# Resilience and the Rudder Leadership Team

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Abstract

Preparing students for post-secondary success requires more than content specific academic learning; a growing body of evidence suggests that character development is equally vital. Analysis of the contemporary research reveals common themes in the attributes of resilient individuals, such as communication, problem solving, independence, sense of purpose, and self-reflectiveness, as well as the methodology to develop resilience in students as a teacher or facilitator. These common attributes provide a framework for structuring developmental curriculum for high school students and the Rudder Leadership Team. The purpose of this mixed-method study was to examine resilience and determine if there was an improved resilience level for students who participated in the Rudder Leadership Team at William Smith High School. This research investigated resilience and compared participants of the Rudder Leadership Team students with the rest of the high school student body. It further analyzed the aspects of the program that could be impactful for current leadership students and alumni of the program. The results show a significant increase in the resiliency levels of leadership team members. The research also suggests specific recommendations to continue certain aspects of the program and to change others.

*Keywords:* resiliency, resilience education, resilience, leadership, experiential education

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# CHAPTER 1: BACKGROUND AND RATIONALE

## Background

Current statistics show that there is at most a 60% graduation rate of first-time, post-secondary students who started as full-time degree/certificate-seeking students. For certain populations, this percentage is drastically lower, reaching as low as 5% (U.S. Department of Education, 2012). Many post-secondary programs are concerned with the retention of college freshmen, and moreover, degree completion. Public and private institutions have been searching for answers that may explain why such a low percentage of students who start a program finish it as planned. Many of these institutions are developing programs for intervention or changing their current practices to be more inclusive of this student population.

Even in the face of students who demonstrate difficult behavior and real challenges, it is essential to remember what Henderson said about resilience:

> Educators cannot eradicate poverty, remove neighborhood gangs, stop cultural violence, heal parental addictions, or prevent a myriad of other types of stress, risk, and trauma that many students face daily. Yet my teachers, like most teachers, did much to foster my resilience without even knowing that they were doing it. (Henderson, 2013, p. 24)

If teachers have the tools, they can take intentional steps to be even more connected with their students and make an even greater lasting impact on the resilience of each and every student.

My thesis research considered this phenomenon from the perspective of students involved in secondary institutions. As a high school teacher, I was interested in determining if there were skills or attributes that could be taught through a series of leadership experiences that would make students more resilient in their post-secondary careers. I sought to determine if the

Rudder Leadership Team was effective in developing resilience and examined possible programmatic aspects that can impact its effectiveness.

In today's educational climate, widespread backlash against standardized testing and the Common Core Standards is pushing educators to search for new ways to measure academic performance while teaching skills, which will benefit students long after they leave the classroom. Expeditionary Learning schools utilize hands-on educational inquiry to teach subject matter in a way which resonates with students. While this inquiry can take on many forms, the overarching goal is to develop 21st century skills, including character development. As an Expeditionary Learning School, William Smith High School seeks to create meaningful programs, which transcend the mere aggregation of academic content and instead set the stage for a lifetime of critical thinking and vigorous participation in life.

William Smith High School is an urban school in Aurora, Colorado. It is an Expeditionary Learning School with a mission to focus on improving school culture as a means to improve the student experience and promote higher graduation rates than nearby high schools. The Rudder Leadership Team consists of a group of students who applied to participate for one year in the program. They serve a major role within the school culture and community and assist fellow students, teachers, and administrators to improve the school environment. Resilience was a key factor to examine because many students were successful in the school program, but potentially lacked the attributes necessary to succeed beyond high school.

## Introduction: About the Study

The purpose of this mixed-method study was to examine resilience and determine if there was any improved resilience level of students who participated in the Rudder Leadership Team at William Smith High School. This research investigated resilience and compares participants

of the Rudder Leadership Team students with the rest of the high school student body. This chapter introduces the study. It includes a general summary of the population, school and demographic information, an overview of the methods used, and highlights the research questions asked and answered in this paper.

The population under investigation was students from William Smith High School's Rudder Leadership Team. The Rudder Leadership Team was launched in 2009 at William Smith High School. Students apply in November of their junior year of high school and are accepted in December. They commit to the program for the following calendar year, with optional participation during the spring after their initial commitment. A unique attribute of the program is that students are accepted based on their potential to improve. For some, they have challenges with achieving good grades. For others, they need extra support to communicate with others. Rudder Leadership Team students do not begin as school superstars nor are they the most popular in the school. Unlike many leadership programs, students are considered for acceptance based on their character, and multiple teachers provide input on applicants. The program was designed with the following three components:

1. Mentorship – students build relationships with incoming freshmen and conduct the freshman class orientation.
2. Service Learning – students develop and implement school-wide programs, assist with needs in the school, and volunteer in the community.
3. Team Building and Facilitation – students are trained to be team building facilitators. They facilitate initiatives for student groups at William Smith High School and other schools in Aurora, Colorado.

The program kicks off with a rigorous application and interview process. After students are selected, they attend weekly meetings to begin the process of team building, monthly service, and learning about their role within the team. The training process culminates with a one week intensive training of facilitation and continued team building and reflection. This week long intensive program occurs in April. When students have completed this process, they begin planning team activities to facilitate current students in the spring and incoming students for the fall. Through reflection and debriefing led by me or their peers, students understand their individual leadership styles and develop specific skills that align with meeting their individual goals. For example, many students begin the program wanting to have more of a voice and the confidence to speak in front of a group. Throughout the year, students develop close-knit relationships with their peers, gain confidence in themselves, and acquire additional communication skills and abilities to lead small and large groups effectively.

I used William Smith High School in Aurora, Colorado, and specifically the Rudder Leadership Team as a case study group for this research. I chose this group because I was the founder and leader of the group. I had access to a diverse group of current students as well as former graduates, and I was personally connected to improving this program. My passion for students and meaningful educational experiences fueled this research study.

Through this research project, I administered The Resiliency Scale Survey (Wagnild, 2009) to the Rudder Leadership Team students and the general school population and analyzed the results. I also examined potential factors that impact the outcomes of the Rudder Leadership Team by connecting with current and alumni Rudder Leadership Team students through a survey and interview process. The aim was to understand how participation in meaningful service

learning, the ability to self-reflect, and oral communication skills impact resilience in a post-secondary setting.

## Purpose: Potential Effects of the Rudder Leadership Team

### Theoretical Framework: Resiliency and Ability to Change

A large component of this thesis research was to evaluate the Rudder Leadership Program as it pertained to developing resilience in its participants. According to Michael Ungar (2010), co-director of the Resilience Resource Centre, "In the context of exposure to significant adversity, resilience is both the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their well-being and their capacity individually and collectively to negotiate for these resources to be provided in culturally meaningful ways" (Ungar, 2010).The theoretical framework of this thesis relied on the research of leading theorists regarding resilience and youth, incorporating studies completed by Bernard (1991), Henderson (2013), Miller (2002), Brooks and Goldstein (2001), and Ungar (2010). In each of their works, these researchers identified key components found in resilient youth. Additionally, I worked under the framework that resilience can be taught or learned as noted by Tough (2012), Henderson and Milstein (2003), and current school programs that teach a growth mindset, for example, KIPP Schools.

### Methods: Qualitative, Quantitative, and Mixed

A mixed-method approach was utilized to examine *if* the Rudder Leadership Team enhances students' resilience level, and if so, *how* it addresses these attributes programmatically.

The first aspect of this study was to measure the influence of the Rudder Leadership team on resilience. To assess resiliency and associated predictors, I collected and analyzed quantitative data by using the Resiliency Scale (Wagnild, 2009). I gathered information from the current

Rudder Leadership Team (pre and post the duration of the participation in the Rudder Leadership Team) and used existing data from William Smith High School (pre and post the Rudder Leadership team for 2014-2015). I included an additional researcher developed survey instrument adapted forms from the Three Dimensional Wisdom Scale (Ardelt, 2003), and the Social Capital Community Benchmark Survey (School, 2014). These data were analyzed through Repeated Measures ANOVA and several Analyses of Variance (ANOVA).

The second part of the study addressed the program's components that students perceived to be most salient for outcomes. For this qualitative component, I used the Means–End theory (Reynolds & Gutman, 1988). I contacted all 59 current members and alumni from the Rudder Leadership Team via email. They had the opportunity to complete The Resiliency Scale (Wagnild, 2009) survey and answer additional questions that sought to provide additional information about the Rudder Leadership Team program and to better understand what components are impactful to participants. Analysis was done through LadderMap (Gengler & Reynolds, 1995) and coded by program values.

**Population: High School Students and Graduates from William Smith HS**

The population under investigation was students from William Smith High School's Rudder Leadership Team. William Smith High School is an urban school in Aurora, Colorado. It is an Expeditionary Learning School with a mission to focus on improving school culture as a means to improve the student experience and promote higher graduation rates than nearby high schools. The Rudder Leadership Team consists of a group of students who applied to participate for one year (during their junior and senior year) in the program. They serve a major role within the school culture and community and assist fellow students, teachers, and administrators to improve the school environment.

**Hypothesis and Research Questions: Impact of the Program and Effective Aspects**

I asked the following questions:

1. *Does the Rudder Leadership Team have a significant impact on the resilience of participants?*
2. *What are the most salient predictors of resilience in this population?*

In this quantitative examination, the null assumed that there was no difference between the pre- and post-survey results of the Rudder Leadership Team and the William Smith High School population.

I further sought to answer the following qualitative questions:

3. *What outcomes were most frequently perceived by Rudder Leadership Team participants?*
4. *What aspects of the Rudder Leadership Team Experience were most influential for the stated outcomes?*

**Definitions of Terms: Resiliency and Secondary Education**

*Community Service:* Voluntary work intended to help people in a particular area (Scales, Blyth, Berkas, & Kielsmeier, 2000).

*Post-Secondary Success*: Graduates have the ability and prerequisites to pursue further education or the career that they choose.

*Resilience:* An individual's ability to cope successfully in the face of adversity and risk (Stewart, Reid, & Mangham, 1997).

*Service Learning*: A teaching and learning strategy that integrates meaningful community service with instruction and reflection to enrich the learning experience, teach civic responsibility, and strengthen communities (Spring, Dietz, & Grimm, 2006, p. 11).

*Community resilience:* The ability of communities to absorb disturbance, self-organize, and adapt, thus displaying hardiness and sustainability (Carpenter, Walker, Anderies, & Abel).

*Social capital:* The level of connectedness an individual feels to friends, family and their local community (School, 2014).

*Community networks: "*Number and density of voluntary, state and personal networks" (Kirmayer, Sehdev, Whitley, Dandeneau, & Isaac, 2009, p.74).

*Civic engagement: "*Participation and use of civic networks" (Kirmayer, Sehdev, Whitley, Dandeneau, & Isaac, 2009, p.74).

## Delimitations

As the researcher, I chose to study the students from the Rudder Leadership Team and William Smith High School, focusing the research project on a smaller population. The data were collected during a two-month period of time in the Fall of 2014, and, through administering the survey in person and emailing potential participants. The dependent variable for the study is the resilience of Rudder Leadership Team participants. Additional variables to be considered are student age, gender, and existing conditions such as social capital and existing community structures that could impact resilience.

## Limitations

One limitation resulted from the original Resiliency Scale (Wagnild, 2009) survey data that was administered by school personnel. Advisory teachers administered this survey to their classes. Although they had clear instructions on exactly what to say and how to conduct the survey, it is challenging to know the consistency with which each survey session was administered and if the teachers followed the specific instructions that were provided. Therefore, a potential limitation resulted from the consistency of the administration of the survey to William

Smith High School. Multiple individuals administered the survey when it was given in October. Additionally, another limitation was the response rate of the Rudder Leadership Team alumni. Although I contacted graduates consistently for their responses, some consenting participants did not complete the survey and follow-up questions. Finally, while the results are valid and reliable, the small sample size limits the ability to generalize the effects of the Rudder Leadership Team to a broader student population.

## Assumptions

### Quantitative Assumptions: Small Sample Size

An assumption that can be made is regarding the small sample size for the Rudder Leadership Team (n = 13). This will be addressed in Chapter 4.

### Qualitative Assumptions: Action Research and Respondent Numbers

Another assumption that can be made is the ability for an action research project to be biased. My role as the action researcher and founder of the Rudder Leadership Team is addressed in the methods chapter. To increase trustworthiness and reduce potential researcher bias, qualitative data was analyzed by a collaborating advisor who is separate from William Smith High School and the Rudder Leadership Team.

A final assumption can be made regarding alumni respondents to the follow-up survey. Although all students were contacted, it was possible that there was a self-selection bias in the study. More students may have chosen to respond who had a positive experience with the program, resulting in more positive responses than if all students had submitted a response. I worked to avoid this bias by contacting students multiple times, encouraging additional feedback, and gathering responses from additional alumni students.

## Researcher Role

In addition to engaging in action research as the researcher for this thesis paper, I am also the founder and sponsor of the Rudder Leadership Team. As the founder of the Rudder Leadership Team, I was very interested in understanding whether the program was effective and which programmatic aspects most impacted its effectiveness. The students contacted for the research felt closely connected to me and their peers during their participation in the Rudder Leadership Team. These feelings could have presented a potential challenge and biases in the data collection and analysis procedures.

# CHAPTER 2: LITERATURE REVIEW

Expeditionary Learning schools seek to develop contemporary skills which inform character rather than solely delivering academic content. Educators within this framework need to be cognizant that character is developed in the context of life's specific circumstances, which vary from student to student. As such, character needs to be developed in such a way that maximizes each student's ability to respond to their unique environments and life circumstances, a phenomenon which can be measured using the concept of resilience.

Resilience is an individual's ability to cope successfully in the face of adversity and risk. This extends to families, groups, and communities, as well. The ability to be resilient changes over time and is enhanced by protective factors that can be found within an individual and within the environment (Stewart, Reid, & Mangham, 1997). It is beneficial to develop resilience in students who face challenges both in the classroom and in their communities. It is important for educators to understand the attributes of a resilient individual and how to assess resilience in their students. The ability of a teacher to systematically assess and develop resilient students greatly improves student outcomes during secondary and post-secondary education and into adulthood (Dweck, 2010). In this chapter, I discuss current definitions of resilience pertaining to individuals and communities, including the ways that resilience education is defined in the educational literature. Further, I identify models that highlight the components of resiliency, methods to develop resilience, and how resilience training is put into practice in various academic institutions. Finally, I describe tools that can be used to assess resilience.

## Defining Resilience

### Resilience in Communities

Resilience, as an empirical concept, can be used to comprehend both societal and natural systems. The Resilience Alliance defines resilience, both within humans and nature, as:

> (a) the amount of disturbance a system can absorb and still remain within the same state or domain of attraction, (b) the degree to which the system is capable of self-organization (versus lack of organization or organization forced by external factors), and (c) the degree to which the system can build and increase the capacity for learning and adaptation. (Carpenter, Walker, Anderies, & Abel, 2001, p. 765)

If communities are able to absorb disturbance, self-organize, and adapt, then they should be able to display hardiness and sustainability.

Community resilience can be assessed in multiple ways. One method is by identifying five important features that describe social capital (Kirmayer, Sehdev, Whitley, Dandeneau, & Isaac, 2009). The first feature is the availability of community networks. This refers to the density of voluntary and public networks. If community networks are accessible, then they can be utilized to foster resilience. The second is civic engagement and participation. A culture of activism is significant to promote resilience. The third is a sense of belonging to the community, known as local civic identity. Fourth is reciprocity and norms of cooperation. This refers to the sense of obligation to help others and an expectation that service will be returned. The final characteristic is trust in the community. Individuals should trust the community and act in a way that is consistent with this feeling. Another way to measure community resilience is by looking at the level of resilience that each individual brings to the community. “Community resilience is approximated by evaluating and averaging community members’ resilience” (Kirmayer et al.,

2009, p. 29). These two measurements could be combined to get a strong sense of the level of resilience in a community.

Resilience from an ecological perspective is an ongoing maintenance of balance. In resilient systems, self-regulation helps the system maintain a state of equilibrium (Kirmayer et al., 2009). This perspective also highlights a system's natural ability to respond to challenges and utilize self-correcting processes in a restorative nature. Resilient systems can withstand hardship and revitalize. "Ecosystems show resilience through three broad mechanisms: buffering disturbances to reduce their impact, self-organization to maintain crucial system functions, and learning or adaptation" (Kirmayer et al., 2009, p. 3). Resilient ecosystems can function as an example to understand psychological resilience and to adapt these concepts to resilience in individuals. Resilient systems and communities do not simply ignore adversity, nor do they experience adversity and return to their original form.

> In many ecological systems . . . resilience involves transformation: the system responds to a challenge not simply by restoring its usual form but by changing in ways that better fit the new environmental constraints. This notion of resilience as adaptation and transformation is crucial for psychological and social resilience. (Kirmayer et al., 2009, p.3)

The concepts of accommodation (Piaget, 1950) and transformative learning (Marsick and Mezirow, 2002) are significant here as they are the basis for learning resilience, altering one's schema, and redefining one's worldview because of it.

