to find what was significant, then delved into increasingly narrow areas when significance was found.

Direct observations and participant-observations were made and recorded throughout the semester, and were relatively easy to conduct given that I was present in the school on a daily basis.

This data collection led to a detailed description of each student, their history, motivation, and experience in the program (Stake, 1995).

### **Quantitative Research – Quasi-Experimental Design**

For the quantitative part of the study, a quasi-experimental design was used. Estimation of the effect of participation in Champions of Wayne on academic achievement required a comparison between what happened as a result of the treatment (treatment group), and what would have happened if the treatment had not been implemented (control group) (Reichardt, 2009).

While a randomized experiment would likely have produced more credible results, ethical concerns made the quasi-experiment a more desirable option. A truly randomized sample would have meant that some students would have randomly been assigned to Champions of Wayne, while others would have been randomly forbidden from participating (Reichardt, 2009). This quasi-experiment used a treatment group comprised mostly of students who were proactive in signing up for the program, and a control group of those who, for one reason or another, elected not to participate. This provided a clear distinction between those with a mentor and an incentivized goal, and those without an incentive and an official mentor.

Because Champions of Wayne set customized GPA goals for each enrolled student based on their respective cumulative GPAs, the quantitative component of this study focused on the GPA growth for each student. GPA growth (GROWTH) was be calculated by subtracting each student's cumulative GPA (CAREER) from their respective semester GPAs (SEM). The formula will look like this:

- $SEM - CAREER = GROWTH$

For example, Student A entered fall semester carrying a 2.5 CAREER GPA and subsequently earned a 2.8 SEM, while Student B entered the semester with a 2.1 CAREER and earned a 1.5 SEM.

- Student A:  $2.8 - 2.5 = 0.3$
- Student B:  $1.5 - 2.1 = -0.6$
- Student A saw a GPA GROWTH of 0.3 while Student B recorded a -0.6.

The main independent variable for this study was participation in Champions of Wayne. Students either did or did not participate. Other independent variables that were analyzed were ethnicity, socioeconomic status, grade level, and gender. The dependent variable was the GROWTH statistic.

As a member of the Wayne Memorial High School staff, I had access to student academic records and profiles via Zangle, the web-based student information system utilized by the Wayne-Westland district.

### **Data Analysis**

As opposed to collecting data for an entire year and then taking the summer to “go over my notes” (Miles et. al, 2014), I analyzed data concurrently with collection.

Analysis of qualitative data—particularly interviews—was first coded as spelled out by Saldana (2013). The first cycle of coding grouped subject responses into an array of categories. Then, the second cycle grouped the existing codes into a smaller number of themes.

Once codes and themes emerged, interviews and observations were analyzed on both a within-case basis and a cross-case basis (Miles et. al, 2014). The within-case

analysis allowed for study of each student as an individual, whereas the cross-case analysis led to noteworthy similarities and differences between the cases.

Presentation of this data in chapter five is according to Stake (1995), who suggests presenting large amounts of data for the reader to self-analyze. He also suggests seven steps for presenting this data:

1. Opening each case with a selected vignette
2. Describe the issues that will help the reader understand each case
3. Present a body of data
4. Develop a few key issues
5. Probe the issues with experiential data and indications of how points were confirmed
6. Summarize understandings of each case
7. Use a closing vignette to remind the reader that this is just one person's encounter with a complex case

After the data presentation, Yin (2003) suggests creating a word table to display themes and show how the cases relate to one another. This table has two columns: One for the themes and the other with a quote from each student that applies directly to the given theme. After the word table, I compared and contrasted these themes with existing literature on at-risk students, mentoring, and financial incentives.

Creswell (2007) discusses the use of computer programs in qualitative data analysis, and suggests that these programs are most useful when analyzing 500 or more pages of text. While these programs have the ability to streamline the coding process, Creswell also notes that they put a machine between the researcher and the actual data,

creating an uncomfortable distance between the two. I decided to analyze the qualitative data myself.

Creswell (2007) notes that the processes of data collection, analysis and reporting do not necessarily have distinct steps. These processes are interrelated, and often occur simultaneously. Further, Creswell states that qualitative researchers often learn by doing, and that each study is crafted somewhat differently. He refers to the “data analysis spiral” (p. 150) where researchers tend to move in analytic circles—data presentation to analysis, back to presentation and further analysis—rather than in a fixed linear fashion.

Quantitative data analysis begins with a look at the comparability of the treatment and control groups. To determine statistical similarity of the two populations (treatment and control) in terms of ethnicity, gender, socioeconomic status, and grade level (9-12), chi-square tests were used. According to Krathwohl (2009), chi-squares test the fit of treatment and control groups, as well as eliminate the alternate explanation of sampling and chance error.

After addressing comparability, quantitative analysis focuses on the GROWTH statistic. The quantitative analysis targeted research question #4, which asks: How does participation in Champions of Wayne affect students’ performance in school? The null hypothesis is that there is no difference between the treatment and control groups, and the alternative hypothesis is that there is a difference between the two:

H<sub>0</sub>: There is no difference between the academic growth of students enrolled in Champions of Wayne and the growth of students not enrolled in Champions of Wayne.

H<sub>1</sub>: There is a difference between the academic growth of students enrolled in Champions of Wayne and the growth of students not enrolled in Champions of Wayne.

To answer this question and determine whether to accept or reject the null hypothesis (and thus retain the alternate hypothesis), an independent samples t-test is conducted. Krathwohl (2009) states, “The t-test of differences between means is widely regarded as accurate and sensitive.” (p. 473)

According to Krathwohl (2009), most social science researchers use a 68%, 95%, or 99% confidence level when conducting t-tests and chi-square tests. For purposes of this study, which involves relatively large populations but does not involve life-and-death decisions, a 95% confidence level is used ( $p = 0.05$ ).

### **Limitations/Delimitations**

While the mixed methods approach likely makes this a stronger study than strictly a quantitative or qualitative study (Creswell, 2007), this study is not without limitations and delimitations.

First, the study is conducted over the course of only one semester, which breaks down to about four months of schooling and mentoring. Styles and Morrow (1992) state that mentor-mentee relationships take at least six months before they begin to show true progress. Some of the relationships studied were preexisting, as many upperclassmen have known their mentors for years. Others, however, were brand new. The vast majority of ninth graders, and an assortment of upperclassmen likely had just met their mentors.



Further, the multiple case study involved five out of over 500 participating students. Purposeful sampling addressed this and ensured a representative sample, but hundreds of stories remain untold.

On the quantitative side, it can be argued that grades, GPAs, and the GROWTH statistic are imperfect. While they may be the best available quantitative measures of academic achievement, GPAs do not account for course rigor (calculus vs. basket-weaving) or variance in teacher grading habits.

Also, the goal-setting process for Champions of Wayne was an inexact science. The goals, set by the program director, were generally a 15% increase from a given student's cumulative GPA (Cumulative GPA  $\times$  1.15 = Goal). The director, however, analyzed each student's schedule, course/teacher difficulty, and several other factors before setting the goal. Often, a student who had experienced a particular life hardship was given a more reachable goal. Other times, a student who was identified as "talented but lazy" was challenged with a GPA goal much greater than the usual 15% increase.

### **Validity, Reliability and Generalizability**

Considering the fact that the two main aspects of the Champions of Wayne program are mentoring and financial incentives to improve grades, the mixed methods study was imperative to the validity of the study. While a qualitative study made sense when examining the effects of mentoring relationships, the face validity of the study would have suffered without a quantitative element. Krathwohl (2009) defines face validity as the appearance of validity to a layperson, or someone not as familiar with the actual validity of a given study. The quantitative element of the study helps to satisfy the question: "Does this actually work?" In other words, if Champions of Wayne placed an

incentive on improving one's GPA, did students who participated in Champions of Wayne actually improve their GPAs?

The validity of the qualitative side of the study depends largely on my ability to remove bias from the interviews and observations. As director of the program, and someone who has worked with many of these students for over five years, it was challenging to maintain a researcher perspective at all times. Based on suggestions from Miles, Huberman and Saldana (2014) to minimize bias, I did my best to:

- Keep research questions firmly in mind
- Show my field notes to colleagues and get their feedback
- Triangulate with several data collection methods
- Think conceptually
- Include dissidents and people with different points of view

**Triangulation.** Krathwohl (2009) notes that validity is increased when data is triangulated between two or more sources to establish factual accuracy. For example, one student claimed that he got in far less trouble in high school than he did in his middle school days. District behavioral data was obtained to corroborate his story.

The reliability of the quantitative analysis was improved by the fact that the GROWTH statistic is customized for each student. Instead of comparing the average GPAs of the treatment and control groups without regard to previous achievement, I analyzed the differences in growth from the beginning of the semester until the end. This particularly affects the internal consistency reliability (Krathwohl, 2009).

For the qualitative analysis, many of the same measures put into place to improve validity also helped with reliability. Stability reliability (Krathwohl, 2009) was improved by multiple sources of data.

Considering the sample sizes that are involved in the quantitative analysis (524 students for the treatment group and 1,142 for control), this study has potential to make a significant contribution to the relatively small amount of research surrounding incentive programs. That said, it does not provide a definitive answer to the question of whether or not incentive programs are effective. Because this is a quasi-experiment and not a random sample, generalizability is somewhat limited. While the intent is to provide valid and reliable qualitative research, the complex nature of human relationships makes it nearly impossible to assert that the mentoring relationships involved in this study will be easy to replicate.

## CHAPTER IV

### QUANTITATIVE DATA AND ANALYSIS

This chapter presents a statistical analysis of the Champions of Wayne program from the fall semester of the 2014-2015 school year. The first section is an analysis of the comparability of the treatment group (students enrolled in Champions of Wayne) and the control group. The following section is an analysis of the GPA growth for each group overall, and the last section of this chapter provides a look at GPA growth within each group.

The financial incentive aspect of Champions of Wayne involved a \$200 incentive for each student who achieved a customized semester grade point average (GPA) goal. These goals were set by the program director, and generally involved a 15% improvement from each student's CAREER (cumulative) GPA. For example, a student with a 3.0 CAREER GPA likely had a goal of a 3.5 GPA for the semester.

Because the financial incentive was based on individual GPA growth, the quantitative analysis focused on the GROWTH statistic, which was calculated by subtracting each student's CAREER GPA from his/her semester GPA (SEM). This analysis sought to determine whether or not there were statistically significant differences between the treatment and control groups. A 95% confidence level was used ( $p=0.05$ ).

For the fall semester of 2014, Wayne Memorial High School was home to 1,666 students who started and finished the semester. Students who enrolled or withdrew during the semester were dropped from the study, as were students in the SXI (cognitively impaired) department. Of the population, 524 students were enrolled in Champions of Wayne, leaving 1,142 who were not.

**Comparability**

In the following tables, Group 1 refers to students enrolled in Champions, and Group 2 refers to those not enrolled. For purposes of this study, each population is broken down into four subcategories: Ethnicity, Socioeconomic Status (Free Lunch, Reduced-Price Lunch, or Full Pay Lunch), Grade Level (9-12), and Gender. Before GPA results, comparability of the treatment and control groups is discussed.

**Ethnicity.** Table 1 shows the breakdown of both groups in terms of ethnicity. Wayne Memorial is home to large African-American and white populations, and has smaller Native American, Latino, and Asian populations. The smaller populations are small enough (less than 50 students in each group) that they are grouped together as “Other” for purposes of this study.

**Table 1**  
**Ethnicity**

Group		Frequency	Percent	Valid Percent	Cumulative Percent
1	African-American	199	38.0	38.0	38.0
	Other	25	4.7	4.8	42.7
	White	300	57.3	57.3	100.0
	Total	524	100.0	100.0	
2	African-American	379	33.2	33.2	33.2
	Other	80	7.0	7.0	40.2
	White	683	59.8	59.8	100.0
	Total	1142	100.0	100.0	

Table 1 makes it evident that the two groups are proportionally close, but not exactly equal. For example, Group 1 (Champions) is comprised of 38% African-American students, while Group 2 (control) is 33.2% African-Americans.

In Table 2, actual count (same information as Table 1) is displayed above the

“expected count,” which represents the number of each demographic that would be in each group if both populations were evenly distributed across ethnicity. Table 2 shows that the actual count of each ethnicity is not exactly the same as the expected count; however, the actual count does seem to be somewhat close to the expected count in each ethnicity. For example, if Champions of Wayne enrollment across ethnicity were to mirror that of Wayne Memorial High School, 181.8 African American students would be expected to enroll in Champions of Wayne (first row, Group 1). The actual enrollment, however, is slightly higher at 199. This means there is a slightly higher percentage of African-American students enrolled in Champions of Wayne than in the overall Wayne Memorial student body. Further, there is a slightly lower percentage of white and “other” students enrolled in Champions of Wayne than in the overall student body. The question then becomes, is this a statistically significant difference?

