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Utilizing Reflective Narratives To Promote Academic Mindsets: Building Relationships, Developing Responsibility, Fostering Resilience, And Providing Relevance For Adolescents

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BUILDING RELATIONSHIPS, DEVELOPING RESPONSIBILITY,

FOSTERING RESILIENCE, AND PROVIDING RELEVANCE

FOR ADOLESCENTS

By

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BS Washington Adventist University 1981
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A DISSERTATION

Presented to the Affiliated Faculty of

The College of Graduate and Professional Studies at the University of New England

In Partial Fulfillment of Requirements

For the degree of Doctor of Education

Portland & Biddeford, Maine

April 2016

Debra Gardner-Baasch
April 2016
Educational Leadership

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Abstract

Preparing students for life after high school requires more than a focus on building content knowledge. With the goal of overall well-being for adolescents, education must expand beyond the traditional focus on academic excellence to develop the noncognitive factors that promote academic mindsets and build relationships, develop responsibility, foster resilience, and provide relevance for students. This research study investigates how reflective narratives can be utilized as universal interventions within personalized learning plans to foster the noncognitive factors of academic mindsets.

Combining the research of social science about resilience, connectedness, and hopefulness with the research of social neuroscience, this study explores the role of story and reflective narratives in optimizing self-efficacy and enhancing overall well-being through the development of relationships, responsibility, resilience, and relevance.

University of New England

Doctor of Education
Educational Leadership

This dissertation was presented
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DEDICATION

This dissertation is dedicated to the students who challenge and inspire me daily to expand my understanding about motivation, learning, relationships, responsibility, resilience, and relevance; and to my husband David, whose support enabled me to complete this journey.

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CHAPTER 1

INTRODUCTION

All vocation requires a sense of meaningful purpose. As author Frederick Buechner (1993) said, "Vocation is the place where our deep gladness meets the world's deep need" (p. 119). Within the field of education we are barraged with distractions that can overshadow our "deep gladness" and unravel our sense of purpose. As William Stafford (1999) so eloquently wrote in his poem "The Way It Is," this purpose is the thread that runs through life:

There's a thread you follow. It goes among

things that change. But it doesn't change.

People wonder about what you are pursuing.

You have to explain about the thread.

But it is hard for others to see.

While you hold it you can't get lost.

Tragedies happen; people get hurt

or die; and you suffer and get old.

Nothing you do can stop time's unfolding.

You don't ever let go of the thread.

The thread that runs through my vocation as a teacher is the thread of student well-being. Every United States education reform purports to follow the same thread of improving outcomes for students. From the 1983 publication of *A Nation at Risk* (U.S. National Commission on Excellence in Education, 1983), to the passage of the No Child Left Behind Act by Congress in 2002, and the adoption of Common Core State Standards in 2014, education reforms in the

United States have been tied to standards-based education and touted as the way to improve student learning (Hamilton, Stecher, & Yuan, 2008). These reforms envision a "world-class" education system where students engage in "complex thinking" (Hamilton et al., 2008, pp. 18-19) and are prepared for college or careers.

The educational system in the US is certainly data-focused and assessment-obsessed (Darling-Hammond & Adamson, 2010; Kamenetz, 2015). Many of the failures of the US education system are well-documented but the root causes are more difficult to address (Knight & Knight, 2011; U.S. Commission on Excellence in Education, 1983). Over the past five years, the idea of teaching perseverance or grit has received significant attention and has been used as a strategy support increased rigor within the CCSS (Kohn, 2014; Tough, 2012). However, according to Farrington et al. (2012), there is "little evidence that working directly on changing students' grit or perseverance would be an effective lever for improving their academic performance" (pp. 6-7). Instead of focusing lessons on the merits of grit, research has demonstrated that "teachers can lead students to exhibit greater perseverance and better academic behaviors in their classes through attention to academic mindsets and development of students' metacognitive and self-regulatory skills rather than trying to change their innate tendency to persevere" (p. 7). In fact, Yeager, Paunesku, Walton, and Dweck (2013) recommended that teachers "enlist students to generate the intervention itself" (p. 18). One suggested method is to have students generate their own intervention by writing a letter to a younger student "advocating for the intervention message" and a second method suggests that personalization "customizing the message for oneself" increases effectiveness (Yeager et al., 2013, p. 18).

The social sciences and neuroscience have given educators a wealth of new research into learning and motivation (Cozolino, 2013; Furlong, Sharkey, Quirk, & Dowdy, 2011; Martin &

Dowson, 2009). The long-term benefits from brief interventions designed to improve noncognitive factors can impact student performance with minimal cost or training (Paunesku et al., 2015; Yeager & Walton, 2011).

This study focuses on using reflective narratives as universal interventions to foster academic mindsets and thereby increase both overall well-being and academic success of adolescents.

Statement of the Problem

The 21st century is a time of extraordinary change; noncognitive factors mitigate and transform the stress of change for students (Farrington et al., 2012; Knight, 2007; Seligman, 2011; Tough, 2012). Many high school students have not developed the noncognitive factors that correlate with academic (or life) success (Farrington et al., 2012; Shubilla & Sturgis, 2012; Yeager & Dweck, 2012).

Purpose of the Study

Some students view high school as something to be endured. In the best scenarios students are engaged and find school personally relevant. Struggling students often view high school as an obstacle that must be navigated by the easiest route possible. Based upon annual classroom surveys, the majority of the underperforming high school students at the study school have entity (fixed) mindset beliefs about themselves, their potential, and their future life options.

Well-being for adolescents requires not only academic excellence, but also the development of noncognitive factors that promote academic mindsets and build relationships, develop responsibility, foster resilience, and provide relevance. With these goals in mind, the purpose of this study is to investigate how reflective narratives can be utilized as a universal intervention to foster the noncognitive factors of academic mindsets.

Research Questions

The overarching research question guiding this research is: What writing prompts elicit reflective narratives that foster the noncognitive factors of academic mindset?

Related research questions included:

- Does self-generation of the intervention (advocating intervention message for younger students) and personalization of the intervention (prompts that ask students to customize the message for themselves) increase the depth of reflection in students' narratives?

- Does using the WOOP (wish, outcome, obstacle, plan) method (Oettinger, 2014) increase the depth of students' reflective narratives?

- How does SES (socioeconomic status), gender, academic performance, and/or demographics affect the depth of reflection about academic mindset?

Conceptual Framework

This study builds upon the relationship between the key factors for fostering academic mindsets in adolescents. If education strives to foster overall well-being for students, then it must include universal interventions (explicit instruction for all students) that develop noncognitive factors and build on student-strengths (Dweck, 2006; Seligman, 2011; Tough, 2012). Research within the fields of education, social sciences, health science, and neuroscience provides validation of the ascendency of noncognitive factors (Cozolino, 2013; Broderick & Jennings, 2012; Corrigan, 2012; Durlak, Weissberg, Dymnicki, & Schellinger, 2011; Furlong et al., 2011; Gilham et al., 2007; Greenberg, 2006; Langford et al., 2015; Wald, Borkan, Taylor, Anthony, & Reis, 2012). Reflective narratives provide an avenue for bringing universal noncognitive interventions into classrooms by providing a mechanism for analyzing and taking responsibility

for the creation and editing of students' self-narratives. "Stories are a central aspect of personal identity and, in many ways, we become the stories of our experiences and aspirations" (Cozolino, 2013, p. 188).

The conceptual framework graphic (Figure 1) provides a visual representation of the four components of academic mindsets (Farrington et al., 2012). Within this graphic representation, the top triangle of Relationships includes the sense of belonging and connectedness within academic mindsets. The triangle of Responsibility includes growth mindset, self-efficacy, and neuroplasticity/social neuroscience. The triangle of Relevance includes the purpose, meaning, goal-setting, and motivation theory. The center triangle, interconnecting with the others, is the triangle of Resilience, which is woven throughout the other three academic mindsets.
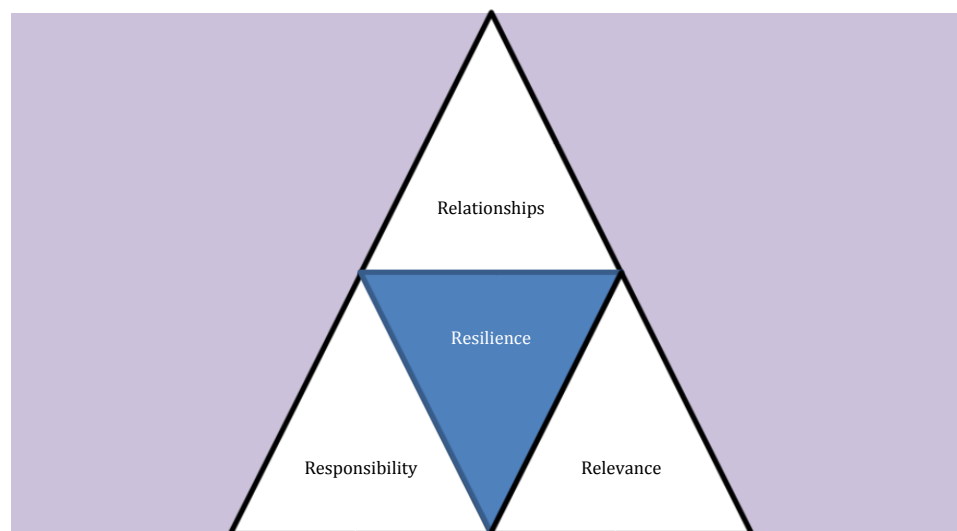
Figure 1. Gardner-Baasch Conceptual Framework (Farrington et al., 2012).

Reflective narratives will be utilized to connect the factors of academic mindset, as through cultivating reflection students become intentional authors and participators in their own story (Baldwin, 2005; Truebridge, 2014, 2010; Wilson, 2011). The utility of reflective narratives and story-editing will be explored as components within the PLP to foster resilience, build

relationships, and provide relevance (Bowen, Wegmann, & Webber, 2013; Cohen & Sherman, 2014; Wilson, 2011).

The research of Ellis, Carette, Anseel, and Lievens (2014) and Yeager et al. (2013) will provide the framework for systematic reflection. The interventions will target neuroplasticity (growth mindset) and purpose (Appendices A and B). The prompts will also comprise the three components of systematic reflection: self-explanation, data verification, and feedback.

Generally, the combination of the three functions that characterize systematic reflection (self-explanation, data verification, and feedback) leads to a greater willingness (motivational effect) and ability (cognitive effect) to draw lesson from prior experiences and eventually to a behavioral change (behavioral effect). (Ellis et al., 2014, p. 68)

Assumptions and Limitations

The purpose of this study assumes that education must encompass the whole child and not only content curriculum and test scores. In addition to this core belief, it is also assumed that a goal of public education is to prepare students for overall well-being beyond the classroom. Therefore, it is assumed that public education must explicitly foster noncognitive factors within our classrooms and communities.

Limitations for this study include the size of the participant population. This study is also limited to the responses and perceptions of the participants (middle school and high school students) in one rural Vermont public school district. The participant demographics for the study may also be a limiting factor in applicability of the results to other demographics. The affiliation of the researcher with the study site requires transparency regarding the dual roles of colleague and researcher.

Significance

The connection between one's beliefs, resilience, academic success, and overall well-being has been the focus of wide research (Durlak et al., 2011; Dweck, 2006; Furlong et al., 2011; Greenberg, 2006; Henderson, 2013; Jennings, Frank, Snowberg, Coccia, & Greenberg, 2013; Jennings & Greenberg, 2009; Knight, 2007; Seligman, 2011; Tough, 2012; Truebridge 2010, 2014; Yeager & Dweck, 2012).

A synthesis of relevant research provides the foundation for using reflective writing to provide the universal interventions shown to foster noncognitive factors, improve student academic performance, and increase overall well-being (Cohen & Sherman, 2014; Farrington et al., 2012; Paunesku et al., 2015; Yeager et al., 2013, 2014). With the changes in education of the 21st century, it behooves teachers and school systems to foster not only academic excellence, but also overall well-being, which relies upon noncognitive factors such as the academic mindsets of building relationships, developing responsibility, fostering resilience, and providing relevance.

Definition of Terms

Academic mindsets: "Psycho-social attitudes or beliefs one has about oneself in relation to academic work. Positive academic mindsets motivate students to persist in schoolwork (i.e., they give rise to academic perseverance), which manifests itself through better academic behaviors, which lead to improved performance" (Farrington et al., 2012, p. 9). There are four academic mindsets: (a) Relationship: "I belong to this academic community"; (b) Responsibility: "My ability and competence grow with my effort"; (c) Resilience: "I can succeed at this"; and (d) Relevance: "This work has value for me" (Farrington et al., 2012, p. 10).

Character education: Character education is an educational approach that focuses on students' social, emotional, and ethical development. "It is the proactive effort by schools,

districts, and states to instill in students important core, ethical and performance values such as caring, honesty, diligence, fairness, fortitude, responsibility, and respect for self and others" (Character Education Partnership, 2015, p. 1).

Mindset: (Synonyms *fixed mindset, entity theory, growth mindset, incremental theory, self-belief*). Mindset is defined as one's beliefs about abilities and traits. A fixed (or entity theory) mindset is the belief system that intelligence, personality traits, and moral character are fixed attributes, and consequently not malleable. A growth (or incremental theory) mindset is the belief that intelligence, personality traits, and moral character are malleable and able to be cultivated by one's own efforts (Yeager & Dweck, 2012).

Narrative identity: (Synonyms *self-narrative, self-identity*). "Narrative identity is the internalized, evolving story of the self that each person crafts to provide his or her life with a sense of purpose and unity" (Adler, 2012, p. 367).

Neuroplasticity: (Synonyms *Neural plasticity*).

Neural plasticity reflects the ability of neurons to change both their structure and relationships to one another in reaction to experience. . . . Supportive, encouraging, and caring relationships stimulate students' neural circuitry to learn, priming their brains for neuroplastic processes. (Cozolino, 2013, pp. 16-17)

Noncognitive factors: "Sets of behaviors, skills, attitudes, and strategies that are crucial to academic performance" (Farrington et al., 2012, p. 2).

Perseverance: (Synonyms *persistence, effort, grit, diligence*). "Working strenuously toward challenges, maintaining effort and interest over years despite failure, adversity, and plateaus in progress" (Duckworth, Peterson, Matthews, & Kelly, 2007, p. 1087-1088).

Personal/reflective narrative: (Synonyms *journaling, personal essay, expressive writing, self-narrative*). Writing about one's experiences, thoughts, feelings, plans, and/or beliefs. "The purpose of expressive writing is for you to be completely honest and open with yourself. Your audience is you and you alone" (Pennebaker & Evans, 2014, p. 16).

Personalized learning:

Personalized learning seeks to accelerate student learning by tailoring the instructional environment–what, when, how and where students learn–to address the individual needs, skills and interests of each student. Students can take ownership of their own learning, while also developing deep, personal connections with each other, their teachers and other adults (Cavanagh, 2014, p. 2).

