INCREASING ADOLESCENT LIFE SATISFACTION AND ACADEMIC EFFORT:
APPRECIATION AND A POSITIVE MODEL OF INTEGRITY

by

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Abstract

This study examined the effects of two character strength exercises—an appreciation journaling exercise and a journaling exercise applying the new model of integrity—on life satisfaction, effort, attitude, and prosocial behavior, using trust as a mediator, in 863 young adolescents in a low to middle income grade six through eight middle school in the Western United States. Guided by transformational learning theory, conversations for change theory, and self-determination theory, the appreciation journaling intervention aimed to develop the strengths associated with the transcendence virtue, while the honoring one’s word intervention aimed to develop the strengths associated with the courage virtue. This study intended to add to the existing literature on positive psychology interventions and programs that use appreciation journaling, while also investigating and providing data on the new character strength intervention, using the new model of integrity. A quantitative design was used with a pre- and post-survey measuring the outcomes of interest. Thirty classes (10 for each condition) were randomly assigned to the appreciation exercise, the integrity exercise, or a control condition. Analysis determined that teacher and grade level clustering did not affect the results; hence, students were treated as randomly assigned and a fixed effects analysis without clustering effects was used. While the mean differences for life satisfaction, prosocial behavior, and trust increased for the honoring your word intervention, and the mean
differences for life satisfaction and trust increased for the appreciation intervention, neither intervention produced statistically significant results for the outcomes of interest. Recommendations are discussed, to include using a qualitative or mixed methods design, improving teacher training and on-going teacher support, using a larger sample size, adding additional intervention contexts to support students practicing the virtue outside of the classroom, increasing the study length, and better investigating both how student outcomes changed during the interventions and why students answered the pre- and post-survey questions positively or negatively.

Keywords: Positive psychology, character strength development, appreciation, gratitude, integrity, the new model of integrity, honoring one’s word, subjective well-being, life satisfaction, effort, attitude, prosocial behavior, trust
Dedication

This dissertation is dedicated to Theresa, Elena, Loren, and Luke. Family commitments, our time, our energy, our sleep, and numerous other commitments were all sacrificed at various times in copious amounts, and yet your support made this work gratifying and enjoyable, and offered plenty of fodder for excellent family discussions, memories, and growth that was not always easy, but certainly rewarding. I will never forget Elena showing up at my side, as my new “research assistant” (replete with a labeled binder and other research materials). And I will never forget Elena, Loren, and Luke’s willingness to be intervention test subjects. You helped me more than you know. Theresa, I look forward to our future adventures—thank you for being my life partner and for your support.

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CHAPTER I
INTRODUCTION

Character Development

Despite humanity’s efforts to continuously improve performance and an explosion of technological advance in the last century, we have progressed relatively little in matters of living well and improving societal well-being (Roffey, 2012). According to the eudaimonic approach, we achieve overall happiness by identifying, cultivating, and living in accordance with our virtues; we practice virtue and improve our character in the Aristotelian vein (Crisp, 2000; Kraut, 2008; Ryff & Singer, 1998). Recent theory proposes that happiness is just one component of well-being. Subjective emotional well-being (SWB) remains a general term to describe an individual’s perceived/subjective emotional well-being, and includes both the cognitive judgment of life satisfaction and an affective judgment of positive emotion (Diener, 2009). To distinguish subjective well-being from psychological well-being (PWB), SWB is evaluation of life in terms of satisfaction and the balance between positive and negative affect; on the other hand, PWB entails perception of engagement with existential challenges of life (Keyes, Shmotkin, & Ryff, 2002). The last two decades of theory and research into character development and well-being have shown that improving character strengths can generate increased subjective well-being and other positive outcomes, and evolving best practices have only begun to be incorporated into the classroom, with little experimental research to demonstrate efficacy of character strength development (Berkowitz, 2011; Lickona, 2012; Seligman, 2011, 2012; Seligman, Ernst, Gillham, Reivich, & Linkins, 2009; Shernoff & Csikszentmihalyi, 2009).
In the United States, No Child Left Behind (Bush, 2001) has left a legacy of schools extrinsically motivated to teach what is measured, or rather, to focus on tested content (Haynes & Berkowitz, 2007; Vinovskis, 2008). Meanwhile, teachers develop student character and affect student well-being every day, whether intentionally or not (Lickona, 2004; Snyder, Lopez, & Pedrotti, 2010). However, teachers remain strained to meet the desires of parents, who have a natural tendency to want the best for their children. After asking hundreds of parents, Seligman (2009) found parents wanted the following for their children: happiness, balance, confidence, kindness, health, and satisfaction. Indeed, most parents and educators deem character and well-being development as important aspects of schooling (J. Cohen, 2006). However, when asked what schools teach, parents included achievement, thinking skills, success, conformity, literacy, mathematics, discipline, and other similar constructs (Seligman et al., 2009). This gap, between what parents want for their children and what schools deliver, provides an opportunity for research-based solutions.