**Table 2**  
**Ethnicity**  
**Actual Count vs. Expected Count**

			Group		Total
			1	2	
Ethnicity	African-American	Count	199	379	578
		Expected Count	181.8	396.2	578.0
	Other	Count	25	80	105
		Expected Count	33.0	72.0	105.0
	White	Count	300	683	983
		Expected Count	309.2	673.8	983.0
Total	Count		524	1142	1666
	Expected Count		524.0	1142.0	1666.0

Table 3 displays results from a chi-square test. For this study, as well as most social science research, a 95% level of significance ( $p=0.05$ ) is used. With that, the

Pearson Chi-Square significance value would need to be below 0.05 for the two groups (Champions and control) to be considered statistically different. Table 3 displays a value of 0.06.

**Table 3**  
**Ethnicity**  
**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.618 <sup>a</sup>	2	.060
Likelihood Ratio	5.731	2	.057
N of Valid Cases	1666		

p = 0.06

**Socioeconomic Status.** Table 4 presents a socioeconomic breakdown of the two groups. Again, both groups seem to be proportionally even when looking at representation from students receiving a free lunch, a reduced-price lunch, and those who pay for their lunch in full.

**Table 4**  
**Socioeconomic Status**  
**Free, Reduced, and Full-Pay Lunch Status**

Group	Frequency	Percent	Valid Percent	Cumulative Percent
1 Free	287	54.8	54.8	54.8
Full-pay	175	33.4	33.4	88.2
Reduced	62	11.8	11.8	100.0
Total	524	100.0	100.0	
2 Free	642	56.2	56.2	56.2
Full-pay	391	34.2	34.2	90.5
Reduced	109	9.5	9.5	100.0
Total	1142	100.0	100.0	

Table 5 and Table 6 show that there is very little difference between the two groups in terms of socioeconomic status. The actual counts are similar to the expected counts, and the significance value of 0.36 is far above the critical 0.05.

**Table 5**  
**Socioeconomic Status**  
**Actual Count vs. Expected Count**

			Group		Total
			1	2	
STATUS	Free	Count	287	642	929
		Expected Count	292.2	636.8	929.0
	Full-pay	Count	175	391	566
		Expected Count	178.0	388.0	566.0
	Reduced	Count	62	109	171
		Expected Count	53.8	117.2	171.0
Total		Count	524	1142	1666
		Expected Count	524.0	1142.0	1666.0

**Table 6**  
**Socioeconomic Status**  
**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	2.041 <sup>a</sup>	2	.360
Likelihood Ratio	1.996	2	.369
N of Valid Cases	1666		

p = 0.36



**Grade Level.** Similar to many other high schools, students at Wayne Memorial are grouped into four grades: 9<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> grade. It is important to note that students are grouped into these grades based on completed credits, and not necessarily by how many years they have been in high school. For example, a 9<sup>th</sup> grade student who fails a number of classes his/her first year in high school will be classified as a 9<sup>th</sup> grader the following year.

Table 7 presents a breakdown of each group by grade level (Group 1: Champions, Group 2: Control). One noteworthy difference emerges when looking at the percentage of 9<sup>th</sup> graders enrolled in Champions (20.4%) and the percentage of 9<sup>th</sup> graders in the control group (35.6%).

**Table 7**  
**Grade Level**

Group		Frequency	Percent	Cumulative Percent
1	9	107	20.4	20.4
	10	117	22.3	42.7
	11	156	29.8	72.5
	12	144	27.5	100.0
	Total	524	100.0	
2	9	406	35.6	35.6
	10	268	23.5	59.0
	11	235	20.6	79.6
	12	233	20.4	100.0
	Total	1142	100.0	

Table 8 shows the actual count in each group as compared to the expected count.

**Table 8**  
**Grade Level**  
**Actual Count vs. Expected Count**

			Group		Total
			1	2	
GRADE 9	Count		107	406	513
	Expected Count		161.4	351.6	513.0
10	Count		117	268	385
	Expected Count		121.1	263.9	385.0
11	Count		156	235	391
	Expected Count		123.0	268.0	391.0
12	Count		144	233	377
	Expected Count		118.6	258.4	377.0
Total	Count		524	1142	1666
	Expected Count		524.0	1142.0	1666.0

Table 9 displays chi-square, or “goodness of fit” test, to determine if the two groups are statistically different in terms of grade-level. The key number here is the 0.00 value in the first row (Pearson Chi-Square).

**Table 9**  
**Grade Level**  
**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	47.798 <sup>a</sup>	3	.000
Likelihood Ratio	49.100	3	.000
Linear-by-Linear Association	40.768	1	.000
N of Valid Cases	1666		

p = 0.000

**Gender.** The number and percentage of males and females in each group is displayed in Table 10. There is a noticeable difference in the Champions group (Group 1), which is comprised of 319 females and 205 males. Roughly 61% of students enrolled in Champions of Wayne are female.

**Table 10**  
**Gender**

Group	Frequency	Percent	Valid Percent	Cumulative Percent
1 Valid	F	319	60.9	60.9
	M	205	39.1	100.0
	Total	524	100.0	100.0
2 Valid	F	542	47.5	47.5
	M	600	52.5	100.0
	Total	1142	100.0	100.0

The actual count of each gender is compared with the expected count if the student population were evenly distributed. There are more female students at Wayne Memorial than male students.

**Table 11**  
**Gender**  
**Actual Count vs. Expected Count**

			Group		Total
			1	2	
GENDER	F	Count	319	542	861
		Expected Count	270.8	590.2	861.0
	M	Count	205	600	805
		Expected Count	253.2	551.8	805.0
Total		Count	524	1142	1666
		Expected Count	524.0	1142.0	1666.0

The chi-square, or “goodness of fit” test is displayed in Table 12. Again, the third column of the first row (Pearson Chi-Square) is the key figure. A value of greater than 0.05 would result in a 95% confidence that the two groups are statistically equal in terms of gender representation. Below 0.05 leads to a conclusion that the two groups are statistically different.

**Table 12**  
**Gender**  
**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	25.894 <sup>a</sup>	1	.000		
Continuity Correction <sup>b</sup>	25.360	1	.000		
Likelihood Ratio	26.065	1	.000		
Fisher's Exact Test				.000	.000
N of Valid Cases	1666				

p = 0.000

**Growth Scores**

Research question #4 asks: How does participation in Champions of Wayne impact students' performance in school? Largely, this is where the quantitative analysis comes into play. Each student at Wayne Memorial enters a given semester with a career (or average) GPA. For students in grades 10-12, this is an average of each semester GPA that they have achieved in high school until the beginning of the given semester. Obviously, ninth graders will not have a career high school GPA entering their first semester, but cumulative middle school GPAs were obtained for each ninth grader to be used as a baseline for their GPA growth.

With the Career GPA (CAREER) as the baseline, and the 2014 fall semester GPA as a measure of academic performance, each student ends up with a difference between the two numbers, which represents their growth. The formula to calculate growth for each student would then be: SEM1 – CAREER = GROWTH.

For example, student A enters the semester with a 2.0 CAREER, and obtains a 2.6 SEM1:

$$2.6 - 2.0 = +0.6 \text{ GROWTH}$$

On the flip side, student B enters the semester with a 2.0 CAREER and obtains a 1.8 SEM1:

$$1.8 - 2.0 = -0.2 \text{ GROWTH}$$

Because the Champions of Wayne incentive is based on growth off of a career GPA in a given semester, this is the key statistic for the quantitative analysis.

The mean (average) GROWTH score for each group is displayed in Table 13. The Champions group (Group 1) has an average GROWTH of 0.13, while the average GROWTH for the control group (Group 2) is -0.29. The difference between the two means is 0.42.

**Table 13**  
**Mean (average) GROWTH**  
**Group 1 (Champions) vs. Group 2 (Control)**

	Group	N	Mean	Std. Deviation	Std. Error Mean
GROWTH	1	524	.12912	.635156	.027747
	2	1142	-.29096	1.292141	.038236

To determine if this is a significant difference, an independent samples T-test was conducted. Table 14 displays the results of the T-test. The significance value under Levine’s Test is less than 0.05, which means that the two means are not statistically equal. Further, the T-test concludes that there is a 95% confidence that, if the test were to be run again with similar groups, the difference between the two mean GROWTH scores (Champions and control) would be between 0.32 and 0.51.

**Table 14**  
**GROWTH Averages**  
**Champions vs. Control**

**Independent Samples Test**

	Levene's Test for Equality of Variances		t-test for Equality of Means							
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
								Lower	Upper	
Difference Equal variances assumed	162.186	.000	7.060	1664	.000	.420082	.059501	.303378	.536787	
Difference Equal variances not assumed			8.892	1656.781	.000	.420082	.047243	.327420	.512745	

p = 0.000

**Program Effects**

The significant difference in GROWTH between treatment and control groups warrants a deeper look into the subgroups of both. Table 15 displays mean GROWTH scores as they pertain to ethnicity. African-American students scored above the mean in both groups (Champions and control), while white students scored slightly below.

**Table 15**  
**GROWTH Averages**  
**Champions vs. Control**  
**By Ethnicity**  
 Difference

Group	ETHNICITY	Mean	N	Std. Deviation
1	African-American	.15328	199	.609778
	Other	-.05864	25	.607244
	White	.12874	300	.653062
	Total	.12912	524	.635156
2	African-American	-.26516	379	1.287994
	Other	-.24001	80	1.238030
	White	-.31125	683	1.302009
	Total	-.29096	1142	1.292141

Table 16 presents GROWTH scores for each group, broken down by socioeconomic status. Consistently, students in the Champions group (treatment) scored positive GROWTH means, while students in the control group scored in the negative across the board. There are differences, however, within each group. The treatment group shows an increase in GROWTH scores as socioeconomic status increases, with more affluent students outperforming less. Students receiving a free or reduced price lunch in the control group, however, outperformed their more affluent counterparts.



**Table 16**  
**GROWTH Averages**  
**Champions vs. Control**  
**By Socioeconomic Status**  
 Difference

Group	STATUS	Mean	N	Std. Deviation
1	Free	.09702	287	.697351
	Full-pay	.17642	175	.525742
	Reduced	.14419	62	.615549
	Total	.12912	524	.635156
2	Free	-.28284	642	1.315433
	Full-pay	-.30519	391	1.273631
	Reduced	-.28778	109	1.229001
	Total	-.29096	1142	1.292141

Table 17 displays the GROWTH scores for each group, broken down by grade level. Average GROWTH was negative for all grade levels in the control group, while only 9<sup>th</sup> graders had a negative average GROWTH score in the treatment group.

**Table 17**  
**GROWTH Averages**  
**Champions vs. Control**  
**By Grade Level**

Difference

Group	GRAD E	Mean	N	Std. Deviation
1	9	-.32403	107	.583432
	10	.06275	117	.568731
	11	.29579	156	.614484
	12	.33919	144	.565229
	Total	.12912	524	.635156
2	9	-.39149	406	1.319560
	10	-.28066	268	1.372561
	11	-.21055	235	1.275654
	12	-.19687	233	1.150052
	Total	-.29096	1142	1.292141

Mean GROWTH scores according to gender were also analyzed. Table 18 presents the results. Females outperformed males in both groups.

**Table 18**  
**GROWTH Averages**  
**Champions vs. Control**  
**By Gender**

Difference

Group	GENDER	Mean	N	Std. Deviation
1	F	.13728	319	.652502
	M	.11642	205	.608537
	Total	.12912	524	.635156
2	F	-.27590	542	1.335905
	M	-.30457	600	1.252257
	Total	-.29096	1142	1.292141

**Quantitative Analysis - Summary of Methodology**

Champions of Wayne combines mentoring with financial incentives that are based on customized goals for each individual student. Largely, these are grade point average (GPA) goals based on levels of previous achievement. Research question 4 asks: How does participation in Champions of Wayne affect students' performance in school? While the other three research questions lend themselves to a qualitative study, this question is best answered in a quantitative manner. The null hypothesis ( $H_0$ ) and the alternate hypothesis ( $H_1$ ) are expressed as:

$H_0$ : There is no difference between the academic growth of students enrolled in Champions of Wayne and the growth of students not enrolled in Champions of Wayne.