**Resilience in Individuals**

General definitions of societal and ecological resilience deepen one's understanding of how individuals can be resilient and how school communities and environments can foster

resilience. Individuals who are resilient have great capacity to withstand difficulty and adversity. By facing problems head on, utilizing resources, and setting goals, they are able to find success in various contexts. "Resilient children do not deny problems that they may face . . . in addition to acknowledging and confronting problems, youngsters who are resilient are able to identify and utilize their strengths" (Brooks and Goldstein, 2001, p. 11). Children who are resilient keep a strength-oriented mindset and face challenges with positivity and confidence. Further, Werner and Smith (2001) found that resilient individuals utilize resources and opportunities available to them. They seek support from other individuals such as mentors, and pursue opportunities such as extracurricular activities. Resilient individuals persevere and learn from hardships and challenges rather than being resigned. They are individuals who rarely give up, if ever. They are self-aware and self-confident. Resilient individuals know that they can complete any reasonable assignment–and can distinguish reasonable from impossible (Ungar, 2010). Resilient individuals are able to bounce back from difficult situations because of these abilities.

Contemporary research uses a variety of terms when referring to resilience in education. This section examines the different language used to describe resilience. Dr. Maya Angelou, a particularly resilient person who is most well-known, perhaps, for her autobiographies *I Know Why the Caged Bird Sings* and *Mom & Me & Mom*, explains that resilience is a bouncing forward in the face of adversity (as cited in Azzam, 2013). She uses the word "dignity" to define resilience. Dignity is "a belief in oneself, that one is worthy of the best. Dignity means that what I have to say is important and I will say it when it's important for me to say it" (as cited in Azzam, 2013, p. 12). Angelou continues to explain that all individuals are called on to demonstrate resilience from time to time, but children who live in impoverished situations are called upon to do so more often. To Angelou, a caring individual or community is the key to

promoting resilience in youth. As evidenced in additional theories and literature, caring individuals represent a significant protective factor to promote resilience.

Similar to Angelou, researcher Angela Lee Duckworth identifies resilience with the term *grit*. In her research at the West Point Military Academy, Duckworth found that a key indicator for success through basic training, more than IQ and other cognitive tests, was grit. She conducted similar research to see which first year teachers in difficult schools would make it through the year and which workers in demanding jobs would succeed. In all of these settings, she found that individuals who had grit had a better chance of success than other individuals. To Duckworth, grit is persevering to achieve long term goals. It is the ability to continue a task or a challenge for years and work hard to realize those goals and future plans (Duckworth, 2013).

Duckworth also explored the relationship between grit and talent. She found that the two are either not related at all or they are inversely related. Schools focus so much on training students to recall content, compute quickly, and write articulately. While these skills are obviously vital for student success, ability alone is not enough; it must be coupled with grit or the willingness to persevere. Duckworth says that "grit is not just having resilience in the face of failure, but also having deep commitments that you remain loyal to over many years" (as cited in Perkins-Gough, 2013, p. 16). The concept of grit, or the commitment to a long-term goal, highlights another key protective factor that promotes resilience.

Finally, the word *hope* is used to further explain resilience. As Maddie Witter (2013) writes, hope is a malleable trait, and as educators, "we can enhance hope in students by developing their ability to set goals and evaluate their own progress—teaching them how to master large, difficult tasks by breaking them into smaller parts and persistently meeting the smaller benchmarks" (Witter, 2013, p. 62). Witter continues that hope (or resilience) can be

developed from three key features: stamina, a growth mind-set, and a solid work ethic (Witter, 2013). Stamina refers to deliberate practice with complete focus. As students believe that they can complete difficult tasks, they will develop hope. Further, a growth mind-set, coined by psychologist Carol Dweck (2010), refers to the habits of hard work and persistence as a way to achieve, rather than an innate ability to be smart. With stamina and a growth mind-set, students can develop a solid work ethic. They can achieve their goals and complete difficult tasks. Witter states that these "nonacademic skills stimulate the hopeful thinking necessary for students' short-term progress and long-term success" (Dweck, 2010, p. 64). The idea of hope alludes to self-motivation, another protective factor that fosters resilience.

## Models of Resilience

### Internal Protective Factors

Given these related definitions of resilience and identification with related concepts, it is important to identify key traits of resilient individuals and outline the concept of protective factors, both internal and external. Several recent models describe common traits among resilient individuals. Bernard highlights five attributes of resilient children: "social competence, ability to problem solve, critical consciousness, autonomy, and sense of purpose" (as cited in Zolkoski & Bullock, 2012, p. 2296). The first attribute, social competence, refers to empathy, compassion, communication skills, and sense of humor. The next, problem solving, includes the ability to think abstractly and develop alternate solutions for problems. The third attribute is critical consciousness, which refers to an awareness of structures of cruelty and the creation of structures to overcome the cruelty that they encounter. The fourth characteristic, autonomy or a capability of being independent, is characterized by students having their own identity and an individual locus of control, an internal balance and ability to self-reflect, feeling some control over their environment. The final key attribute for resilience is a sense of purpose. According to

Bernard, this refers to having goals and aspirations, and a belief in a bright future (as cited in Zolkoski & Bullock, 2012, p. 2296). In another resource, Bernard identifies only four attributes, eliminating critical consciousness from the model (Bernard, 1991). In both versions of this model, the key attributes remain: social competence, problem solving, autonomy, and purpose.

The next model demonstrates five characteristics that best identify resilience in disabled youth. A study completed by Miller (2002) shows that "resilient learning-disabled youth (a) look for personal control over their lives, (b) are willing to seek out and accept support, (c) set goals, (d) possess a strong will to succeed, and (e) demonstrate high levels of persistence" (Zolkoski & Bullock, 2012, p. 2297). Further, Miller asserted that "one of the most noticeable differences between resilient and non-resilient students was that those who are resilient demonstrated an ability to identify success experiences, were able to identify their strengths, and showed strong self-determination to succeed" (as cited in Zolkoski & Bullock, 2012, p. 2297). This model is similar to Bernard's because it identifies a need for personal control (autonomy), goal setting (sense of purpose), and high levels of persistence (problem solving). It adds a different attribute, mainly that resilient individuals seek out and accept support.

The next model comes from Brooks and Goldstein (2001), regarding parenting skills and characteristics that lead to resilient children. The first feature is that resilient children feel special. They set realistic goals and expectations for themselves, believing in their ability to problem solve and make quality decisions. Resilient children view obstacles and setbacks as challenges to confront, rather than to shy away from or avoid, utilizing effective coping strategies to grow from challenges. They recognize talents and understand their weaknesses, but view them as areas for improvement rather than permanent flaws. Finally, resilient children feel comfortable with others and show quality interpersonal skills with other children and adults.

They are all-around effective communicators who can seek assistance appropriately from adults when in need. This model clearly highlights similar themes from the former models. What is unique to this model is the understanding and awareness of self, and the understanding of both strengths and weaknesses. Brooks and Goldstein (2001) also mention that resilient children "are able to define the aspects of their lives over which they have control and to focus their energy and attention on those rather than on factors over which they have little, or any, influence" (p. 4). This demonstrates yet again that an internal locus of control is important for an individual to be resilient.

The final model comes from Wagnild (2011). In this model, resilience has five components: equanimity, purpose, self-reliance, self-acceptance, and perseverance. The first term, equanimity, refers to one being balanced and having a balanced perspective. Resilient individuals can see multiple sides of a situation. The next is purpose and the belief in living a meaningful life. Whether this is found through faith or independent of religion, resilient people find meaning and set meaningful life goals. Self-reliance is the ability to be independent and depend on oneself. The fourth characteristic is self-acceptance. This is the understanding of oneself and finding approval despite flaws. Finally, resilient individuals persevere. They never give up and consistently maintain a belief that they can be successful (Ungar, 2010). Through cultivating these traits, one can develop protective factors that also contribute to resilience.

**Developing Resilience**

Through her research, Nan Henderson (2013) identified key protective factors that develop resilience. Resilient individuals typically possess strengths in several attributes. The first is the ability to form positive relationships with others and be a friend. The next is service/helpfulness. Resilient students give of themselves to serve a cause. Another component is

life skills, which includes making good decisions, self-control, and being self-advocating. Individuals with a good sense of humor can utilize the skill as an internal factor for resilience. The next protective factor is inner direction, also known as an internal locus of control. This means that individuals can make decisions with intrinsic values in mind. Other features are perceptiveness and independence. Both of these features allow an individual to be insightful in situations and able to act autonomously. Another feature is a "positive view of personal future." Resilient children set goals and view the future through an optimistic lens. Next, students possess flexibility and the ability to adapt and adjust to new and difficult situations. Love of learning (i.e., a connection to learning) and self-motivation (i.e., internal initiative) are two more key features that can support an individual in being resilient. Finally, self-worth, perseverance, creativity, and spirituality are the final protective factors that foster resilience. Self-worth refers to self-confidence.

Like Angelou said, "If children are given the chance to believe they're worth something – if they truly believe that – they will insist upon it" (as cited in Azzam, 2013, p. 12). Perseverance is similar to Duckworth's concept of grit and the ability to stick with something, despite its challenges. Creativity can be thought of as being artistically expressive or as a way to solve problems in a unique or imaginative way. Finally, spirituality refers to a personal faith in something greater. Spirituality can be cultivated in a formal religious institution or it can be personally developed. In either setting, the belief in something greater can aid individuals in the development of resilience. These factors are internal strengths already possessed by individuals. For individuals to intentionally increase resilience, highlighting these strengths is a great beginning to the development of resilience.

The common themes of each model (Table 1.) can be synthesized into communication, problem-solving, independence, purpose, and self-awareness. Communication refers to the ability to communicate with others and maintain appropriate discourse with other individuals, and be sensitive to the needs of others. Problem-solving refers to the ability to creatively find solutions and the persistence to solve problems. Independence is a person's confidence and ability to complete tasks on her/his own. A sense of purpose means that an individual sees value in the work that he/she does and sets long-term, purposeful goals. Finally, self-awareness includes the ability to understand strengths and weaknesses, the ability to understand and accept oneself, and the capability to self-reflect and make personal changes.

Table 1.

*Synthesis of Dimensions of Various Models of Resilience*

| | **Bonnie Bernard** (1991) | **Miller** (2002) | | **Brooks and Goldstein** (2001) | **Ungar** (2010) | **Nan Henderson** (2013) | | |
|---|---|---|---|---|---|---|---|---|
| **Communication** | | | | Interpersonal Skills | | Positive Relationships | | |
| **Problem Solving** | Problem Solve | High Levels of Persistence | | Views Obstacles as Challenges | Perseverance | Love of Learning | | |
| **Independence** | Autonomy | Personal Control | | | Self-Reliance | Life Skills | Independence | Internal Initiative |
| **Purpose** | Sense of Purpose | Set Goals | Will to Succeed | Feel Special | Purpose | Service/Helpfulness | Positive View of the Future | Self-Worth |
| **Self-Awareness** | Critical Consciousness | | | Set Realistic Goals | Equanimity | Internal Locus of Control | | Perceptiveness |
| **Other** | | Seek Out and Accept Support | | Effective Coping Strategies | Self-Acceptance | Sense of Humor | Flexibility | Creativity |

**External Protective Factors**

While internal characteristics can lead to resilience, one must not forget external protective factors that can help foster resilience in children, namely quality relationships with adults. Youth can develop resilience through individual relationships, families, and communities. Resilience first develops through family in the home. "When children are given responsibilities, the message is clearly communicated that they are worthy and capable of being contributing members of the family" (Bernard, 1991, p. 11). If children learn their importance within the family, they can gain both a sense of responsibility and a sense of purpose. Moreover, "for families to create environments characterized by the qualities of caring, high expectations, and opportunities for participation, they, in turn, must exist in communities which also provide support and opportunities" (p. 11). In an ideal situation, families engage in their community, be it faith-based or not.

Unfortunately, in many communities and within many families, children are not afforded opportunities to develop resilience. Bernard (1991) notes that "resilient youth are those youth who have and take the opportunity to fulfill the basic human need for social support, caring, and love" (p. 13). She continues to say that "if this is unavailable to them in their immediate family environments, it is imperative that the school provide the opportunities to develop caring relationships with both adults and other youth" (p. 13). One challenge that school staff face today is that they often serve as the primary providers of resilient communities and opportunities for children to develop resilience. In his study on school effectiveness, Edmonds (1986) determined that a school can create a climate more influential than any single influence. For at least six hours a day, children thriving in this environment can learn habits and skills that can override almost everything else in their lives.

## Implementation

Nan Henderson's Resiliency Wheel (2013) is one resilience model that has been implemented in schools. This wheel describes six important ways to encourage resilience in students. The first category is to provide opportunities for meaningful participation. Young people should be involved in decisions as active and valued participants. They should be able to plan, make decisions, evaluate possibilities, and implement projects. The next is to increase bonding or connectedness. This means to connect individuals to one another to develop community connection within the class or group. The next is for the teacher to set clear and consistent boundaries. It is vital to be consistent and fair in implementing policies and regulations. The third category is to teach life skills. Students must learn conflict resolution, cooperation, and collaboration. Following that, it is essential to provide care and support. As the teacher, it is important to support students and care for them as they learn. Finally, the sixth category is to set and communicate high (but realistic) expectations. High expectations function as motivators for students to achieve their full potential. In all, this model is clear and is manageable to implement.

This model serves as one method for schools to consider implementing as they pursue programmatic changes to enhance resilience in students. An example of implementation could be a student-developed service learning project. Students can take ownership over determining with which organizations they want to work. Students should work together to make decisions, and in doing so, they could become connected to one another. Within the service structure (that the teacher and students have outlined), the students will undergo their service commitment. Through this process, they will encounter both emotional and interpersonal challenges. As they work through these challenges to pursue their goal, students will begin to learn resilience.

Through quality processing, such as journaling or group debriefing, attributes of resilience will develop.

While it is extremely important that schools become a source of strength and a solid community for individual development, it must be noted that individual connections can also have great impact on individuals and resilience.

> Shifting the balance or tipping the scales from vulnerability to resilience may happen as a result of one person or one opportunity. Individuals who have succeeded in spite of adverse environmental conditions in their families, schools, and/or communities have often done so because of the presence of environmental support in the form of one family member, one teacher, one school, one community person that encouraged their success and welcomed their participation. (Bernard, 1991, p. 23)

The impact that one person can have on a student must not be ignored. Teachers, administrators, counselors, and faculty must recognize the potential they have to impact students in their academic development, in addition to long-term resilience.

Ultimately resilience can take many shapes and forms, with the potential to define individuals, communities, and systems. Researchers have identified common features and attributes in individuals who are resilient, as well as aspects in the environment that support development of these attributes. The individual's skills and attributes, family support, strong community values, and caring school climate all influence and support the development of resilience in children. It is essential that all adults and able individuals take part in supporting the development of resilience in children and adolescents.

## Resilience in Education

With 21st century education defined by new problems to solve, complexities that technology has inspired, and changes that are impossible to anticipate, one may question the importance of teaching resilience to students. But as Azzam (2013) says,

> One of the things— one of the blessed components of resilience – is this: A person who resists being tied down and bound and made less than herself is able, by resisting, not only to be better than the naysayer would believe, but she's also able to lift up the naysayer. (p. 13)

As researchers examine programs currently implemented in schools, they need to see resilience as a key component in the success of students in secondary education and in their post-secondary lives.

A positive school climate can have great impact on an individual and his or her ability to develop resilience. As Henderson (2013) reflects, "School was my haven, my solace, the alternate universe I stepped into most days with relief. School counteracted the trauma of the rest of my life" (p. 23). Henderson is not alone in this belief. She further states, based on her research, that schools are filled with conditions that promote resilience. According to her work published about the Resiliency Wheel, schools provide caring relationships, clear and fair boundaries and structure, exploration of other worlds, and historical accounts of individuals overcoming adversity (Henderson, 2013). Quality school climates create feelings of safety among staff and students, high expectations of appropriate behavior, trust, respect, and caring, and ample opportunities for meaningful participation.

**Current Efforts in Resilience Training**

In many cases, today's educational institutions strive to implement best practices in teaching resilience. School faculty and staff often take intentional steps to teach resilience by developing positive school climates, creating supportive classroom cultures and community, initiating advisory classes to serve as trustworthy environments, and providing opportunities for students to build relationships with caring adults. An example of a school district that has focused attention on building resilience is the Upper Darby School District in Philadelphia. The district used author Paul Tough's novel *How Children Succeed* (2012) as a basis to improve student achievement. Tough argues that the qualities that make individuals most successful derive from character traits like perseverance, curiosity, conscientiousness, optimism, and self-control (Tough, 2012).

As Deborah Perkins-Gough (2013) writes, the Darby district adopted this outlook and began character education and citizenship classes for staff. They held workshops based on a model called PERMA – Positive Emotions, Engagement, Relationships, Meaning and Purpose, and Accomplishments. They implemented a comprehensive professional development plan that led to teaching character education and citizenship classes for middle school students (Perkins-Gough, 2013). In the citizenship class, students learned about having good conversations, being active listeners, building meaningful relationships, setting and achieving goals, and recognizing consequences of behavior. Because of these significant changes in the district, discipline problems fell and achievement increased (Perkins-Gough, 2013). Other school programs such as the Knowledge is Power Program (KIPP), YES Prep, and Aspire Public Schools focus their energy on both the academic skills needed to develop talent and the character development necessary to continue success in post-secondary programs. Regardless of the specific program,

for schools to be successful in developing school culture, it is essential that all staff in the school work together to create a climate that can foster resilience.