Positive psychology: "Positive psychology is the scientific study of human flourishing, and an applied approach to optimal functioning. It has also been defined as the study of the strengths and virtues that enable individuals, communities and organizations to thrive" (Gable & Haidt, 2005, Sheldon & King, 2001, as cited in Positive Psychology Institute, 2012, p. 1).

Proficiency-based learning: (Synonyms *Mass-Customized Learning, Competency-based learning, Standards-based education*).

Proficiency-based learning refers to systems of instruction, assessment, grading, and academic reporting that are based on students demonstrating that they have learned the knowledge and skills they are expected to learn as they progress through their education. . . . Proficiency-based learning is generally seen as an alternative to more traditional educational approaches in which students may or may not acquire proficiency in a given course or academic subject before they earn course credit, get promoted to the next grade level, or graduate. (The Glossary of Education Reform, 2014)

Pro-social education: (Synonyms *Social and emotional learning). Prosocial education is used as

an umbrella term that denotes all the various ways in which teachers develop effect classroom learning environments and teach the whole child, principals encourage positive school climates, superintendents assess the health and productivity of their systems, and communities and parents contribute to the well-being and thriving of their children. (Brown, Corrigan, & Higgins-D'Alessandro, 2012, p. 3)

Reflective practices: (Synonym *mindfulness, self-awareness, introspection*). Learning from and through experiences to gain insights and become more self-aware. "Mindfulness is present-moment, nonjudgmental awareness . . . a 'fullness of mind,' because you bring your full, undivided attention to the present moment" (Jennings, 2015, p. 2).

Reflective writing: (Synonyms *self-narrative, journal writing*). Reflective writing

gives meaning to experience; it turns experience into practice, links past and present experiences, and prepares the individual for future practice . . . reflection promotes a deep approach to learning and fosters lifelong learning as students learn to reframe problems, question their own assumptions, and attend to their own learning needs. (Plack, Driscoll, Blissett, McKenna, & Plack, 2005, p. 200)

Relationship: (Synonyms *Belonging, Connectedness*). Relationship, belonging, and connectedness are defined as "the belief by students that adults and peers in the school care about their learning as well as about them as individuals" (Centers for Disease Control, 2009, p. 3, as cited in Furlong et al., 2011, p. 19). As Dr. James Comer (1995) from Yale University says: "No significant learning can occur without a significant relationship of mutual respect, teacher to student."

Relevance: (Synonyms *Engagement, Real-world connections, Personal meaning*). Relevance in school settings is connecting learning to student interests or needs; relevance can be created in two ways: "The most common approach is to shape or interpret ideas so that their relations to the lives, interest, and curiosities of the majority of students is readily apparent. . . . The second approach is to change students' attitudes towards the material . . . to teach students to make the material meaningful to themselves" (Langer, 1997, pp. 74-75).

Resilience: The term resilience has been used to reflect the current consensus that resilience is a "process of positive adaption in the face of adversity" and not a fixed trait (Truebridge, 2014, p. 12-13). According to Waxman, Gray, and Padrón (2003), the most widely used definition of resilience is "the heightened likelihood of success in school and other life accomplishments despite environmental adversities brought about by early traits, conditions, and experiences" (p. 2).

Self-efficacy: One's belief in one's ability to accomplish tasks and achieve goals (Bandura, 2012).

Standards-based Education: (See *Proficiency-based learning*).

Story: (Synonym *narrative*). "Story is the narrative thread of our experiences–not what literally happens, but what we make out of what happens, what we tell each other and what we remember" (Baldwin 2005, p. xi).

Story editing: (Synonyms *editing self-narrative or narrative identity*). Story editing is a "set of techniques designed to redirect people's narratives about themselves and the social world in a way that leads to lasting changes in behavior" (Wilson, 2011, pp. 11-12).

Social and emotional competence (SEC): (Synonyms *Empathy, Hopefulness, Futures-orientation, Compassion, Optimism, Sense of Purpose/Meaning, Internal locus of control, Pro-*

social education). Social and emotional competence involves five primary skills: "Self-awareness, relationship skills, and responsible decision-making" (Jennings et al., 2013, p. 374). Social and emotional competence is defined by Knight (2007) as an aspect within resilience that encompasses three categories of "manifestations": emotional competence (internal locus of control), social competence (empathy), and futures-orientation (optimistic, sense of purpose).

Social emotional learning (SEL): (See *Social and emotional competence and Pro-social education.*)

Universal interventions: Interventions for all students, not just an identified subgroup.

Well-being: "Well-being is a construct . . . [that] has five elements . . . positive emotion, engagement, meaning, positive relationship, and accomplishment" (Seligman, 2011, pp. 15-16).

Conclusion

Ongoing U.S. education reforms promoting personalized and proficiency-based learning offer the opportunity to systematically include universal interventions that foster noncognitive factors. Brief interventions have been shown to be effective in fostering academic mindsets and other noncognitive factors (Bowen et al., 2013; Cohen & Sherman, 2014; Ellis et al., 2014; Farrington et al., 2012; Paunesku et al., 2015; Yeager et al., 2013; Yeager & Walton, 2011).

Reflective narratives designed to promote academic mindsets can be used both as teaching tools and mechanisms for building relationships, developing responsibility, fostering resilience and providing relevance for adolescents (Baldwin, 2005; Bangert-Drowns, Hurley, & Wilkinson, 2004; Charon & Hermann, 2012; Wald et al., 2012; Wilson, 2011). Personalization will require a major shift in the beliefs and practices of teachers, parents, and community members, which will provide additional opportunities to use reflective narratives as a tool for professional development and monitoring.

CHAPTER 2

REVIEW OF THE LITERATURE

The purpose of this literature review is to establish the importance of noncognitive factors in education while exploring reflective narratives as a mechanism for building academic mindsets. The overarching goals of education have expanded beyond academic success to preparation for life after high school, which requires attention to the noncognitive factors such academic mindsets that build relationships, responsibility, resilience, and relevance (Cohen & Sherman, 2014; Farrington et al., 2012; Paunesku et al., 2015; Yeager & Walton, 2011).

Educators and school districts throughout the United States are grappling with how to incorporate a revision of the three R's of education to include reasoning, resilience, and responsibility (Sternberg & Subotnik, 2006) and rigor, relevance, and relationships (Littky & Grabelle, 2004). To address these 21st-century demands for redefined learning, student engagement, and career-readiness, the Vermont Legislature passed Act 77 (Flexible Pathways Initiative, 2013) requiring schools to provide Flexible Pathways to Graduation, Personalized Learning Plans (PLPs), and Proficiency-Based Graduation Requirements (PBGR) by 2020. Noncognitive factors are also addressed through Vermont's Transferable Skills (Vermont Agency of Education, 2015), which are required under PBGR. Noncognitive factors are assessed in Vermont's Transferable Skills under the categories of "Self-Direction" and "Responsible and Involved Citizenship."

Another 21st-century school reform is the adoption of the Common Core State Standards (CCSS). The Common Core addresses the need for high expectations for all students by providing a national set of "high-quality standards" that will "ensure that all students graduate

from high school with the skills and knowledge necessary to succeed in college, career, and life"
(Common Core State Standards Initiative, 2014, p. 1). At this juncture, a great opportunity exists
to create new education structures and frameworks that systematically include noncognitive
factors and build academic mindsets to meet the increased demands of the Common Core's
Career and College Readiness standards.

My professional interest stems from years of classroom experience and observing the
impact of personal beliefs on students' well-being and academic success. As a high school
English teacher whose literacy classes target struggling adolescents, the need for engagement
and relevance is a daily concern. When I moved to the high school after 20 years of teaching K-6,
I was struck by the transformation of some of my students; the curiosity, wonder, and promise of
8 year olds had been replaced with resignation, hopelessness, and disconnection. At 14 or 15
many of my students had lost their sense of hope and self-efficacy. However, other students
demonstrated amazing resilience and continued to work purposefully, raising the question of
why some students are more resilient than others with similar challenges.

Whenever students can see a direct application to their own life, student engagement
increases (Brown et al., 2012; Clarke, 2013; Cozolino, 2013). Reflective writing can foster
connections both within academic learning and noncognitive learning (Bangert-Drowns et al.,
2004; Bowen et al., 2013; Cohen & Sherman, 2014; Ellis et al., 2014; Farrington et al., 2012;
Wilson, 2011; Yeager & Walton, 2011.) There is power in one's beliefs about one's self and in
one's reflective ability to craft, edit, and rewrite he/her personal stories; this is the power that
academic mindsets, the science of neuroplasticity, and reflective practice provides students and
adults. "Having an articulated personal story helps us remember where we come from, where we
are, and where we are going" (Cozolino, 2013, p. 192).

A review of the research literature supports the claim that fostering an understanding of academic mindsets can be accomplished through interventions designed to build relationships, develop responsibility, foster resilience, and provide relevance (Durlak et al., 2011; Farrington et al., 2012; Gillham et al., 2007; Rowe, Stewart, & Patterson, 2006; Waxman et al., 2003). My initial assertion is that embedding reflective narratives within PLPs as universal interventions will develop noncognitive factors, and thereby supports both overall well-being and academic success of students. The overarching goals of my research will be enhanced academic mindsets for students, academic success, overall well-being, and preparation for life after high school.

This literature review began with a systematic search of the literature pertaining to adolescent resilience within education, social sciences, health sciences, and neuroscience using the identified key words to explore overlapping concepts and classroom interventions that could be delivered by teachers within classrooms. The key words searched included resilience, empathy, compassion, connectedness, belonging, hopefulness, positive psychology, well-being, mindset, noncognitive factors, academic mindsets, incremental theory, entity theory, intelligence theory, motivation theory, perseverance, engagement, personalized learning, character education, reflective practices, reflective narratives/writing, pro-social education, social and emotional competence (SEC), social emotional learning (SEL), proficiency-based graduation (PBGR), and personalized learning plans (PLPs).

The research literature provides an array of studies about noncognitive factors that build relationships, develop responsibility, foster resilience, and provide relevance for adolescents. Additionally, the interconnections between social neuroscience, social emotional learning/competency, motivation theory, incremental/entity theory, and reflective writing are

explored as they relate to noncognitive factors. The four components of academic mindsets have

been used to group the literature reviewed into sections.

Relationship: "I am connected here--I belong and I am valued."

I believe

the greatest gift

I can conceive of having

from anyone

is to be seen by them,

heard by them,

to be understood

and touched by them.

The greatest gift

I can give

is to see, hear, understand

and to touch

another person.

When this is done,

I feel

contact has been made.

Making Contact by Virginia Satir (2003)

The much-quoted truism attributed to Dr. James Comer (1995) from Yale University, states the imperative of relationships eloquently: "No significant learning can occur without a significant relationship of mutual respect, teacher to student." Another way to view building positive relationships between teachers and students is through connections that increases student learning. Connectedness is a concept that applies to a variety of fields. For this literature review connectedness is defined as "the belief by students that adults and peers in the school care about their learning as well as about them as individual" (Furlong et al., 2011). Empathy is a necessary element within connectedness and defined as being able to see things from the perspective of another, while feeling a strong emotional desire to understand and support. These two concepts are linked within this literature review because to feel socially and emotionally connected one must have a level of caring, empathy, and compassion.

Recurring themes within the literature about building student connectedness to school and empathy include fostering growth mindset and resilience. The first of the three primary protective factors in resilience is caring relationships that provide connectedness and "exude compassion and trust" (Truebridge, 2014, p. 15), making this first factor a mirror of connectedness and empathy. The second protective factor is high expectations, sending a positive message about capability, which relates directly to both optimism and mindset. High expectations also have a direct tie to the goals of the CCSS and PBGR. The third protective factor is the opportunity to participate providing voice, choice and the "gift of service" which are closely related to connectedness and empathy (Truebridge, 2014, pp. 15-16). Purpose and meaning will be examined more closely within the subheading Relevance.

The implications for research and interventions are again tied closely with resilience and mindset interventions. Henderson (2013) suggested that encouraging relationship, role models,

and mentors within schools builds resilience. Walloff (2010) found that student advisories increased connectedness and improved school climate, as reported by both teachers and students. Therefore, the question of how explicit instruction and reflective narrative can be used to optimize the protective factors of resilience with the structures of PLPs, PBGR, and advisories is pertinent and ties closely to the goal of promoting self-compassion (Neff & McGehee, 2010). Rather than focusing on boosting self-esteem, which has been linked to negative outcomes such as increased bullying and aggression, self-compassion overlaps with empathy and connectedness. Rowe et al. (2006) called for schools to use instructional methods and structures to build connectedness and social equity and increase resilience by instructional methods (process) and systems (structures).

Casas (2011) found that one of the "most consistent findings in personal well-being research is that in practically all studied populations, the most important domain of global life satisfaction is satisfaction with interpersonal relationships" (p. 561). Therefore, in order to increase adolescent well-being, teachers and school communities need to intentionally focus on building positive relationships within classrooms and throughout the school community.

Responsibility: "I am able to improve my competence and ability."

On the other side of the door

I can be a different me,

As smart and as brave, as funny or strong

As a person could want to be.

There's nothing too hard for me to do,

There's no place I can't explore

Because everything can happen

On the other side of the door.

On the other side of the door

I don't have to go alone.

If you come, too, we can sail tall ships

And fly where the wind has flown.

And wherever we go, it is almost sure

We'll find what we are looking for

Because everything can happen

On the other side of the door.

On the Other Side of the Door by Jeff Moss (1991)

Mindset is defined as one's beliefs about abilities and traits. A fixed (or entity theory) mindset is the belief system that intelligence, personality traits, and moral character are fixed attributes, and consequently not malleable. A growth (or incremental theory) mindset is the belief that intelligence, personality traits, and moral character are malleable and able to be cultivated by one's own efforts (Yeager & Dweck, 2012).

When one believes that one's own potential is not finite or measurable, there is increased motivation to persevere. The concepts of incremental/attribution theory and growth mindset recur throughout the research on non-cognitive factors and overlap with social neuroscience (Dweck, 2006). Although IQ has been viewed as a fixed ability that predicts academic success, Alfred Binet designed IQ testing to identify children who needed different educational programs

to be successful. Binet called the notion that IQ was a fixed quality "brutal pessimism" (cited in Dweck, 2006). Our own beliefs about our limitations affect both our learning and our overall well-being (Langer, 2009).

Yeager and Dweck (2012) reviewed research into mindset interventions and the effect on resilience. Interventions focused on teaching about neuroplasticity and incremental theory (growth mindset.) The authors stressed that the formula for brain growth is "Effort + Good Strategies + Help from Others."

In building hopefulness and optimism, one needs to believe that he/she is not a pawn in the chess game of life, but is actually capable of controlling vital aspects of the game; this is where the research about mindset and neuroplasticity intersect with well-being and self-efficacy. People can change their outlook and increase well-being and happiness through understanding themselves and the way their beliefs mold their outlook (Seligman, 2011).