$H_1$ : There is a difference between the academic growth of students enrolled in Champions of Wayne and the growth of students not enrolled in Champions of Wayne.

For this study, a 95% confidence level ( $p = 0.05$ ) is used, meaning that t-tests and chi-square tests must have significance values below 0.05 to reject the null hypothesis and conclude that there is a significant difference between the two populations.

The effect of participation in the program was tested by comparing a treatment group—Wayne Memorial High School students who participated in Champions of Wayne during fall semester 2014-2015—and a control group—WMHS students who did not participate in Champions.

The key statistic of analysis for this study was the GROWTH score, which is calculated by subtracting each student's cumulative (Career) GPA from the GPA earned during the fall semester. Because Champions of Wayne incents improvement from previous levels of achievement, this was the logical method of quantitative analysis.

The quantitative data in the previous chapter first presents the comparability of the treatment group (students enrolled in Champions of Wayne) and the control group (students not enrolled) in terms of ethnicity, socioeconomic status, grade level, and gender using frequencies and chi-square tests. Next, an independent t-test is conducted to determine the difference, if any, between the mean GROWTH scores of the two groups. Finally, program effects are unpacked with a presentation of the mean GROWTH scores across each demographic (ethnicity, socioeconomic status, grade level, and gender) in each group (treatment and control).

### **Comparability**

Comparison of the treatment and control groups involves four chi-square tests with four separate sets of hypotheses.

**Ethnicity.** Champions of Wayne (n=542) was comprised of 57.3% White students, 38% African-American students, and 4.8% Other (Latino, Asian-American, and Native American). The control group (n=1142) was 59.8% White, 33.2% African-American, and 7% Other. The null and alternate hypotheses for the ethnicity chi-square test are as follows:

H<sub>0</sub>: There is no difference between the ethnic makeup of students enrolled in Champions of Wayne and that of students not enrolled in Champions of Wayne.

H<sub>1</sub>: There is a difference between the ethnic makeup of students enrolled in Champions of Wayne and that of students not enrolled in Champions of Wayne.

The chi-square test in Table 3 displays a significance value of 0.06, which is greater than the significance level of 0.05. Because of this, the null hypothesis is

accepted, and it is concluded that there is no difference between the ethnic makeup of the two groups.

**Socioeconomic Status.** Champions of Wayne was comprised of 33.4% students who paid full price for their lunch, 11.8% who paid a reduced price, and 54.8% who received their lunch for free. The control group was similar, with 34.2% paying full price, 9.5% paying a reduced price, and 56.2% receiving a free lunch.

H<sub>0</sub>: There is no difference between the socioeconomic makeup of students enrolled in Champions of Wayne and that of students not enrolled in Champions of Wayne.

H<sub>1</sub>: There is a difference between the socioeconomic makeup of students enrolled in Champions of Wayne and that of students not enrolled in Champions of Wayne.

The chi-square test in Table 6 shows a significance value of 0.36, which far exceeds 0.05. The null hypothesis is accepted and it is concluded that there is no difference between the socioeconomic makeup of the two groups.

**Grade Level.** 9<sup>th</sup> graders made up 20.4% of Champions of Wayne during the semester, while making up 35.6% of the control group. There were also some noteworthy differences among 11<sup>th</sup> and 12<sup>th</sup> graders.

H<sub>0</sub>: There are no differences between the grade level makeup of students enrolled in Champions of Wayne and the growth of students not enrolled in Champions of Wayne.

H<sub>1</sub>: There are differences between the grade level makeup of students enrolled in Champions of Wayne and the growth of students not enrolled in Champions of Wayne.

The chi-square test in Table 9 reveals a significance level of 0.000, which is well below 0.05. The null hypothesis is rejected, and the alternate hypothesis is accepted that there are differences between the grade level makeup of the two populations.

**Gender.** Champions of Wayne was comprised of 60.9% females and 39.1% males, while the control group was 47.5% female and 52.5% male.

H<sub>0</sub>: There is no differences between the gender makeup of students enrolled in Champions of Wayne and that of students not enrolled in Champions of Wayne.

H<sub>1</sub>: There is a difference between the gender makeup of students enrolled in Champions of Wayne and that of students not enrolled in Champions of Wayne.

The chi-square test in Table 12 reveals a significance level of 0.000, which is well below 0.05. The null hypothesis is rejected, and the alternate is accepted. There is a significant difference in the gender makeup of the two groups.

**Summary.** The two groups (treatment and control) are statistically the same in terms of ethnicity and socioeconomic status, yet different in terms of grade level and gender.

### **Growth Scores**

When a given student's cumulative (Career) GPA is subtracted from his/her semester GPA, the difference represents that student's GROWTH score. Determining whether or not there is a significant difference between the average (mean) GROWTH

score of the treatment group (Champions of Wayne) and the control group, the null and alternate hypotheses are set as follows:

H<sub>0</sub>: There is no difference between the academic growth of students enrolled in Champions of Wayne and the growth of students not enrolled in Champions of Wayne.

H<sub>1</sub>: There is a difference between the academic growth of students enrolled in Champions of Wayne and the growth of students not enrolled in Champions of Wayne.

Table 13 displays the mean GROWTH scores of the treatment group (Group 1) and the control group (Group 2). Students in the treatment group had a mean GROWTH score of 0.13, while students in the control group had a mean GROWTH score of -0.29. The difference between the two scores is 0.42.

The independent samples t-test displayed in Table 14 determines the significance of this difference. The significance value of 0.000 is well below 0.05, and the null hypothesis is rejected. There is a significant difference between the GROWTH scores of students enrolled in Champions of Wayne and the GROWTH scores of students not enrolled. Further, the 95% confidence interval displayed in Table 14 shows that, if the test were to be run again with statistically similar populations, a mean difference between 0.22 and 0.51 could be expected 95% of the time.

### **Program Effects**

Previous sections show the composition of the treatment group (Champions of Wayne) and the control group to be statistically similar in terms of ethnicity and socioeconomic status, but statistically different in terms of grade level and gender. The

average GROWTH score of the Champions of Wayne students is significantly higher than that of the control group, but it is possible that this is due to differences in grade level and/or gender.

**Ethnicity Scores.** Table 15 shows that African-American students scored slightly above the mean in both the treatment and control groups, while white students scored slightly below in both. Students in the “Other” category (Asian Americans, Latinos and Native Americans) scored curiously below zero in the Champions group. One possible explanation for this is the small number of students in that group ( $n = 25$ ).

**Socioeconomic Scores.** Across socioeconomic status (Table 16), students enrolled in Champions of Wayne improved their grades, while those not enrolled saw their grades decline. Interestingly, the more affluent students showed the largest improvement in the Champions group, while all three levels (Free, Reduced, and Full-Pay) achieved similar GROWTH scores in the control group.

**Grade Level Scores.** Tables 7-9 show that there is a significant difference in the composition of the two groups according to grade level—particularly the proportion of 9<sup>th</sup> graders in each group. Table 17 reveals that 9<sup>th</sup> graders in both groups are the lowest performers in terms of GROWTH, and score lower than -0.3 in both groups. One possible explanation for this is most 9<sup>th</sup> graders do not have a cumulative high school GPA for their first semester of high school. Instead, their average GPA from middle school was used. It is possible that grading practices between middle and high school vary enough that using middle school GPAs as the career GPA was not an appropriate baseline, and that high school GPAs tend to be lower than middle school GPAs.



A study of over 16,000 K-12 students over a ten-year period by Pharris-Ciurej, Hirschman, and Willhoft (2012) found significant declines in the GPAs of students as they transitioned from 8<sup>th</sup> to 9<sup>th</sup> grade. The study found that 42.5% of 8<sup>th</sup> grade students had a GPA between 3.0 and 4.0, compared to just 31.8% of 9<sup>th</sup> graders in the same range. Further, only 5.6% of 8<sup>th</sup> graders had a GPA below 1.0, but that number jumped to 15.5% when students reached the 9<sup>th</sup> grade. Pharris-Ciurej, Hirschman, and Willhoft refer to this phenomenon as “9<sup>th</sup> grade shock.” (p. 709)

Another possible explanation for 9<sup>th</sup> graders having less than -0.3 GROWTH scores in both groups is, at Wayne Memorial, students’ grade level is determined not by how many years they have been in high school, but by the number of credits earned. What this means is that, students at Wayne Memorial classified as 9<sup>th</sup> graders are not just students in their first year of high school. Those who move on to grades 10, 11, and 12 are those who are passing classes and may be thinking about college. Those still classified as 9<sup>th</sup> graders despite being in their second, third, or even fourth year of high school are more likely to be students who have abandoned the ideas of graduation and college, and have let their grades slip.

Regardless, when 9<sup>th</sup> graders are removed from both groups and the GROWTH means are tallied, the result is an average of 0.24 for the treatment group and -0.23 for the control. This is a difference of 0.47, which is even larger than with the 9<sup>th</sup> graders included.

**Gender Scores.** Table 18 shows females with higher average GROWTH score than males in the treatment group (0.14 to 0.12) and in the control group (-0.28 to -0.30). These differences are small enough that they do not account for the overall difference in

the mean GROWTH scores for treatment and control groups; however, the fact that females outperformed males and comprised over 60% of the Champions of Wayne population warrants a closer look.

The difference in gender representation is also curious. A study by Buchmann, DiPrete, and McDaniel (2008) found that girls outperform boys across most subjects, and that there are more girls among the highest achieving students. The study also found that girls tend to have advantages in social skill and classroom behavior. Further, boys are more likely to be negative about school and to form contentious relationships with teachers. These factors may answer the question of why more girls enroll in Champions than boys.

## CHAPTER V

### QUALITATIVE DATA AND ANALYSIS

The complexity of mentoring relationships warranted a mixed-methods design for this study. The previous chapter presented a quantitative analysis of grade point averages, which were the basis for the financial incentive side of the Champions of Wayne program. This chapter provides a qualitative analysis aimed at understanding the students involved in the program: Who they are, why they chose to enroll, and what effect (if any) participation had on their personal lives and their perceptions of their abilities.

Five students, all of whom participated in Champions for the fall semester 2014-2015 school year, were selected to participate in the multiple case study:

- Sarah
  - Caucasian 12<sup>th</sup> grade female
  - Goal: 3.3 Semester GPA
  - Achieved a 2.8 for the semester (unsuccessful)
- John
  - Caucasian 9<sup>th</sup> grade male
  - Goal: 2.5 Semester GPA
  - Achieved a 3.0 for the semester (successful)
- Julie
  - African-American 11<sup>th</sup> grade female
  - Goal: 4.0 Semester GPA
  - Achieved a 4.0 for the semester (successful)

- Brian
  - Caucasian 10<sup>th</sup> grade male
  - Goal: Pass All Six Classes
  - Achieved a 1.8 GPA and passed all classes (successful)
  
- Brandon
  - African-American 12<sup>th</sup> grade male
  - Goal: 2.5 Semester GPA
  - Achieved a 1.0 GPA for the semester (unsuccessful)

Each student was interviewed privately for one hour after the semester was completed. The semi-structured interviews initially searched broad areas such as family dynamics, educational history, motivation to enroll in Champions, and perceptions of ability. The interview questions became more focused when areas of significance were found. In the interest of validity, interviews were triangulated with other data sources (grades, behavioral records, etc.) when available.

This chapter is set up in three sections. First, each case is presented on a within-case basis to allow for study of each student as an individual. Next, the cross-case analysis presents noteworthy similarities and difference between the five cases. Finally, the multiple case study is analyzed as a whole as it pertains to Bandura's (1986) theory of self-efficacy.

### **Qualitative Data**

**Sarah.** I met with Sarah in the early afternoon on a typical school day. It was relatively easy for me to get her out of class, as she had a good relationship with her teacher, who said he could trust her to make up any work that she missed. It was also a

pleasant experience to obtain consent from Sarah and her mother. Both were open to, and excited about, being part of an academic study.

Sarah was in the 12th grade, carried a 2.8 grade point average, and had been accepted to one of the more selective colleges in the state, where she planned to attend in the fall. I had observed Sarah in the hallways of the school, and she carried herself with an upbeat confidence that was contagious. She was friendly with her teachers and peers, and was rarely (if ever) seen without a smile on her face. She had been a student in this district since kindergarten.

Sarah, the youngest of three children, lived with her mother and her mother's boyfriend. Sarah's parents were never married. Her father was in the army until she was six years old, and she described her relationship with him:

"I never had a great connection with (my father) until he came back (from the army), and I do now, but it's whatever. He doesn't talk to me about school much other than I have to go and I have to go to college, there is no other option. Not that he will help me with it, just that I have to go."