Whether or not a resilience curriculum is implemented throughout a school, on a smaller scale, teaching resilience can empower students within individual classrooms. By developing a classroom culture of care and support, teachers can create a protective environment that fosters resilience. Their efforts should start with how the teacher relates to students. Psychologist Daniel Hughes developed the PACE model for just this purpose. The PACE model begins with playfulness. For some students, being lighthearted is an effective way to connect with others and build rapport. Following this is acceptance, which means that the teacher accepts the student's feelings and thoughts, just not all behaviors. This phase requires distinguishing that students are not *bad*; they simply may behave *badly* in a certain situation. The next term is curiosity. Teachers should ask questions with real openness and genuine interest in the student's response. Finally, Hughes describes the need for empathy, striving to understand the experience of the student (Warshof & Rappaport, 2013). Once the teacher has set the stage for students to be comfortable with their relationship, it is important to develop a positive classroom culture to teach students how to relate to one another. Teachers should encourage classroom sharing and collaboration. The environment in the classroom should be positive and students should treat each other kindly and without judgment.

Table 2.
*Classroom Practice Models to Develop Resilience*

| | **Paul Tough** | **PACE** | **PERMA** | **KIPP Character Development** | |
|---|---|---|---|---|---|
| **Positivity** | Optimism | Playfulness | Positive Emotions | Optimism | |
| **Curiosity** | Curiosity | Curiosity | Engagement | Zest | Curiosity |
| **Relationships** | Self-Control | Empathy | Relationships | Self-Control | Social Intelligence |
| **Community** | Conscientiousness | Acceptance | Meaning and Purpose | | |
| **Acknowledgment** | | | Accomplishments | Gratitude | |
| **Other** | Perseverance | | | Grit | |

An example of a class in which resilience proves essential is math. As Lisa Medoff (2013) describes, students can have difficulty maintaining a growth mindset in math class. She suggests that to make class a space that fosters resilience in students, teachers need to solidify their understanding of math or the course content. In the classroom, teachers should use a variety of activites and supports to engage students in the content. Furthermore, teachers should talk about math from a growth mindset. We should refrain from words like *smart* and *perfect* and replace them with phrases that acknowledge the hard work that has been done and to push students to the next step, whatever it may be. Finally, she encourages teachers to reframe the purpose of quizzes and tests. Instead of making tests a stressful experience that assess students' ability to memorize and recall, tests should be used formatively to instruct follow-up lessons and coaching sessions between the teacher and student.

Any classroom can become a place in which students gain tremendous skills in resilience. These skills come from setting goals, being challenged, and then achieving the goal amongst a supportive group of peers. As Medoff (2013) said, "Adversity shouldn't be avoided; it's important for students to encounter small levels of challenge and frustration and to receive supports for handling them so they learn to persist when they face a truly difficult time" (p. 45).

All teachers can make their classrooms places in which individual students learn resilience and practice these habits regularly.

Advisory class curriculum and teacher actions can further develop resilience. “In an advisory program, students meet regularly with a small group of peers and an advisor over multiple years” (Benson & Poliner, 2013, p. 51). Advisories provide a structure that nurtures resilience for students through a community-based, non-academic, and supportive environment. In this small group setting, students can share academic challenges, discuss future plans and set goals, manage stress. Personal connections developed between teachers and students can be a support system in case of crisis. Each advisory is unique, but common structures are that students have the same advisor for four years, the group of peers is an essential support system for each student, and norming and the group engages in building rituals important to the success of the group (Benson & Poliner, 2013). Advisory sessions can vary in time-length and frequency of occurrence depending on the school program. During these times, however, students engage in discussions, reflections, and exercises to expand communication skills. Whether or not a school intentionally focuses the advisory curriculum on resilience, concepts of resilience are addressed regularly. By being a part of an advisory group, students are offered an opportunity to develop internal protective attributes and the advisory environment creates a trusting and positive place to support them when needed. Resilience is a habit of mind and a skill set that takes practice, not a string of one–time activities. Advisory classes can serve as a place to consistently practice these habits and skills (Benson & Poliner, 2013).

Though the importance of positive school environments, quality classrooms, and school programs is incredibly helpful for developing resilience, the strongest protective factor that develops resilience in children is caring relationships with adults in schools. Werner and Smith

(2001) conducted the Kauai Longitudinal study on resilience. They followed a group of children born on the Hawaiian island in 1955. Many students experienced four or more risk factors (chronic poverty, prenatal distress, family drug and alcohol abuse, etc.) that indicated that they would have significant challenges at being successful later in life. To their surprise, five sixths of the individuals studied had overcome serious adversity and trauma by their mid-thirties. From multiple sources, the resilient group identified positive personal relationships with adults as significant factors in their success. From this study, "Werner and Smith concluded that protective factors are more powerful in the lives of children than are the stressful life events these children encountered" (as cited in Henderson, 2013, p. 25).

To further support the power of positive adult relationships for children, Michael Sadowski writes about the significance of caring relationships with non-parental adults. He asserts that teachers can "make a profound difference in the lives of adolescents, provided they are sufficient duration and are marked by key characteristics, such as consistency and empathy" (Sadowski, 2013, p. 30). He continues to say that students often look for a teacher who will listen to them. They seek a teacher who will be available for them after they have completed their classes; the teachers who will leave their doors open after school for a laugh, a chat, or even some guidance. Henderson describes other research by Steven and Sybil Wolin (1993) who determined that a child's self-concept develops in relation to the environmental *mirrors* in that child's life. A teacher can provide positive mirrors that are caring, kind, and affirming for the child. They reflect the child's strengths back for the child to see for himself. Wolin and Wolin (1993) concluded that the most protective factor for children to develop resilience is through one or more of these caring, believing mirrors (as cited in Henderson, 2013). Teachers can provide

mirroring for students through encouragement and reinforcement that will enable resilient strengths to ultimately flourish.

Even in the face of students who demonstrate difficult behavior and real challenges, it is essential to remember what Henderson said about resilience:

> Educators cannot eradicate poverty, remove neighborhood gangs, stop cultural violence, heal parental addictions, or prevent a myriad of other types of stress, risk, and trauma that many students face daily. Yet my teachers, like most teachers, did much to foster my resilience without even knowing that they were doing it. (Henderson, 2013, p. 24)

If teachers have the tools, they can take intentional steps to be even more connected with their students and make an even greater lasting impact on the resilience of each and every student.

## Assessments

No matter the methods used to develop resiliency, it is important to evaluate the impact of a resilience curriculum on students. Resilience can be assessed through qualitative and quantitative methods. Two resilience tools are briefly presented below. The first example, the Brief Resilient Coping Scale requires a series of four statements:

> 1) I look for creative ways to alter difficult situations, regardless of what happens to me.
>
> 2) I believe I can control my reaction to difficult situations.
>
> 3) I believe I can grow in positive ways by dealing with difficult situations.
>
> 4) I look for ways to replace the losses I encounter in life.
>
> (Kirmayer, Sehdev, Whitley, Dandeneau, & Isaac, 2009, p. 31).

Individuals respond to these statements in an interview, and through their responses, it is possible to gain a sense of their resilience. The other scale that is most noteable is the Resiliency Scale developed by Gale Wagnild and Heather M. Young (1993). This is a quantitative survey that

consists of 14 questions. Individuals rate each question on a likert scale from 1–7, answering from strongly disagree to strongly agree. The results are compiled and a quantitative score results. Scores range from very low, 25–100, to very high, 161–175. These scores can be utilized to understand a baseline of student resilience prior to implementing developmental programs.

Educators can also measure additional factors that could impact resiliency using the Three Dimensional Wisdom Scale (Ardelt, 2003), and the Social Capital Community Benchmark Survey (School, 2014). The Three Dimensional Wisdom Scale assesses three components: reflective, cognitive, and affective effect that are indicators of wisdom (Ardelt, 2003). Each component contains 12–14 questions rated on scale from 1–5. Items are totaled to receive a wisdom score. Furthermore, the Social Capital Community Benchmark Survey measures social capital. This assessment quantifies social capital levels by asking questions such as, "How many of your neighbors' first names do you know?" (School, 2014). Together, the Wisdom survey and Social Capital survey can lead to identifying and quantifying existing attributes that could impact resilience levels.

## Summary

In this section, I discussed definitions of resilience and the language used to define it. I compared and contrasted models of resilience, and examined school programs and ways to develop resilience in students. Finally, I explored cases of resilient students and briefly identified ways to qualitatively and quantitatively assess resilience. It is important to continue exploring ways to improve our practice as educators to develop resilience in each and every student. It is clear that all individuals will face adversity in their lives. As influential adults and educators who work with students on a daily basis, we can equip students with internal protective factors and awareness of these skills, greatly contributing to furthering the secondary and post-secondary

success of students. The next chapter discusses the methodology used for this study and thoroughly describes each research question and how it was answered by the research conducted.

# CHAPTER 3: METHODOLOGY

The purpose of this mixed-method research was to study resilience and determine if there was any improved resilience level of students who participated in the Rudder Leadership Team at William Smith High School. This research examined resilience and compares participants of the Rudder Leadership Team students with the rest of the high school student body. This chapter explains the methodology used for this thesis research.

I first explored four questions to best inform my practice as an educator and leadership team advisor. I wanted to determine *if* the Rudder Leadership Team had a significant impact on the resilience of its participants and if so, *how* it does that. To answer these questions, I asked the following questions:

1. *Does the Rudder Leadership Team have a significant impact on the resilience of participants?*
2. *What are the most salient predictors of resilience in this population?*
3. *What outcomes were most frequently perceived by Rudder Leadership Team participants?*
4. *What aspects of the Rudder Leadership Team Experience were most influential for the stated outcomes?*

To best answer the first two questions, I examined and analyzed quantitative research by using the Resiliency Scale (Wagnild, 2009). I gathered information from the current Rudder Leadership Team and used existing data from William Smith High School, collected by school administrators one year prior to these data. To best answer the second two questions, I contacted alumni participants from the Rudder Leadership Team. They had the opportunity to complete the

Resiliency Scale (Wagnild, 2009) survey and additional open-ended survey questions. These questions led me to examine *how* the Rudder Leadership Team impacts student resilience.

To begin this research, I identified experiences and behaviors associated with resiliency in young adults. I administered the initial survey, the Resiliency Scale (Wagnild, 2009), at program initiation, asking participants to identify components of their experience on the Rudder Leadership Team that may have been important and impactful. Students identified personal experiences and behaviors they exhibit that exemplify their perception of resiliency. Students who newly entered the leadership program completed an additional interview regarding "The Nine Catalyst Questions" provided by the Child and Youth Resilience Measure (Resilience Resource Center, 2010) that identifies current resiliency level. They also took this test as a post-test at the end of the process to see if there were significant changes in resilience levels.

In this research, a primary issue to consider is that already resilient students sought to be a part of the Rudder Leadership Team, or conversely, that non-resilient students avoided participation. Students who are already more resilient may take additional risks, like applying to a program, that less resilient students would avoid. Additional confounding variables could be related to age, socio-economic status, ethnicity and culture, and values learned and modeled at home.

## Researcher Role

In addition to engaging in action research as the researcher for this thesis paper, I also founded and sponsor the Rudder Leadership Team. As the founder of the Rudder Leadership Team, I was very interested in understanding whether the program was effective and which programmatic aspects most impacted its effectiveness. The students contacted for the research felt closely connected to me and their peers during their participation in the Rudder Leadership

Team. These feelings could have presented a potential challenge for data collection and analysis procedures.

To ensure that this research was trustworthy, I addressed both validity and reliability (Elo & Kyngas, 2008). To maintain validity for this research, I coded and analyzed survey information independent of another researcher using the same methods. Together, through this member checking process, we collaborated on information that we both detected and agreed on the coding. This process helped minimize my bias as much as possible.

To ensure reliability, each participant took the same survey and had the same opportunity to fill in free response questions as they occurred. I contacted all participants in the same way and wrote follow-up emails in a similar format to all students. Furthermore, the consent forms helped fully inform participants of their choice to participate and to stop at any time.

## Educational Context, Population, and Sample Selection

### Population

Figure 1 (below) presents William Smith High School demographic, graduation rate, and performance data as compared with Aurora Public Schools, the school district of which it is a part. William Smith High School is a Pilot School and operates within the district agreements with certain autonomies including scheduling and budget. This structure allows for a redistribution of funds to include student travel and adventure activities, a flexible schedule that can accommodate service learning activities, general volunteer work, and programming that is student driven with budgetary support.

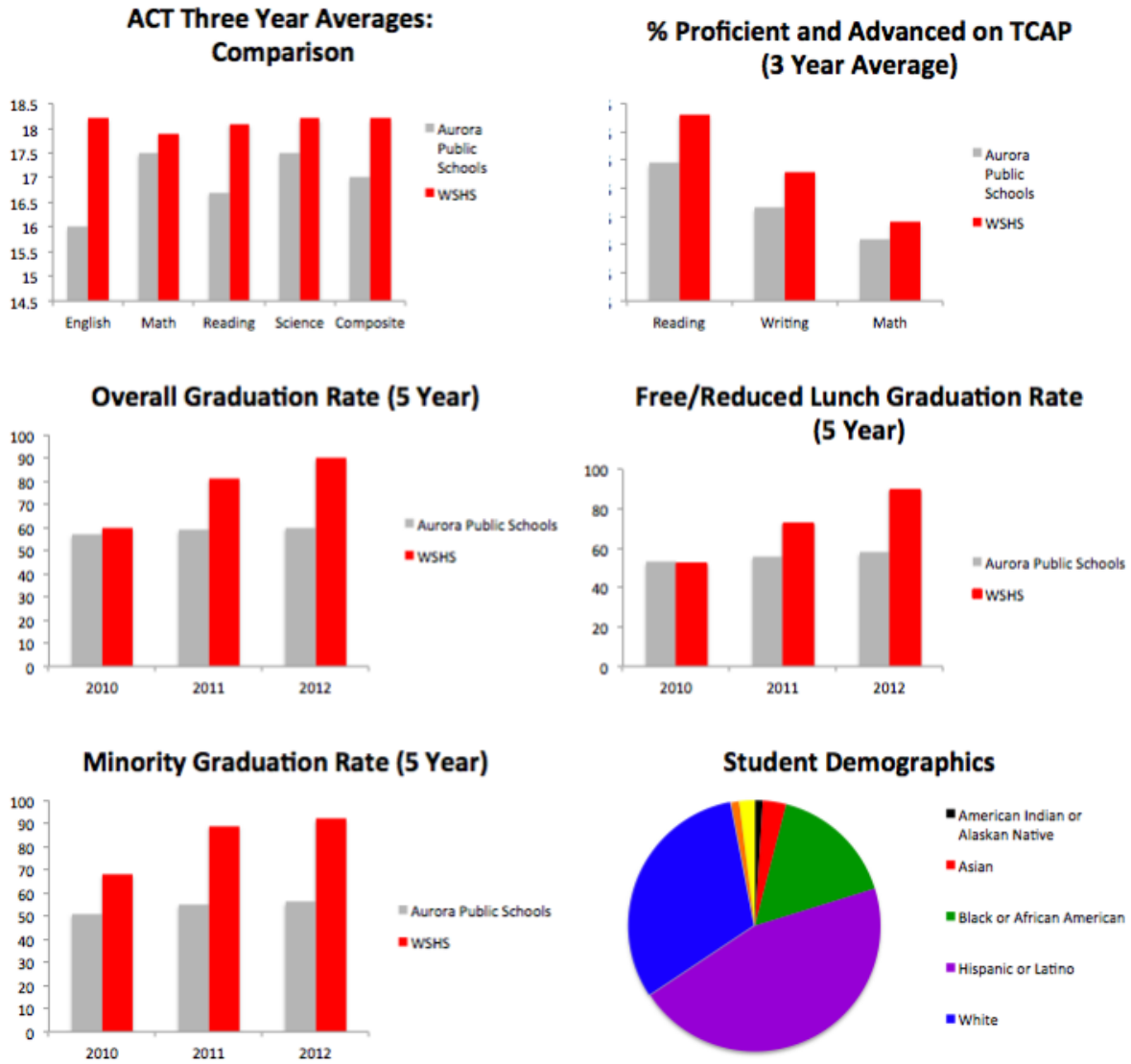


*Figure 1. William Smith High School demographic, graduation, and performance information (2014-2015).*

Resilience was a key factor to examine because many students were successful in the school program, but potentially lacked the attributes necessary to succeed beyond high school. There were 212 students surveyed in the entire school, along with 13 students in the Rudder Leadership Team. The sample was a convenience sample, as I chose all Rudder Leadership Team students to participate. I compared data from the leadership team with the William Smith

High School students who completed the survey. To survey William Smith High School students, each student was provided the opportunity to complete the survey in their homeroom class. They had the option to include their names on the survey and additional identifying information. This information was not used beyond data collection and the names were coded by number. All completed surveys were collected and data was compiled into a common spreadsheet.