Yeager et al. (2014) further examined the role of purpose in fostering adolescent self-efficacy and self-regulation. "Individuals are known to marshal self-discipline more when they are pursuing personally meaningful goals" (p. 560). Both responsibility and relevance are directly affected by beliefs about the purpose for learning. Purpose for learning is defined as "a goal that is motivated both by an opportunity to benefit the self and by the potential to have some effect on or connection to the world beyond the self" (p. 560). By asking students to reflect on reasons a task is relevant to their current reality and how it might connect to future goals course performance can be improved "by enhancing the perceived utility value of a task" (p. 561).

The research of Yeager et al. (2014) found "that asking students to generate reasons why a learning task could be relevant to their daily lives and future goals could improve course performance among low-performers by enhancing the perceived utility value of a task" (p. 561).

Beyond simply setting a personal purpose for learning, this research found that the effects increased when the purpose also had "the potential to have some effect on or a connection to the world beyond the self" (p. 560).

With the implementation of Vermont Act 77, school leaders have the opportunity to explore how the insights and metacognitive practices of researchers such as Seligman (2011), Jennings et al. (2013), Durlak et al. (2011), Paunesku et al. (2015), Yeager & Dweck, (2012), and Yeager et al., (2014) can be incorporated into universal interventions to promote noncognitive factors. The implications for school systems and teachers are both seismic and transformational. This is an optimal point to explore how universal interventions, such as reflective narratives, can be used for instruction and assessment to promote academic mindsets. As research mounts that teaching students about academic mindsets and neuroplasticity will increase well-being and academic success while lowering stress, schools will be grappling with how universal interventions and structures can support academic mindsets for all students—and their teachers and parents (Farrington et al., 2012; Yeager & Dweck, 2013).

Resilience: "I believe that I can succeed."

What is hope?

It is the pre-sentiment that imagination

is more real and reality is less real than it looks.

It is the hunch that the overwhelming brutality

of facts that oppress and repress us

is not the last word.

Tomorrow's Child by Rubin Alves (2003)

Resilience research over the last 3 decades has typically been defined as the capability for a successful outcome despite adversity or challenges. Much of the initial research in this field focused on resilience as a trait that some possessed and others did not possess. The term resilience has been used to reflect the current consensus that resilience is a "process of positive adaption in the face of adversity" and not a fixed trait (Truebridge, 2014). According to Waxman et al. (2003), the most widely used definition of resilience is "the heightened likelihood of success in school and other life accomplishments despite environmental adversities brought about by early traits, conditions, and experiences." Resilience was further defined by Knight (2007) as encompassing three categories of "manifestations": emotional competence (internal locus of control), social competence (empathy), and futures-orientation (optimistic, sense of purpose).

In surveying the research literature on resilience, one recurring theme is that resilience is alterable and a process rather than a fixed attribute. Resilience research intersects with the research about fixed versus growth mindset, as one's beliefs about one's own limitations have been shown to be foundational in resilience (Durlak et al., 2011; Henderson, 2013; Langer, 2009; Neff & McGehee, 2010; Seligman, 2011; Truebridge, 2014; Waxman et al., 2003; Yeager & Dweck, 2012). Academic resilience is tied to overall student success, persistence, and growth mindset/self-belief (Trujillo Moehr Smith, 2012). Martin (2002, 2010) created a simple model for teachers and students that integrates motivation theory with academic resilience. Students learn about motivation and academic resilience through instruction about "boosters" (self-belief, learning focus, value of school, persistence, planning, and task management) and "guzzlers" (self-sabotage, disengagement, failure avoidance, uncertain control, and anxiety). Self-belief is

identified as the most critical booster and the strongest predictor of school achievement and engagement (Bandura, 2012; Marsh, 1990; Martin & Debus, 1998, as cited in Martin, 2002).

Greenberg (2006) discussed the implications of neuroscience and neuropsychology in the field of resilience. A key component of resilience lies in the individual's response to stress and/or trauma making self-regulation of stress responses a focus for further research. Emotion regulation "is increasingly viewed by contemporary researchers as a foundation for well-being, academic achievement, and positive adjustment through the life span" (Greenberg, 2006, as cited in Broderick & Jennings, 2012, p. 114).

> If adolescence is a stress-sensitive period of development, then emotional distress may be a risk factor for emotional and behavioral problems for all adolescents. Therefore, we need to prioritize effective universal prevention programs that teach emotion regulation (distress tolerance) skills to all adolescents. . . . We propose that a mindfulness-based approach may be uniquely suited to this task. (Greenberg, 2006, as cited in Broderick & Jennings, 2012, p. 115)

Professional development for teachers and effective strategies for classroom-based prevention were identified as areas of critical need (Gillham et al., 2007; Truebridge, 2014). Durlak et al. (2011) also called for more research into accountability systems for social emotional learning (SEL programs). The need for such programs is also supported by the US Surgeon General's report that 20% of US children and adolescents suffer from "significant social, emotional, and behavioral problems that place them at risk for school failure" (Greenberg, 2006, as cited in Broderick & Jennings, 2012, p. 112).

Jennings et al. (2013) concurred, stating that "teacher psychology variables were stronger predictors of classroom quality than were teacher educational attainment and experience"

(p. 376). They hypothesized that teacher dispositions (well-being, efficacy, and mindfulness) and classroom improvement (organization and instructional and social support) would result in student improvement (student/teacher relationships, academic achievement, behavior).

Interventions targeting resilience are varied in format and scope. Gillham et al. (2007) conducted their research on the effectiveness of the Penn Resiliency Program using twelve-weeks of ninety-minute afterschool sessions. Truebridge (2014) warned that resilience is not a program or a curriculum to be implemented, but is a shift in beliefs for teachers, parents, and students that requires a strengths-based perspective. Both the BREATHE program for students (Broderick & Jennings, 2012) and the CARE program for teachers (Jennings et al., 2013) have demonstrated positive student outcomes. A nine-week SEL program (Discovery) showed significant increases in school connectedness and overall well-being scores for at-risk adolescents (Trujillo Moehr Smith, 2012).

The field of positive psychology has a focus on the construct of well-being rather than treating mental illness. Key aspects of well-being theory include positive emotion, engagement/interest, meaning/purpose, self-esteem, optimism, resilience, and positive relationships (Seligman, 2011). When parents are polled about what they want for their children, well-being always tops the list. When parents are polled about what schools actually teach, they list thinking skills, literacy, math, and skills for workplace success (Seligman, 2011, p. 78). Positive psychology clearly delineates the need for schools to address the overall well-being of students. There is a significant overlap between the process for promoting resilience and the process for fostering hopefulness/optimism.

One very applicable study (Gillham et al., 2007) demonstrated that promoting optimism reduces depression, hopelessness, anxiety, and conduct problems while increasing overall well-

being and academic success in adolescents. Knight (2007) demonstrated the vital role of purpose and optimism in student success. These research implications clearly support exploration into ways professional learning plans (PLP)s can incorporate social emotional competence (SEC) and a futures-orientation. The research of Cohen and Sherman (2014) with self-affirmation interventions (writing about personal values) found "lasting benefits" resulting in "a positive feedback loop" (p. 333). Self-affirmation writing activities "help people to maintain a narrative of personal adequacy in threatening circumstances" and the effects "can persist, for instance improving the grades of at-risk minority students, years later" (p. 340).

The intersection of resilience research and current reform movements (such as Vermont Act 77), make it timely to explore how noncognitive factors can be effectively and systematically fostered in students (Tough, 2012) through the PLP and PBGR process. Given that students who learned about neuroplasticity and their ability to change were more pro-social, had better coping skills, and higher academic achievement (Yeager & Dweck, 2012), the task for educators is to effectively incorporate universal interventions that teach neuroplasticity and academic mindsets.

Relevance: "I value this and see a larger purpose."

Tell me, what is it you plan to do

with your one wild and precious life?

From *The Summer Day* by Mary Oliver (2003)

A recurring theme in school reform focuses on moving from the industrial model of school with students in rows being filled with knowledge by a teacher to a student-centered and

personalized approach. The 21st century reflects the information age, and requires creativity and student passion (Robinson & Aronica, 2009). Vermont Secretary of Education, Rebecca Holcombe, characterized personalized learning plans (PLPs) this way, "This is such an exciting step forward for our schools and students. We can't address challenges around engagement, relevance and student responsibility for learning without taking on this issue of personalization" (Holcombe, 2014, p. 1).

According to Eccles et al. (1983), there are three types of value: attainment value, intrinsic value, and utility value. Relevance is provided for many academic tasks when students attach personal meaning to tasks (attainment value), gain a sense of enjoyment from the task (intrinsic value), and find a useful purpose for the task (utility value). Interventions that promote academic mindsets address this need for purpose and meaning (Yeager & Bundick, 2009). "Sense-of-purpose interventions encourage students to reflect on how working hard and learning in school can help them accomplish meaningful goals beyond the self, such as contributing to their community or being examples for other people" (Paunesku et al., 2015, p. 785).

Academic mindsets foster resilience instruction and universal interventions can be woven into the school structure within the new structures of PLPs and PBGR. Curriculum and practices that prepare students, teachers, and communities for the 21st century will promote relationship, responsibility, resilience, and relevance by fostering academic mindsets.

<div style="text-align: center;">**Conceptual Framework**</div>

This literature review endeavors to capture the web of interconnection and recursive processes between the key concepts of building relationships, developing responsibility, fostering resilience, and provide relevance within adolescents through reflective narratives. To further illustrate this relationship, Figure 2 visually displays the initial working title of this

research, "Fostering Resilience in Adolescents: Building Well-Being, Hope, and Connectedness through Personalized Learning Plans."

Resilience
Well-Being

Hopefulness	Connectedness
▪ optimism/future-orientation ▪ engagement/relevance	▪ belonging ▪ empathy/compassion

Growth Mindset
▪ perseverance ▪ goal-setting

Personalized Learning / PLPs
Proficiency-Based Education / PBGR
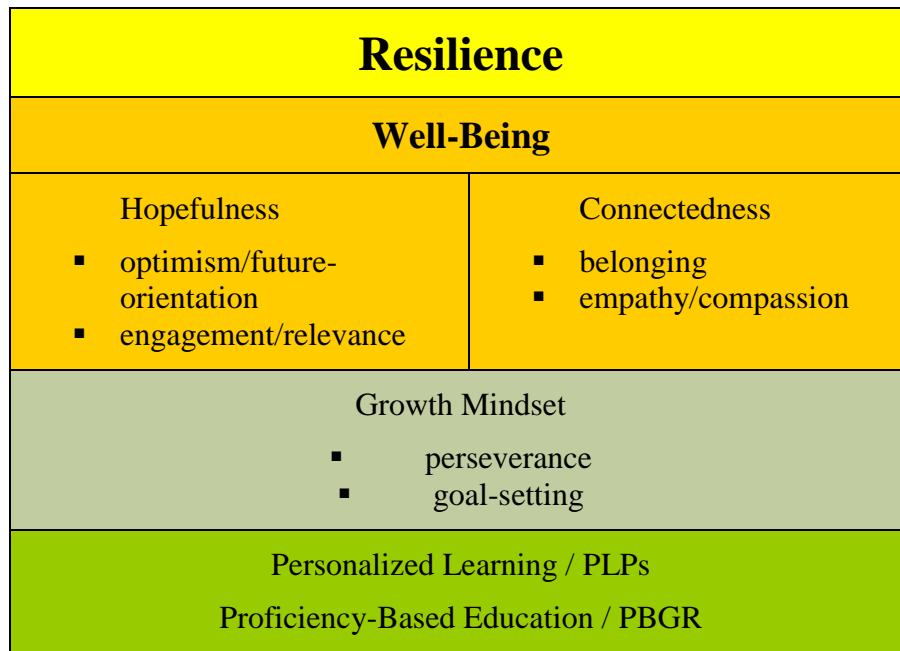
Figure 2. Gardner-Baasch Concept Map, 2014.

As the vehicles and structures for implementing the universal interventions, personalized learning plans (PLPs) and proficiency-based graduation requirements (PBGR) form the base of this concept map. Above that structural foundation is Growth Mindset and the role of one's own beliefs about ability and potential. From a Growth Mindset, the habits and discipline of Hopefulness (with the subtopics of optimism, future-orientation, engagement, and relevance) and Connectedness (with subtopics of belonging, empathy, and compassion) can take root and grow. At the very top of the concept map is Resilience, the ability to thrive despite adversity. The process of resilience is fostered and promoted by the supporting layers in the concept map.

My research interest is the utility of embedding reflective narratives within the PLPs as a tool to provide a universal intervention to develop academic mindsets. Student well-being is the desired outcome with the focus on universal interventions that develop potential and build on student-strengths. The conceptual framework for creating universal prompts for reflective writing is built upon research from a broad cross section of research focused on a diversity of topics (e.g., attribution theory, motivation theory, entity/incremental theory, reflective writing, self-efficacy, neuroplasticity, and social emotional learning/competency.)

In striving to connect academic mindsets with reflective writing, the research of Cozolino (2013) and the neuroscience of teaching and learning provided a wealth of insight into the melding of academic mindsets with reflective narratives. "Stories are a central aspect of personal identity and, in many ways, we become the stories of our experiences and aspirations" (p. 188). Neuroscience research strongly supports the role of goal-setting and self-efficacy. "Perceived competence has been found to be the central element of self-concept" (p. 155). Proximal (rather than distal) goals, process goals with progressive feedback, feedback on effort, and self-evaluation are shown to increase student self-efficacy and academic performance (p. 157). The neuroscience of learning and social connectedness reinforces Bruner's research (1990; as cited in Cozolino, 2012, p. 188) that stated: "The impact of stories on the formation of self-identity makes them powerful tools in the creation and maintenance of the self."

Ellis et al. (2014) found that systematic reflection requires three components: self-explanation, data verification, and feedback. Each component was addressed by a specific reflective prompt, as shown in Table 1.

> Generally, the combination of the three functions that characterize systematic reflection (self-explanation, data verification, and feedback) leads to a greater willingness

(motivational effect) and ability (cognitive effect) to draw lesson from prior experiences

and eventually to a behavioral change (behavioral effect). (Ellis et al., 2014, p. 68)

Table 1

Systematic Reflection Prompts and Concepts

Systematic Reflection		
Component	Sample Prompts	Key Concept
Self-explanation	How did you contribute… Why did you do A or decide B? How effective were you in this experience?	"The more learners attribute performance to specific and internal factors, the more effective is the reflection process…..By attributing the causes for successes and failures to themselves, people take more responsibility for their behaviors." (Ellis et al., 2014, p. 68)
Data verification	Consider a different approach that could have been taken… What might have happened if that approach was chosen?	Learners confront different perceptions of same data (counterfactual thinking) to cross-validate information. Enables learners to sidestep potential biases, including confirmation & hindsight biases.
Feedback	What worked, what did not work? What has been learned from the experience? How will you behave in the future?"	First type of feedback is performance evaluation (success or failure). Without outcome feedback, reflection is not focused, goal-directed or effective. Second type is process feedback in which learner is responsible for analysis of own performance and generating reasons for why it worked or did not work.