Sarah also described her relationship with her siblings:

"My sister works at a movie theater and my brother...he's just a big mess. I don't know what he's doing with his life. He actually just got kicked out of the house. He moved out...but he always comes back to my mom every time he needs help. It's this really big thing right now. It's stressing me out and just continuously adds stress to my life."

Sarah's mother had all three of her children before the age of 21, and her family of four lived in a single bedroom:

“We all stayed in the same room. It was me, my mom, my sister and my brother all in one tiny room because we lived with my grandparents. And they’re hoarders, so that adds to the challenge. There was just so much stuff. Our room was the cleanest room of the house even though there was four people living in it.”

Sarah was very close with her mother, whom she described as almost the same person as herself:

“When I was younger, I used to say she was my best friend. But then I realized it was inappropriate because your mother should be, like, your mother, and not your best friend. She had me when she was 20, so she never got to grow up and finish high school or go to college.”

When I asked Sarah about her motivation to join Champions, she responded enthusiastically:

“I mean, it’s a great incentive. Who doesn’t want \$200 for doing what they are supposed to be doing? I just thought it would help me get organized. My Champion is Mrs. McDougall, and her and I are really close and she’s great to look up to and really organized. I had lunch with her every day throughout the semester, so it was convenient. We’re really good friends. I always feel like I can talk to her and vent to her and connect with her. She wasn’t really strict about my grades, but she did help me a lot with organization. We never got to the deeper stuff where she was helping me with my work.”

Sarah’s career GPA entering the semester was a 2.8, and her Champions goal was 3.3. In the end, she earned another 2.8 for the semester, maintaining her grades, but falling short of her goal. I asked her if it was worth going through all that, even though her grades did not improve and she did not earn the \$200:

“Yes, hands down. I wouldn’t otherwise have the great relationship with my Champion. The \$200 is a great incentive, but to have one specific mentor sit down with you and talk to you and help you focus is great motivation on its own.”

When I asked Sarah about her feelings toward college, she showed me a nervous smile:

“I’m excited to get out on my own and be solely responsible for myself and to meet new people. I’m super anxious and nervous about time management. I need to find a good balance, and I hope college isn’t ten times harder than high school. I definitely plan on keeping my relationship with my Champion after high school.”

**John.** When I approached John’s mother and asked her for consent, she was thrilled about the idea of him participating in an academic study. Like many mothers of 14 year-old boys, she wanted the best for her son and was concerned about influences beyond her control. She was hopeful that maybe this experience would be good for him.

John, who was in the middle of his 9th grade year, wasn’t nearly as excitable as his mother was. He seemed naturally shy, and I quickly realized it would take carefully worded questions to get him to give responses longer than one word. The best thing I had going for me was that he seemed open to getting out of class for an hour to do something different.

John’s parents were married before he was born and were still together. He paid full-price for his lunch, and his parents were both employed. John is tall and thin, and had styled his hair before school. He did not make eye contact often, and I got the feeling that he was somewhat skeptical of me and all my questions.

Looking at the GROWTH statistic, John was one of the more successful students in Champions. He entered high school with a 2.3 cumulative GPA, received a goal of a 2.5, and ended up with a 3.0 GPA for the semester. I asked John how he heard about Champions of Wayne, and why he decided to join:

“I’m not quite sure how I heard about it. I don’t remember if there was an assembly or something they made us go to. The first reason I joined was for the money. \$200 for doing good in school, like why would you not do it? But I mean it also helps you get your grades up, knowing that you can get rewarded for doing well.”

I asked John about his Champion, Mr. Costello, who happens to be one of the more energetic and personable teachers in the school:

“I knew I needed to find a Champion to join, so I went and asked Mr. Costello. He said he would do it. He’s one of the better teachers here, someone that you can talk to. He’s really likeable.”

I asked John if his relationship with Mr. Costello was helpful:

“It didn’t really help me that much. Last semester we didn’t really talk about anything. This semester we’re talking more though, and I have more expectations.”

John wasn’t as talkative as the other subjects, but I kept pressing him on his motivation for achieving such a high relative GPA:

“The motivation really came for the amount of money involved, and knowing that high school is where grades actually start to really count. You have to be more serious about it. I’ve never really done much studying, but I did study a lot for Spanish this past semester. It was more of an attitude change for me. I paid better attention.”



Satisfied with that, I moved on to questions about his future. He told me of his hopes to attend Michigan State University after graduation, that his mother attended Penn State, and that he's not exactly sure where his dad attended. I asked John if things would have been different for him last semester if he had not joined Champions:

“Yes, I definitely would not have read as much as I did. I think my grades would be slightly lower too. Probably like a 2.8.”

**Julie.** I next met with Julie, a petite African-American girl with long hair and a big smile. Julie was well-known and well-liked around the school, and happily agreed to participate in the interview.

Julie was an excellent student. She had participated in Champions each of her five semesters at Wayne Memorial at the time of the interview, and she had never gotten less than an A in any class. On the surface, it appeared that Julie was an All-American kid from an All-American family. But when I asked her about her family dynamics, a different picture emerged:

“My father is incarcerated. He has been in jail since I was five. Our relationship is kind of distant because we don't see each other, but I can email him and stuff...and I talk to him about every two weeks. I haven't visited him since the sixth grade but I'm allowed to visit him but I just...he's all the way in Alabama.”

Julie told me that her father was sentenced to 18 years for drug trafficking, and that it was possible he would be getting out in the near future. I asked her about the challenges of growing up while her father was in prison:

“Um, sometimes I would get upset like, I'm not gonna lie. Financial problems, really. My mom works hard at the airport, she works at like a store now and sells stuff.

She used to be a janitor person at apartments and, you know, like clean up and stuff. Her income every year is a little bit lower than \$20,000.”

Julie told me she wasn't always a nice kid, and that she got into her share of trouble in middle school. District records show she was suspended for fighting in the 8th grade. She told me that some of her friends had a negative influence on her during those years:

“Yeah, I just, they influenced me to get into bad things and do bad stuff, and I was just rude. Once I got to high school, I made a new group of friends and did cheer and got my life together. I realized I didn't want to live the life I was living in middle school, like in poverty and stuff. Cheer got me on track. Getting involved with sports, I made new friends and they were just positive influences on me.”

Despite her challenges during those years, Julie still managed to pull together a 3.5 career GPA in middle school. When she got to high school and heard about Champions of Wayne, she immediately joined:

“Well, at first they were like \$200, and I was like, ‘oh wow!’ But then I realized it looks like all the Champions people started to guide me if I need help. They would show me opportunities for my future and it helps. Now that I think about it, Mr. Decker was the one that motivated me to get a 4.0 in the 9th grade and I was like, uh, I don't know if I can do this. So my goal was a 3.8 but when I saw that I got a 4.0 first marking period, he was like ‘keep it up’. If it wasn't for him, I probably wouldn't have gotten a 4.0 back in 9th grade.

She continued to tell me about the impact Mr. Decker has had:

“Mr. Decker, I just don’t want to disappoint him. I know it’s for me, but I would cry if I got a B. But, I also would hate to upset him because he has so much faith in me, he really knows I can do this. Just him believing in me is enough.”

Julie achieved her Champions goal each of the five semesters she participated, earning a total of \$1,000 in the process. When I asked her if the incentive was a major motivator for her, she responded enthusiastically, “Yes! It really is. Who doesn’t want \$200 for free, like just working on your grades? That’s like a great...that’s one of the best things ever.”

Julie told me of her desire to “be something” after high school. When I asked her to define “something,” she paused before saying, “um, someone who’s smart and makes a lot of money and always thinks positive.”

Julie had plans to attend college right after high school, and had already begun working on scholarship applications.

Since the interview, I observed Julie in the hallways as she interacted with her peers and with her teachers. She was relentlessly positive, and I noticed that those who interacted with her seemed to be smiling as well.

**Brian.** I met with Brian during the school day, and he was happy to participate in the interview. When I asked Brian’s mother for her consent, she was still beaming with pride after attending the Champions of Wayne banquet and celebrating Brian’s academic achievement. Brian was a tall Caucasian boy with dark hair. He was in the 10th grade and fresh off of passing all six of his classes for the first time in his academic career. Entering the semester, Brian had a 0.9 career GPA, and achieved a 1.8 as a part of Champions.

I could tell early on that Brian's grades were not a reflection of his intelligence. He seemed mature for his age, had a firm handshake, and did not shy away from eye contact the way many of his peers did. We began with Brian telling me of his family dynamics:

"It's currently just my mother and me. I have a half brother and a half sister, which ever since my dad passed away I really don't see my half brother, and my half sister has always just been really rude to me and my mother. So yeah she recently moved out. It's my mom's daughter and my dad's son."

Brian told me about his father:

"My father came here from Ireland, and I was only six when he passed away, so I never got to talk to him about how far he came. We weren't sure if he got hepatitis C through a blood transfusion after a bad motorcycle crash, or through a tattoo which ended up making his kidneys fail. Once that got figured out and the hospital gave him medicine to help, the medicine made his liver fail, so he passed away at the hospital."

Brian told me of his close relationship with his mother. His half siblings both dropped out of high school and, after he failed a couple classes in 9th grade, Brian enrolled in summer school so that he could get on track to graduate. I asked him why he decided to get involved with Champions of Wayne:

"I heard about it through freshman orientation, but I didn't do Champions because I didn't know anyone. Finally, I asked Mrs. Logan to be my Champion and she helped me meet my goal and I got the incentive for it. The goal was super easy: To pass all my classes. It was good for me because it's something I've never done before."

I asked Brian about his motivation for enrolling in Champions, and his motivation throughout the semester:

“I think the goal is something that I wanted to get to. That’s where really everyone should be and having something to look at and knowing, hey, that’s where I should be. If the incentive wasn’t there, I believe I still would have signed up for the basic mentoring. The money was always in the back of my mind, but the money was really only on my mind 10-20 percent of the time. School has never been my strong suit at all. It’s a place I’ve never really enjoyed coming to. If there wasn’t a Champions program, I believe it would have been different. I probably wouldn’t have tried as much, but the incentive was never my focus. I guess it just helped push me a little further.”

Brian told me that after he becomes the first in his family to graduate from high school, he wants to attend college and study technology.

In the weeks and months after the interview, I noticed that Brian was much friendlier to me. He took time to acknowledge me every time he passed by, and often asked me how my project was coming along.

**Brandon.** I met Brandon, a tall and physically fit African-American boy, in the media center after school. I had seen Brandon around school for a few years at that point, and I noted that I had seen him wear this same beat-up t-shirt many times before. Brandon was friendly and respectful as we started the interview.

Before we met, I looked up Brandon’s grades. He was a 12th grader with a cumulative GPA of 1.8. He enrolled in Champions for the fall semester, and set a goal of a 2.5 GPA. Brandon started off the semester well, posting a 2.8 for the first marking

period (there are three marking periods in each semester). He gradually declined over the next two marking periods, however, and ended up with a 1.0 GPA for the semester.

We began the interview by discussing Brandon's family. He told me he was the third of four children, his parents split up when he was about ten years old, and he was living with his father in Wayne:

“Me and my dad moved to Wayne after we lost our house in Detroit. We moved into the homeless shelter on Michigan Ave. when my parents split up, and it was the worst experience ever. Closest to jail I've ever been. We lived there for about three months.”

Brandon told me it took him a while to fit in socially, and that he felt like an outsider throughout middle school. When he got to high school and heard about Champions, he was immediately interested:

“I learned about it at ‘Celebrate Wayne’ (a welcoming event to new 9th graders at WMHS each year), there was a big poster that said ‘do you want \$200?’ and it caught my eye. I found out that it's not just about money, it's about school, books, working hard.”

I asked Brandon what impact Champions had on his personal life:

“There's a lot of staff that know me, that are on a first name basis with me. I probably wouldn't be here if there were no Champions. It kinda motivates me to get down, to get work done. Me and Ms. Little are like best friends. We joke around, play around, tell jokes...everything like that. I see her every day, and I visit her often. I told Ms. Little stuff I would never tell my friends.”

Despite entering the semester with a 1.8 GPA and carrying a 2.8 for the first six weeks of the semester, Brandon's grades fell to a 1.0 GPA by the end of the semester. I ask him how that happened:

"I kinda fell off last semester. I tore my ACL, I was missing two days out of every week. I had surgery, so I missed the last two weeks of the semester. I had a 2.5 goal and ended up with a 1.8. I'm doing Champions next semester though."