If schools were required to develop character strengths and assess well-being, new teaching practices might naturally lead to the improved effort and associated performance that also predicts success. A body of evidence, based on experimental evidence, has grown to show that relatively simple intentional changes in one’s thoughts or behaviors can lead to practically significant increases in emotional well-being (Lyubomirsky & Layous, 2013) and positive changes in character (Berkowitz & Bier, 2005b). This study used two such intentional changes in an experimental setting, and looked at the effects of each intervention on multiple constructs.
Positive Psychology

Positive psychology—the science of positive emotion, positive character, and positive institutions—has been described as the exploration of “what makes life worth living and building the enabling conditions of a life worth living” (Seligman, 2012, p. 2). Researchers have made important progress understanding the positive psychology of human experience and the positive, long term impact that positive interventions have provided (Seligman, Steen, Park, & Peterson, 2005b).

Researchers have also urged the application of positive psychology with youth (Chafouleas & Bray, 2004; Clonan, Chafouleas, McDougal, Riley, & Tillman, 2004; Seligman, 2007). Many questions remain regarding the development and manifestation of well-being in youth, yet research has already shown that well-being programs can (a) produce measurable improvements in student well-being, (b) improve student engagement with learning and achievement, and (c) promote skills and strengths that are valued by most (if not all) parents (Seligman et al., 2009). Also, research literature has contained a dearth of conversation regarding the overlap between positive psychology and traditional character development programs (Linley, Joseph, & Seligman, 2004; Park, Peterson, & Seligman, 2004; Seligman, 2002; Seligman & Peterson, 2003; Seligman, Steen, Park, & Peterson, 2005a; Snyder et al., 2010), yet positive psychology has many links to traditional character development (Berkowitz, 2002, 2011; Berkowitz & Bier, 2005b; Berkowitz & Fekula, 1999; Haynes & Berkowitz, 2007; Snyder et al., 2010).

Research on traditional character education tends to be viewed separately from positive psychology research despite the obvious parallels and even congruent constructs (Berkowitz, 2011), with researchers usually choosing to maintain the linguistic traditions
of their particular research domain (Berkowitz, 2011). Traditional character education, having strong overlaps with positive psychology, has also been shown to improve both student well-being and achievement (Berkowitz & Bier, 2005b; Davidson, Lickona, & Khmelkov, 2008). Although many schools have taken the initiative to incorporate well-being or character development programs that are comprehensive or at least aligned as a school effort (Lickona, 2004), most school districts and states have not mandated or financially supported well-being or character programs, nor have they supported teacher training and development in these areas (2013; Berkowitz & Bier, 2004, 2005a; Howard, Berkowitz, & Schaeffer, 2004). Given the perception that character development and well-being interventions diminish academic achievement and resources, researchers have been called upon to provide the evidence required to demonstrate an advantageous cost-benefit ratio (Benninga, Berkowitz, Kuehn, & Smith, 2003; Howard et al., 2004).