**Sample**

I exclusively focused on the Rudder Leadership Team students and alumni for the qualitative portion of the study. The total population size was 59. The oldest students were 22 years old and the youngest 17 years of age ($M = 19$). All of these students have completed the Rudder Leadership Program. These individuals had widely different personalities, individual attributes, and experiences in the program. They were like each other in that they came from a similar socio-economic background as demonstrated in Figure 1 of this chapter and graduated (or will graduate) from the same school. This qualitative research provides an indication of successful programmatic factors that are currently realized from the Rudder Leadership Team, informing future decisions and structures pertaining to the team.

## Instrument Selection, Protocol, and Variables

This study utilized one standard instrument, the Resiliency Scale (Wagnild, 2009), and two adapted survey instruments, the Three Dimensional Wisdom Scale (Ardelt, 2003) and the Social Capital Community Benchmark Survey (School, 2014). The modified Wisdom Scale and Social Capital Survey were included to gain information on potential contributing attributes that would make students more resilient. Neglecting this information would overlook confounding variables, such as social capital and reflectiveness, which could negate any positive impacts

associated with the Rudder Leadership Program. The instrument was peer reviewed and developed in collaboration with the thesis committee. The effectiveness of this tool was addressed in the results chapter of this thesis paper. A primary covariate that was considered was that already resilient students sought to be a part of the Rudder Leadership Team, or conversely, that non-resilient students avoided participation.

Respondents identified key outcomes they believe they developed from participation in the Rudder Leadership Team. Following this segment, participants named which program element led to the outcome and how it led to a personal value that they developed and maintained. The variables were derived as a synthesis of leading factors of resilience from the research above (Table 1). The variables considered as themes were communication, problem solving, independence, purpose, and self-awareness. These themes were addressed in the results section of this thesis paper.

## Data Collection Procedures

### Quantitative Data Collection

Quantitative data were collected from the entire school population and current Rudder Leadership Team participants. The school already had the resiliency scale survey information from the pre-test of almost all students at the school. The post-test survey also included all Rudder Leadership Team students and all students in the student body. I printed all consent forms and survey documents to distribute to colleagues initiating the survey. Teachers read to the students that they may opt out of the survey at any time or leave a question blank if they were not interested in answering the question. Although a space for name, age, and gender was available on the survey, students had the option to leave this out. Once the survey was initiated, all teachers returned the information to the researcher and it was entered into a data spreadsheet.

Names of students were converted to coded numbers, but age and gender remained on the survey sheet to examine potential relationships that may have occurred with resilience and gender, or resilience and age. After all data were collected and compiled into an Excel spreadsheet, it was uploaded into the SPSS program for analysis.

### Qualitative Data Collection

To collect qualitative data, I initiated contact via email with all students currently in and alumni of the Rudder Leadership Team. The email explained the basics of the research and invited participants to open contained documents including the consent form, resiliency scale, follow-up, and a Rudder Leadership Team specific follow-up questionnaire. Students and alumni were invited to complete the surveys and to email completed documents back to me. Research occurred for two months beginning with initial contact in November and completed the first week of January. A reminder email was sent to non-respondents early in December and again in late December to attempt to get as many responses as possible. After surveys were returned, I entered the information into a spreadsheet to prepare for coding analysis. Although participants gave their names when completing this survey information, students were kept anonymous through the use of pseudonyms during analysis.

## Data Analysis Procedures

### Quantitative Data Analysis

Research Question 1 was addressed using a quasi-experimental design. In this design, I compared two separate groups (the Rudder Leadership Team students and the general student population) before and after the Rudder program. I analyzed the data with repeated-measures Analysis of Variance (ANOVA). The dependent variable was resilience. Independent variables included demographics (age, gender, etc.) and other predictors of resilience (social capital, etc.).

I obtained demographic information from the principal of my school and additional public records.

I first determined the reliability of the tool by using Cronbach's Alpha. The threshold for this to be reliable is *alpha*= 0.7. When I ran the test, I found $\alpha = 0.78$, which exceeds the threshold for reliability. This test demonstrated that the resiliency tool was reliable (Santos, 1999). To answer this question, I utilized a Repeated Measures ANOVA test (Table 4).

Research Question 2 was analyzed with several separate Analyses of Variance (ANOVA). Resilience was the dependent variable with demographics and other predictors as the independent variables. These analyses were conducted on all students (not just the Rudder Leadership Team). Additionally, the principal of William Smith High School conducted follow-up assessments on all students with the Resiliency Scale (Wagnild, 2009) and other demographic and predictor variables. To gain additional information for comparison, I encouraged alumni of the Rudder Leadership Team Program to complete this follow-up assessment.

I ran a Principal Axis Factoring Method with Varimax Rotation because I utilized multiple tools in this survey and I first determined the appropriate factor groups. Following this, I ran an ANOVA test to determine the significance of these factors on resilience levels. I examined the correlations (Table 8) of these factors to determine if the identified factors related to one another. Finally, to address the very different sample sizes tested, I ran a t–test to determine homogeneity of variance.

**Qualitative Data Analysis**

Following the quantitative analyses, I utilized qualitative research methods to determine *how* the Rudder Leadership Team made an impact on students and their levels of resilience. I did this by contacting all Rudder Leadership Team alumni (n = 59) and asked students to participate

in my follow-up study. Of the 59 students who submitted surveys, 27 students responded and completed the survey and follow-up questions (46% response rate). From their surveys, I found the mean values of the program rankings. The mean value was ranked highly and there was not much to differentiate between the scores assigned (see Appendix D). To get a better idea of participant intent, I utilized the means-end approach (Reynolds & Gutman, 1988) to analyze the information deductively. I utilized this model to complete a Hierarchical Value Map to make connections and delve deeply into analysis of what the participants were communicating.

Research Questions 3 and 4 were analyzed with the use of the Means–End theory (Reynolds & Gutman, 1988). Respondents selected the key outcomes from participation in the Rudder Leadership Team. Following this step, participants named why an activity led to the outcome and how it led to a personal value that they developed and maintained. Through deductive content analysis, I developed a categorization matrix (Reynolds & Gutman, 1988) and coded accordingly. The process demonstrates validity because I understood the complexity of the response data and categories were empirically grounded. The research is credible because the majority of response data fit into these categories. This research is transferable because resilience education is an interest and challenge in many secondary education programs. Finally, these categories were determined authentically as they were based on resilience research as referenced in the literature review (Elo & Kyngas, 2008).

I established themes based on Table 1: Synthesis of Dimensions of Various Models of Resilience found in Appendix A. The themes chosen were based on the research of Bernard (1991), Miller (2002), Brooks and Goldstein (2001), Ungar (2010), and Henderson (2013). Content codes were created by key phrases, and through the content codes I was able to develop a series of Hierarchical Value Maps (HVMs) found in Appendix D coded into key themes that

develop resilience (communication, problem solving, independence, purpose, self-awareness, and other). Communication is the ability to speak with and listen to others, to self-advocate, and to convey ideas effectively (Brooks and Goldstein, 2001). Problem solving involves utilizing tools and resources to find solutions (Bernard, 1991). Independence is maintaining an internal locus of control (Henderson, 2013). It is the ability to complete tasks independently. Purpose is the ability to see a big picture (Ungar, 2010). Often, goal setting and identifying long term passions and interest are examples of one showing a sense of purpose. Self-awareness is the ability to accurately self-reflect (Henderson, 2013). Self-aware individuals have a strong sense of self and understand their impact on themselves and their communities.

I decided the values decided deductively, based on resilience research, and determined the consequences and attributes inductively. This process provided a graphical summary of the relationships and links between the program attributes, consequences, and values constructed as determinants of resilience. The graphical display demonstrated themes and links between these themes. The number of connections from each value indicated importance of each result.

## Chapter Summary

This chapter used a quantitative approach to answer if the Rudder Leadership Team has a significant impact on resilience of its participants, and what are the most salient predictors of resilience for this population. It used a qualitative approach to determine what outcomes were most frequently perceived by Rudder Leadership Team participants and what aspects of the program were most influential for these outcomes. I utilized the resiliency scale (Wagnild, 2009) to determine resilience scores for students and Rudder Leadership Team participants and included additional survey questions as developed from the Three Dimensional Wisdom Scale (Ardelt, 2003) and the Social Capital Community Benchmark Survey (School, 2014). I analyzed

these results using several statistical tools, primarily multiple ANOVA Tests to determine significance of results. To determine how the program was influential for participants, I administered additional survey questions to Rudder Leadership Team participants and alumni of the program. To analyze this, I utilized the Means-End Theory (Reynolds and Gutman, 1988) and created a Hierarchical Value Map (Figure 5) to better understand the results. Ultimately, the mixed method approach allowed me to examine *if* the Rudder Leadership Team enhanced students' resilience level and if so, *how* it addressed these attributes programmatically. The next chapter includes the analysis of these results to determine the impact of the Rudder Leadership Program in developing resilience.

# CHAPTER 4: FINDINGS

This paper highlights the research plan to assess the effectiveness of the Rudder Leadership Team. Through mixed method research and analysis, I answered the questions:

1. *Does the Rudder Leadership Team have a significant impact on the resilience of participants?*
2. *What are the most salient predictors of resilience in this population?*
3. *What outcomes were most frequently perceived by Rudder Leadership Team participants?*
4. *What aspects of the Rudder Leadership Team Experience were most influential for the stated outcomes?*

To answer the first two questions, I used quantitative analysis. Through ANOVA testing, I determined that there indeed was a significant growth in resilience of the Rudder Leadership Team compared with the overall school population. Unfortunately, the predictors that I had gleaned from my review of contemporary research were slightly inter-correlated but did not appear to have the influence I hypothesized on resilience. While perhaps these predictors have an overall impact on resilience among the general population, the data showed they did not impact members of the Rudder Leadership Team differently than the school population as a whole, making their influence difficult to distinguish.

I used qualitative analysis to answer questions three and four. I first used contemporary resilience research to identify key dimensions of resilience, which I hoped would manifest as outcomes of participation in the Rudder Leadership Team. Labeling these key dimensions as 'values,' I used a Hierarchical Value Map (HVM) to determine the consequences that led to these values. This chapter includes analysis of the findings from this research study as described

in chapter three. It describes the quantitative findings to answer the first two research questions and evaluates the qualitative findings to explain questions three and four, regarding how the Rudder Leadership Team is perceived by its participants.

## Findings

Of the William Smith High School population, there were more than 200 respondents ranging from 9th grade through 12th grade (71% response rate). Thirteen current Rudder Leadership students were surveyed in all. The results from the Resiliency Scale (Wagnild, 2009) and follow up quantitative questions are shown below followed by qualitative results. The first question asks if the Rudder Leadership Team had a significant impact on the resilience of participants. I first determined the reliability of the tool by using Cronbach's Alpha. The threshold for this to be reliable is *alpha*= 0.7. When I ran the test, I found $\alpha = 0.78$, which exceeds the threshold for reliability. This test demonstrated that the resiliency tool was reliable (Santos, 1999). To answer this question, I utilized a Repeated Measures ANOVA test (Table 4). I examined the means of the resiliency scores of two groups, the Rudder Leadership Team group and William Smith High School students (Table 2 and Figure 1).

I then asked the second question to determine the most salient predictors of resilience in this population. To begin, I ran a Principal Axis Factoring Method with Varimax Rotation because I utilized multiple tools in this survey and I first determined the appropriate factor groups. Following this, I ran an ANOVA test to determine the significance of these factors on resilience levels. I examined the correlations (Table 8) of these factors to determine if the identified factors relate to one another. Finally, to address the very different sample sizes tested, I ran a t–test to determine homogeneity of variance.

Following the quantitative analyses, which determined *if* the Rudder Leadership Team made an impact on students and their levels of resilience, I utilized qualitative research methods to determine *how*. I did this by contacting all Rudder Leadership Team alumni (n = 59) and asked students to participate in my follow-up study. Of the 59 students sent surveys, 27 students responded and completed the survey and follow-up questions (46% response rate). From their surveys, I found the mean values of the program rankings. The mean value was ranked highly and there was not much to differentiate between the scores assigned (see Appendix D). To get a better idea of participant intent, I utilized the means-end approach (Reynolds & Gutman, 1988) to analyze the information deductively. I utilized this model to complete a Hierarchical Value Map (found in Appendix D) to make connections and delve deeply into analysis of what the participants were communicating.

The following are the results of the questions asked and how each question was addressed using quantitative and qualitative analysis.

## Questions

### RQ1. Does the Rudder Leadership Team Have a Significant Impact on the Resilience of Participants?

Prior to conducting research, I had hypothesized that the curriculum of the Rudder leadership team would increase resilience levels of its participants. After analyzing data from the quantitative (Resiliency scale) surveys, I indeed determined that, consistent with my hypothesis, participants in the rudder leadership team increased in resilience more than the average school population (p = 212). Though the program alone cannot claim total responsibility for these gains, it is noteworthy to mention.

To summarize the descriptive statistics collected, of 200 respondents, the mean age ($M$ = 15.8) was below 16 years old. The mean score per question of the resiliency scale ranged from ($m_{Score}$ = 4.7 to 5.8) out of 7 total. The survey questions with lower ranking scores were "I take things in stride," "I am friends with myself," "I can handle many hard things at a time," and "My belief in myself can get me through hard times." The questions that received higher scores were "I feel proud that I've accomplished things in life," "My life has meaning," and "I can usually find things to laugh about." Though the mean values range, there are no questions that have particularly low results. Table 3 displays mean resilience score based on age and gender of the students as they compare to the Rudder Leadership Team. There is not a particular age or gender with unusual results.

Table 3

*Mean Resilience Score for William Smith High School Students by Age and Gender*

| Age (years) | Mean Resilience Score | Gender | Mean Resilience Score |
|---|---|---|---|
| 13 | 4.714 | Female | 5.13478 |
| 14 | 5.057 | Male | 5.25272 |
| 15 | 5.322 | Undisclosed | 4.539835 |
| 16 | 5.143 | | |
| 17 | 5.397 | | |
| 18 | 4.671 | | |
| 19 | 4.714 | | |
| Rudder | 5.406 | | |

Table 4 shows that the first line in the results (pre-post overall) was the test for a difference in pre-post scores for all students in both groups–William Smith and Rudder. In both the pre-post * Rudder and the pre – post overall, the $F$ value and the $p$ value were different from each other. These scores demonstrate that there was a significant difference between groups on pre-post scores. Additionally, Table 4 shows the average pre and post scores from the two groups. While the William Smith High School group stayed roughly the same (and even

decreased by approximately 0.2) the Rudder Leadership Team students increased resilience scores from 4.714 to 5.406. This is illustrated well on figure 2, showing the interaction. The following is the result of a Repeated Measures ANOVA test:

Table 4

| Effect | | *df* | *F* | *p* |
|---|---|---|---|---|
| | | | | |
| ResiliencePrePost | Pillai's Trace | 1 | 1.762[b] | 0.186 |
| | Wilks' Lambda | 1 | 1.762[b] | 0.186 |
| | Hotelling's Trace | 1 | 1.762[b] | 0.186 |
| | Roy's Largest Root | 1 | 1.762[b] | 0.186 |
| ResiliencePrePost * Rudder | Pillai's Trace | 1 | 3.707[b] | 0.056 |
| | Wilks' Lambda | 1 | 3.707[b] | 0.056 |
| | Hotelling's Trace | 1 | 3.707[b] | 0.056 |
| | Roy's Largest Root | 1 | 3.707[b] | 0.056 |

a. Design: Intercept + Rudder

Within Subjects Design: ResiliencePrePost

b. Exact statistic

Though the sample size of the Rudder Leadership group is small ($n$=13), the $\eta^2$ value (Table 1) of .02 demonstrates that there is a small, but significant effect size between group trajectories. This means that the effect of the rudder group only accounted for 2% of the variance within the ANOVA Test of Resiliency (UCLA Department of Linguistics, 2010). A larger sample size for the Rudder Leadership Team program may have produced a larger statistical effect. However, this finding gives validity to the results that demonstrate the improved

resilience level of Rudder students. Table 5 shows a difference in means of resiliency levels from the pre and post survey of both groups and Figure 2 demonstrates this difference as well.