After the interview, Brandon struggled with attendance and behavior in class. Two of his teachers came to me with concerns that he may not pass, and may not graduate with his class. When I saw Brandon, however, he seemed to be the same guy he was before. He continued to talk about his college plans, and did not seem concerned about the classes he may or may not have been passing.

### **Cross-Case Analysis**

According to Stake (2013), the cross-case analysis emphasizes the uniqueness of each case, while retaining vital experiential knowledge. This analysis involves determining the main themes that emerged during each interview and observation. While each case is unique and different from each other case, this analysis focuses on rich description (Stake, 2013) in order to thoroughly understand Champions of Wayne across cases. By drawing examples from each case, assertions can be made about the impact of mentoring and financial incentives.

Five themes emerged from the cross-case analysis of the five high school students. These themes are: *Initial motivation to enroll*, *relationship with father*, *relationship with mentor*, *description of childhood*, and *impact of participation*. For each theme, examples from each student are included to highlight commonalities.

THEMES	QUOTES
Description of childhood	<p>“Growing up, we all stayed in the same room. It was me, my mom, my sister, and my brother all in one tiny room because we lived with my grandparents.” –Sarah</p> <p>“It didn’t really bother me that my dad was incarcerated until he started to tell me that he was getting out soon. That’s when it started to bother me. But I was always a happy kid until middle school, then it started to hit me.” –Julie</p> <p>“I did good in school through kindergarten and like, second grade. But it went down from there, it started getting really bad.” – John</p> <p>“Since my dad passed away, I don’t really see my half-brother, and my half-sister has always just been really rude to me and my</p>



	<p>mother, so it's just my mother and me." –                  Brian</p> <p>"It was the worst experience ever. Closest to jail I've ever been. We lived (in the homeless shelter) for about three months."                  -Brandon</p>
<p>Relationship with father</p>	<p>"I never had a great connection with my father until he came back from the army, and I do now, but it's whatever. He doesn't talk to me about school much other than I have to go, and that I have to go to college. Not that he will help me with it, just that I have to go." –Sarah</p> <p>"My father has been in jail since I was five. Our relationship is kind of distant because we don't see each other, but I can email him and stuff so, I talk to him like every two weeks. I haven't visited him since 6<sup>th</sup> grade...he's all the way in Alabama." –Julie</p>

	<p>“My mom is an HR director and my dad does, like, printing.” –John</p> <p>“My father came here from Ireland, and I was only six when he passed away, so I never got to talk to him about how far he came.” –Brian</p> <p>“I think I have a stronger relationship with my mom. It feels like I can talk more with my mom than my dad. I see her almost every weekend...I go visit her.” –Brandon</p>
<p>Initial motivation</p>	<p>“Well, at first they were like \$200 and I was like ‘oh wow!’” –Julie</p> <p>“First it was the money, \$200 for doing good in school. Like, why would you not do it? But, I mean, it also helps you get your grades up, knowing you can get rewarded for doing well.” –John</p>

	<p>“The goal is something I wanted to get to...having something to look at and knowing hey that’s where I should be.” - Brian</p> <p>“I mean, it’s a great incentive. Who doesn’t want \$200 for doing what they are supposed to be doing?” –Sarah</p> <p>“There was a big poster that said ‘do you want \$200’ and it caught my eye.” -Brandon</p>
<p>Relationship with mentor</p>	<p>“Just him believing in me is enough, I know I can do it. He helps me realize that.” –Julie</p> <p>“He’s one of the better teachers here, someone that you can talk to. He’s really likable.” –John</p> <p>“She’s great to look up to and really organized. I had lunch with her every day</p>

	<p>throughout the whole semester, so it was convenient.” –Sarah</p> <p>“She was funny, she always made jokes and was nice to me.” –Brian</p> <p>“It was a great relationship. We stayed after school almost every day, she came to my basketball games and track meets.” - Brandon</p>
<p>Impact of participation</p>	<p>“I was one of those students that didn’t think I could get a 4.0 every semester and managed to do it. I wouldn’t be able to do it without Champions because I have all these motivators and I have all the help I need.” –Julie</p> <p>“Having good relationships with my teachers has been really important to me. It helps me to become more comfortable with them and it helps me if I have a problem.” -Sarah</p>

	<p>“I definitely would not have read as much as I did.” –John</p> <p>“I probably wouldn’t have tried as much, but the incentive was never my focus. I guess it just helped push me a little further.” –Brian</p> <p>“Last semester, when I knew my goal was out of reach, I still went to her for advice or just to talk to her... there’s a lot of staff that know me, that are on a first name basis with me.” -Brandon</p>
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**Themes**

**Description of Childhood.** As each student described his/her respective childhoods and discussed how family dynamics changed over time, each expressed major challenges, with the notable exception of John.

For Sarah, it was living with her siblings and mother in a single bedroom in the home of her hoarding grandparents. Julie discussed a happy and somewhat naive childhood that became much more difficult when the reality of her father’s long-term incarceration began to set in. Brandon told of his parents’ separation, the loss of the

family home, and their move to a homeless shelter. Brian explained how the death of his father led to deteriorating relationships with his siblings, as well as a general lack of role models.

As for John, the story was different. John chose not to discuss his family much, choosing instead to focus on his academic struggles in elementary and middle school. “I did good through kindergarten and, like, 2<sup>nd</sup> grade, but it went down from there.” When I asked John what happened in the 2<sup>nd</sup> grade, he responded, “Yeah my grades went down because I didn’t really pay attention. I didn’t feel like doing school work so I didn’t choose to.”

**Relationship With Father.** Of the five students selected for the qualitative study, four seemed to have challenging relationships with their fathers. Even John, who seemed straight out of “Leave it to Beaver” when compared to the others, was somewhat uncomfortable when providing information about his father. He spoke with pride when he told me his mother’s occupation (HR director), but looked away and seemed uncertain of his father, telling me, “My dad does, like, printing.” John is the only student of the five not to be considered at-risk.

The other four students’ relationships with their fathers varied from Brandon (emotionally closer with mom despite living with dad) to Brian (father died when he was six years old). A review of research literature suggested family dysfunction as a significant challenge for at-risk children, but paternal struggles emerged as a specific struggle for students involved in this study. A study by Krohn and Bogan (2001) produced the following statistics:

- 63% of youth suicides are from fatherless homes

- 85% of all children who exhibit behavioral disorders come from fatherless homes
- 80% of rapists motivated by displaced anger come from fatherless homes
- 71% of all high school dropouts are from fatherless homes
- 85% of all youths in prison grew up in a fatherless home
- Fatherless children are 20% less likely to attend college

Considering these numbers and the challenges faced by the students in this study, the potential for a mentor to fill a large parenting void becomes understandable.

Interestingly, both females involved in this study (Julie and Sarah) made comments about their respective struggles in math. Krohn and Bogan (2001) found that motivation to learn mathematics generally comes from one's father, and that girls with absent fathers tend to have less interest in math as they grow up. Further, the same study found that girls with absent fathers tend to achieve less in the classroom and are far less likely to attend college. This makes Julie's GPA (4.0 every semester) and Sarah's acceptance to Michigan State even more impressive.

**Initial Motivation to Enroll.** Perhaps not surprisingly, four of the five students stated that their initial motivation to enroll in Champions of Wayne was the \$200 incentive. Brian, the one who stressed that money was not much of a motivator, spoke more about the importance of setting a goal. Even he, however, stated at the end of his interview that "the incentive was never my focus, I guess it just helped push me a little further."

Julie, John, Brandon and Sarah all expressed that the \$200 incentive was the initial hook. In fact, each of the four expressed that, once they heard about the incentive, it was basically a "no-brainer" to enroll. From John's, "\$200 for doing good in school.

Like, why would you not do it?” To Sarah’s “Who doesn’t want \$200 for doing what they are supposed to be doing?”, all four students implied that not participating in Champions was out of the question.

Interestingly, Julie, Brandon, and Sarah all expressed that while the incentive was the initial hook, the mentoring relationship ended up being the most significant aspect of the program. John, who lives with his still-married and biological parents, expressed that the incentive and academic achievement were most important to him throughout the process.

**Relationship With Mentor.** Also common across the qualitative interviews was discussion of each student’s relationship with his/her respective mentor. Whether or not the GPA goal was achieved, each student gave a glowing description of their mentoring relationships, again with the notable exception of John.

Julie, who was academically motivated in middle school and may have achieved academically without Champions, adamantly stated that it was her relationship with her mentor that motivated her to push for straight As. “He’s the one that motivated me to get 4.0s. If it wasn’t for him, I probably wouldn’t have gotten one back in 9<sup>th</sup> grade. He has so much faith in me, he really knows I can do this.”

Brian’s mentor went on medical leave early on in the semester, but he was still vocal about the positive relationship between the two of them. “She helped me meet my goal and I got the incentive for it. She was funny, she always made jokes and was nice to me.”

Despite not achieving his goal, Brandon also reported a meaningful relationship with his mentor, “Me and my mentor are like best friends. We joke around, we play



around, everything like that. I see her every day and I visit her often.” Brandon told me that his mentor attended many of his sporting events and took time to tutor him after school.

Sarah did not achieve her goal either, but she did report having lunch with her mentor every day and establishing a special connection, “We’re like really good friends. I always feel like I can talk to her and vent to her and connect with her. She helped me a lot with organization.”

Similar to other themes, John described his relationship with his mentor differently than the others. When I asked him if there were any adults or teachers that he looked forward to seeing each day, he responded bluntly, “No. I wouldn’t talk to any of my teachers about anything not school related.” Later, I asked John if his relationship with his mentor was helpful. Unlike the others, John reported that, “It really didn’t help that much. The first semester we didn’t really talk about anything.” Despite this, John had a very successful semester.

**Impact of Participation.** The final—and perhaps most interesting—theme that emerged was each student’s perception of the impact of participation in Champions of Wayne. Toward the end of each interview, I asked students to imagine how their semester would have unfolded had Champions not been a part of it.

All five students reported that participation in Champions had a positive impact to some degree. Brian, whose mentor went on medical leave early in the semester, reported that Champions “helped push me a little further.” Paradoxically, Brian said that his goal was “super easy” despite the goal being a higher GPA than he had ever achieved at the time. “The goal was super easy, to pass all my classes. It was good for me because it’s

something I've never done before." Brian went on to say that, although the incentive was not his main focus, he believed that it did push him a little further. In the end, Brian passed all six of his classes for the first time, and spoke with confidence about attending college and learning to code software.

John, who lives with his still-married biological parents, gave little credit to his relationship with his mentor, but spoke highly of the financial incentive. After earning a 2.3 GPA in middle school, John was able to pull together all Bs as a member of Champions and achieve a 3.0 GPA for his first semester of high school.

A straight-A student throughout high school, Julie credited Champions of Wayne as being very influential on her academic success. While she acknowledged the \$200 incentive as her primary motivation to sign up, she gave most of the credit to her mentor who always believed in her, and whom she never wanted to let down.