**Improving Character Strengths**

Positive psychology (PP) concerns itself with three areas: positive emotions, positive individual traits, and positive institutions. Of these, the positive individual traits area focuses on one’s virtues and associated strengths. Meanwhile, traditional character development has concerned itself with two areas: moral character development and performance character development.

To measure character strengths, multiple character strength classifications have been developed. The Values in Action (VIA) Inventory of Character Strengths (Park et al., 2004) is based on a comprehensive review of culturally ubiquitous values and virtues and their associated character strengths (Peterson & Seligman, 2004). Peterson and
Seligman’s (2004) final analysis included the following virtues (and associated character strengths used in PP research):

- Wisdom and knowledge (creativity, curiosity, love of learning, open-mindedness, and perspective)
- Courage, or the emotional strengths (bravery, integrity, persistence, and zest/vitality)
- Humanity, or the interpersonal strengths (kindness, love, and social intelligence)
- Justice, or the civic strengths (citizenship, fairness, and leadership)
- Temperance (forgiveness, modesty, prudence, and self-regulation)
- Transcendence (appreciation of beauty and excellence, gratitude, hope, humor, and spirituality)

In the last decade, numerous studies have used the VIA strength classification to correlate character strengths and well-being, with far fewer studies pursuing causal effects of character strength interventions (Diener & Biswas-Diener, 2011; Hart & Sasso, 2011; O'Grady, 2013; Quinlan, Swain, & Vella-Brodrick, 2012). Moreover, of the interventions that have been used in schools, most research has focused on the general population or university students (adults) (Quinlan et al., 2012). Thus, relatively little is known about the effects of these interventions, much less the effects of these interventions on youth, or whether effective adult interventions would remain effective with youth, leading to increased well-being and other desirable outcomes.
Significance of the Study

Although strength interventions have more recently been used in schools, most of the research has been conducted with the general population or university students; much less is known about the effects of strength interventions on children or whether particular adult character strength interventions would work with children or in a school setting (Quinlan et al., 2012). This study addressed this gap in the literature regarding individual student interventions (especially among youth) versus established character education programs; researchers looking at effective programs cannot discern which aspects accomplished which effects on which strengths (Berkowitz, 2011; Lyubomirsky & Layous, 2013; Quinlan et al., 2012).

Comparatively little research that examines life satisfaction has included children and adolescents, with almost all appreciation or gratitude studies occurring with adults or university students (Froh, Sefick, & Emmons, 2008; Gadermann, Schonert-Reichl, & Zumbo, 2010; Howell, Keyes, & Passmore, 2013; Huebner, Gilman, & Ma, 2012; Proctor, Tsukayama, et al., 2011). Moreover, with the exception of Seligman’s Three Good Things exercise (Seligman et al., 2009), which was used experimentally with an online group and could be said to have utilized appreciation, what few appreciation and gratitude journaling studies included children did not use or address the broader definition of appreciation. The appreciation exercise used in this study adds to the current literature by heeding a recent call to further define the gratitude/appreciation constructs (Fagley, 2012), using an open-ended exercise that incorporated the broader appreciation construct versus gratitude alone.
Meanwhile, a search of the literature revealed no known peer-reviewed, published research testing the efficacy of the new model of integrity. A literature search found a plethora of research on normative models of integrity—judgmental models citing ethical or moral aims (Berkowitz, 2011; Berkowitz & Bier, 2004, 2005a, 2005b, 2007; Davidson et al., 2008; Howard et al., 2004; Lickona, 2001, 2004; Marzano, 2003)—with little on positive models of integrity described by Peterson and Seligman’s original definition above (wholeness, completeness); however, as previously described, promising new positive models of integrity have been developed. This study tested honoring your word, a particular new intervention that develops a positive (non-judgmental) model of integrity (Erhard, Jensen, & Zaffron, 2006, 2010; Erhard, Jensen, Zaffron, & Granger, 2010a, 2010b; Peterson, Ruch, Beermann, Park, & Seligman, 2007).