Table 5

*Resilience Pre and Post Survey Results*

| | | | | 95% Confidence Interval | |
|---|---|---|---|---|---|
| Program | | Mean | Std. Error | Lower Bound | Upper Bound |
| William Smith High School | Pre | 5.319 | 0.084 | 5.154 | 5.485 |
| | Post | 5.192 | 0.072 | 5.05 | 5.334 |
| Rudder Leadership Team | Pre | 4.714 | 0.307 | 4.108 | 5.32 |
| | Post | 5.406 | 0.263 | 4.888 | 5.925 |

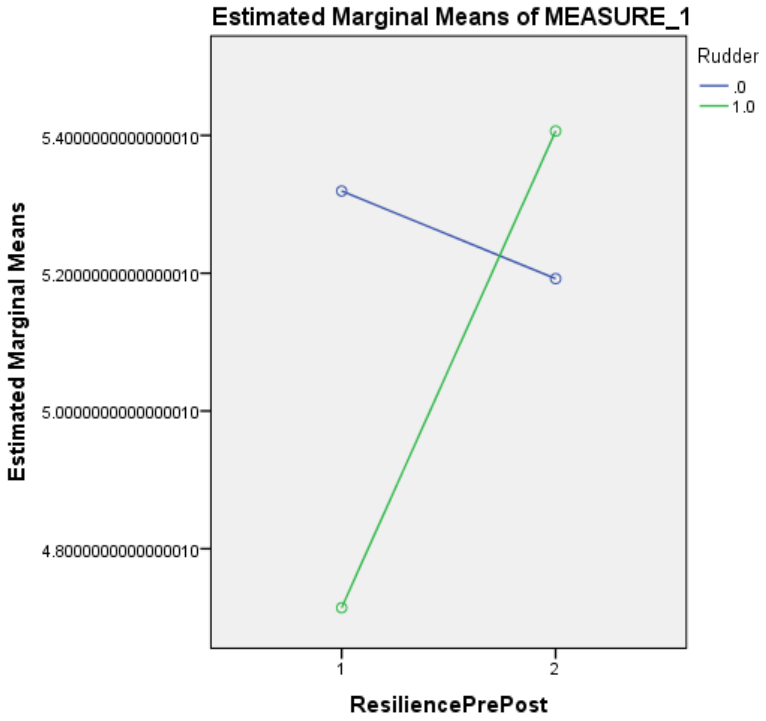


*Figure 2*. Pre-Post Interaction Effect for Two Student Groups.

The previous charts and figures demonstrate an increased resilience level for students who participated in the Rudder Leadership Team.

**RQ 2. What Are the Most Salient Predictors of Resilience in This Population?**

For the second question, I utilized an ANOVA test to determine if any external factors or confounding variables may impact the results of the resiliency scale. Because I referenced multiple instruments when constructing this survey, I first completed a factor analysis to reduce all of the items into factors.

Table 6 displays how the factors were grouped and categorized from the original survey using factor analysis. The Principal Axis Factoring Method with Varimax Rotation allowed four clear categories to arise (Howell, 2002). I utilized an Eigenvalue cutoff of .3 and placed the items that loaded onto multiple factors into their highest loading category (Howell, 2002). For

example, “I am an active participant in my community” falls best into Factor I (Community), with a value of 0.675. These four factors were given the following names based on their commonalities: community involvement, reflectivity, openness, and coping. The question “I like to read books which challenge me to think differently about issues” did not score highly for any factor, and was removed from the analysis. This may be because a question regarding books could be outdated and did not ask the question as intended.

Table 6
*Principal Axis Factor Analysis of Survey Questions to Display Potential Factors of Resilience*

| Survey Question | Factor I Community | Factor II Reflectiveness | Factor III Social Cap | Factor IV Openness |
|---|---|---|---|---|
| I am an active participant in my community. | 0.675 | 0.191 | 0.189 | 0.211 |
| I can make a difference in my community. | 0.637 | 0.057 | 0.389 | 0.259 |
| I know my neighbors. | 0.520 | -0.037 | 0.066 | 0.131 |

| | | | | |
|---|---|---|---|---|
| I often recall earlier times in my life to see how I've changed since then. | 0.352 | 0.322 | 0.171 | 0.128 |
| I like to read books which challenge me to think differently about issues. | 0.225 | 0.163 | 0.211 | 0.013 |
| It is easy for me to adjust my emotions to the situation at hand. | 0.009 | 0.711 | 0.066 | 0.323 |
| I have overcome many painful events. | 0.010 | 0.539 | 0.118 | 0.051 |
| It seems I have a talent for reading other people's emotions. | 0.263 | 0.531 | 0.306 | -0.077 |
| I enjoy sampling a wide variety of different ethnic foods. | 0.149 | 0.152 | 0.673 | -0.015 |
| I like being around people whose views are strongly different from mine. | 0.079 | 0.218 | 0.587 | 0.185 |
| I enjoy culture and new ideas. | 0.279 | 0.026 | 0.515 | 0.141 |
| I have a supportive home life. | 0.176 | 0.038 | 0.051 | 0.570 |
| I can freely express my emotions without feeling like I might lose control. | 0.129 | 0.071 | 0.132 | 0.564 |
| There can be amusing elements even in very difficult life situations. | 0.072 | 0.383 | 0.257 | 0.430 |
| When circumstances change, I can adapt and problem solve. | 0.246 | 0.319 | -0.078 | 0.405 |

Extraction Method: Principal Axis Factoring.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

To answer the second research question, I ran an ANOVA test again with resilience as the dependent variable and the four factors as independent variables in order to determine the impact of each factor on the resilience score. As seen by the significance value, none of the factors were statistically significant on the resilience level in this study.

Table 7
*Tests of Between-Subjects Effects*

| Dependent Variable: | Average Resiliency Score | | | | | |
|---|---|---|---|---|---|---|
| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
| Corrected Model | 1.938[a] | 4 | .484 | .558 | .694 | .011 |
| Intercept | 142.226 | 1 | 142.226 | 163.766 | .000 | .442 |
| SocialCap | .308 | 1 | .308 | .355 | .552 | .002 |
| Community | .016 | 1 | .016 | .019 | .891 | .000 |
| Reflective | 1.615 | 1 | 1.615 | 1.860 | .174 | .009 |
| Openness | .010 | 1 | .010 | .012 | .913 | .000 |
| Error | 179.774 | 207 | .868 | | | |
| Total | 5887.263 | 212 | | | | |
| Corrected Total | 181.712 | 211 | | | | |
| a. R Squared = .011 (Adjusted R Squared = -.008) | | | | | | |

Once these factors were determined to not directly influence resilience, the final step was to examine their relationship to one another. To do so, a correlation test was run to further investigate the influence of these factors on resilience and each other (see table 8). For instance, Factors with a Pearson Correlation such as Social Capital and Reflective have a value of .161. This value demonstrates significance at the .05 level. Community and Social Capital show significance at the .01 level and have a value of 0.357. According to Table 8, there is a correlation between social capital and reflective, openness, and community. Also, there is a correlation between reflective and community. Age and gender were not correlated with these factors. This finding may have implications for future studies of factors that contribute to one another for other scales in addition to resiliency.

Table 8
*Correlations Between Factors and Resilience*

| | | Gender | Age | Average Resiliency Score | Social Capital | Community | Reflective | Openness |
|---|---|---|---|---|---|---|---|---|
| Gender | Pearson Correlation | 1 | .000 | -.052 | .111 | -.109 | -.037 | -.101 |
| | Sig. (2-tailed) | | .999 | .454 | .111 | .119 | .601 | .148 |
| | N | 208 | 206 | 208 | 206 | 206 | 206 | 206 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Age | Pearson Correlation | .000 | 1 | .052 | .032 | .024 | -.026 | .007 |
| | Sig. (2-tailed) | .999 | | .460 | .650 | .736 | .710 | .917 |
| | N | 206 | 206 | 206 | 204 | 204 | 204 | 204 |
| Average Resiliency Score | Pearson Correlation | -.052 | .052 | 1 | -.033 | .003 | .090 | .019 |
| | Sig. (2-tailed) | .454 | .460 | | .636 | .961 | .190 | .779 |
| | N | 208 | 206 | 214 | 212 | 212 | 212 | 212 |
| SocialCap | Pearson Correlation | .111 | .032 | -.033 | 1 | .357** | .161* | .167* |
| | Sig. (2-tailed) | .111 | .650 | .636 | | .000 | .019 | .015 |
| | N | 206 | 204 | 212 | 212 | 212 | 212 | 212 |
| Community | Pearson Correlation | -.109 | .024 | .003 | .357** | 1 | .317** | .356** |
| | Sig. (2-tailed) | .119 | .736 | .961 | .000 | | .000 | .000 |
| | N | 206 | 204 | 212 | 212 | 212 | 212 | 212 |
| Reflective | Pearson Correlation | -.037 | -.026 | .090 | .161* | .317** | 1 | .376** |
| | Sig. (2-tailed) | .601 | .710 | .190 | .019 | .000 | | .000 |
| | N | 206 | 204 | 212 | 212 | 212 | 212 | 212 |
| Openness | Pearson Correlation | -.101 | .007 | .019 | .167* | .356** | .376** | 1 |
| | Sig. (2-tailed) | .148 | .917 | .779 | .015 | .000 | .000 | |
| | N | 206 | 204 | 212 | 212 | 212 | 212 | 212 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

The implications of this study indicates that the factor leading to increased levels of resilience is the Rudder Leadership Team and additional potential factors leading to resilience have little impact given this subject group.

While ANOVA in SPSS is not necessarily affected by unequal sample size, it can be a problem if the two groups have a large difference in variance (Karen, 2014). To account for this difference, I ran an independent samples t-test and examined Levene's test for homogeneity of variance using the pre-test resilience scores for both groups (Table 9). Results for this test were

not significant ($p$ = .988) indicating that despite the large difference in sample size, the variability of the two samples does not significantly differ statistically ("How Do I Interpret," 2008).

Table 9

*Independent Samples Test*

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Average Resilience | Equal variances assumed | .000 | .988 | 1.870 | 189 | .063 | 0.59 | 0.32 | -0.03 | 1.22 |
| | Equal variances not assumed | | | 2.183 | 14.626 | .046 | 0.59 | 0.27 | 0.01 | 1.18 |

**RQ 3. What Outcomes Were Most Frequently Perceived by Rudder Leadership Team Participants?**

**RQ 4. What Aspects of the Rudder Leadership Team Experience Were Most influential for the Stated Outcomes?**

To answer Research questions three and four fully, I utilized the means–end approach (Reynolds & Gutman, 1988) and developed a Hierarchical Value Map (HVM) to examine participant comments and fully analyze their communication. To begin, I determined the values to be the five aspects of the Rudder Leadership Program: communication, problem solving, independence, purpose, and self-awareness. I chose these five values deductively as I determined them to be determinants of resilience. I then sorted and coded statements pertaining to these values. As I coded data, I found significant trends and determined them to be outcomes. In many cases, the consequences were principal activities in which the Rudder students participated throughout the program, such as facilitation. Finally, I determined the attributes. In many cases, these were feelings, breakthroughs, and changes that students better understood and took action on through their participation in the program. The following is an explanation of the HVM as it highlights values, consequences, and attributes regarding the questions of *how* the Rudder Leadership Team was effective.

## Communication

One value observed in the Rudder Leadership Team was demonstrating and learning communication. Communication can be understood as one aspect of interpersonal skill development and in this case implies the give and take of conversations and the ability to understand voice and how and when to use it (Brooks and Goldstein, 2001). As respondents

noted, they best developed communication through team work, facilitation, and relationship building.

The first example of communication came through team work. In the Rudder Leadership Program, students spend multiple weeks bonding as a team and developing their voice within the team through team initiatives and debrief processing. Each week, students participate in a short team building sequence (introduction, icebreaker, initiative, debrief, and closure) activity. The initiatives generally push students to be more creative and to find unique solutions to problems by working together and taking risks. The debrief process can take many forms such as a written reflection, tossing a ball with sentence starters, or answering prompts orally. Regardless of the activity and method of processing, all students speak up during each lesson and learn that their voice within the team matters. A challenge for many students is learning how to open channels of communication by either speaking up or stepping down and allowing others to contribute. One example of this challenge comes from Lane[1], a student who participated fully in class and who would help her peers regularly. Despite financial challenges at home and being first generation to attend college, she was a student who had clear goals for her future and utilized every class period to learn as much as she possibly could before she graduated. She also had great leadership potential, as her teachers and peers looked to her for guidance in the classroom, but she did not always step forward with her ideas. She said "learning how to speak up so others heard me and not letting my ideas go unheard" was one of the primary outcomes from the program. She was a student who I and other staff observed grow and develop into a mature and thoughtful leader. She learned to communicate effectively with peers, adults, and younger students. In doing so, she became a student who advocated for herself and often asked for help. To further highlight her

[1] I have replaced all names with pseudonyms.

skills in self-advocacy, when Lane began college, she was having a hard time transitioning and keeping up with a rigorous course load. Instead of settling for low grades in her classes, she independently attended office hours, communicated her needs to her professors directly, and assembled study groups to support her learning. As a high school student, prior to her involvement in the Rudder Leadership Team, she would not have thought to advocate for herself this way by creating supportive structures. She is a student who learned how to communicate effectively with adults in authority positions.

Additionally, participants articulated that their experiences facilitating other students helped them develop their own communication skills. In their experience in the Rudder Leadership Team, students began by participating in facilitation activities led by other facilitators. After only a month of participation, our debrief conversations transitioned to exploring *how* the activity was facilitated and highlighted the purpose behind asking certain questions and utilizing different debrief tools. Participants transitioned from this step to facilitating others with a partner to help them. By leading their peers, the freshman class, and middle school students, leadership participants facilitated team building in pairs. Together, they made decisions about what they wanted their participants to learn from the process and practiced communicating effectively. This process proved challenging for some as they had to step up and step back depending on the partner with whom they were working.

> There were various activities that showed the power of communication, I found that my voice was often in the first few to be heard. I had a really good friend also in the program who was really quiet and I started to wait longer and longer to speak. Eventually I was the last one to speak, and sometimes when there was the awkward silence, I could speak. I would say it was the group aspect of Rudder that taught me that skill. –Tina

This demonstrates the process for Tina and others who struggled with communicating in a dominant way. Sometimes students enter the program believing that leadership means talking the loudest. Through team participation, and later through facilitating other groups, they can see that having an overly dominant participant actually takes away from team productivity and can damage the team. Tina became a leader who solicited others' opinions and was seen as a kind and caring leader by her peers. This example demonstrates how Tina's voice was a huge component of communication for her. Though she started the program confident and able to speak to adults, she learned the importance of the listening aspect of communication.

Many other students attributed facilitation as a valuable activity that supported their learning of communication. Another student, Aaron, noted that he learned about communication "when we went over how to facilitate and conduct yourself during facilitation." Aaron was able to speak with his peers casually, but did not know how to communicate in a formal and approachable manner. For Aaron, facilitating was a chance to practice public speaking in front of an authentic audience. He had to be motivational, approachable, and in control. Though it started out as a huge challenge for Aaron, he learned how to communicate through facilitation and became a facilitator who got positive results from his participants.

Finally, participants learned about communication through developing relationships with one another. Many of them joined the program without close ties to most of the other students, but as they learned to work closely together, they developed strong bonds and meaningful friendships. Through their relationships, students learned to accept their peers and listen to each other.

> I gained a lot of patience through participating in the program. I am not someone who is necessarily known for being open to ideas and am quick to shut down ideas before

> offering someone the chance to explain their thoughts but Rudder forced me to be more patient with others and take more time to understand them. – Maggie

Maggie is a great example of a student who would dismiss others' ideas immediately and try to control the group. She learned how to communicate, ask questions, and seek information from others rather than assuming that she already knew the answer. As a leader beginning the program, she would not care about other students' opinions and thoughts. Through group development and building relationships, she listened to her peers and noticed that they had valuable opinions which differed from her own. She slowly transitioned from her stance of being the only valuable communicator in the group to understanding that her peers had beneficial insights as well. Through group development and relationship building, she became a communicator who allowed for two-way communication and practiced honoring those with whom she worked.

Through team work, facilitation, and building relationships, many participants developed their communication skills. Each respondent discussed some element that they could associate with their ability to be confident in themselves and their abilities to communicate with one another and other adults.

## Problem Solving

Another value observed in the Rudder Leadership Team and through participant survey responses was learning creative problem solving. In the context of the Rudder Leadership Team, problem solving means to view obstacles as challenges and to persevere (Bernard, 1991). People can view problems as an opportunity to learn and be challenged rather than an obstacle that hinders success. As respondents noted, they best learned problem solving through team work and facilitation.

As members of the Rudder Leadership Team developed their team, they participated in icebreakers, cooperative games, initiatives, and debrief experiences. Typically, as students participated in cooperative games and initiatives, they faced challenges that required creative problem solving to complete the task. There are often multiple solutions to each challenge, and students try a variety of options before settling on the final solution to achieve their goal. When we debrief the experience, participants often see that there are many solutions that work, not just the one that worked for them. As they practice more initiatives in groups, they start to see how problem solving is a skill they can use anywhere, and they transfer this skill to other facets of their lives. As Jonathan said, "Rudder taught me that finding other solutions works and nothing is really impossible." His response serves as one example of how many students reported feeling during and after their Rudder Leadership Team experience. They alter their outlooks and gain confidence in themselves and their abilities to solve problems. Many students enter the program believing that every problem has one or no solution, and many leave the program knowing that there are many solutions available and they trust themselves to find one that works best for them.