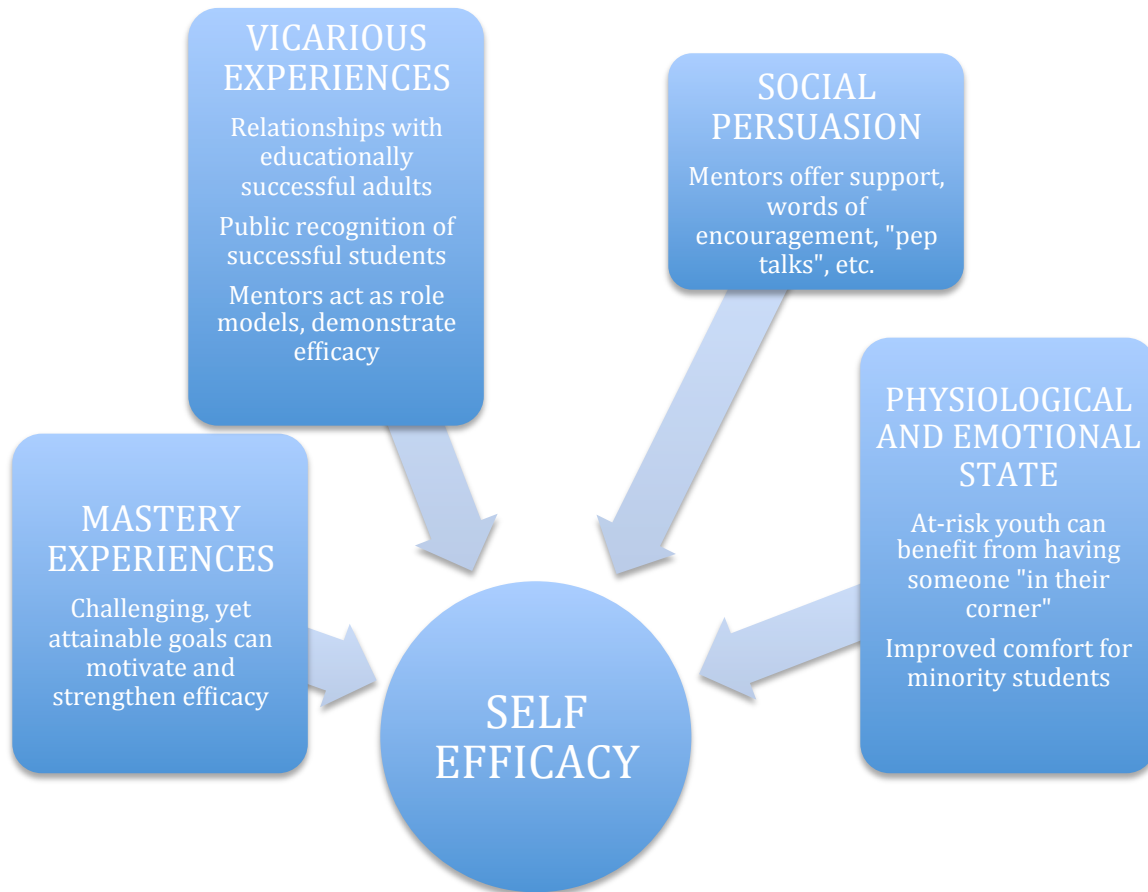
Interestingly, the two students who did not achieve their academic goals and did not earn money, Brandon and Sarah, spoke most highly of their participation and of their relationships with their mentors. Brandon, who was suspended for 33 total days in two years of middle school, says his relationship with his mentor has kept him out of trouble and in school. "I probably wouldn't be here if there were no Champions," he said. Brandon went on to tell me that, when he would get frustrated or angry with another student, his teachers would often allow him to go visit his mentor just to cool down and deescalate the situation. He was suspended a total of nine days in high school.

Sarah's description of the impact of her participation was similar to Brandon's. While she was somewhat ashamed to admit that the relationship was informal and more about hanging out than focusing on schoolwork, Sarah said that her positive relationships

with her teachers are all a result of participation in Champions, and that individual attention from a trusted adult is “a great incentive on its own.”

**Qualitative Analysis - Self-Efficacy Theory**

Bandura’s (1986) theory of self-efficacy suggests that there are four factors that contribute to a given person’s belief in his/her ability to perform a given task: Mastery experiences, vicarious experiences, social persuasion, and psychological/emotional state. The quantitative section of this study suggests that students who participate in Champions of Wayne do, in fact, improve their academic performance. The qualitative section lends clues as to how they do this, and Bandura’s efficacy theory provides a stable framework for analysis.



**Mastery Experiences.** Bandura (1986) defines mastery experiences as the given person's direct experiences with a given task. While Champions of Wayne obviously did not change the previous experiences of its students, challenging yet attainable goals help to build and strengthen efficacy (Bandura, 1997).

Brian's perplexing description of his Champions goal (to pass all of his classes) as "super easy," despite never having done so in his academic career, begins to make sense when considering Bandura's theory. While Brian had not passed all of his classes in a given semester before, he did have the mastery experience of passing classes. Perhaps in his mind, because he had passed classes before, it wasn't much of a stretch to imagine passing six of them.

Other mastery experiences emerged that did not apply directly to the academic goals. Brandon, who struggled to form positive relationships with his teachers in middle school, stated that he became more confident in raising his hand and asking questions in class. It could be a result of positive interactions with his mentor that led Brandon to believe that interactions with other teachers would be positive as well.

**Vicarious Experiences.** Second to mastery experiences, vicarious experiences are most powerful in shaping one's self-efficacy. These occur when one observes someone else either succeed or fail at a given task.

Of the five students interviewed, four students lived in a single-parent household and did not have anyone in their families with a college degree. This limited exposure to educational tradition and to "learning how to learn" is a main cause of the achievement gap between privileged and underprivileged students (Alexander et. al, 1997). While

Brian's mentoring relationship was cut short due to his mentor going on medical leave, Brandon, Sarah and Julie all seem to have benefited from a meaningful relationship with an educationally successful adult.

Sarah described her mentor, a relatively young college graduate, as "great to look up to" and someone who helped her with organization. Sarah also plans to keep in touch with her mentor as she heads off to college—as the first person in her family to do so.

Julie's vicarious experiences are also noteworthy. Aside from her glowing account of her mentoring relationship and her belief that it has been instrumental in her attaining straight As, she also discussed her desire to apply for the Gates Millennium Scholarship during the fall of her senior year. Four Champions of Wayne students have attained the GMS over the past three years, and these accomplishments were celebrated publicly. It is possible that Julie would not have known about the scholarship, let alone believed she had a legitimate chance of obtaining it, had it not been for these vicarious experiences.

The idea that John did not seem to value his mentoring relationship as much as the others did may be because he did not need a mentor as much as the others, and that he did not have this void in his life. According to Putnam (2015), affluent children growing up with two parents get almost twice the nurturing time from parents, increased access to good daycare, and are more likely to have regular meals with their families—all of which leads to good grades and behavior in school. Further, Putnam states that affluent parents are likely to have affluent friends who may serve as informal mentors and role models for their children. These advantages begin in the womb and widen at every stage. John simply may not have needed the mentoring the way that the others did.

**Social Persuasion.** Bandura (1986) states that social persuasion is not as powerful of a contributor to self-efficacy as mastery and vicarious experiences, but effective coaching and words of encouragement have potential to boost efficacy in the short-term.

Julie was vocal about her mentor's encouraging words. "He always told me that I could do anything I set my mind to," she said. "Just him believing in me is enough."

Sarah was less specific, but also spoke highly of having a mentor to sit down with her and help her focus.

The other three students did not have much to say in terms of social persuasion. As vocal as Brandon was about his mentoring relationship, he made no mention of any sort of a pep talk.

**Physiological and Emotional State.** Lastly, Bandura (1986) states that self-efficacy is also determined by the physiological and emotional state of the subject. While none of the students interviewed for this study explicitly stated that their mood or emotions were improved, some students—particularly African-American students—implied an increased feeling of comfort at school. Considering the Wayne Memorial student body is 35% African-American while the staff is over 95% white, it is understandable that African-American students might be somewhat uncomfortable. According to Aronson (2001), if being white is perceived as the norm at a given school, anyone who is not white will at least carry an awareness that he or she is different.

Brandon, who said he would have dropped out if it were not for his relationship with his mentor (a white woman), stated that he felt more confident interacting with his teachers, and that many of the staff were on a first name basis with him.

Similarly, Julie said she was pleased to find out that, after initially enrolling for the \$200 incentive, she could go to her mentor (a white man) for advice and guidance.

## CHAPTER VI

### CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to explore the impact of the Champions of Wayne program at Wayne Memorial High School—particularly to determine why students enroll in the program, how participation affects them as young adults, and how participation in the program affects their academic performance. Wayne Memorial is a large public high school near Detroit, Michigan, with over 80% of the student body eligible for a free or reduced-price lunch. There is considerable support for Champions of Wayne in the community, but the privately-funded program had not undergone any sort of formal evaluation until now.

While research supporting the potential of mentoring programs is abundant (Holt et al., 2002; DuBois et al., 2002; Grossman & Bulle, 2006; Grossman & Tierney 1998), and several studies agree that financial incentives can have at least a small positive impact on student achievement (Fryer, 2011; Hahn, 1994; Rodriguez-Planas, 2012; Slavin, 2010; Spencer et al., 2005; Raymond, 2008; Bettinger, 2012), very little research exists on programs that combine mentoring with financial incentives. In this way, Champions of Wayne is unique.

#### **Summary of Study**

Due to most research on mentoring being qualitative and most research on financial incentives being quantitative, a mixed methods approach was used for this study. The quantitative side of the study focused on individual GPA growth for all students at Wayne Memorial High School. Students enrolled in Champions of Wayne had an incentive to improve their grades, thus they comprised the treatment group. The



control group was then comprised of all students not enrolled in the program. The goal of the quantitative study was to determine if there was a difference between the average GPA growth of the treatment group and that of the control group.

To best understand the mentoring component of Champions of Wayne, a multiple case study was conducted. Students in the program were placed into four categories:

- 2.5 GPA or higher, successfully achieved Champions goal
- 2.5 GPA or higher, did not achieve goal
- Below 2.5 GPA, successfully achieved goal
- Below 2.5 GPA, did not achieve goal

One student was randomly selected from each category to participate in the study. The four students selected from these categories were from grades 10-12, so the fifth student (John) was randomly selected from the 9<sup>th</sup> grade participants.

The students, selected after completion of the fall semester, were each interviewed for one hour. During the interview, students were asked to describe their family dynamics, educational history, reasoning behind enrolling in Champions of Wayne, relationships with their mentors, and overall experiences as a part of the program.

The following research questions were the driving force behind the study:

1. What motivates students to sign up for Champions of Wayne?
2. How do students describe the impact that participation in Champions of Wayne has had on their personal lives?
3. How are students' perceptions of school and their academic abilities changed as a member of the Champions of Wayne program?

4. How does participation in Champions of Wayne affect students' performance in school?

The first three research questions were addressed by the qualitative analysis, while the fourth question lent itself to the quantitative.

**RQ1: What motivates students to sign up for Champions of Wayne?**

Champions of Wayne is unique from other mentoring programs because of the financial incentive offered. Most other mentoring programs in the United States, such as Big Brothers Big Sisters, do not offer any sort of extrinsic reward. In an evaluation of a mentoring program from the perspective of the participants, De Anda (2001) found that most students got involved in the program because they wanted someone to talk to, to trust, and to spend time with.

Of the five students interviewed for this study, four made it clear that their initial motivation to enroll in Champions of Wayne was the \$200 that was offered:

*At first, they were like \$200 and I was like, oh wow!*

*First it was the money, \$200 for doing good in school.*

*There was a big poster that said \$200 and it caught my eye.*

Interestingly, however, these same students all reported that the incentive faded from their minds a few weeks into the semester. These thoughts of money were replaced with appreciation of their mentoring relationships and a desire to achieve academically. This runs contradictory to Kohn's (1993) claim that extrinsic rewards ultimately reduce intrinsic motivation, and supports Flora and Flora's (1999) assertion that external motivators can serve as a base for future intrinsic motivation.

**RQ 2: How do students describe the impact that participation in Champions of Wayne has had on their personal lives?**

Based on the qualitative interviews, the answer to this question varies. On the “most impactful” end, Sarah and Brandon both described rich and life-changing experiences, while Julie, Brian and John chose to talk about improvements in their respective GPAs. Interestingly, Sarah and Brandon were the two students who did not achieve their academic goals for the given semester.

Grossman and Bulle (2006) found that mentoring tandems that spend time together on an informal basis, eat lunch together, and just “hang out” are more likely to report having a close relationship than those who focus on grades and homework. The results of this study support this, as Brandon and Sarah both described closer relationships with their mentors. Brandon reported that he and his mentor “are like best friends. We joke around and play around, I see her every day.” Sarah felt somewhat guilty when describing her informal mentoring relationship, “We’re like really good friends. I know that’s kind of unprofessional, but we’re really alike.” Later, she said, “It got to the point where she wasn’t strict enough about my grades.”

Looking at the Bandura’s (1986) self-efficacy model, it appears Sarah and Brandon both gained valuable vicarious experiences by spending time with educated adults that they otherwise may not have spent. Each of their mentors has at least a bachelor’s degree, meaning that they each were able to find relative success in their respective post-secondary educations. Looking at the families of the two students, it makes sense that a close relationship with a college-educated mentor would have value.

**RQ3: How are students' perceptions of school and their academic abilities changed as members of the Champions of Wayne program?**

This is another question best answered by the qualitative study and, similar to question two, there are positive results. Overall, participation in Champions of Wayne has shown to be helpful.

Overall, students reported participation in Champions of Wayne to be helpful. Some spoke about improved relationships with adults at school and feeling more comfortable, while others expressed a heightened confidence in the classroom.