Finally, a literature search produced no known studies that have pitted new character strength exercises against existing exercises using an experimental design.

**Purpose of the Study**

The study experimentally evaluated the efficacy of two promising character strength interventions to determine their effects on particular aspects of young adolescent well-being and performance. The character strengths included appreciation (Fagley, 2012; Park et al., 2004) (using a construct that includes eight appreciation aspects, including gratitude) and a positive model of integrity that uses honoring one’s word (Erhard, Jensen, & Zaffron, 2010; Park & Peterson, 2009a). The appreciation journaling intervention aimed to develop the transcendental virtue and associated strengths, while the honoring one’s word intervention aimed to develop the courage virtue and associated strengths. The appreciation journaling intervention provided a relatively known exercise
(albeit with adults versus youth) to contrast against the never-before-tested honoring one’s word exercise. Outcomes of interests included life satisfaction (measuring long term emotional well-being), effort and attitude (as key aspects of better performance), and prosocial helping behaviors, with trust measured as a both a primary outcome of interest as well as a potential mediating variable that influences interpersonal and group behavior (Cook & Wall, 1980). Trust has been shown to improve school effectiveness (Bryck & Schneider, 2002). See Literature Review and Methods for the particular importance of these outcomes.

Key terms

Performance character education: Educating or training such strengths as self-discipline and best effort—virtuous behavior that increases performance (Davidson et al., 2008). Using a positive (non-judgmental) model of integrity, this study concerns itself with performance character. This study does not attempt to increase or measure moral character, although the intervention may have indirectly improved moral character.

Positive psychology: The science of positive emotion, positive character, and positive institutions (Seligman, 2012, p. 2).

Appreciation: Acknowledging the value and meaning of something or someone, and feeling a positive emotion attached to that entity (Adler & Fagley, 2005). Note: In this study, gratitude refers to one element of the larger construct of appreciation (see Appreciation versus gratitude). Appreciation refers to the larger construct including all eight elements.

Integrity: “A pattern of behavior that is consistent with espoused values” (Peterson & Seligman, 2004, p. 250).
The new model of integrity: A positive (versus normative) model of integrity based on honoring one’s word (in explanation, maintaining the wholeness and completeness of one’s word) (Erhard et al., 2006).

Life satisfaction: A person’s long term assessment of the quality of his or her life (Land, Lamb, & Mustillo, 2001).

Attitude: A predisposition to evaluate an entity or object in a favorable or unfavorable manner (Crano & Prislin, 2008).

Effort: Mental exertion (Dweck, 2006).

Prosocial behavior: Voluntary actions intended to benefit another individual or group (Eisenberg & Mussen, 1989).

Trust: A measure of another person’s alignment with expected behavior (Berkowitz, 2011; Lickona, 2012).

Research Questions

This study delved into whether performance character interventions and well-being interventions improve well-being, effort/attitude or prosocial behavior. The research questions were as follows:

- What effect does appreciation journaling have on adolescent life satisfaction, effort, attitude, and prosocial behavior in young adolescents?
- What effect does practicing a positive integrity exercise have on adolescent life satisfaction, effort, attitude, and prosocial behavior in young adolescents?
- Does trust mediate these relationships?
The following is a simple diagram of the research model.

![Diagram of research model]

**Figure 1.** Research model

**Scope of Study**

Using an experimental design, 30 classes of middle school students (grades 6 through 8) were randomly assigned to one of three conditions (i.e. appreciation journaling exercise, honoring your word journaling exercise, or control). Ten classes each received the appreciation journaling exercise and the honoring your word exercise, with 10 classes serving as no-treatment controls.