Furthermore, participants also found that facilitation was an effective method for learning to problem solve. When students learn how to facilitate, they often realize that it is challenging to run a program for a group of students in a meaningful way. The first challenge is that groups are unpredictable. Rudder participants do not know who will be in their groups and how they will react to the planned program. For instance, often groups start out very quiet and it is challenging to get students to interact with one another. Other times, the groups have one or two participants who dominate the conversation and act unwilling to hear their teammates' ideas. As a facilitator, Rudder Leadership Team students must lead these programs and work with the group they have. At times, they may need to change their planned program on the spot and adapt

to better meet the needs of the group. Christopher noted that facilitating students was a big learning experience because "[he] had to be innovative." As students refine their skills of facilitation, many of them reflect that they had to adapt often and utilize quick thinking to be effective.

Respondents noted that the components of team work and facilitation contributed greatly to learning problem solving skills. Not only did they learn that there are often multiple solutions to problems, but also that they may need to problem solve in the moment and should be prepared to do so.

## Independence

The next value identified is independence. Independence can also be described as autonomy, personal initiative, and life skills. In essence, independence can be looked at as an individual's self-motivation and ability to be self-directed (Henderson, 2013). Responses indicated that this value was determined by team work, support from peers and significant adults, and planning activities.

The first aspect of the program that respondents said impacted independence was team work. When participants join the Rudder Leadership Team, they work closely with one another to complete team tasks and challenges. Though they interact as a group, participants learn about their individual identities and how they can contribute to the group. All students share their goals at the beginning of the program, and many of them want to better understand how they contribute to a group and what they can do to be a better leader. Through this experience, many students learn how they can be leaders and identify their strengths. This aspect of the program helps them act independently as they move beyond the leadership team and into broader life experiences. An example from the survey of a student who benefitted greatly from this

experience was Alex. She indicated that at the beginning of the program, she found it difficult to be herself within the group and to utilize her attributes to contribute to the team's success. She said that she learned a great deal about herself by "driving [herself] and others towards goals." As she stepped up as a leader, she learned about herself. She better understood her leadership abilities and found herself taking initiative and completing tasks. Mostly, she challenged herself to be a leader who understood the needs of the group and could adjust her actions accordingly.

Another variable that led to independence was support from peers and significant adults. The Rudder Leadership Team is structured as a supportive group and through team building and activities to get to know one another, students bond and grow very close. A supportive structure means that each student has a "team one" partner. Rudder Leadership Team participants go through the program with this partner. They work together often and hold one another accountable to be on time and to complete work that they have committed to completing. Mostly, the relationship serves as a support for both partners. Participants often face major life challenges throughout the program that may derail their progress. Challenges may be academic issues, financial problems at home, abusive family situations, drug addiction problems, or common challenges that many teens face. Team one partners are the first people to help their buddy and encourage them to get the help they need to stay on track. In addition to significant peer support, students are also supported by participating adults and other school faculty. For example, Lane said that she "was guided towards Rudder which started [her] thinking about how smart and independent [she] can be." Further, she noted that it was through participating and working with others in the Rudder Leadership Team that she got "the opportunity to start to build who [she] was as an independent individual." For Lane, support came from teachers who saw her potential and encouraged her to apply to the team. Once she felt their support, she began to let down her

guard. She became a leader who was open to learning about herself and utilized the structures of the Rudder Leadership Team to feel support and encouragement. For her, she learned independence through understanding herself and becoming reflective. For many students, support of their peers and adults helps them branch out and find the courage to become independent.

The third facet that led to independence was planning activities. During their experience in the Rudder Leadership Team, participants plan school-wide events and activities for their peers to enjoy. Some school events are celebratory. An example of this was a Pi Day pie eating contest. Rudder students organized a pie eating tournament for the entire school to watch. They independently developed the schedule for the day, purchased supplies, prepared pies, and facilitated the actual event. They also plan school-wide service days. They make calls and set up service activities for the entire school. They handle permission slips, coordinator contact, and group sign-up. The only part of this program that students do not organize is transportation because that needs to be handled by adults. Through this process, students gain skills in independence. They work independently as a moving part of the larger group project. One example of students' survey responses on this topic comes from Annie, who mentioned that planning volunteer days were important to her because "we were given the task to plan a group volunteer activity on our own. It gave me the chance to have a task and do it on my own for other people." For Annie, planning a huge activity in which she had a concrete and important role was helpful for her development. She organized a huge event for other people that was meaningful to her and her peers. She gained lessons of independence from planning this event to support herself in moving out of her home and living independently.

Overall, independence emerged in the data as a common value developed by most students. Through their experiences working as a team, learning about themselves as individuals, and planning school wide-events, students developed this skill.

**Purpose**

Another value to highlight is a sense of purpose, which refers to the interest in setting goals and a sense of self-worth (Ungar, 2010). To highlight this value, respondents identified factors such as support, facilitation, and service are necessary to discuss.

The first example of students finding purpose is identified by support. By developing strong peer relationships, students expressed feeling reinforced by one another and realizing that they are an important contributor to the team. For example, Abe said,

> The activities that I participated in helped me realize that everyone has a role. I had the ability to recognize that in a group I am on the passive side but I had potential in which people looked up to.

Abe overlooked his own ability to be a leader and to see his self-worth. Although he was accepted into the program and was a wonderful contributor to the team, he was unable to see his potential and to value himself without the support of his Rudder Team. He eventually learned that he was a person looked up to and respected by many students. The support that he received from the team enabled him to see his potential, follow his dreams, and pursue challenging goals. He applied, and was accepted, to many colleges that he would not have considered before this experience, just one example of how Abe gained confidence in himself and pursued his dreams because of Rudder. Many of the Rudder members found that through the support they received from the team they had developed the confidence to pursue exciting opportunities that they were hesitant to commit to prior to membership and commitment to Rudder.

Facilitation also led to students finding a sense of purpose. When students facilitated team building for other students, they developed confidence in themselves. They were seen as leaders who could guide others in the right direction and help others learn. This realization proved significant for many students, because it led to them realize their own importance. They understood that they could help their peers become a team, and that they could pass on the lessons they learned that were significant to them. An example of responses addressing this theme came from Benny, who stated that,

> One event from Rudder that made me realize my purpose was during facilitation of team building. My "Team One" and my peers made me feel so important I realized that my contribution played an important role in the success of the project.

From this experience, Benny learned firsthand that he made a difference by being a part of a team and contributing to others' learning.

Mark demonstrates another example of a student using facilitation to learn about purpose. When we would process situations through debrief, Mark found it interesting to hear what his peers took from the situation, and how they connected it to their real lives. He began to see purpose behind team building activities and related the metaphors of the activities to a bigger picture. When he became a facilitator, he also realized that the questions that he asked during debriefs could help kids make connections. He would thoughtfully observe student groups work through a challenge and ask key questions to lead them to important insights. Mark noted that through facilitation, he learned to "pull what is important out of the situation." He understood how to find the purpose behind activities and to find a deeper meaning that can be applicable to life. Like other students, Mark learned how to find purpose in activities that relate to his own life. This skill extended beyond the activities from the leadership program and became a part of his

everyday life. He became a person who finds a deeper meaning in situations and purpose in ordinary experiences in life. These examples demonstrate that through facilitation, students in the Rudder Leadership Team find purpose. They are both important to helping other groups function and they learn to determine importance in situations.

Service emerged as a final aspect of the program that led to a sense of purpose. One important component of the Rudder Leadership Team is the monthly service project in which students participate. As a group, Rudder Leadership Team students work together and volunteer with a variety of organizations. Through service, many students find value in helping others and taking on community problems. Tina said,

> The Rudder leadership team changed my life. It has created a passion of service for me. I have even decided to pursue service learning education as a career; I plan to teach others about Rudder and Expeditionary Learning. And I will continue to use all of the skills I learned.

Tina regularly sought opportunities to do meaningful work. She started planning dances and school activities. She enjoyed being an integral part of the school. When she branched out and experienced community service, she found that she had a true passion for getting involved with non-profit organizations and helping others with needs different from her own. Currently she attends college and works in the civic engagement office. She found that service is very important to her and developed goals based on this passion. Another student, Ali, expressed her sense of purpose as being a part of a group "that made a difference." The program gave her exposure to various non-profit organizations and helped her give back to the community while learning about potential careers of interest. For Ali and others, service is a way to do meaningful

work, give back to the community, gain perspective, and feel important. Helping others leads to a sense of purpose and empowers students to learn that they can make a difference.

## Self-Awareness

Self-awareness can be considered as both internal locus of control (Henderson, 2013) and the ability to set realistic goals. Participants expressed that leadership and identity, encouragement from peers and staff, and facilitation experiences significantly impacted this value.

During the Rudder Leadership Team Program, participants learn about themselves as leaders to better understand their identities. They start the program by writing a leadership autobiography, a time for them to reflect on their stories as leaders and their experience of stepping into leadership positions. Some have been told that they are a born leader and constantly find themselves being voted to run this club or stepping up to run an activity. Those students have a strong concept of their abilities as leaders from the start. For many students, their participation with the Rudder Leadership Team is the first time that they are in a position of leadership, and they do not yet see their potential. When they start to write their autobiographies, they are often lacking insight into their own characters. As the term progresses, we revisit their autobiographies and they fill in their story with more detail and the vocabulary of how they have become leaders. For example, students do not know that service can be a type of leadership, or merely being a good listener. Most of them begin the process thinking that the best leaders talk the most. As they participate in lessons and reflection opportunities, they identify with other components of leadership and develop their strengths accordingly. Each week we delve into an aspect of leadership, define new terms, and highlight attributes of leadership that we observe. One student, Lou, said that the weekly meetings best supported his development as a leader. He

said that through the lessons, he learned about himself. Lou became a reflective individual and developed his internal locus of control.

Another student, Tim, expressed that he developed, "the ability to reflect and think critically. After Rudder, [I] could make accurate assumptions and connect ideas." Although he began the program as a thoughtful student, he was not a consistently critical thinker. Through team building activities, weekly leadership lessons, and practiced reflection, he became a student who would make strong connections. Tim is a prime example of a student becoming a self-reflective individual. He transitioned from needing prompting to be reflective to doing it independently. The development of identity through leadership development is apparent, and participants became self-aware individuals.

Another consequence that led to the value of self-awareness was encouragement. Students in the Rudder Leadership Team felt encouragement and support from their peers. As they participate in team building activities and as they get to know one another, they discover their true leadership potential and begin to have more self-awareness. One activity that they participate in is called the "Leader Line-Up." This is an activity in which students place themselves along a continuum of their perception of themselves as a leader. Once they place themselves, individuals can move students to be a better fit. This often includes discussion of ways certain individuals demonstrate leadership. By the end of the activity, students end up in a circle and learn that no one person is a better leader than the other. All students walk away seeing their peers in a new light, and through encouragement, they see themselves that way too. Lane, for example, said that "because the teachers saw it in me to be a leader, it made me think about my capabilities." She continues,

> I never saw myself as a leader until others saw me and pushed me to try it out. Once I started to notice what they saw in me, it caused me to take a step back and look at myself.

Lane is an example of a student who took feedback and ideas from others.

She took their encouragement to heart and used it to be reflective. Another student, Emily, explained that her experience with the Rudder Leadership Team taught her more about herself and motivated her to learn about herself:

> Rudder helped me regain my self-confidence. I used to be very shy and really unable to talk to people without constantly worrying about if I was saying the 'wrong' thing. Rudder taught me that who I am matters. There is no other individual who will be exactly the same as you . . . Being in a group that just offered each other so much support to each other and was so accepting allowed me to really start being myself.

Emily gained the confidence that she needed through the Rudder Leadership Team and being part of a supportive group. By learning that she was important, she began to be herself. This led to her development of self-awareness. With a newly found confidence, she would be herself and let others get to know her. This confidence ultimately led to her getting to know herself and becoming self-reflective. Rudder Leadership Team students enter the program with beliefs about themselves as leaders and leave with self-awareness. They can reflect and more accurately see themselves.

Facilitation emerged from the survey responses as another consequence that led to self-awareness. Through facilitation exercises, participants become self-aware by helping other students learn about themselves. One student, Charles, mentioned, "The activities that I participated in helped me realize that everyone has a role." Although he began as a passive participant, by facilitating other students, he found through his role in the group he was able to

learn more about himself. When students are asked to facilitate, they are challenged to reflect on other groups and other students. This in turn can be transferred to learning and reflecting about themselves. Additionally, Tonya said, "An additional outcome I gained from Rudder was confidence and resilience. Facilitating helped me gain confidence in myself and I learned to be resilient because there were many times when things got hard." By facilitating the same groups multiple times, students learn to be confident. Although they may begin nervously, they learn that people listen when they talk and they care about what they have to say. This changes students and they gain an authentic sense of confidence. This ultimately helps them be more reflective. Students both learn about others and themselves through facilitating. This impacts who they are and who they become. Ultimately, self-awareness is a significant value. Students learned to set realistic goals for themselves and to be self-motivated. They could do this by understanding who they are and what was important to them.

## Other Themes

Though most students' comments were coded and fit in the five values mentioned above, communication, problem solving, independence, purpose, and self-awareness, other comments related to but went beyond the categories and suggested significant aspects of program outcomes and program development. The primary themes that emerged are that students expanded their comfort zone, learned self-respect, and learned to work with others within the community.

The first theme is expanding their comfort zone, which means that participants become more willing to take risks. Risks may be physical; for example completing a task on a ropes course that is challenging. Risks may also be emotional; such as sharing personal stories or challenging situations with one another. One occurrence of this in the program is when students complete the timeline activity. One at a time, students share three important chronological events

with one another. Students allow themselves to be vulnerable and often find the experience positive because it is the first time that they have shared their story with anyone. This sharing brings students closer together and develops a safe place to grow emotionally. One participant, Joshua, said that, "Rudder pushed me out of my comfort zone and challenged me to participate in various activities . . . It was also a safe place to express myself freely." Joshua was a student who was hesitant to participate in group activities that involved being close with others. When he began the program, he would often find excuses to miss activities that involved physical touch. He also was the last to share during group debrief times to avoid sharing. After the Rudder Intensive Program, which is a week of students working closely together and learning to trust one another, he opened up and no longer avoided participation. As the year progressed, he became one of the first students to speak out and a wonderful teammate during all initiatives and cooperative games. Joshua's story and survey response serves as one example of a student who became more comfortable with himself and becoming a part of a group through the program. All Rudder students expand their comfort zone throughout the year. Whether it is physical or emotional risk, no student enters the program ready to be fully exposed to their peers. By the end of the year, all students embraced one another and appreciated the growth that they have made by being comfortable with closeness.

Another theme that did not fit into the major values is self-respect. When students become Rudder Leadership Team members, something instantly changes for them. They step into a leadership position and are held to a higher standard than their peers. Students are expected to keep a higher grade point average, conduct themselves as a role model in all classes, and are looked up to by peers and younger students in the school. Students grow into this leadership position through coaching and debriefing. Though it does not happen right away, they

eventually gain self-respect and see themselves as a leader. Lou mentioned this theme in his responses and it is exemplary of other students' feelings as well. He mentioned that students and teachers hold Rudder in high regard, and that the responsibility of being a leader felt very real for him. Because of the added responsibility, he stepped up as a leader and truly embraced leadership as one of his attributes. This transition appears to be true for many participants in the Rudder Leadership Team and by the end of their program year, students who participated in Rudder carry themselves with self-respect and importance.

Finally, students saw community connection as an important theme of the Rudder Leadership Team. On a monthly basis, we participate in community service as a group. Some students are struck by the passionate volunteer coordinators and other volunteers they meet. Many become excited and passionate about those communities as well. Mostly, Rudder Leadership Team students find that they become passionate about their local communities and want to make a difference. They learn to speak up and become a voice in their communities. As a result of the leadership program, many students join service fraternities in college or join outreach clubs. They see the benefit of community partnerships and pursue relationships with other individuals who are passionate about volunteering.

These three themes (willingness to take risk, self-respect, and leadership) further paint the picture of the Rudder Leadership Team and the potential impact of the program on its participants. It is clear that they are significant and should be examined further to make future decisions and recommendations regarding Rudder Leadership Programs.

## Conclusion

In this chapter, I analyzed quantitative and qualitative results regarding survey information for the Rudder Leadership Team. I examined the reliability of the tool by using

Cronbach's Alpha. This test demonstrated that the resiliency tool was reliable (Santos, 1999). Furthermore, to answer the question, I utilized a Repeated Measures ANOVA test (Table 4). I examined the means of the resiliency scores of two groups, the Rudder Leadership Team group and William Smith High School students (Table 2 and Figure 1). I then asked the second question to determine the most salient predictors of resilience in this population. To begin, I ran a Principal Axis Factoring Method with Varimax Rotation. Following this, I ran an ANOVA test to determine the significance of these factors on resilience levels. I examined the correlations (Table 8) of these factors to determine if the identified factors relate to one another. Finally, to address the very different sample sizes tested, I ran a t–test to determine homogeneity of variance (Table 9).

Following the quantitative analyses, which determined *if* the Rudder Leadership Team made an impact on students and their levels of resilience, I utilized qualitative research methods to determine *how*. I used the means-end approach (Reynolds & Gutman, 1988) to analyze the information deductively. I utilized this model to complete a Hierarchical Value Map to make connections and delve deeply into analysis of what the participants were communicating.