(Ellis et al., 2014)

These systematic reflective elements were integrated into the reflective prompts used

within this study (see Table 2 and Appendix A). The research of Paunesku et al. (2015) provided

an additional frame for constructing the reflective writing prompts. These prompts specifically

promote both growth mindset (the "Responsibility" aspect of academic mindsets) and purpose

(the "Relevance" aspect of academic mindsets)

Table 2

Prompts for Growth Mindset and Purpose Interventions

Description of Intervention	Key Message	Time/Frequency
Growth Mindset: All students read article describing brain's ability to grow and reorganize in response to working hard on challenges. Assigned two writing assignments: (1) summarize information from article; (2) Write to hypothetical younger student who is struggling in school to give advice based on neuroscience.	Intelligence is malleable and struggle doesn't indicate limited potential. Understanding of neuroplasticity and application to help someone else.	Two 40 minute sessions; 2 weeks apart Session 1
Sense of Purpose Group: Student wrote briefly about how they wished the world could be a better place. Prompt stated that many students work hard in school because they want to grow up to 'make a positive impact on the world,' to 'make their families proud,' or to be 'a good example for other people.' Students were asked to think about their own goals and write about how learning and working hard in school could help them achieve these goals."	Beyond yourself or self-transcendent goals	Session 2

(Paunesku et al., 2015, p. 787)

The research supports an additional aspect to include in these writing prompts, one

related to purpose. Including opportunities to connect to a self-transcendent purpose will increase

the effectiveness of the interventions (Yeager et al., 2014, p. 574).

The connecting thread between Vermont's Act 77 mandating PLPs and PBGR (Flexible

Pathways to Graduation, 2013) and my research interest in the concepts of relationships,

responsibility, resilience and relevance is the utility of reflective narratives within the PLPs to harness the power of stories we tell ourselves. "Learning that we are more than other people's expectations and the voices that haunt us can provide hope and serve as a way to change our lives" (Cozolino, 2013, p. 196).

My conceptual framework visually depicts four overarching areas: relationships, responsibility, resilience, and relevance (Figure 1). Within this graphic representation, the top triangle of Relationships includes the sense of belonging and connectedness within academic mindset. The triangle of Responsibility includes growth mindset, self-efficacy, and neuroplasticity/social neuroscience. The triangle of Relevance includes the purpose, meaning, goal-setting, and motivation theory. The center triangle interconnecting with the others is the triangle of Resilience, which is woven throughout the other three academic mindsets. Resilience includes the concepts of well-being, hopefulness, optimism, and self-compassion.

Reflective narratives are used as the vehicle for teaching these four components of academic mindset. Through cultivating reflection, adolescents (and adults) become intentional authors and participants in their own stories. Reflective narrative is a key component in harnessing the power of story to foster relationships, responsibility, resilience, and relevance.

> As children we are told who we are, what is important to us, and what we are capable of. . . . These stories become organizing principles that serve to perpetuate both healthy and unhealthy aspects of self-identity. Positive self-narratives aid in emotional surety and minimize the need for elaborate psychology defenses, while negative self-narratives perpetuate pessimism, low self-esteem, and decreases in exploration and learning. (Cozolino, 2013, p. 188)

Within my conceptual framework, the power of story, reflective narratives, and our ability to edit and create our own stories will be utilized to foster resilience, build relationships, promote responsibility, and provide relevance. By providing a variety of reflective prompts (Appendices 1 and 2) designed to utilize principles from the existing research, the perceived and demonstrated effectiveness of each prompt can be measured.

Conclusion

A review of the literature has strengthened both my personal knowledge and my passionate commitment to melding universal noncognitive interventions into the school system (through PLPs and PBGR). A two-tiered approach may be indicated to address both professional development needs for teachers and universal interventions for students.

Along with the interventions designed to promote noncognitive factors, there is a need for reflection and personal application. "Because mind-set interventions typically target a single keystone belief, they can be brief (e.g., an hour or less) and can be delivered using standardized materials" (Paunesku et al., 2015, p. 785). Reflective narratives will provide students with opportunities to self-monitor, set goals, and maintain a future-orientation to their PLP. These universal interventions will include reflective prompts that weave together the effective components shown to support noncognitive factors from the research of Ellis et al. (2014), Paunesku et al. (2015), and Yeager et al. (2014).

Additional areas of intervention may include mentorship, expanded use of advisories, and service-learning opportunities. Personalized learning and proficiency-based graduation will require a major shift in the beliefs and practices of teachers and will provide additional opportunities to use reflective narratives as a tool for professional development and an indicator of growth.

CHAPTER 3

METHODOLOGY

The overarching research questions guiding this study pertain to the interventions that elicit reflection and foster the four components of academic mindsets (relationship, responsibility, resilience, and relevance). Additionally, personalized learning plans (PLPs) are seen as a systematic way to incorporate reflective narratives that foster noncognitive factors. Prompts for reflective narratives will be explored within the existing framework of Vermont Act 77 (Flexible Pathways Initiative, 2013) requires all Vermont students in grades 7-12 to have PLPs by 2018. Analyzing the writing from a variety of reflective prompts designed to foster academic mindsets (Appendices A and B) will offer new insights into how reflective narratives can be used to support noncognitive factors. These factors include the four academic mindsets: (a) I belong in this academic community (relationship); (b) my ability and competence grow with my effort (growth-mindset/perseverance/resilience); (c) I can succeed at this (optimism/hopefulness, self-efficacy, responsibility); and (d) this work has value for me (purpose/meaning, goal-setting, relevance) (Farrington et al., 2012, p. 10).

According to Yeager and Dweck (2012), mindset interventions work best when students are actively involved in the experience rather than passive listeners to information. This study combines active student involvement with the ability of personalization to build relevance (Clarke, 2013) and the power of reflective narrative to teach (Bangert-Drowns et al., 2004). Reflective writing allows students to actively construct their own learning, while fostering a recursive process for self-affirmation and self-efficacy (Cohen & Sherman, 2014). The power of personalization is documented in this study by using reflective prompts that require students to

apply the information about academic mindset to their personal goals and to share the information to help another student.

The qualitative method selected for this study is phenomenological. According to Creswell (2013), the phenomenological research approach is best when the research problem is "one in which it is important to understand several individuals' common or shared experiences of a phenomenon" (p. 81). This approach endeavors to "develop practices or policies, or to develop deeper understanding about the feature of the phenomenon" (p. 81).

Setting of the Study

The study site is a public 7-12 school in rural Vermont that serves as the union high school for four towns and a school of choice for another seven towns in the area. The school serves 500 students. According to the Vermont Agency of Education, 37 percent of these students qualify for Free/Reduced Lunch. The study high school has failed to make the mandated annual yearly progress (AYP) for 3 years in Math (and is currently in the third year of corrective action). The ratio of teachers to students is 9:1. The student population is 97 percent White and only 2 percent are English Language Learners (ELL). The county of the study school has a population of just over 60,000, with about 70 percent homeownership. The median cost of a home is $176,800. The median household income for the county is $49,271 and 13 percent of the population fall below the poverty level (U.S. Census Bureau, 2014). The county contains a blend of urban, rural, and agriculture lands. Local employment includes tourism, manufacturing, small businesses, and agriculture.

Participants

Approximately 150 students in grades 7, 8, and 9 at the study school were given the study writing prompts (Appendices A and B) to ascertain the degree to which participants respond to

the writing prompts with reflection about noncognitive factors and students' perceptions of the intervention.

Data from the Vermont Agency of Education indicated that 16 percent of the student population at the study school have Individualized Learning Plans (IEPs) and 12 percent have an Education Support Team (EST) or 504 Plan. Graduation rates are 88 percent, which is just above the state average. The study school is known in the area for its strong arts programs, including award-winning chorus, band, and drama productions. Thirty-eight percent of the student population participates in Advanced Placement (AP) courses. Proficiency rates in math are 35 percent and in reading 81 percent. All Vermont students are also eligible for dual-enrollment, early college, work-based learning, and Career and Technical Education under Vermont Act 77 (Flexible Pathways Initiative, 2013).

In accordance with Vermont Act 77, students in grades 7-12 are required to have PLPs by 2018. While the requirement for PLPs applies to grades 7 through 12, Act 77 also makes it clear that the Legislature believes that "personalized learning and personalized instructional approaches are critical to students in kindergarten through grade 6 as well" (Vermont Agency of Education's Introduction to Act 77, p. 2). Students in grades 7-11 were updating PLPs during the 2015-2016 school year.

Access to the students was through the regularly scheduled PLP sessions. The study school has a PLP Coordinator who met weekly with half the students in grades 7 and 8 during the first semester of the 2015-2016 school year. The other half of the students in grades 7 and 8 met weekly for PLP sessions with the middle school guidance counselor. Sessions were 40-minutes in length and held in classrooms. The study school had a 1-to-1 technology program, so all students in grades 7-9 had individual iPads to use for writing the responses. No additional

PLP sessions were necessary and all proposed interventions were delivered by those within the study school who were typically facilitating the PLPs. During the second semester of the 2015-2016 school year, the PLP work transitioned to classroom teachers and be completed during homeroom advisory times.

Data Collection

Approximately 150 students at the study school in grades 7, 8, and 9 were asked to complete the reflective prompts by February 2016. For the purpose of this study, socioeconomic status (SES), gender, and academic achievement levels was used to create subsets within the data. Scores from Measures of Academic Progress (MAP) and Smarter Balanced Assessment Consortium (SBAC) were used for data comparisons, along with grade point average (GPA). Since there are four elementary schools within the supervisory union of the study high school, the subset of students from each school was also used for data comparison and analysis.

As part of the PLP process, students were given the universal interventions and reflective writing prompts (Appendices A and B). Students had two 40-minute sessions within a one-month period. The reflective narratives and the student surveys were analyzed using a rubric to assess depth of reflection (Appendix C).

Data Analysis

According to Creswell (2013), data analysis of qualitative research includes the organization of the data, reading/memoing, describing the data into codes/ themes, classifying the data into codes/ themes, interpreting the data, and representing/visualizing the data. Phenomenological data analysis will typically include a textual description of "what happened" and a structural description of "how" the phenomenon being studied was experienced (pp. 190-

191). From these data interpretations the "essence" of the experience will be visually displayed and discussed.

Data from the reflective narratives was analyzed to code for depth of reflection. Although reflection is a widely touted aspect of education, the definition and concepts are poorly defined (Kember, McKay, Sinclair, & Wong, 2008). Dewey is credited with formally introducing the concept of reflection into the field of education in 1933. Dewey characterized reflective thought as "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends" (Koole et al., 2011, p. 2). For the purpose of this study, the definition for reflection is taken from the research of Plack et al. (2005):

> Reflection gives meaning to experience; it turns experience into practice, links past and present experiences, and prepares the individual for future practice . . . reflection promotes a deep approach to learning and fosters lifelong learning as students learn to reframe problems, question their own assumptions, and attend to their own learning needs (p. 200).

The framework of Kember et al. (2008) was used to evaluative the student's depth of reflective writing. With four levels of reflection, Kember's model is built upon the work of Mezirow, Boud et al., and Wong et al. (as cited in Kember et al., 2008, p. 371). The "normal procedure" for evaluation of reflective writing "is to examine the whole paper to find the highest level of reflection. The judgment on the overall paper will then be that it is at that level of reflection" (Kember et al., 2008, p. 372). Kember's framework is outlined as a writing rubric in Appendix C. When examining the data from this study, responses were also sorted for subsets of

students based on academic achievement levels and compared with town/school, SES, and/or gender results.

Participant Rights

The student PLPs were created within Google sites and password protected by individual students. Narrative responses were written in Google forms and linked to students' existing PLPs. All data aggregated for this study were password protected and housed on secure devices at the study site. Test score data is held by Northwest Evaluation Association's Measures of Academic Progress (NWEA MAP) and the grade point average (GPA) data for the study school is housed within the Rediker student information system. Both systems are secure and password protected. Individual student names were deleted from the aggregated data once the academic, test scores, grade, gender, SES, and demographic data was linked to the specific responses. The study school used Google Sheets and Docs for student data and all study data were password protected and housed in the same manner. Individually identifiable information is not reported within this study, only aggregated data.

Student names were not attached to the reflections, but gender, academic achievement, economic, and demographic data were associated with each piece of writing. The study compared the results of a variety of writing prompts for subsets of the student population, but did not focus on individual responses. The reflective content of the student responses was scored for depth of reflection using the coding rubric (Appendix C).

The groundwork for this research at the study school began with discussions in the spring of 2013 with the study school principal, superintendent, and director of curriculum. As personnel shifted over the past two years, the conversations broadened to include the district's PLP committee, assistant superintendent, the director of technology, and director of PLPs. In

November 2015, the study school superintendent provided the Institutional Review Board (IRB) at the University of New England (UNE) with a letter of consent for the research (Appendix D).

The data being analyzed already existed within the study school. After IRB approval was received (Appendix E), letters of explanation were sent to each parent asking permission to include their child's data in the study (Appendix F), along with consent forms (Appendix G). Students were given the letters of explanation during their teacher advisory time (i.e., TAs or homeroom) during the months of November and December 2015, prior to pulling any of the student data for this study.

<center>**Potential Limitations**</center>

The researcher was employed as an ELA teacher and the Literacy Leader for the study school and had worked at all five schools within the district. The researcher was also a member of a small district team that participated in a yearlong seminar about Act 77 with the Vermont Agency of Education and the Great Schools Partnership during the 2014-2015 school year. The researcher currently serves on the district steering committee for Proficiency-based Learning/Graduation. Although the researcher has volunteered on district committees regarding PLPs, she has no role in the implementation of PLPs or in supervising the personnel involved. The researcher already has a positive working relationship with those who are charged with implementing the PLPs, but has no personal/professional stake or conflict of interest.

This study was limited to one school district in Vermont and looked at data gathered from one semester. The setting and structure for the implementation of these interventions posed another limiting factor. The study school was in the midst of changing PLP implementation for grades 7-9. The interventions were completed in December 2015 and January of 2016, before the February 2016 changes in focus, timing, personnel, and format. Nonetheless, the lack of

structured activities or academic expectations during the previous PLP sessions, created a non-academic classroom environment for these interventions.

Another limitation of the study was the collection of parental consent forms. Of the 101 students who completed the two-40 minute sessions of the intervention, only 62 (about 61 percent) had signed parental consent forms and were included in this study. The forms requesting parental consent (Appendices F and G) were sent home with students in grades 7-9 in late November and early December. The compliance rate in returning these forms varied widely: one of the homerooms had 100 percent of the students return the form and another had 0 percent. Additionally, 40 females returned the parent consent form, while only 22 males returned this form.

CHAPTER 4

RESULTS

The focus for this qualitative study targets building academic mindsets through reflective narratives included in students' personalized learning plans.

According to Farrington et al. (2012), the four academic mindsets are

- Relationship ("I am connected here–I belong and I am valued.")

- Responsibility ("I am able to improve my competence and ability.")

- Resilience ("I believe that I can succeed.")

- Relevance ("I value this and see a larger purpose.")