John, who improved his grades more than the other four students, had the least to say in terms of improvements in his academic ability. His comments regarding improvement from a middle school 2.3 GPA to a high school 3.0 GPA—which is an even more impressive jump considering the results of the quantitative study—did not suggest any specific strategies for improving his grades. He stated, “High school is where grades actually start to really count,” and that “You have to be more serious about it.” Later in the interview, he said, “I can see myself wanting to do something and actually trying to do something.” When asked what that something might be, he took a long pause before responding with, “hopefully college.”

John's comments are similar to those recorded by Allan and Fryer (2011). When asking students how they planned to improve their grades and test scores, Allan and Fryer heard from many students who planned to “try harder” and to “read test questions more carefully,” “Not a single student mentioned reading the textbook, completing homework, or asking teachers or other adults for help with confusing topics.” (p. 15) It is noteworthy

that John was the youngest participant in the study. Allan and Fryer (2011) also found that financial incentives were less effective for younger students.

Brian, who passed all of his classes for the first time in his educational career, also had little to say about a change in his academic ability. He was confident as he spoke of the importance of goal-setting, but often contradicted himself when he discussed his academic ability, “The goal was super easy, to pass all my classes. It was good for me because it’s something I’ve never done sixth through tenth grade.” This too agrees with Allan and Fryer’s assertion that students generally like the idea of monetary incentives, but have little idea as to how to translate their excitement into tangible steps to achieve the incentives. Further, Brian and John were the youngest participants in the study. Contradictory to Allan and Fryer (2011), however, was that Brian and John both significantly improved their grades.

The three older students—Julie (11<sup>th</sup> grade), Sarah (12<sup>th</sup>) and Brandon (12<sup>th</sup>) all gave the impression that participation in Champions of Wayne had a positive impact on their academic abilities and of their sense of belonging at school. Based on their interviews, it seems that none of the three had a personal relationship with a college graduate before participation in the program, and all three may have gone through high school without such a close relationship.

Brandon’s interview suggests that he would have dropped out of school had he not enrolled in Champions of Wayne, and his behavioral record from middle school corroborates this. Julie, Sarah, and Brian were the oldest three students in the study. It is possible that they are simply more mature than the other two, and that maturity enables them to be more aware of what is going on around them.

**RQ4: How does participation in Champions of Wayne affect students' performance in school?**

Although the five qualitative interviews were revealing, the effect of the program on students' performance cannot be generalized from five cases. A closer examination of quantitative data from the student population at large is most helpful in understanding the program's impact on grades. The quantitative data suggests that participation in Champions of Wayne appears to have a positive impact on the academic performance of students at Wayne Memorial. The populations in the quantitative analysis are large enough (542 treatment group and 1,142 control) that the 0.42 GROWTH score difference is statistically significant at a 95% confidence level.

This small, yet significant difference confirms the general consensus that financial incentives have at least a small positive impact on student achievement (Allan & Fryer, 2011; Hahn, 1994; Spencer et al., 2005). It contradicts Allan and Fryer (2011) and Slavin (2010), however, in that Champions of Wayne successfully incents academic outputs (grade point averages) rather than any sort of academic input (attendance, behavior, homework completion, etc.).

Allan and Fryer's (2011) qualitative study found that, despite being genuinely enthusiastic about output-based incentives, students had little idea how to translate their enthusiasm to tangible steps that might lead to achieving the incentives. The qualitative portion of this study confirms this. Even when successful students were asked to think back on their successful semester and describe what they did differently to achieve their results, responses generally involved abstract concepts like "focus," "taking things seriously," and "trying harder." Not once did any of the five students describe something

tangible, such as spending more time on homework, eliminating distractions, or sitting in the front of the classroom. In fact, the only student who reported something that might be considered in the same ballpark as tangible was Brandon, who said he would often stay after school to “hang out” with his mentor, and that he was more confident in raising his hand in class. Yet Brandon was the one student in the qualitative study whose grades got *worse* (1.8 cumulative GPA to a 1.0 semester GPA).

With all of this in mind, the results of this study are somewhat perplexing. The quantitative side of the study shows that students who participate in Champions of Wayne significantly improve their grades when compared to students at the same school who do not participate. The literature review suggests that, although students likely signed up for Champions because of the \$200 incentive, they ultimately achieved more because of their relationships with their mentors and the byproducts of these relationships (connectedness to school, improved relationships with other adults, etc.). However, the qualitative side of the study suggests that the three students who described the most meaningful mentoring relationships either had a GROWTH score of zero (Sarah and Julie) or saw their grades decline (Brandon). Meanwhile, the two students who significantly improved their grades had the least to say about their mentoring relationships and could not describe any tangible change in study habits or work ethic. John, who recorded a +0.7 GROWTH score (which is probably more significant considering it was based on a middle school career GPA and a high school semester GPA), reported that his mentor “really didn’t help much,” and could only credit improved focus and taking school more seriously for his improvement. And Brian, who said his

goal was “super easy” despite improving on his GPA by 100%, saw his mentor go on medical leave early in the semester, essentially leaving him to his own devices.

### **Significance of Results**

It is worth noting that ACT scores at Wayne Memorial High School are at an all-time high, and have increased from a building average of 17.2 (on a 36-point scale) when Champions of Wayne was founded (2009), to an average of 18.8 in 2015. Further, the general consensus among staff in the Wayne-Westland district, as well as among substitute teachers who work in various districts throughout the year, is that Wayne Memorial has an extremely friendly and positive culture in comparison to neighboring schools.

While there are many other initiatives and programs at Wayne Memorial that have contributed to these results and at least deserve some of the credit, the results of this study suggest that Champions of Wayne has played a significant role in this improvement of achievement and culture. Students enrolled in the program significantly outperformed those not enrolled in terms of grade point average, and it is apparent from the qualitative side that the mentoring component of the program seems to have enhanced the self-efficacy of students who took advantage of it.

Due to ethical concerns, the quantitative design was quasi-experimental, not randomized. One could argue that the students who enrolled in Champions of Wayne were the ones legitimately interested in improving their grades and that more apathetic students comprised the control group, though this study did not explore on a large scale why some students chose to join the program and some did not. Further, while the multiple case study approach provided rich descriptions of some dynamic mentoring



relationships, the stories of 519 out of 524 students in the program were not heard.

Although this study was the first conducted on the program since its inception in 2009, the need for further research on this program and its effect on students is clear.

### **Recommendations for Champions of Wayne**

While this study found Champions of Wayne to be effective in enhancing educational achievement and relationships at Wayne Memorial, areas in which the program can be improved were also found. Based on the results of this study, Champions of Wayne can be improved by:

- Encouraging mentors to seek out at-risk students who lack parental involvement in their educational lives as opposed to affluent students who live with both biological parents.
- Advising mentors to focus on informal interactions (having lunch together, “hanging out,” etc.) in the initial stages of the mentoring relationship.
- Making mentors aware that, although students may be genuinely excited about improving their grades and achieving a goal, they are largely incapable of developing a plan of action on their own.
- Providing mentors with training on how to develop plans of action and accountability systems with students.
- Building a mentoring toolkit to make mentors aware of best practices.
- Exploring the concept of goals based on something other than grade point average. Some students may be more responsive to goals based on behavior, attendance, punctuality, etc.

- Increase awareness of the ratio of girls enrolled (69%) vs. boys enrolled (31%).

While this may not be necessarily be a problem, it is worth keeping in mind as a new semester begins.

### **Recommendations for School Leaders**

School leaders should understand it is possible to replicate Champions of Wayne in their respective schools, although it is somewhat complicated. Recommendations for replication are:

- Use an entrepreneurial approach: The old saying, “Rome wasn’t built in a day” applies here. The first step to starting a similar program would be to do exactly that—start the program with a few students and a few mentors. Starting with a few dedicated staff members with political/social capital would be beneficial.
- Figure out some sort of incentive: A \$200 incentive has proven to be effective, but is not necessarily the only way to offer an incentive. This study suggests that students initially will sign up for an enticing incentive, but mentoring relationships can be much more powerful.
- Focus on relationships: Especially in the early stages of the program, positive relationships are paramount. The qualitative section of this study confirms this.
- Find a successful alum/alums to support: Long-standing schools that have been a part of their communities for generations are likely to have at least a few alums with abundant resources. Reach out to them and let them know their alma mater could use their help.

### Recommendations for Future Research

This study suggests that Champions of Wayne has been a boon to Wayne Memorial High School since inception in 2009. GPA data suggests the program improves student achievement, and interviews with participants suggest students—particularly those considered at-risk—benefit from one-on-one relationships with educationally successful adults. Recommendations for further research on topic are:

- Exploration of qualities of an effective mentoring relationship. This study found informal relationships to be influential, but also confirmed existing research that suggests students are poor planners.
- Additional understanding of the differences between mentoring at-risk students and mentoring affluent students. This study suggests that at-risk students stand to benefit greatly from a mentoring relationship with an educationally successful adult, and that affluent students are likely have similar relationships already in place. This may not be true in all situations, and it is possible that affluent students can still benefit from a mentoring relationship.
- Analysis of Champions of Wayne’s impact on the overall culture of Wayne Memorial. Informal interviews with the principal and police liaison officer at Wayne Memorial suggest that many staff members use Champions as a means of building relationships with students who might otherwise cause trouble at school. In his book *David and Goliath: Underdogs, Misfits, and the Art of Battling Giants*, Malcolm Gladwell (2013) tells the story of the 2003 Juvenile Robbery Intervention Program (J-RIP) in Brooklyn New York. The program focused on 106 juveniles who had been arrested in the past year, with the intention of getting

them out of a life of crime, back in school, and ultimately making them productive members of society. The program sputtered at first due to a general distrust of the police by the juveniles and their families, but took a turn for the better when the police chief decided to purchase a Thanksgiving turkey for each of the 106 families and deliver it to their doorsteps. After successfully beginning to build positive relationships with the turkeys, the police officers involved in J-RIP started Christmas toy giveaways, pickup basketball games, and efforts to secure summer jobs for the juveniles. In short, robberies and arrests of the juveniles plummeted because the police started acting less like police and more like mentors. Relationships between police and youth improved, and it is possible that Champions of Wayne may be having a similar effect at Wayne Memorial.

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## Appendix A

### Parent/Guardian Consent Form

#### Parent/Guardian Informed Consent Agreement

**Project Title: THE IMPACT OF A MENTORING/FINANCIAL INCENTIVE PROGRAM ON AT-RISK HIGH SCHOOL STUDENTS**

**Principal Investigator:** Sean Galvin, Eastern Michigan University

**Co-Investigator:** Barbara Bleyaert, EdD, Committee Chair, Eastern Michigan University

**Purpose of the Study:** The purpose of this research study is to explore what motivates students at Wayne Memorial join the Champions of Wayne program, how participation in the program affects them as young adults, and how participation impacts their academic performance.

**Procedure:** I will explain the study to you in person, answer any questions you may have, and witness your signature to this consent form. Your child must be a Wayne Memorial High School student, a recent participant in the Champions of Wayne program, and be willing to participate in order to take part in this study.

Your child will be asked to participate in one in-depth interview lasting 60 minutes, with a possible follow-up interview. In the first interview, your child will be asked to reflect on his/her experience as a part of Champions of Wayne during fall semester 2014, as well as his/her experiences in school before enrolling in Champions. Your child's academic history (grades, GPAs, etc.) will be discussed in the interview.

If it is determined that a follow-up interview is appropriate, your child will be asked to participate in an additional 60 minute interview. In the follow-up interview, he/she will be asked to reflect further on the experience as a part of Champions, and to compare it to other educational experiences that he/she may have had. The interviews will be recorded digitally, and will be transcribed (typed out word-for-word) by me.

After my initial analysis of the interview and transcript, I will provide you a copy of my written description and I will ask for your input as to its accuracy. Prior to my final submission of my written dissertation, I will seek your input as to accuracy and confidentiality of your child's contributions.

Once this consent form is signed, you will be given a duplicate copy.

**Confidentiality:** Your child's participation in this research will be kept confidential. Only a pseudonym will identify the transcripts of your child's interviews. The selected pseudonyms for your child and his/her school will be used in any written report, presentation, or other publication. Transcripts will be stored separately from the signed consent form, which includes your child's name and any other identifying information. At no time will your child's real name or the real name of his/her school be associated with or matched to the transcripts of the

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interviews, in any future written report, presentation, or other publication. The interview audio files themselves will be destroyed following completion of this study. All related materials, including a digital back-up file will be kept in locked file cabinets located in this researcher's office at Wayne Memorial, and all digital data will be stored on a password-protected computer in password-protected files. Other than the researcher (Sean Galvin), only the committee chair (Dr. Barbara Bleyaert), and research oversight organizations will have access to any of the above information.