As mentioned above, the results from the resiliency scale and follow up quantitative questions are shown. In examining the five values that most impact the Rudder Leadership Team Program, communication, problem solving, independence, purpose, and self-awareness, we have uncovered important consequences that led to these values. Each value had multiple consequences to further explain its impact. As I examined the consequences further, it became apparent that the *how* of the Rudder Leadership Team was revealed. Programmatic aspects of the team and activities and experiences were shown to be significant and greatly impacted the values depicted. Leadership development, team work, support from the group, relationship building,

planning activities, encouragement, facilitation, and service were all significant consequences that led to the values. Additionally, facilitation and team work emerged as important contributors to the values.

By utilizing qualitative research methods, I discovered the essential values that determine what the important outcomes of the Rudder Leadership Team are, and further, I realized how these outcomes are achieved. The next chapter includes a final summary of this research study, its implications, and next steps to inform my practice as a researcher and as a Rudder Leadership Team sponsor.

# CHAPTER 5: SUMMARY, CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS

## Summary: Methodology and Major Findings

This paper highlights the research plan to assess the effectiveness of the Rudder Leadership Team. Through mixed method research and analysis, I answered the questions:

1. *Does the Rudder Leadership Team have a significant impact on the resilience of participants?*
2. *What are the most salient predictors of resilience in this population?*
3. *What outcomes were most frequently perceived by Rudder Leadership Team participants?*
4. *What aspects of the Rudder Leadership Team Experience were most influential for the stated outcomes?*

To answer the first two questions, I used quantitative analysis. Through ANOVA testing, I determined that there indeed was a significant growth in resilience of the Rudder Leadership Team compared with the overall school population. Unfortunately, the predictors that I had gleaned from my review of contemporary research were slightly inter-correlated but did not appear to have the influence I hypothesized on resilience. While perhaps these predictors have an overall impact on resilience among the general population, the data showed they did not impact members of the Rudder Leadership Team differently than the school population as a whole, making their influence difficult to distinguish.

I used qualitative analysis to answer questions three and four. I first used contemporary resilience research to identify key dimensions of resilience, which I hoped would manifest as outcomes of participation in the Rudder Leadership Team. Labeling these key dimensions as 'values,' I used a Hierarchical Value Map (HVM) to determine the consequences that led to

these values. By interpreting the "consequences" as programmatic elements of the Rudder Leadership Team, I could determine the effectiveness of specific activities within the Rudder Leadership Team curriculum.

## Conclusions

Through mixed methods analysis of survey data, I determined Rudder Leadership Team participants are statistically more likely to develop resilience than members of the general William Smith High School population. The answers to the first two questions demonstrate that the Rudder Leadership Team students demonstrate a statistically significant increase in resilience. Due to the quantitative increase in resilience, questions three and four can suggest how the leadership team impacts these resilience levels. By utilizing the works of Bernard (1991), Miller (2002), Brooks and Goldstein (2001), Ungar (2010), and Henderson (2013), I analyzed how different themes that lead to resilience were apparent in the Rudder Leadership Team program and through the assumption that resilience education can be taught (Henderson, 2013). The different programmatic elements within the Rudder Leadership Team had different impacts on the development of the dimensions of resilience.

Overall, I determined through my analysis that the Rudder Leadership Team is composed of nine primary programmatic elements. Each element helped participants develop at least one dimension of resilience. Looking deeper, six elements: Leadership/Identity, Support, Planning Activities, Community Connection, Encouragement, and Service contributed significantly to the development of only one or two dimensions of resilience. While these elements can still be a useful part of the Rudder Leadership Team curriculum, more examination into their delivery is necessary to determine methods to make them more effective in developing resilience. For the

purposes of this thesis, I will turn my focus to those elements which developed three or more dimensions of resilience among participants: Teamwork, Facilitation, and Relationship.

**Teamwork**

Rather than work with students individually, assembling a team has always been a focus of Rudder. Participants in the program work together both as part of the whole Team, and with their Team One Partners. The structure emphasizes that participants understand their contribution to a larger team and how they work with others as a way to develop their own skills. This focus on the whole over the individual helped participants improve their communication, problem solving skills, and independence (Henderson, 2013). Most notable among these is the development of independence through teamwork, as upon first glance these values appear to be contradictory. My analysis demonstrated, however, that by making participants accountable to other Team members to complete assigned tasks, participants exhibited motivation and creativity to fulfill their individual role, thereby increasing their independence. Moreover, in team building activities each participant receives an individual and distinct role, which contributes to the accomplishment of the task. Participants must decide for themselves how to best fulfill their role within a given challenge, forcing them to think independently while contributing to a greater goal.

**Facilitation**

Facilitation was overall the most important element of the Rudder Leadership Team in developing the dimensions of resilience, contributing to four of the five dimensions (Communication, Problem Solving, Purpose, and Self-Awareness). Generally, each participant and their Team One Partner was responsible for facilitating activities among various groups of other students, whose composition varied dramatically in age, motivation, and cohesiveness.

Facilitation was especially valuable because each participant understood that it was their responsibility to successfully guide a group regardless of the group's underlying composition or attitude at the beginning of the facilitation, holding each member of the Rudder Leadership Team accountable to achieve results even in difficult situations. Team members had no choice but to communicate clearly and embody the attitude of confidence, trustworthiness, and conscientiousness in order to be successful (Brooks and Goldstein, 2001). After students facilitate for the first time, they embody this way of being in their everyday lives, achieving greater results.

**Relationship**

Being close to one another and being supported provides members of the Rudder Leadership Team the confidence to express their true personalities without fear of shame or reproach. As such, they are better able to express themselves honestly in their everyday lives. Too often, participants come into the Rudder Leadership Team without a true concept of their values and priorities in life. When faced with stressful or difficult situations they are more willing to bend to the will of others and adapt the negative tendencies of those around them. Through the greater Self-Awareness, which participants develop through honest communication and expression, they begin to realize their self-worth and gain the confidence to work towards their own priorities regardless of the opinions of those around them (Bernard, 1991). Participants realize their goals are worth achieving because they are valuable and they are allowed to contribute meaningfully to a greater whole.

## Contribution/Implications

This research could contribute in the following ways:

1. To the further development of the Rudder Leadership Team. *The research will inform me, the leadership team sponsor, of the effectiveness of this program in meeting the objectives of developing resilience in students through participation in the Rudder Leadership Team. I will use this information to make necessary changes to meet these objectives and to continue using components of the program that work. It is possible that the research will inform me that the program is ineffective for developing resilience and it may be something that I need to reconfigure.*
2. To seek support and funding for the Rudder Leadership Team. *The research will inform the administration of the program's effectiveness. It will be beneficial to have administrative support to continue funding the program and seek external funding from outside grants.*
3. A foundation for understanding and critiquing the Rudder Leadership Team. *As an educator, it is important to critically examine all forms of practice. I have not received adequate feedback regarding this program (as I do for normal classroom instruction). This is an opportunity to look at the program through a critical and non-biased lens to better understand the strengths and weaknesses of the program.*
4. Contribution to secondary educators interested in resilience. *This program and analysis can aid educators through an example of a school program that develops resilience. Although there are examples of how to develop resilience in students, the components of the Rudder Leadership Team could serve educators in implementing specific structures in their practices and programs.*

5. Contribution to resilience research. *This thesis can be used for researchers to further understand resilience, methods of assessing resilience, and how this information can be used to inform additional research projects.*

From the conclusions I have derived from the research, it will aid my educational practices, contribute to educators and researcher, and will inform further resilience research for myself and others.

## Recommendations

### Quantitative Research Recommendations

The tools I used to assess the resilience of the Rudder Leadership Team varied in effectiveness and informed my recommendations for future research. Most effective and relevant to my research was the Resiliency Scale developed by Gail Wagnild (2009). Wagnild has exhaustively tested the effectiveness of her research tool to demonstrate its viability, and my research corroborates its utility to assess the resilience of the Rudder Leadership Team. Less reliable was the research tool I created to determine predictors of resilience, as the tool was compiled from an existing social capital research tool and a wisdom scale. While these tools proved adequate to conduct my research, one question I used was thrown out because it lacked clarity, signaling perhaps that finding a tool which has been proven to assess predictors of resilience directly would be more effective. Perhaps with refinement the tool I created could be more effective, but far more testing would be necessary to bring it to a place where it could be used universally in the resiliency research field.

### Qualitative Research Recommendations

My qualitative recommendation involves changing the method of qualitative data collection. Although the survey responses I received did allow for comments and free response

to answer questions, a more effective method would be to deliver the questions orally as interview, which would allow more opportunity for follow-up and clarification. While some responses were very clear and concise, others were more vague or ambiguous, and would have been much easier to understand with either intonation or clarification questions. Though this method is more time consuming, I believe it would lead to richer responses and more concise information.

Furthermore, a higher response rate would benefit this research in the future. To access a higher response rate, additional forms of social media could be used to connect with alumni. Email and Facebook are two methods to reach students, but many students use Twitter, Snapchat, and Instagram more frequently. The methods of contacting students should first include contact via one of these sources followed by an email to explain the study and to get consent. Although this adds one extra step in the data collection procedure, it could impact the response rate and encourage a better response.

**Programmatic Recommendations**

My analysis revealed that the Rudder Leadership Team Program could be improved during and after students' participation. While students are on the Rudder Leadership Team, each of the nine programmatic elements of the Rudder Leadership Team should contribute to the development of multiple dimensions of resilience. Currently, five of the nine programmatic elements contribute to only one dimension of resilience, and none of the programmatic elements builds all five dimensions, meaning there is significant room for improvement despite the overall success of the program.

I want to highlight the element of Service, as that is a significant component of the Rudder Leadership Team and incredibly important to me personally. While Service gave

students a strong sense of purpose, with more processing and debrief the Service experience could lead to the development of Self-Awareness, Independence and Communication as well. As I alter the program, I will be sure to include better debrief protocols into the Service experience.

After students complete their tenure on the Rudder Leadership Team, my research also revealed more systems need to be in place so students can continue to feel supported and empowered to grow. One student in particular expressed:

> The Rudder Leadership Team helped me develop good skills while working with others, but something I did have trouble with after high school was gaining independence. My support system disappeared and honestly I had trouble standing on my feet alone. I went through a couple obstacles which prevented any progress. It was hard to go back to this part of my life because I lost that potential. It makes me sad that I could barely recognize the skills I developed. -Jennifer

What I realized through this statement is that the program does little to connect students to resources outside high school. Regardless of each participant's post-secondary plan, I can do a better job of connecting them to resources to enhance their interests. For example, for students going to college, I will help make connections with on campus leadership and service groups. For students who do not go to college after high school, I will connect them with organizations nearby so that they continue with meaningful service in addition to jobs that they get to earn a living. Furthermore, I will implement an exit interview with the group and talk about fears, challenges, and next steps beyond high school and the Rudder Leadership Team. Although this is not a solution, hopefully it can address Jennifer's concerns and help future students with similar transition challenges.

## Summary

My thesis research attempted to determine *if* the Rudder Leadership Team is effective in developing resilience and *how* these programmatic aspects that can impact its effectiveness. The theoretical framework of my research incorporated studies completed by Bernard (1991), Henderson (2013), Miller (2002), Brooks and Goldstein (2001), and Ungar (2010), each of which identified key components found in resilient youth. I viewed this research under the notion that resilience can be taught or learned as noted by Tough (2012), Henderson and Milstein (2003) and current school programs that teach a growth mindset. Ultimately, the conclusions I have derived from the research will aid my educational practices, contribute to educators and researcher, and will inform further resilience research for myself and others. Hopefully this research will inspire further examination of resilience and the bettering of education through the addition of and access to innovative, engaging, and meaningful educational experiences for all students.

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Appendix A1

## INTRODUCTION AND INFORMED CONSENT FOR ADULT PARTICIPANTS

***Understanding Resilience Training in the Rudder Leadership Team***

Brooke Stern
William Smith High School

### GENERAL INFORMATION:

**Introduction:** My name is Brooke Stern and I am a math teacher and leadership team sponsor at William Smith High School. I am completing research for my master's thesis that may help secondary schools develop curriculum that will assist high school graduates in their post secondary lives.

After reading more about the study, and if you agree, I will ask that you sign the consent form for you to participate in this study. If at any time you have a question about a word or phrase in this document, please feel free to ask the teacher issuing the survey.

**Purpose:** The researcher will talk to students who participated in the Rudder Leadership Team during high school to determine what key components they learned from the experience.

**Type of Research Intervention:** This will be conducted through surveys.

**Selection of Participants:** All William Smith High School students and former Rudder Leadership Team students will be asked to participate.

**Voluntary Participation:** You do not have to participate in this study. Participation is completely voluntary.

**Procedures:** We are going to test the impact that high school enrichment programs, specifically the Rudder Leadership Team, have on post secondary success. By taking part in this research, you will be assisting students and school personnel in decision making that could impact future curriculum decisions at William Smith High School and Aurora Public Schools. At this point, we do not know the impact of these programs, so both students and researchers will have made no predetermined conclusions prior to this study.

If you decide that you want to participate in this study, you will be asked to complete a survey one time. It will take about 20 minutes to complete.

**Duration:** This study will require you to participate by completing a survey one time.

**Risks and Discomforts:** At times, you may be asked difficult questions that involve personal or confidential information. You may abstain from answering any question that makes you feel uncomfortable or that you choose to not disclose. You may choose to stop participating in the research at any time.

**Benefits:** There is no likely direct benefit to you, but your participation is likely to impact high school students and schools as we investigate the benefit of the Rudder Leadership Team.

**Confidentiality:** We will not be sharing specific information with anyone outside of the research team or William Smith High School staff. Any information published about you will have a number associated with the data as opposed to your name.

**PARTICIPANT CONSENT:**

**Sharing of Research Findings:** At the end of the study, we will share results with participating students and individuals in the local community. We will also publish results that may be relevant to the greater school system.

**Right to refuse or withdraw:** You may choose to stop participation in this study at any time. There is no negative consequence if you choose to do so.

**Who to Contact:** If you have any questions, now or later, please contact: Brooke Stern (BLStern@aps.k12.co.us)

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this study.

**Print Name of Participant _____**

**Signature of Participant_____ Date _____**

Appendix A2

## INTRODUCTION AND PARENTAL CONSENT FORM FOR PARTICIPANTS AGE 16 – 18

***Understanding Resilience Training in the Rudder Leadership Team***

Brooke Stern
William Smith High School

### GENERAL INFORMATION:

**Introduction:** My name is Brooke Stern and I am a math teacher and leadership team sponsor at William Smith High School. I am completing research for my master's thesis that may help secondary schools develop curriculum that will assist high school graduates in their post-secondary lives.

Whenever researchers study students, it is essential to get parent consent and participant assent. After reading more about the study, and if you agree, I will ask that you sign the consent form for your child to participate in this study. If at any time you have a question about a word or phrase in this document, please feel free to ask questions.

Both you and your child must independently agree to participate before I can begin.

**Purpose:** It is possible that students in high school can undergo specific experiences that will lead them to be more successful in college and a future career. The researcher will talk to students who participate in enrichment programs during and after high school.

**Type of Research Intervention:** This will be conducted through surveys.

**Selection of Participants:** All William Smith High School students will be asked to participate.

**Voluntary Participation:** You do not have to agree that your son/daughter will participate in this study. If you do not agree, no difference in services will be given regarding enrichment that he/she is participating in.

**Procedures:** We are going to test the impact that high school enrichment programs, specifically the Rudder Leadership Team, have on post-secondary success. By allowing your child to take part in this research, you will be assisting students and school personnel in decision making that could impact future curriculum decisions at William Smith High School. At this point, we do not know the impact of these programs, so both students and researchers will have made no predetermined conclusions prior to this study.

If you decide that you want your child to participate in this study and if your child assents to participate, your child will be asked to complete a survey one time.

Page 2

**Duration:** This study will require your child to participate by completing a survey one time.

**Risks and Discomforts:** At times, we may be asking your son or daughter difficult questions that involve personal or confidential information. Your child may abstain from answering any question that makes them uncomfortable or that they choose to not disclose. At your request, a copy of the survey may be provided for you ahead of time to see questions that will be asked.

**Benefits:** There is no likely direct benefit to your child or to you, but your child's participation is likely to impact high school students and schools as we investigate the benefit of enrichment programs and developing resilience in high school students for post secondary success.

**Reimbursements:** Your child will not receive any payment or compensation to take part in the research.

**Confidentiality:** We will not be sharing specific information with anyone outside of the research team. Any information published about your child will have a number associated with the data as opposed to his/her name that will not be personally identifying. All other personal information that can be used to identify your child will be kept confidential.

**Sharing of Research Findings:** At the end of the study, we will share results with participating students and individuals in the local community. We will also publish results that may be relevant to the greater school system.

**Right to refuse or withdraw:** You or your child may choose to not participate in this study at any time. Choosing not to participate will not have any impact for your child's future treatment or available opportunities.

**Who to Contact:** If you have any questions, now or later, please contact: Brooke Stern (BLStern@aps.k12.co.us)

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily for my child to participate as a participant in this study.