This study investigated ways that reflective narratives can be utilized to foster the noncognitive factors of academic mindsets in adolescence, with the goal of both academic success and overall well-being. The overarching research question that guided this qualitative study was: *What writing prompts elicit reflective narratives that foster the noncognitive factors of positive academic mindset?*

Related research questions included:

- Does self-generation of the intervention (advocating intervention message for younger students) and personalization of the intervention (prompts that ask students to customize the message for themselves) increase the depth of reflection in students' narratives?

- Does using the WOOP (wish, outcome, obstacle, plan) method (Oettinger, 2014) increase the depth of students' reflective narratives?

- How does socioeconomic status (SES), gender, academic performance, and/or demographics affect the depth of reflection about academic mindset?

The connection between one's beliefs, resilience, academic success, and overall well-being has been the focus of many researchers (Durlak et al., 2011; Dweck, 2006; Furlong et al., 2011; Greenberg, 2006; Henderson, 2013; Jennings et al., 2013; Jennings & Greenberg, 2009; Knight, 2007; Seligman, 2011; Tough, 2012; Truebridge, 2010, 2014; Yeager & Dweck, 2012). A synthesis of relevant research provides the foundation for using reflective writing to provide universal interventions shown to foster noncognitive factors, improve student academic performance, and increase overall well-being (Cohen & Sherman, 2014; Farrington et al., 2012; Paunesku et al., 2015; Yeager et al., 2014; Yeager et al., 2013;). Within the current education reforms, it behooves teachers and school systems to foster not only academic excellence, but also overall well-being, which relies upon noncognitive factors such as the academic mindsets of building relationships, developing responsibility, fostering resilience, and providing relevance.

According to the research of Siegel (2013), the adolescent brain goes through four major changes which is captured in the acronym ES SE N CE: **E**motional **S**park, **S**ocial **E**ngagement, **N**ovelty, **C**reative **E**xplorations. By using reflective narratives as an instructional tool, this study endeavored to harness the intensity of the adolescent emotional spark with creative explorations to encourage students to think deeply in order to "create a gateway to seeing the world through new lenses" (ibid., p. 11).

As part of the Vermont's Act 77 mandated Personalized Learning Plan (PLP) process, students received universal interventions to build academic mindsets. After brief informational presentations, students were asked to respond to a variety of reflective writing prompts (Appendices A and B). Students had two 40-minute sessions within a 1-month period or one 80-

minute session (based upon scheduling needs at the study school). The reflective narratives were analyzed using a rubric to assess depth of reflection (Appendix C) and content relevant to the research questions.

Along with the interventions designed to promote noncognitive factors, there is a need for reflection and personal application. "Because mind-set interventions typically target a single keystone belief, they can be brief (e.g., an hour or less) and can be delivered using standardized materials" (Paunesku et al., 2015, p. 785). Reflective narratives were designed to provide students with opportunities to self-monitor, set goals, and maintain a futures-orientation to their PLPs. These universal interventions included reflective prompts that incorporated the components that support noncognitive factors from the research of Ellis et al. (2014), Paunesku et al. (2015) and Yeager et al. (2014). The positive effects of metacognition, reflection, and academic mindsets are well-researched and may result in individual benefits to participants (Ellis et al., 2014; Farrington et al., 2012; Paunesku et al., 2015; Yeager et al., 2014), whether or not their parent/guardian consented to allow the use of their data for this study.

Analysis Method

The study school is a public 7-12 school in rural Vermont that serves as the union high school for four towns and a school of choice for another seven towns in the area. The school serves just under 500 students. Approximately 150 students in grades 7, 8, and 9 at the study school were given the study writing prompts (Appendices A and B) to ascertain the depth of reflection (Appendix C) in response to the intervention about noncognitive factors. All interactions were completed within regularly scheduled PLP times and administered by school personnel (guidance counselors).

All participating students at the study school in grades 7, 8, and 9 completed the reflective prompts by February 2016. For the purpose of this study, SES, gender, academic achievement levels, test score data, and demographics were used to create subsets within the data. Scores from Measures of Academic Progress (MAP) were used along with grade point average (GPA). Since there are four elementary schools within the supervisory union that send students to the study school, demographic information about students was also analyzed and compared with the depth of reflection results.

After collating all the student responses, the individual responses to each prompt were analyzed and scored for depth of reflection (Appendix C). The definition used for reflection was taken from the research of Plack et al. (2005): "Reflection promotes a deep approach to learning and fosters lifelong learning as students learn to reframe problems, question their own assumptions, and attend to their own learning needs" (p. 200). This power of reflection is magnified when it is combined with mental elaboration that creates mental images of the desired outcome and obstacles (Oettinger, 2014, pp. 62-63).

The framework of Kember et al. (2008) was used to evaluative the student's depth of reflective writing. With four levels of reflection, Kember's model (Appendix C) was used to create the scoring guide for this study. To evaluate the reflective writing responses, writing was scored on the highest level of reflection found in each response (Kember et al., 2008, p. 372).

Presentation of Results

This study explored factors that might affect depth of reflection in student narrative writing in response to a variety of research-based prompts. Introductory letters and parental consent forms were distributed through the homerooms of students in grades 7-9 at the study school in December 2015 (Appendices F and G). Of the two hundred copies distributed, ninety-

eight parents returned signed consent forms. As there were two sessions required to complete the intervention, not all students completed both sessions (Table 3). The total number of responses collected was 143 and 101 of those responses were complete. Of those 101 complete responses, 62 students (about 61%) had returned parental consent forms and were eligible to have their data used for the analysis and discussion in this study.

Table 3

Student Participation Totals

Total Number of Students Who Participated	143
Total Number of Students Who Completed Both Sessions	101
Complete with Parental Consent	62

Depth of reflection was measured using a rubric created from the research of Kember et al. (2008) that evaluates the application of material to one's own life and experiences (Appendix C.) The student responses were rated on a scale of 1 to 4, with the highest level of reflection requiring "a change to deep-seated, and often unconscious, beliefs" and leading "to new belief structures….and new perspectives" (Kember et al., 2008, p. 370). Such a transformation would be unexpected and difficult to demonstrate during the two 40-minute interventions of this study. The majority of students scored either 2 or 3 on the depth of reflection scale. The defining variable between these two scores was whether the student related the information to a personal or real life experience. Only 7 students (11%) scored at the lowest level (1 = no significant thought went into writing) on any of the reflective narratives, and no students scored at the highest level (4 = transformation). Therefore, a one-point difference on the rubric scale reflects the difference between relating the material and applying the material.

After evaluating student responses for depth of reflection, a sum score was calculated by adding the depth of reflection score for the pen pal letter, the future wish list, and the WOOP goal setting response. The sum of these three scores was entered into Excel for comparison by grade, gender, grade point average (GPA), standardized test scores (MAP Reading scores), socioeconomic status (Free/Reduced lunch measures), and demographics (elementary school attended.)

The overarching research question of this study asked what writing prompts would elicit reflective narratives that foster the noncognitive factors of positive academic mindset. Each of the three prompts scored (pen pal letter, wish list, and WOOP) elicited writing that demonstrated student reflectiveness that included personal insights beyond the material presented. Table 4 lists the comparisons of each prompt separately by gender.

Table 4

Depth of Reflection Score by Prompt and Gender

Prompt	Female	Male	Difference	Average
Pen pal Letter	2.35	2.18	+.17 female	2.29
Wish List	2.90	2.64	+.26 female	2.81
WOOP	2.88	2.68	+.20 female	2.81

Female students demonstrated higher depth of reflection scores for each of the three prompts. The average depth of reflection score for the females on the combined prompts was 8.13, whereas the males had an average combined score of 7.5. The wish list and the WOOP prompts elicited very similar depth of reflection scores with the females have .02 percent higher scores on the wish list than on the WOOP. The depth of reflection scores for the males was .04

percent higher on the WOOP than on the wish list. Therefore, the study results found that all three prompts did elicit reflective responses with the wish list and WOOP prompts generating the highest scores.

The second research question of this student considered whether self-generation of the intervention (the pen pal letter) increased the depth of reflection. While the self-generated intervention of writing a pen pal letter had the lowest reflection score, there were only three responses that scored at the lowest level of "no significant thought." The difference between scoring a 2 and 3 on depth of reflection was whether the student related it to their personal experience, but both scores indicate deeper understanding of the material. While the self-generation of the intervention didn't result in a higher depth of reflection than the other prompts, it did generate thoughtful and lengthy responses. Additionally, several students in each session asked the instructors if their letters would be shared with the younger students, indicating increased engagement with the task.

A third research question focused on whether using the WOOP method (Oettinger, 2014) would result in higher student depth of reflection. This prompt had two scored components: the wish list and the WOOP. Both these prompts produced very similar results. The wish list portion of the prompt had the largest variance between the genders with females scoring .26 percent higher on the depth of reflection scores. The average score was higher for this prompt than for the pen pal letter by .52 percent. The subject matter itself was more personal, so the increased score seems intuitive. This study found that the WOOP method generated the highest depth of reflection scores.

The fourth research question explored whether SES, gender, academic performance, and/or demographics affect the depth of reflection. The comparisons of the depth of reflection

scores with achievement (GPA) and ability (MAP scores) did not show any statistically significant correlations (Appendix H). When analyzing the ability (MAP score) comparisons, the students who scored in the top half of the depth of reflection scores were nearly evenly distributed on the MAP plots (indicating about 50 percent scored higher than average and 50 percent scored lower than average on the MAP tests.) The average MAP reading percentile score of students who scored at the highest level (9) for the depth of reflection score was in the 45th percentile. The depth of reflection scoring rubric (Appendix C) was a limiting factor in the score comparisons, as there was only a difference of 4 points between the highest student depth of reflection score (9) and the lowest student score (5).

Similar results were found when the data comparing student performance (GPA) and depth of reflection was analyzed. Many of the top depth of reflection scores were from students with lower than average GPAs. The average GPA of students who scored 9 was 2.79 while the overall average GPA of the entire sample was 2.94. Therefore, the data did not indicate that students with greater academic ability or higher performance levels were more reflective than their peers; neither was there a significant inverse relationship between academic ability and depth of reflection.

Socioeconomic status (SES) was used as another data comparison point in this study. The student responses were sorted by those who received free and reduced lunch and those who did not. Again, there were no notable differences when comparing economic factors with depth of reflection scores (Figure 3). The small sample size for free/reduced lunch was a limiting factor in this comparison, but was consistent with the overall percentage of students at the study school who receive free/reduced lunch.
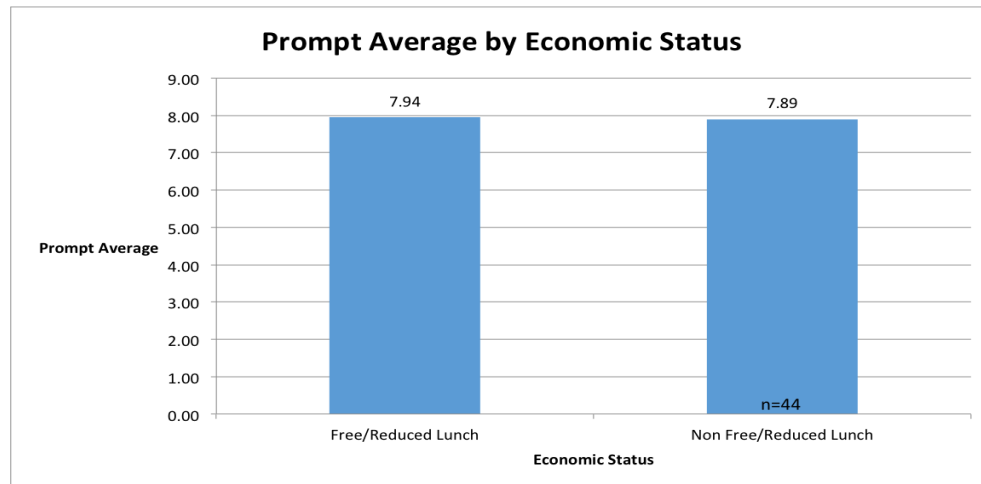
Figure 3. Economic Comparisons

Another comparison point used in this study was demographic (Figure 4). The study school served as the district high school for four towns, as well as a school of choice for several other towns. When the depth of reflection scores were sorted by a student's sending school, some differences were noted. However, due to the small sample sizes from some of the sending schools, additional data is needed on this comparison point. Even with the small sample size, students from the four regional towns significantly outscored those from the choice towns. All of the sending schools within the study school district are relatively small (less than 200 students PreK-6). Multiple studies have found that smaller schools "enhance academic achievement, on-task behavior, participation in extracurricular activities, and positive relationships among students, staff, and faculty (Conant, 1959; Cotton, 1996; Fowler & Walberg, 1991; Lotan & Ben-Ari, 1994, as cited in Cozolino, 2013, p. 258).

Prompt Average by Town
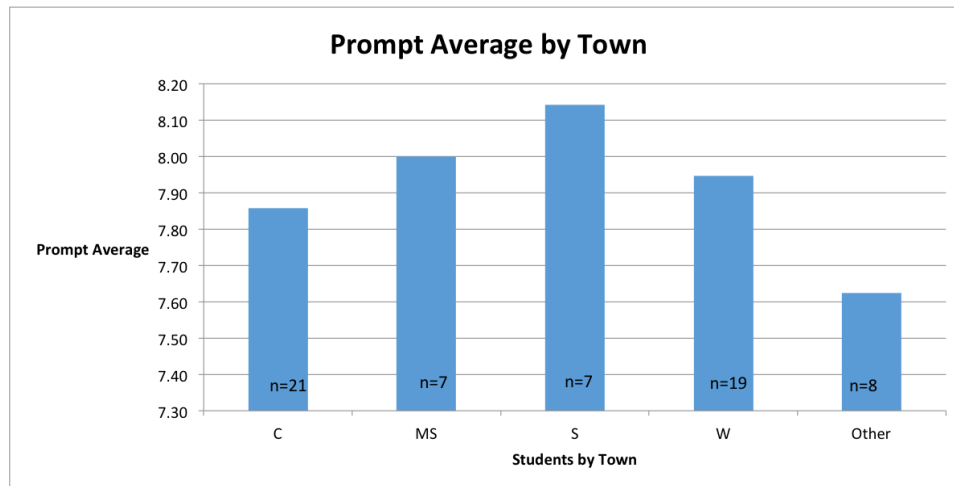
Figure 4. Demographic Averages

The most significant differences between data sets were generated by the comparison between genders (Figure 5). The average depth of reflection score for females in this study was 8.13, while the average score for males was 7.50.