**Expected Risks:** While there should not be risk to your child in participating in this study, there is the possibility that as he/she responds to the in-depth interview questions he/she may feel some distress through identifying painful experiences from his/her past, educational experiences, or from the mentoring experience. If your child feels any such discomfort, he/she has the right to stop at any time and seek assistance from:

- Kristara Taylor  
WMHS School Social Worker  
(734) 419-2229
- Jason Lewis  
WMHS School Psychologist  
(734) 419-2241

**Expected Benefits:** There will be no direct personal benefits to your child, but his/her participation will contribute to educators' understanding of the lived experiences of students as participants in Champions of Wayne. Your child's contribution to this research has potential to enhance the program, as well as inform other schools and school leaders of the impact of mentoring and financial incentives in schools.

**Voluntary Participation:** Participation in this study is voluntary. You and your child may choose not to participate. It is your right to withdraw your child at any time from completion of the study without penalty or negative consequences. This means that your child's education and/or grades will not be affected in any way for choosing not to participate or for choosing to stop participating after the study has already started.

**Use of Research Results:** I will be using the results of this research the process of completing a PhD degree. The results will be presented in aggregate form only and when presenting descriptive findings, or descriptive data, I will separate participants from the school they attend when necessary to protect participant identity and school interests. Results may be presented at research meetings and conferences, in scientific or other publications, and as part of a doctoral dissertation being conducted by the principal investigator.

**Future Questions:** If you have any questions concerning your child's participation in this study now, or in the future, you can contact the principal investigator, Sean Galvin, at 517-974-1117 or via email at [sean.t.galvin@gmail.com](mailto:sean.t.galvin@gmail.com). You can also contact EMU Professor and Committee Chair Barbara Bleyaert at 734-487-0255 or [bbleyaer@emich.edu](mailto:bbleyaer@emich.edu).

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For questions about your rights as a research subject, contact the Eastern Michigan University Human Subjects Review Committee at [human.subjects@emich.edu](mailto:human.subjects@emich.edu) or by phone at 734-487-3090.

**Consent to Participate:** I have read or had read to me all of the above information about this research study, including the research procedures, possible risks, side effects, and the likelihood of any benefit to my child. The content and meaning of this information has been explained and I understand. All my questions, at this time, have been answered. I hereby consent to my child's voluntary participation.

PRINT NAME: \_\_\_\_\_

Signatures:

Participant (your signature) \_\_\_\_\_ Date \_\_\_\_\_

Principal Investigator \_\_\_\_\_ Date \_\_\_\_\_

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## Appendix B

### Student Consent Form

#### Participant Informed Consent Agreement

**Project Title:** THE IMPACT OF A MENTORING/FINANCIAL INCENTIVE PROGRAM ON AT-RISK HIGH SCHOOL STUDENTS

**Principal Investigator:** Sean Galvin, Eastern Michigan University

**Co-Investigator:** Barbara Bleyaert, EdD, Committee Chair, Eastern Michigan University

**Purpose of the Study:** The purpose of this research study is to explore what motivates students at Wayne Memorial join the Champions of Wayne program, how participation in the program affects them as young adults, and how participation impacts their academic performance.

**Procedure:** I will explain the study to you in person, answer any questions you may have, and witness your signature to this consent form. You must be a Wayne Memorial High School student, a recent participant in the Champions of Wayne program, and be willing to participate in order to take part in this study.

You will be asked to participate in one in-depth interview lasting 60 minutes, with a possible follow-up interview. In the first interview, you will be asked to reflect on your experience as a part of Champions of Wayne during fall semester 2014, as well as your experiences in school before enrolling in Champions. Your academic history (grades, GPAs, etc.) will be discussed in the interview.

If it is determined that a follow-up interview is appropriate, you will be asked to participate in an additional 60 minute interview. In the follow-up interview, you'll be asked to reflect further on your experience as a part of Champions, and to compare it to other educational experiences that you've had. The interviews will be recorded digitally, and will be transcribed (typed out word-for-word) by me.

After my initial analysis of the interview and transcript, I will provide you a copy of my written description and I will ask for your input as to its accuracy. Prior to my final submission of my written dissertation, I will seek your input as to accuracy and confidentiality of your contributions.

Once this consent form is signed, you will be given a duplicate copy.

**Confidentiality:** Your participation in this research will be kept confidential. Only a pseudonym will identify the transcripts of your interviews. The selected pseudonyms for you and your school will be used in any written report, presentation, or other publication. Transcripts will be stored separately from the signed consent form, which includes your name and any other identifying information. At no time will your real name or the real name of your school be associated with or matched to the transcripts of the interviews, in any future written report, presentation, or other publication. The interview audio files themselves will be destroyed following completion of this study. All related materials, including a digital back-up file will be kept in locked file cabinets located in the researcher's office at Wayne Memorial, and all digital data will be stored on a

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password-protected computer in password-protected files. Other than the researcher (Sean Galvin), only the committee chair (Dr. Barbara Bleyaert), and research oversight organizations will have access to any of the above information.

**Expected Risks:** While there should not be risk to you in participating in this study, there is the possibility that as you respond to the in-depth interview questions you may feel some distress through identifying painful experiences from your own past, your life experiences, or from the mentoring experience. If you feel any such discomfort, you have the right to stop at any time and seek assistance from:

- Kristara Taylor  
WMHS School Social Worker  
(734) 419-2229
- Jason Lewis  
WMHS School Psychologist  
(734) 419-2241

**Expected Benefits:** There will be no direct personal benefits to you, but your participation will contribute to educators' understanding of the lived experiences of students as participants in Champions of Wayne. Your contribution to this research has potential to enhance the program, as well as inform other schools and school leaders of the impact of mentoring and financial incentives in schools.

**Voluntary Participation:** Participation in this study is voluntary. You may choose not to participate. It is your right to withdraw at any time from completion of the study without penalty or negative consequences. This means that your education and/or grades will not be affected in any way for choosing not to participate or for choosing to stop participating after the study has already started.

**Use of Research Results:** I will be using the results of this research the process of completing a PhD degree. The results will be presented in aggregate form only and when presenting descriptive findings, or descriptive data, I will separate participants from the school they attend when necessary to protect participant identity and school interests. Results may be presented at research meetings and conferences, in scientific or other publications, and as part of a doctoral dissertation being conducted by the principal investigator.

**Future Questions:** If you have any questions concerning your participation in this study now, or in the future, you can contact the principal investigator, Sean Galvin, at 517-974-1117 or via email at [sean.t.galvin@gmail.com](mailto:sean.t.galvin@gmail.com). You can also contact EMU Professor and Committee Chair Barbara Bleyaert at 734-487-0255 or [bbleyaer@emich.edu](mailto:bbleyaer@emich.edu).

For questions about your rights as a research subject, contact the Eastern Michigan University Human Subjects Review Committee at [human.subjects@emich.edu](mailto:human.subjects@emich.edu) or by phone at 734-487-3090.

**Consent to Participate:** I have read or had read to me all of the above information about this

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research study, including the research procedures, possible risks, side effects, and the likelihood of any benefit to me. The content and meaning of this information has been explained and I understand. All my questions, at this time, have been answered. I hereby consent and do voluntarily offer to follow the study requirements and take part in the study.

PRINT NAME: \_\_\_\_\_

Signatures:

Participant (your signature) \_\_\_\_\_ Date \_\_\_\_\_

Principal Investigator \_\_\_\_\_ Date \_\_\_\_\_

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**Appendix C**

**Wayne Memorial High School Approval**



December 3, 2014

Wayne Memorial High School  
3001 Fourth St.  
Wayne, Michigan 48184  
(734) 419-2200  
(734) 595-2227 fax

Dear Sean Galvin,

You have permission to gather data on student GPA and to interview 5-7 students as a part of your dissertation research, provided that you use pseudonyms in your writing to protect student and family privacy.

**Michele A Harmala Ph.D.**  
*Superintendent*

A handwritten signature in black ink that reads 'K Weber'.

**Kevin Weber**  
*Principal*

Kevin Weber

**Denise Brennan**  
*Assistant Principal*

Principal

**Kesha Reeves**  
*Assistant Principal*

Wayne Memorial High School

**Lindsay Rousseau**  
*Assistant Principal*

**Greg Ambrose**  
*Athletic Director*

Accredited by the  
North Central Association  
of Colleges and Schools



## Appendix D

### EMU Internal Review Board Approval

#### RESEARCH @ EMU

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**UHSRC Determination:** EXPEDITED INITIAL APPROVAL

**DATE:** January 16, 2015

**TO:** Sean Galvin, PhD  
Eastern Michigan University

**Re:** UHSRC: # 695933-1  
Category: Expedited  
Approval Date: January 15, 2015  
Expiration Date: January 15, 2016

**Title:** The Impact of Mentoring and Financial Incentives on At-Risk High School Students

Your research project, entitled **The Impact of Mentoring and Financial Incentives on At-Risk High School Students**, has been approved in accordance with all applicable federal regulations.

This approval included the following:

1. Enrollment of Quantitative: *1,150 control group; 630 treatment group; Qualitative: 5 subjects to participate in the approved protocol.*
2. Use of the following study measures: *Interview Guide: Project Title: THE IMPACT OF A MENTORING/INCENTIVE PROGRAM ON AT-RISK HIGH SCHOOL STUDENTS; Type of Interview: Multiple Case Study*
1. Use of the following stamped recruitment materials: *NA*
2. Use of the stamped *Parent/Guardian Informed Consent Agreement; Participant Informed Consent Agreement*

**Renewals:** This approval is valid for one year and expires on January 15, 2016. If you plan to continue your study beyond January 15, 2016, you must submit a Continuing Review Form by December 16, 2015 to ensure the approval does not lapse.

**Modifications:** All changes must be approved prior to implementation. If you plan to make any minor changes, you must submit a **Minor Modification Form**. For any changes that alter study design or any study instruments, you must submit a **Human Subjects Approval Request Form**. These forms are available through IRBNet on the UHSRC website.

**Problems:** All major deviations from the reviewed protocol, unanticipated problems, adverse events, subject complaints, or other problems that may increase the risk to human subjects **or** change the category of review must be reported to the UHSRC via an **Event Report** form, available through IRBNet on the UHSRC website

**Follow-up:** If your Expedited research project is not completed and closed after **three years**, the UHSRC office requires a new **Human Subjects Approval Request Form** prior to approving a continuation beyond three years.

Please use the UHSRC number listed above on any forms submitted that relate to this project, or on any correspondence with the UHSRC office.

Good luck in your research. If we can be of further assistance, please contact us at 734-487-3090 or via e-mail at [human.subjects@emich.edu](mailto:human.subjects@emich.edu). Thank you for your cooperation.

Sincerely,

Jennifer Kellman Fritz, PhD  
Chair  
University Human Subjects Review Committee

Appendix E

Champions of Wayne Contract



Student Name: \_\_\_\_\_ Grade: \_\_\_\_\_ Date: \_\_\_\_\_

**I. Student Agreement**

I, \_\_\_\_\_, agree to actively pursue the below listed goal. I will work diligently to reach my goal by the end of the semester. I have met with a program representative to discuss the goal and plan.

Goal: \_\_\_\_\_

My goal will be reached by the end of the semester

Student Signature \_\_\_\_\_

**II. Mentor Agreement**

I, \_\_\_\_\_, agree to champion the above-named student during the course of this semester to help him/her strive to reach his/her goal. I will do the following to help my student in developing a plan to reach our goal:

\_\_\_\_\_

\_\_\_\_\_

Champion-Mentor Signature: \_\_\_\_\_

**III. Parent Agreement**

I, \_\_\_\_\_, agree to allow my student to participate in the WMHS Champions of Wayne Program. I understand that if the Champions of Wayne Program Administrator determines that my child has achieved the above-stated goal, and kept up with his/her check-in forms, by the end of the listed semester, my child will receive a \$200 reward for their efforts. The \$200 reward will be in the form of a check made payable to the student. I further agree to do everything I can to help my child reach their goal. It is expressly understood that in the event of any dispute as to whether my child has achieved his or her goal, the determination of the Program Administrator shall be final and binding.

Parent Signature: \_\_\_\_\_

Director Signature: \_\_\_\_\_

*The Champions of Wayne Program is supported by a donation from The Helppie Family Charitable Foundation to assist Wayne Memorial High School achieve academic excellence.*