**Print Name of Parent or Guardian** _____

**Signature of Parent of Guardian**_____ **Date** _____

**Print Name of Participant** _____

**Signature of Participant**_____ **Date** _____

## Appendix A3
## INTRODUCTION AND MINOR ASSENT FORM FOR MINOR PARTICIPANTS
***Understanding Resilience Training in the Rudder Leadership Team***

Brooke Stern
William Smith High School

**GENERAL INFORMATION:**

**Introduction:** My name is Brooke Stern and I am a math teacher and leadership team sponsor at William Smith High School. I am completing research for my master's thesis that may help secondary schools develop curriculum that will assist high school graduates in their post secondary lives.

Whenever researchers study students, it is essential to get parent consent and minor assent in order for minors to participate in the study. After reading more about the study, and if you agree, I will ask that you sign the minor assent form in order for you to participate in this study. If at any time you have a question about a word or phrase in this document, please feel free to ask questions.

Both you and your parent/guardian must independently agree to participate before I can begin.

**Purpose:** The researcher will talk to students who participated in the Rudder Leadership Team during high school and

**Procedures:** We are going to test the impact that high school enrichment programs, specifically the Rudder Leadership Team, have on post secondary success. By taking part in this research, you will be assisting students and school personnel in decision making that could impact future curriculum decisions at William Smith High School and Aurora Public Schools. At this point, we do not know the impact of these programs, so both students and researchers will have made no predetermined conclusions prior to this study.

If you decide that you want to participate in this study, you will be asked to complete a survey one time.

**Duration:** This study will require you to participate by completing a survey one time which will take about 20 minutes.

**Risks and Discomforts:** At times, you may be asked difficult questions that involve personal or confidential information. You may abstain from answering any question that makes you feel uncomfortable or that you choose to not disclose. You may choose to stop participating at any time.

**Benefits:** There is likely no direct benefit to you, but your participation has potential to impact high school students and schools as we investigate the benefit of the Rudder Leadership Team.

**Confidentiality:** We will not be sharing specific information with anyone outside of the research team or William Smith High School staff. Any information published about you will have a number associated with the data as opposed to your name.

**Page 2**

**Sharing of Research Findings:** At the end of the study, we will share results with participating students and individuals in the local community. We will also publish results that may be relevant to the greater school system.

**Right to refuse or withdraw:** You may choose not to participate in this study at any time. There is no negative consequence if you choose to do so.

**Who to Contact:** If you have any questions, now or later, please contact: Brooke Stern (BLStern@aps.k12.co.us)

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this study.

**Print Name of Participant** _____

**Signature of Participant**_____ **Date** _____

Appendix B


**William Smith High School**
400 Airport Boulevard
Aurora, CO 80011

Phone – 303-364-8715
Fax – 303-326-1278
Web – www.aps.k12.co.us

Prescott College Institutional Review Board
220 Grove Avenue
Prescott, AZ, 86301

September 1, 2014

To Whom It May Concern:
Please note that Ms. Brooke Stern, Prescott College graduate student, has the permission of the William Smith High School to conduct research of students regarding resilience and exploring "Resilience and the Rudder Leadership Team."
Ms. Stern will be initiating a survey to all students at the school during the fall. Teachers during the advisory block will initiate the survey. She also has permission to contact current and former members of the Rudder Leadership Team.
Ms. Stern has agreed not to schedule the completion of surveys at a time that would interrupt the procedures and routines of the participants or others using the school facility. Brooke Stern has also agreed to provide to my office a copy of the Prescott College IRB-approved, stamped consent document before commencing the study. Ms. Stern will also provide a copy of any aggregate results.
If there are any questions, please contact my office.
Signed,

David Roll
Principal
William Smith High School
303 – 364 - 8715

Appendix C1

**How Resilient Are You?**

My Name _____ My Age ____ My Grade ____ My Gender _____

**The 14-Item Resilience Scale™ (RS-14™)**

12 October 2014

Please read the following statements. To the right of each you will find seven numbers, ranging from "1" (Strongly Disagree) on the left to "7" (Strongly Agree) on the right. Fill in the circle below the number which best indicates your feelings about that statement. For example, if you strongly disagree with a statement, click the circle below "1". If you are neutral, fill in "4", and if you strongly agree, fill in "7", etc. You must answer every question to submit the test for scoring.

| | | Strongly Disagree | | | | | | Strongly Agree |
|---|---|---|---|---|---|---|---|---|
| 1. | I usually manage one way or another. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2. | I feel proud that I have accomplished things in life. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3. | I usually take things in stride. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4. | I am friends with myself. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5. | I feel that I can handle many things at a time. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 6. | I am determined. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 7. | I can get through difficult times because I've experienced difficulty before. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8. | I have self discipline. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 9. | I keep interested in things. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10. | I can usually find something to laugh about. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 11. | My belief in myself gets me through hard times. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 12. | In an emergency, I'm someone people can generally rely on. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 13. | My life has meaning. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 14. | When I'm in a difficult situation, I can usually find my way out of it. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Appendix C2

To Be Paired with RS 14

| Strongly Disagree 1 | Disagree 2 | Neutral 3 | Agree 4 | Strongly Agree 5 |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| I enjoy culture and new ideas. | 1 | 2 | 3 | 4 | 5 |
| When circumstances change, I can adapt and problem solve. | 1 | 2 | 3 | 4 | 5 |
| I have a supportive home life. | 1 | 2 | 3 | 4 | 5 |
| I have overcome many painful events. | 1 | 2 | 3 | 4 | 5 |
| I am an active participant in my community. | 1 | 2 | 3 | 4 | 5 |
| I know my neighbors. | 1 | 2 | 3 | 4 | 5 |
| I can make a difference in my community. | 1 | 2 | 3 | 4 | 5 |
| It seems I have a talent for reading other people's emotions. | 1 | 2 | 3 | 4 | 5 |
| I like being around people whose views are strongly different from mine. | 1 | 2 | 3 | 4 | 5 |
| It is easy for me to adjust my emotions to the situation at hand. | 1 | 2 | 3 | 4 | 5 |
| I like to read books which challenge me to think differently about issues. | 1 | 2 | 3 | 4 | 5 |
| There can be amusing elements even in very difficult life situations. | 1 | 2 | 3 | 4 | 5 |
| I enjoy sampling a wide variety of different ethnic foods. | 1 | 2 | 3 | 4 | 5 |
| I can freely express my emotions without feeling like I might lose control. | 1 | 2 | 3 | 4 | 5 |
| I often recall earlier times in my life to see how I've changed since then. | 1 | 2 | 3 | 4 | 5 |

**How many times in the past 12 months have you:**

| 0 – 1 Times | 2 – 4 Times | 5 – 9 Times | 1 – 3 Times a Month | 1 – 2 Times/Week or More |
|---|---|---|---|---|
| **A** | **B** | **C** | **D** | **E** |

| | | | | | |
|---|---|---|---|---|---|
| Worked on a community project? | **A** | **B** | **C** | **D** | **E** |
| Attended a club or organization meeting (not including school or church)? | **A** | **B** | **C** | **D** | **E** |
| Volunteered? | **A** | **B** | **C** | **D** | **E** |
| Attended religious services? | **A** | **B** | **C** | **D** | **E** |
| Had friends over to your home? | **A** | **B** | **C** | **D** | **E** |
| Visited with relatives? | **A** | **B** | **C** | **D** | **E** |
| Hung out with friends in a public place? | **A** | **B** | **C** | **D** | **E** |

Appendix C3

**Rudder Only Follow Up Questions**

How important were each of these aspects of the program to you?

| Very Important | Somewhat Important | Neutral | Somewhat Unimportant | Unimportant |
|---|---|---|---|---|
| 5 | 4 | 3 | 2 | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Community Service | 5 | 4 | 3 | 2 | 1 |
| Group Team Building | 5 | 4 | 3 | 2 | 1 |
| Learning To Facilitate Team Building | 5 | 4 | 3 | 2 | 1 |
| Facilitating Freshmen Team Building | 5 | 4 | 3 | 2 | 1 |
| Working with a "Team One" (N/A for First Group) | 5 | 4 | 3 | 2 | 1 |
| Planning School Wide Events (Field Day, Pi Day, etc) | 5 | 4 | 3 | 2 | 1 |
| Facilitating at the National Conference | 5 | 4 | 3 | 2 | 1 |
| Rudder Mentor Training and Facilitation | 5 | 4 | 3 | 2 | 1 |

What aspects of the Rudder Leadership Team Program *not mentioned above* were important to you?

**Rank** (5, 4, 3, 2, and 1) the following outcomes from most important outcome (5) to least important outcome (1) as a result of participation in the Rudder Leadership Team.

___ Communication – I can lead a group or individuals by managing my voice when needed.

___ Problem solving – I can creatively find solutions to challenging tasks and collaborate.

___ Independence – I learned to take on tasks and find necessary resources to complete them.

___ Purpose – I understood that I am a useful member of this team and my community.

___ Self awareness – I learned about who I am as an individual and team member.

For your highest ranked outcome (5) of the question above, what aspect of the rudder leadership program taught you that skill? Explain.

What outcome(s) did you gain from the Rudder Leadership Team Program not mentioned in this survey?

What comments do you have in reflecting on the Rudder Leadership Team?

Appendix D

Table 10. Research Methods by Question

| Question | Method of Analysis |
|---|---|
| *Does the Rudder leadership team have a significant impact on the resilience of participants?* | Repeated-measures Multiple Analysis of Variance (MANOVA) |
| *What are the most salient predictors of resilience in this population?* | Analyses of Variance (ANOVA) |
| *What was the most important outcome from participating in the Rudder Leadership Team?* | Means-End theory and Hierarchical Value Map |
| *What aspect of the rudder leadership program taught you that?* | Means-End theory and Hierarchical Value Map |

Appendix E1

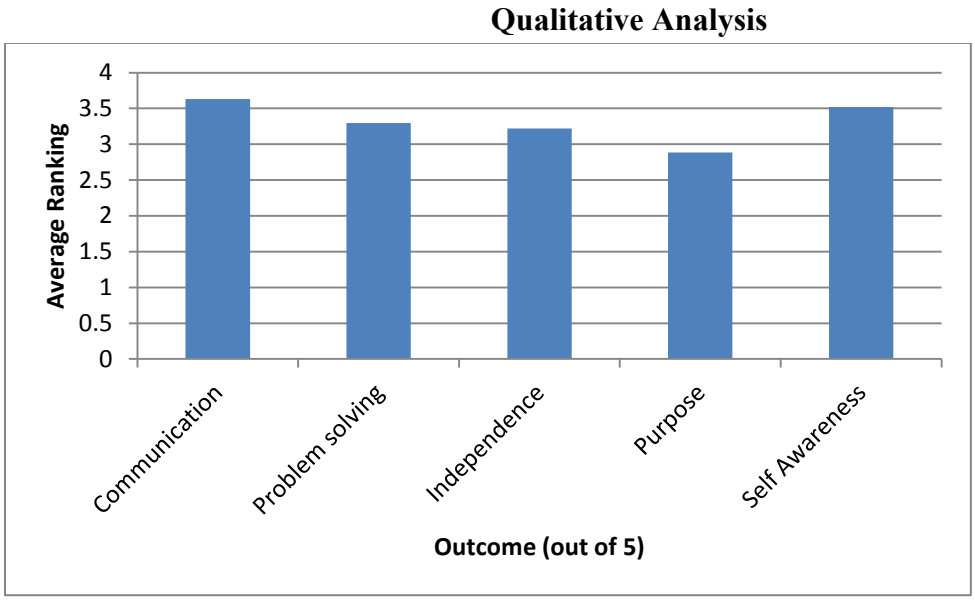


*Figure 3*. Ranking of Program Outcomes

Appendix E2

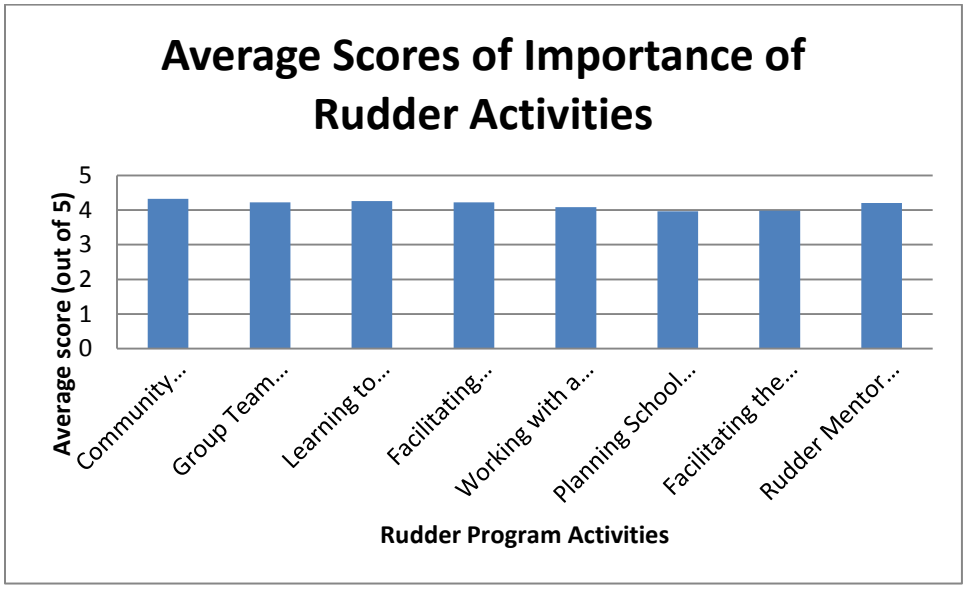


*Figure 4*. Average Scores of Importance of Rudder Activities

Appendix F

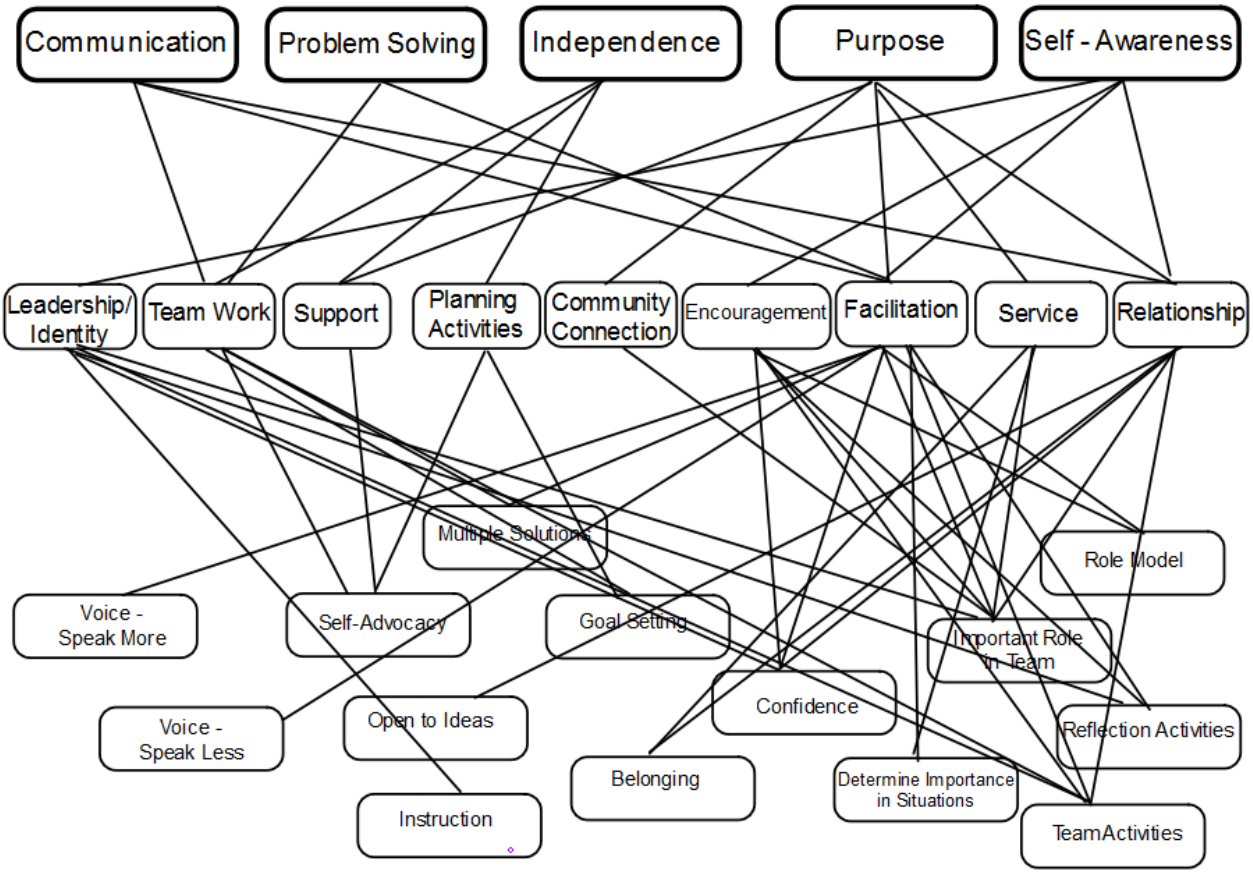


*Figure 5*. Hierarchical Value Map of Means-End Analysis