Prompt Average by Gender
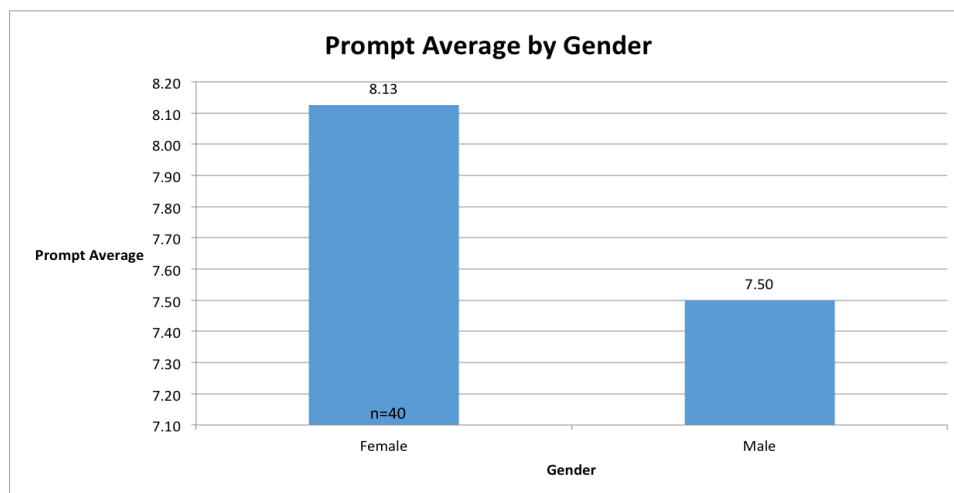
Figure 5. Depth of Reflection Averages by Gender

Research about the development of empathy and perspective taking during adolescence supports this finding. According to a longitudinal study of gender differences in the development

of empathic concern and perspective taking during adolescence, (Van der Graaff et al., 2014)

girls increased in their ability to take perspective and show empathic concern between the ages

of 13 and 15. Boys did not show this increase until the age of 15 and even decreased in ability to

take perspective and show empathic concern before age 15. The authors reported that these

finding were consistent with the more rapid cerebral cortical maturation rates for adolescent girls

(p. 885). This developmental difference between the genders is consistent with this study's

findings of gender differences in depth of perception (Figure 6). Both genders demonstrated a

drop in depth of reflection in 8th grade, but an overall increase between 7th and 9th grade. Males

had an increase of .3 between 7th and 9th grade, while females had an increase of .08 for the same

time period.
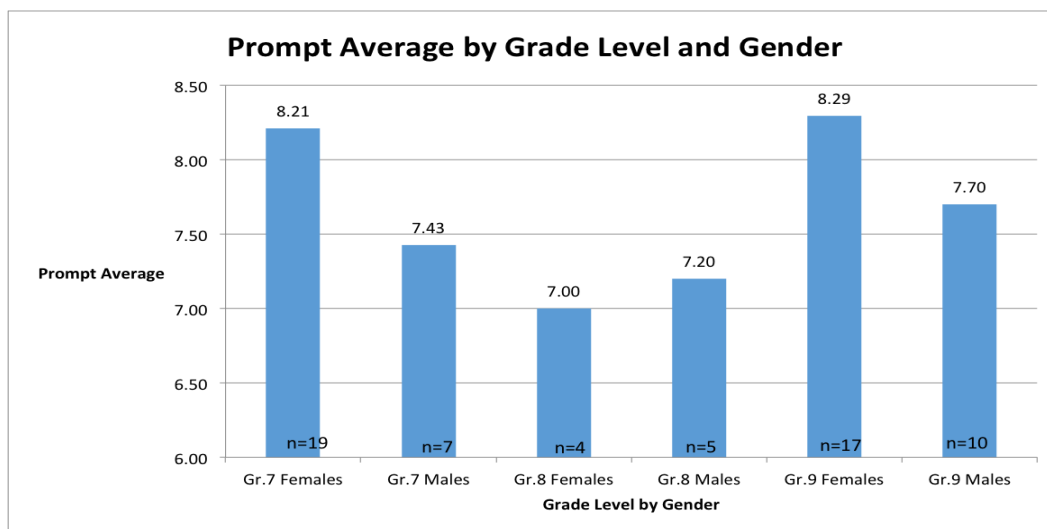
Figure 6. Depth of Reflection Averages by Grade and Gender

To further explore the differences in the writing prompts, the wish lists were analyzed

and sorted into themes. The initial prompt instructed students to "Think about ways that the

world could be a better place. Make a wish list of things that would make the world a better place"

(Appendix A). After reviewing the responses and analyzing for themes, the student responses were coded into 5 themes: altruistic, environmental, political, personal, and monetary. Table 5 outlines the definitions developed for each of these themes with examples of student responses for each theme.

Table 5

Definitions and Examples of Themes

Theme	Definition	Examples from Student Responses
Altruistic	Responses that were focused on helping others.	"End world hunger" "No one committing suicide" "No more violence or racism" "I wish people would live as one"
Environmental	Responses that were focused on improving the environment.	"Less waste in landfills/more recyclables" "More solar power/wind power" "Everyone reduces their carbon footstep" "Save rhinos, polar bears, pandas"
Political	Responses that were focused on specific political figures or governmental actions.	"Bernie Sanders as president" "End Isis" "Donald Trump gone" "Anyone can enter and exit country"
Personal	Responses that were focused on improving something specific to the student's own life.	"A white Christmas" "I wish I could dunk" "Free Patriots tickets" "I wish that summer lasts forever"
Monetary	Responses that were focused on monetary gain for the student.	"Be rich" "Get all the money in the world" "Drive a Lamborghini" "Rain money"

Students were given 5 minutes to write their wish lists, so the number of items on individual lists varied. Therefore, in order to compare the themes on students' wish lists (Figure 7), the percentage of responses for any theme was used for the comparisons (e.g., if 5 out of 8 of a student's wish list items reflected altruism, the altruism score was recorded as .625).
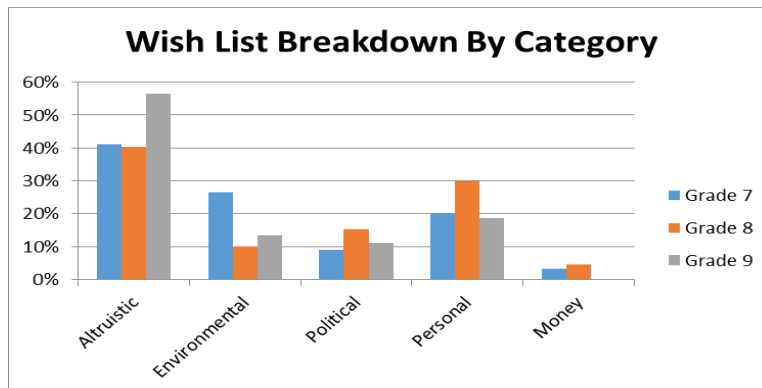
Figure 7. Themes by Category and Grade

When looking at the themes by grade, 57 percent of the 9th grade responses were altruistic, compared with 41 percent in grade 7 and 40 percent in grade 8. The 16-17 percent increase in altruistic responses by grade 9 mirrors the cognitive development of adolescents in perspective taking and empathic concern (Van der Graaff et al., 2014). If the themes of personal and monetary gain are combined (as both focus on gain for the individual student), students in 7th grade focused 23 percent of responses on personal gain. The 8th grade students focused 35 percent of responses on personal gain, whereas only 19 percent of responses in grade 9 were focused on personal gain.

When looking at the wish list themes by gender and grade (Figures 8, 9, and 10), both males and females showed growth in altruistic responses between 7th and 9th grade.
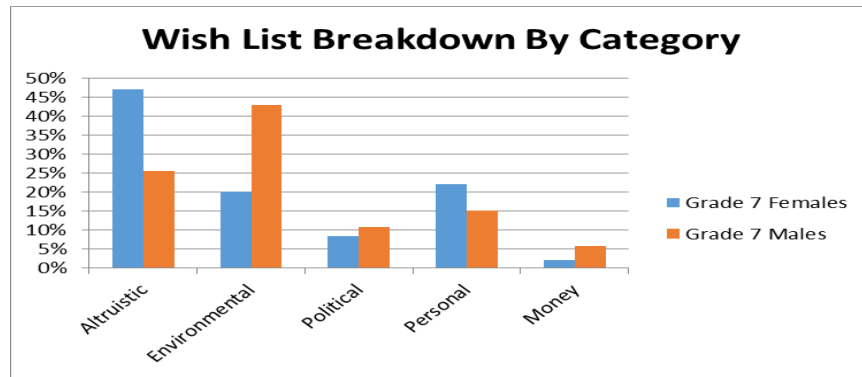
Figure 8. Themes by Gender (Grade 7)

Figure 9. Themes by Gender (Grade 8)
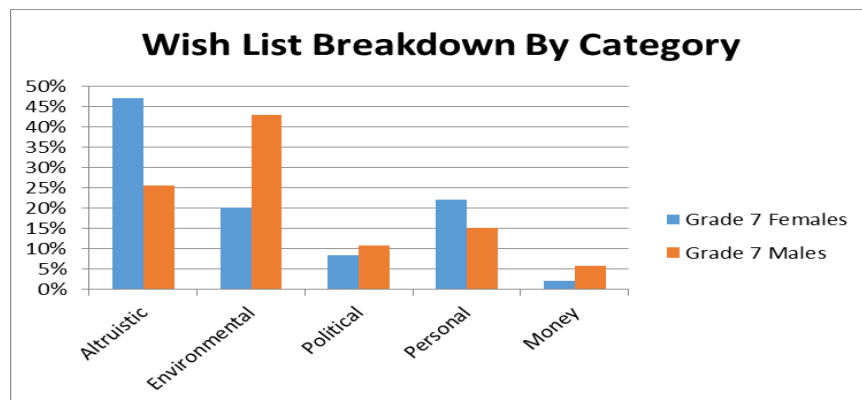
The 9th grade females had the highest percentage of altruistic responses at 63 percent, and showed an increase of 16 percent in altruistic responses when compared with their 7th grade counterparts. The 9th grade males responded altruistically 45 percent of the time and showed an increase of 19 percent in altruistic responses when compared with their 7th grade counterparts.
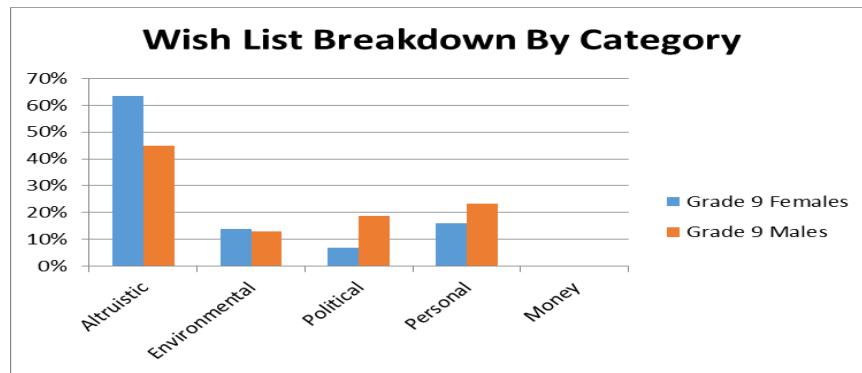
Figure 10. Themes by Gender (Grade 9)

Student responses were also sorted by sending towns to compare demographics with themes (Figure 8). There was a range of 24 percent between the town with the highest number of altruistic responses (O = 63%) and the town with the lowest number of altruistic responses (C = 39%.) The range in scores when comparing towns on environmental responses was 26 percent, when comparing the town with the highest number (S=31%) and the town with the lowest number (O = 5%).

When comparing the school with the highest rate of political responses (W = 19%) to the school with the lowest rate of political responses (S = 1%), there was a range of 18 percent. The range for personal responses was only 14 percent when comparing the highest scoring school (C = 27%) and the lowest scoring school (M = 13%). Only two of the town schools had responses addressing monetary gain (C = 5% and O = 3%), with a range of only 5 percent.

Wish List Breakdown by Category and Town

[chart: Altruistic, Environmental categories with series C, M, S, W, O]

Wish List Breakdown by Category and Town

[chart: Political, Personal, Money categories with series C, M, S, W, O]
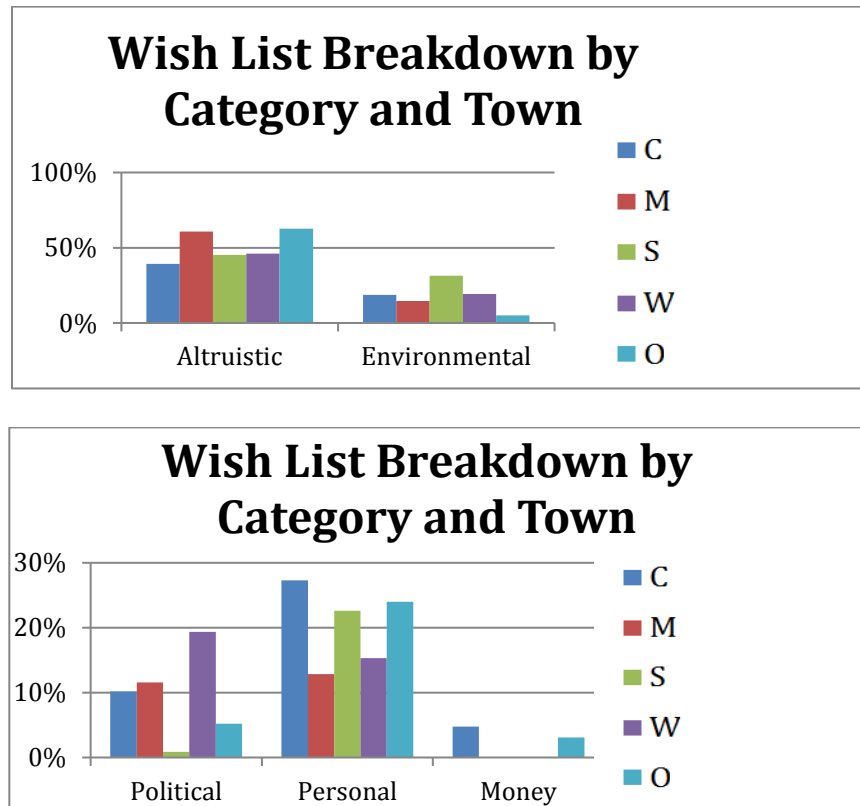
Figure 11. Demographic Comparisons of Wish List Themes

Summary

The data from the narrative responses of students in grades 7, 8, and 9 of the study school supported the efficacy of using reflective narratives as an instructional tool (as measured by depth of reflection). The two 40-minute interventions elicited an average depth of reflection score of 8.13 for female students and 7.5 for male students. A sum score was given for three writing prompts that were evaluated using a rubric (Appendix C) created from the research of Kember et al. (2008). The highest score on any individual response was 3, which demonstrated that the student applied the information personally or to a real-life situation. The highest cumulative score was 9 and the lowest was 5, resulting in a range of 4. With such a small range

in scores, the comparisons by SES, GPA, MAP scores, and demographics did not demonstrate a clear pattern.

The prompts of the wish list and the WOOP elicited the highest depth of reflection scores for both genders. Females outscored males on each individual prompt with an average that was .17 percent higher on the pen pal letter and .26 percent higher on the wish list. The depth of reflection scores had a range of .72 percent between the highest score for females (wish list = 2.90) and the lowest score for males (pen pal letters = 2.18). The depth of reflection scores for both genders were highest on the wish list and WOOP goal-setting method (Oettinger, 2014).

The most significant pattern to emerge from the data was the grade and gender comparisons. Female students scored higher overall on depth of knowledge scales and also scored higher in altruistic responses. The findings support the research of Van der Graaff et al. (2014) who found that empathic concern and the ability to take the perspective of others developed earlier (age 13) for females when compared with their male counterparts who showed this development later (age 15). There was growth in depth of reflection when comparing all 7th grade students to 9th grade students, aligning with findings of adolescent brain maturation.

The themes of student responses were also compared. The data comparing gender, age, and sending town was the most notable. While female students in grade 9 were the most altruistic, both male (19%) and female (16%) students showed significant growth in altruism between grade 7 and grade 9. Sending town data differed the most when comparing the altruism and environmental scores. The students from towns with the highest altruism and environmental responses (M = 76% and S = 76%) were 18 percent above the lowest scoring town (C = 58). Notably, these were also the same two towns with the highest depth of reflection responses (S = 8.14 and M= 8).

CHAPTER 5

CONCLUSION

The purpose of this study was to investigate how reflective narratives can be used with adolescents to foster the noncognitive factors of academic mindsets with the goal of academic success and overall well-being. An adaption of the poem *Success* by Bessie Anderson Stanley (Siegel, 2013, pp. 306-307) captures the essence of what overall well-being looks like in adolescence and beyond:

To laugh often and love much;

To win the respect of intelligent persons and the affection of children;

To earn the approbation of honest critics and endure the betrayal of false friends;

To appreciate beauty;

To find the best in others;

To give of one's self;

To leave the world a bit better, whether by a healthy child, a garden patch or a redeemed social

condition;

To have played and laughed with enthusiasm and sung with exultation;

To know even one life has breathed easier because you have lived—

This is to have succeeded.

This type of overall well-being relies upon an ability to take notice, appreciate, and reflect about oneself and one's surroundings. Reflective practices (e.g., mindfulness, self-awareness, and introspection) focus on becoming more self-aware (Jennings, 2015). Reflective writing requires students to use critical thinking and problem-solving skills to rethink challenges,

examine assumptions, and focus on learning needs (Plack et al., 2005, p. 200). The power of metacognition is incorporated into the act of writing, providing a tool for learning about oneself, for personalization, for life application, and for building a narrative identity. Cozolino (2013) wrote that "self-reflective language is a vehicle of thoughtful consideration. It employs our executive functions, language abilities, and imagination to allow us to be the executor rather than a witness of our lives" (p. 196).

The term narrative identity refers to the evolving story that each person creates about his or her own life to provide a sense of purpose (Adler, 2012). Adler's study showed that psychological well-being improved when narrative writing showed agency (self-sufficiency and belief in one's ability to control or affect experiences). Whether using Adler's terminology of "narrative identity" or Wilson's (2011) terminology of "story editing," the goal is to utilize writing as a tool for fostering the academic mindsets that support both academic success and overall well-being.

The four academic mindsets (Farrington et al., 2012) at the heart of this study are (a) Relationship: I am connected here–I belong and I am valued; (b) Responsibility: I am able to improve my competence and ability; (c) Resilience: I believe that I can succeed; and (d) Relevance: I value this and see a larger purpose. By utilizing writing prompts designed to foster reflection, personalization, and connection to shared experiences, this study addressed each of these four academic mindsets. Reflective narratives within student PLPs were used to provide an avenue for bringing universal noncognitive interventions into classrooms. "Because mind-set interventions typically target a single keystone belief, they can be brief (e.g., an hour or less) and can be delivered using standardized materials" (Paunesku et al., 2015, p. 785).

Writing enables students to understand and take control of their own learning, imagine their own future, and set personal goals. Cohen and Sherman (2014) found that personal narratives and expressive writing interventions help to build a sense of purpose and self-adequacy (p. 361). Reflective narratives can change self-identity and affect future decisions; people become the stories of their experiences and aspirations (Cozolino, 2013, p. 188). People truly "live their way into" becoming the stories they tell about themselves (Adler, 2012, p. 385). Although the research is current, it reflects the sentiments of the ancient words of Buddha: "The mind is everything. What you think you become."

Interpretation of Findings

The universal interventions (Appendices A and B) in this study were designed to incorporate the research of Yeager et al. (2013) by focusing on the beliefs of students about themselves and their learning environment. By asking students to generate their own intervention (writing a letter), each student summarized the intervention message, personalized the information, and applied this knowledge to benefit a younger student.

The timing of the interventions was designed to foster a recursive positive feedback loop. According to Cohen and Sherman (2014), this recursive process is why "brief interventions can have large and long-term effects when they address key psychological processes" (p. 340). The interventions were targeted at students in grades 7 (when students move from smaller K-6 schools to a district middle school setting) and students in grade 8-9 (when students prepare for or first enter the high school.) When an intervention is well-timed, it feeds into a recursive cycle of reinforcing interactions that can turn the intervention from an isolated event into a pivotal and transformative interaction (p. 340).

This study found that two 40 minute universal interventions did elicit reflective responses, as measured by a depth of reflection scale (Appendix C). The average depth of reflection scores (Figures 5 and 6) varied significantly for females (8.13) and males (7.5). These differences were also notable when compared by both gender and age. For both genders, there was an increase in depth of reflection for 9th grade students compared with 7th grade students and a drop in 8th grade. These findings are consistent with brain development research into the ability of adolescents to take the perspective of others and have empathic concern (Van der Graaff et al., 2014). Due to the small sample size, the dip in scores for grade 8, while interesting, is not conclusive. The study needs to be replicated with a larger sample before formulating a valid conclusion or interpretation.

The lack of correlation between the depth of reflection in the writing responses and either academic ability (as measured by MAP scores) or academic performance (as measured by GPA) was another notable result. In fact, students with the highest depth of reflection scores had slightly below average scores on both academic ability and performance. Similarly, the depth of reflection scores did not have a positive correlation with economic status (measured by Free/Reduced lunch status).

When depth of reflection scores were compared by sending schools, the only notable pattern was that the smaller schools of the study school district had higher averages. The higher depth of reflection scores may be due to the smaller school sizes of the sending schools or to other factors not being measured within this study (e.g., social curriculum, school climate, teacher education, leadership, etc.).

When the wish lists were coded by theme, the gender differences provided another interesting window into adolescent brain development (Figure 8). The 9th grade female students

had the highest percentage of altruistic responses at 63 percent, a 16 percent increase over 7th grade female students. The 9th grade male students also had the highest male altruism rates at 45 percent, with an increase of 19 percent when compared with their 7th grade counterparts.

When the themes were sorted by sending towns, the most notable differences were between the scores for altruism and environmental concerns. The towns with the highest altruism and environmental responses (M = 76% and S = 76%) were 18 percent above the lowest scoring town (C = 58). Notably, these were also the same two towns with the highest depth of reflection responses (S = 8.14 and M = 8). This finding seems intuitive when considering a link between concerns for people/environment and the ability to make real-life connections. If students are able to make connections to their own experiences and apply information to the real world, there appears to be a natural link to themes of altruistic concerns for people and/or the environment.

Implications

This study focused on using reflective narratives to promote academic mindsets and build relationships, develop responsibility, foster resilience, and provide relevance. The results supported the existing research about using brief universal interventions to foster noncognitive factors and academic mindsets (Bowen et al., 2013; Cohen & Sherman, 2014; Ellis et al., 2014; Farrington et al., 2012; Paunesku et al., 2015; Yeager et al., 2013; Yeager & Walton, 2011).

The usefulness of reflective narratives in this study targeted narratives as both teaching tools and mechanisms for building relationship, developing responsibility, fostering resilience, and providing relevance for adolescents. As personalization continues to bring major shifts in beliefs and practices of teachers, parents, and community members, the role for reflective narratives will continue to grow both for students and teachers (Baldwin, 2005; Bangert-Drowns et al., 2004; Hermann, 2012; Wald et al., 2012; Wilson, 2011). Reflective narratives provide

students with on-going opportunities to self-monitor, set goals, and maintain a future-orientation in their PLPs.

Reflective narratives can be used to improve metacognition, clarify thoughts, deepen understanding, monitor growth, and build both personal and global connections. According to the research of Cozolino (2013), when students learn to write about and share their feelings they are learning skills of encouragement. Our personal stories connect us to our past, help us to be intentional about the present, and build a bridge to our future self (Cozolino, 2013, p. 192).

Recommendations for Action

Taking the results from an academic endeavor (such as a dissertation) and applying these questions, curiosities, and findings in a manner that is both pragmatic and accessible, poses a daunting task. The wisdom of Lao Tsu helps to frame these recommendations: "People who see the world in terms of theories, often have a very intricate view of what is happening. Clarity is difficult for them" (Heider, 1985, p. 129). The goal of these recommendations for action is to distinguish between the complex explanations of theory and return to the focus of what is happening in the present situation.

Teachers are in the midst of an educational tsunami of research, reforms, political demands, and societal changes. These broad changes range from the national standards for education of the Common Core State Standards (CCSS) to state-led initiatives like Vermont's Act 77 Flexible Pathways to Graduation (Vermont Agency of Education, 2016). Current educational research is changing the way we educate students, our educational goals, and the way we assess these goals. While consensus on the best path for educational reform is unlikely, there is agreement that change is both dramatic and inevitable (Knight & Knight, 2011; Schwahn & McGarvey, 2011; Tough, 2012; U.S. Commission on Excellence in Education, 1983).

The focus of these recommendations addresses the "what is actually happening" aspect of school reform by broadening the scope of educational focus beyond test scores. Beyond the CCSS goal of "career and college readiness," this study adds recommendations aimed at overall well-being. Recommendations for action are made for each of the four areas of academic mindset.

Building relationship: "I am connected here--I belong and I am valued."

> "No significant learning can occur without a significant relationship of mutual respect, teacher to student." Comer (1995).

If all learning is relational, then relationship is the foundation of every education experience. At the secondary level, teachers can feel that this expansion into social emotional areas is beyond their purview. However, the research clearly refutes the view that if teachers articulate content clearly, then students will learn. Brain research asserts that it is not possible to separate academic or cognitive learning from social emotional learning. While this does not mean that teachers must also be therapists, it does mean that it takes more than an emphasis upon content to be a successful teacher (Cozolino, 2013, p. 225).

Recommendations include systemic professional development (and pre-service training) about adolescent development and the ways that reflective writing and goal-setting such as WOOP (Oettingen, 2014) can be used to build relationship and connections within school communities. Changes to advisory programs to include more intentional mentoring have also shown promise in building relationships (Wallof, 2010). Schools must foster positive relationships not only within individual classrooms, but also throughout the entire school (adults and students) and with parents and community members, as well as the broader community.

Developing responsibility: "I am able to improve my competence and ability."

The academic mindset of responsibility addresses self-efficacy, growth mindset, and grit. Grit is an area of focus in current educational reform but sometimes the underlying research of self-efficacy and responsibility can be overlooked. Students must learn that they can choose and critically evaluate their own path and are not defined by the expectations of others (Cozolino, 2013, pp. 196-197).

Recommendations to develop responsibility will also begin with systemic professional development about growth/fixed mindset and self-efficacy. A transformative growth mindset incorporates not only the belief in individual effort, but also the use of effective strategies and timely guidance from teachers (Yeagar & Dweck, 2012). In addition, it will be important that community outreach, such as parenting courses and workshops, also reflect research on development of self-efficacy, growth mindset, and adolescent brain development. Universal interventions such as those used in this study can be adopted as part of the PLP process for students, as this will ensure equity in delivering the interventions to all students.

Fostering resilience: "I believe that I can succeed."

As Henry Ford is often quoted as saying, "If you think you can do a thing or think you can't do a thing, you're right." Resilience increases the probability of success regardless of adversities of traits, conditions, or experiences, both in school and throughout life (Waxman et al., 2003). Resilience is not a fixed trait but rather a process of being able to adapt when faced with adversity (Truebridge, 2014). In the conceptual framework for this study, resilience is the central piece (Figure 3) because it is the core that supports overall well-being.

Resilience reframes difficulties and adversity as isolated events rather than reflections of a person's adequacy or worth. By building a personal narrative that reflects one's ability to

overcome difficulties, the ability to cope with future adversities is bolstered. Interventions that build resilience can create a self-affirming cycle and change one's perception of adversity (Cohen & Sherman, 2014, p. 342).

When fostering resilience, the words of Emily Dickinson still provide a useful guide:

Tell all Truth but tell it slant—

Success in Circuit lies

Too bright for our infirm Delight

The Truth's superb surprise

Resilience is a process that provides that "slant" or filter that enables people to retain hope, optimism, and a belief in oneself. Recommendations for building resilience are woven throughout all the prosocial skills and academic mindsets (Corrigan, 2012). Relationship building is a vital aspect of resilience, as is the self-efficacy and competence of "developing responsibility." Once again, professional development (and pre-service training) will be imperative. Reflective narratives are a useful tool in building students' understanding about their role in creating their own narratives. When teachers can help students to put their thoughts, strategies, and feelings into words, they can build a positive self-narrative and regulate anxiety. According to Cozolino (2013), "There is no more important developmental or educational goal" (pp. 194-195).

Providing relevance: "I value this and see a larger purpose."

Helping students to understand the value of school is a major aspect of providing relevance. Simple instructional changes that tie daily lessons to student-friendly learning targets and real-life big picture goals will help students to understand the relevance of specific lessons.

Additionally, the goal of initiatives such as Vermont's Act 77 use personalization and flexible pathways to provide relevance.

Predictably, the recommendations must begin with professional development (and pre-service training) that targets personalized learning. By tailoring the what, when, how, and where of student learning environments, personalized learning accelerates learning while addressing both individual skills and needs of students. "Students can take ownership of their own learning, while also developing deep, personal connections with each other, their teachers and other adults" (Cavanagh, 2014). Teachers, students, parents, and the community will need to receive multiple opportunities to discuss the research that supports personalized learning and the structures that can ensure that students still reach the rigorous standards set by national standards such as CCSS.

The actions needed to implement changes in each of these areas will require time, education, and leadership. Reflective narratives combine the educational power of metacognition and with the psychological imperative social-emotional nurturing, making writing a dynamic teaching tool for promoting academic mindsets. By building relationships, developing responsibility, fostering resilience, and providing relevance within classrooms, teachers can guide students towards becoming the heroes of their own stories, creating an optimal learning environment for students (Cozolino, 2013, p 199).

Recommendations for Further Study

Useful information will be gained if students at the study school revisit their goals every 6 to 12 months. Follow-up research questions might include:

- If similar interventions were repeated, would there be cumulative effects in the depth of reflection?

- Would using a computer analysis tool such as the Linguistic Inquiry and Word Count (LIWC) provide additional insights into student reflections (Pennebaker, 2011)?

- In what ways will reflective narratives be most effective for professional development?

- In what ways can reflective narratives be used to enhance the effectiveness of personalized learning and service learning?

- In what ways can reflective narratives be used to enhance the effectiveness of student voice and student leadership opportunities?

Conclusion

This dissertation began with the poem "The Way It Is" by William Stafford (1999) and this poem will provide the thread for the conclusion:

There's a thread you follow. It goes among

things that change. But it doesn't change.

People wonder about what you are pursuing.

You have to explain about the thread.

But it is hard for others to see.

While you hold it you can't get lost.

Tragedies happen; people get hurt

or die; and you suffer and get old.

Nothing you do can stop time's unfolding.

You don't ever let go of the thread.

Within this study, the thread of academic mindsets has been followed to create overall well-being. By weaving relationship, responsibility, resilience, and relevance into reflective narratives, a tapestry of well-being is created. Reflective narratives provide a mechanism for learning, enhance metacognition, create authentic assessments, and foster growth in academic mindsets. A positive self-narrative builds emotional security and support psychological well-being; of equal importance, a negative self-narrative fosters pessimism, decreases self-esteem and diminishes exploration and learning (Cozolino, 2013, p. 188).

The stories we tell about ourselves become the narratives of our lives. But personal narratives are created and can be edited. Teachers can use reflective narratives to help students realize that they are not just characters in a pre-written script but are the authors of their own stories (Cozolino, 2013, p. 201; Wilson, 2011). Reflective narratives can be powerful tools to build the academic mindsets of relationship, responsibility, resilience, and relevance while also supporting academic success. The research of Klein and Boals (2001, as cited in Pennebaker & Evans, 2014, p. 11), asserted that through expressive writing student were able to improve their working memory. Studies have repeatedly shown an increase in GPAs in the semester following expressive/reflective writing interventions (Lumley & Provenzano, 2003, Cameron & Nicholls, 1998, Pennebaker, Colder, & Sharp, 1990, as cited in Pennebaker & Evans, 2014, p.11).

The utility of reflective narratives, both as a learning tool and a support for social emotion growth, is supported by extensive research. Bangert-Drowns et al. (2004) found that one of the most crucial aspects in improving student learning is having students write reflections about their understandings, questions, and own learning process (pp. 51-52). Whether viewed as an instruction tool, formative assessment, or summative assessment, writing provides a window into a student's academic understanding and social emotional well-being.

This study's findings may expand the ways that classroom teachers can utilize the strategies from existing research that demonstrate the many benefits of reflective writing. The ability to make friends, form lasting relationships, and improve communication are benefits of writing (Cozolino, 2013, p. 12). By building relationships, developing responsibility, fostering resilience, and providing relevance for adolescent students, we support both academic success and overall well-being.

Utilizing reflective narratives to promote academic mindsets is a research-based tool of transformation. This study adds another voice to that chorus of research and offers the reflective narrative as a simple, effective, and powerful tool. While the path of educational transformation may not be clear or easy, these words from Rainer Maria Rilke offer an apt conclusion:

"Live the questions now.

Perhaps you will then gradually,

without noticing it,

live along some distant day

into the answer."

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Appendix A

Interventions

Topic	Intervention Resources/Material	Time
Growth Mindset/ **Neuro-plasticity**	You Can Learn Anything Video: https://www.youtube.com/watch?v=JC82Il2cjqA	Session 1: 15 minutes *(Videos)*
	Growth Mindset Video: https://www.youtube.com/watch?v=ElVUqv0v1EE	
	Khan Academy Article - https://www.khanacademy.org/brainworkout_1	5 minutes *(Summary)*
	Writing Prompt:	20 minutes *(Letters)*
	1. Write a paragraph summary of what you learned from the article and videos. Be sure to include how your brain can change and grow.	Total = 40 minutes
	2. Then, select one of the pen pals. (Appendix 2) Write a letter to your pen pal and give to him/her some advice about what you know about how the brain grows and what he/she can do to help his/her brain grow.	

Purpose and meaning **(Goal-Setting)**	1. Think about ways that the world could be a better place. Make a wish list of things that would make the world a better place.	Session 2: 5 minutes (Wish List)
	2. Many students work hard in school because they want to group up to "make a positive impact on the world," or to "make their families proud," or to be "a good example for other people." Think about your own goals for your future.	
	• Write about how learning and working hard in school could help you to achieve your goals. • How will it affect you if you achieve your goals? • How will it affect others you care about if you achieve your goals?	15 minutes (Purpose and effects)
	(Growth Mindset and Purpose prompts based on the research of Paunesku, Walton, Romero, Smith, Yeager & Dweck, 2015; and Yeager, Henderson, D'Mello, Paunesku, Walter, Spitzer & Duckworh, 2014; Cohen & Sherman 2014)	
	3) Thinking about a goal you want to achieve and then imaging it happening, isn't the best way to achieve success. Research has found that people are more successful when **they imagine the positive outcomes of their goal, imagine the obstacles or challenges they will face, and then make a plan about how to deal with those challenges**. The WOOP outline was developed to help people achieve their goals.	20 minutes (WOOP) Total = 40 minutes
	W–Wish. Think about what you'd like to accomplish. Pick something that is challenging but possible. Write a phrase (3-6 words) that names this wish.	
	O–Outcome. Now imagine the best things that could happen if you achieve your wish. Write as much detail as you want about the positive results of achieving your wish.	
	O–Obstacle. Now imagine what the most likely challenges will be. Write as much detail as you want about the obstacles or challenges you will face. (This will be about your behavior, feelings, emotions—not about others, as the wish you selected was one you felt that YOU could accomplish.)	
	P–Plan. Now imagine when and where you are likely to come up to this obstacle. Write a plan that follows this format: If (the challenge) happens (when/where), then I will (your plan to overcome or navigate this challenge.) *(WOOP prompts based on the research of Oettinger, 2014)*	

Appendix B

Pen Pal Choices for Growth Mindset/Neuroplasticity Intervention

Pen Pal 1:

K is a twelve-year-old girl in 6th grade. She feels like she isn't smart enough to be successful in math. K. often doesn't do her homework or ask for extra help because she thinks that she can't improve. What advice and encouragement could you give K. based upon what you know about growth mindset and neuroplasticity?

Pen Pal 2:

P is an eleven-year-old boy in 5th grade. He doesn't like to read and says that reading is boring. It takes him a long time to read assignments, so he usually doesn't bother. He thinks he just isn't smart enough to read well. What advice and encouragement could you give P. based upon what you know about growth mindset and neuroplasticity?

Appendix C

Rubric for Reflective Narrative Evaluation

Score	Category	Description	Example
1	(Habitual Action) Non-Reflective	Student gives an answer without significant thought.	Student uses text from book or lecture without attempt to apply or understand.
2	Understanding	Student uses a deeper approach to learning and attempts to understand concepts or topic. Theory is not related to personal experience or real-life.	Student may correctly relate the concept or material, but gives no examples of how it relates to any personal experience or practical situation.
3	Reflection	Student takes the concept and considers it in relation to personal experiences.	Student will have personal insights beyond just the concepts or material presented.
4	Critical Reflection	Student has a transformation or change of perspective in fundamental belief.	Student reviews presuppositions from prior learning and their consequences

(Kember, McKay, Sinclair, & Wong, 2008)

Appendix D

Letter of Support from Study School

████████ Supervisory Union
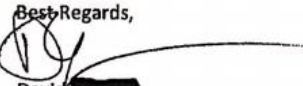████ Road
Tel: ████████   Fax: ████████

To: University of New England Institutional Review Board

From: David ████ Superintendent of Schools

Date: November 9, 2015

Please accept this letter of authorization from ████████ Supervisory Union for Debra Gardner-Baasch to conduct the research related to the effectiveness of writing prompts to elicit student reflections about academic mindsets.

While the ████████ Supervision Union does not have an IRB or associated documentation requirements, it is with our full permission that Ms. Gardner-Baasch proceeds with her research at the ████████ High School site during the academic year 2015-2016.

We understand that this study, given all voluntary and revocable consents, includes existing student data and will not include identifiable individual student responses. This project has been reviewed and found to be aligned to the ████ community mission to maximize student learning and to support the ████ Foundational Beliefs.

We feel this topic is relevant to our vision and has the potential to provide benefit to our students, staff and the greater community.

Best Regards,

David ████
Superintendent

████████   ████████   ████████   ████████   ████████
Elementary School   ████ School   Elementary School   Elementary School   ████ High School

Appendix E

IRB Approval

UNE | **UNIVERSITY OF NEW ENGLAND**

Institutional Review Board
Olgun Guvench, Chair

Biddeford Campus
11 Hills Beach Road
Biddeford, ME 04005
(207)602-2244 T
(207)602-5905 F

Portland Campus
716 Stevens Avenue
Portland, ME 04103

To: Debra Gardner-Baasch

Cc: Ella Benson

From: Olgun Guvench, Ph.D.

Date: November 25, 2015

Project # & Title: 111715-006, Utilizing Reflective Narratives to Promote Academic Mindsets: Building Relationships, Developing Responsibility, Fostering Resilience, and Providing Relevance for Adolescents (Initial)

The Institutional Review Board (IRB) for the Protection of Human Subjects has reviewed the above captioned project, and has determined that the proposed work is exempt from IRB review and oversight as defined by 45 CFR 46.101 (b)(1) & (b)(4).

Additional IRB review and approval is not required for this protocol as submitted. If you wish to change your protocol at any time, you must first submit the changes for review.

Please contact Olgun Guvench at (207) 221-4171 or oguvench@une.edu with any questions.

Sincerely,

Olgun Guvench, M.D., Ph.D.
IRB Chair

IRB#: 111715-006
Submission Date: 11/11/15
Status: Exempt, 45 CFR 46.101 (b)(1) & (b)(4)
Status Date: **11/25/15**

Appendix F

Parental Information Letter

Dear MRU Parents/Guardians,

Although many of you may know me as an English/Literacy teacher at Mill River Union High School, I am writing as a doctoral candidate for a degree in Educational Leadership from the University of New England.

My research study is focused on how school staff can use Personalized Learning Plans to support both MRU's Mission Statement and the RSSU Foundational Beliefs. Vermont's Act 77 mandates that all students in grades 7-12 must have Personalized Learning Plans (PLPs) by 2018. At MRU we have been working towards for this goal for several years now, most recently under the direction of Jodie Stewart-Ruck.

As part of the PLP process, students are setting goals and reflecting both on their progress and their role in their own learning. Through my own review of current research and in collaboration with the RSSU Administration Team and the RSSU Proficiency-based Learning Committee, I have designed some of the writing prompts that will be used within the PLPs at Mill River.

The purpose of my research study is to investigate how effective these writings prompts are in helping students to be reflective about their learning and their academic goals. The design and methodology, including all legal and ethical considerations for the rights of participants have been developed to the Institutional Review Board of standards at the University of New England. There are no known risks with this research, however, there is the potential for positive affects for individual students and our school system.

Student responses to the prompts will be analyzed for depth of reflection using a research-based rubric. The responses will also be compared with academic achievement (grades), test scores, gender, and demographic information. All of this data already exists within secure password protected cloud-based systems used at MRU. Individual names or identifying information will not be included in this study, as all the results will be aggregated. The information obtained by this study may be published in educational journals or presented at educational conferences, but the data will contain no identifying information for individual students.

If you have any questions about this research study, you may contact me in person at MRU, by phone 802 446 7004, by email dbaasch@rssu.org or you may contact Olgun Guvench, M.D. Ph.D., Chair of the UNE Institutional Review Board at (207) 221-4171 or irb@une.edu.

Respectfully,

Debra Gardner-Baasch, Researcher

Appendix G

Parental Consent Form

Introduction

"The mission of MRU community is to maximize each student's learning." This aligns with recent changes mandated by Vermont's Act 77 requiring Flexible Pathways to Graduation, Proficiency-based Graduation, and Personalized Learning Plans (PLPs).

RSSU has adopted a set of Foundational Belief that further support the changes outlined in the Flexible Pathways to Graduation. The RSSU Foundational Beliefs include: 1) Students feel cared for and loved; 2) Students feel challenged everyday; 3) Students have lots of opportunities to learn; 4) Students know what they are expected to learn; 5) Students know why they are learning; 6) Teachers communicate with families before, during, and after challenges and successes; and 7) Students, staff, and families work together.

This research study supports both MRU's mission statement and the RSSU Foundational Beliefs. The focus of the research study is on using reflective narratives within PLPs to foster academic mindsets and thereby increase both overall well-being and academic success of adolescents. Academic mindsets include building relationships, developing responsibility, fostering resilience, and providing relevance.

Why is this study being done?

The purpose of this research study is to investigate how effective these writings prompts are in helping students to be reflective about their learning and their goals.

Who will be in this study?

All students in grades 7-9 can participate in this study.

What will students be asked to do?

There are no additional requirements for students in this study. All students are creating

their Personalized Learning Plans as mandated by Vermont's Act 77. As part of the PLP process,

all students are setting goals and reflecting both on their progress and their role in their own

learning. With parental consent, existing data will be analyzed to evaluate the effectiveness of

the PLP reflective narratives.

What are the possible risks of the study?

There are no foreseeable risks to this study.

What are the possible benefits of the study?

There is the potential for positive affects for individual students because when students

learn more about their role in their own learning, take time to reflect on their learning, and set

meaningful goals, research shows that students increase their academic performance. The

positive affects will be the same for both participating students and those opting out of the study.

What are my rights and options?

Although all students will be completing the PLP process, including your student's data

in this study is entirely voluntary. You can opt out and there will be no negative impact for you

or your student.

Whom may I contact with questions?

Direct any questions to the study researcher, Debra Gardner-Baasch, or to Dr. Ella

Benson, Faculty Advisor. You may contact Debra directly at MRU, by phone at 802 446-7004,

or by email dbaasch@rssu.org. You may contact Dr. Ella Benson at 757/ 450-3628 or by email at

ebenson2@une.edu. If you have any questions or concerns about your rights as a research

subject, you may call Olgun Guvench, M.D. Ph.D., Chair of the UNE Institutional Review Board at (207) 221-4171 or irb@une.edu.

Documentation of Informed Consent

You are voluntarily making a decision whether or not to allow your child's existing data to be used to evaluate the effectiveness of reflective writing prompts in this research study. Your signature certifies that you have agreed to allow the researcher to view your child's data and use this data for purposes of this study. You understand that your child's identity will not be included in this study and that all data will be analyzed by groups such as gender, grade, test scores, demographics, and grades.

By signing this form you indicate that you have read and understood the information presented. You will be given a copy of this consent form to keep.

_____   _____

Signature of Parent/Guardian   Date

In my judgment the parent/legal guardian is voluntarily and knowingly giving informed consent and possesses the legal capacity to give informed consent to participate in this research study.

_____   _____

Signature of Researcher   Date

Appendix H

**Standardized Test Scores (MAPS) and Grade Performance (GPA)
Correlations to Depth of Reflection**

Prompt Total vs MAP Reading Percentile

$R^2 = 0.0134$

Prompt Total vs GPA

$R^2 = 0.005$

Series1

Linear (Series1)