**Appreciation journaling exercise.** A reflective journaling exercise, modeled after Seligman’s *Three Good Things* (Seligman et al., 2009) comprised the first intervention. In Seligman’s exercise, students wrote down three good things that happened each day for a week. In this study, three good things included all eight elements of appreciation (see Literature Review for detailed explanation). These elements were explained to the students, and teachers provided examples as needed. Students were also encouraged (not required) to share their experiences and ideas, and answered questions...
that might help improve their ability to replicate positive experiences in their lives.

These questions included:

- Why did this good thing happen to you?
- What does this good thing mean to you?
- How can you make this good thing (or something like it) happen again?

Similar appreciation journaling studies have seen enduring positive results after interventions as short as one week (Seligman et al., 2005b; Snyder et al., 2010). However, Lyobomirsky et al. (2011) suggested that the longer the intervention the better and longer lasting the results, to a degree. Given this better result, this experimental study ran for four weeks.

**Honoring your word exercise.** No published research results were found using this exercise. In this intervention, students were asked to only give their word if they would keep it, and then confess and work on any resulting issues should they not be able to keep their word. Students maintained a daily journal on where they kept their word, whether and how this effected trust in them, where they honored their word (broke their word yet communicated with all involved, and then worked the situation to the best of their ability), and where they had not kept their word and needed to communicate with others to improve the situation to the best of their ability.

**Control groups.** These groups continued working on normal schoolwork for that school period.

**Flow of experiment.** Following both school district and university IRB approvals, parent and teacher consents and student assent forms were collected. The following figure describes the basic experimental flow. Pre-test and post-test surveys
were used to measure life satisfaction, effort, attitude, prosocial behaviors, and trust. Using pre-test allows the experiment to account for the impact of student starting points with these measures. If a student had low trust of their classmates, the intervention, if effective on this measure, would cause an increase in trust. Note that although the original experimental design included a measure of student trust in teachers, the principal, and the institution of the school, these questions were removed due to school district IRB concerns.

**Figure 2.** Experimental flow

**Analysis.** This study investigated the effects of the two interventions above (independent variables) on emotional well-being (life satisfaction), effort, attitude, prosocial behavior (dependent variables), and trust (as both a DV and a mediator). Data was subjected to exploratory factor analysis (EFA) using Principal Axis Factoring with Varimax rotation. Confirmatory factor analysis was used to impose one-factor measurement models on responses, using the resulting goodness-of-fit statistics to determine model accuracy (Ong & Van Dulmen, 2007). Cronbach’s alpha was used to calculate all instrument construct reliabilities. After checking for skew, outliers, linearity,
normality, and homoscedasticity, SPSS 18.0 software was used to analyze the primary research questions using fixed effects ordinary least squares (OLS) regression. See Methods for the OLS regression models.

Finally, the study tested trust as a mediator, using Baron and Kenny’s (1986) three-step test: (1) the independent variable must affect the mediator, (2) the independent variable must affect the dependent variable, and (3) the mediator must affect the dependent variable, with the independent variable included in the equation.
CHAPTER II
LITERATURE REVIEW

Overview

Few argue against the need for mastery (doing your best work—effectively using positive performance character strengths), excellent relational orientation (doing the right thing with respect to others—effectively using positive moral character strengths), or the benefits of increasing well-being (one goal of positive psychology) in the 21st century workplace (Lickona, 2004; O'Grady, 2013). Yet many argue as to the best way to achieve these character attributes and habits of character in K-12 students (Davidson et al., 2008; Seligman et al., 2009).

Traditional Character (Strength) Education History

Formal classroom character education (CE) has a long history in the United States, yet by the 1890s, two approaches were emphasized: (a) the traditional CE approach instilled virtue (and values) as a fence against modern corroding temptations, and (b) the progressive approach viewed ethical decisions and character development as dependent on contexts (instead of absolutes) and focused on the betterment of society (Howard et al., 2004).

Strength interventions with a goal of increasing well-being or personal achievement and performance have been used for over 60 years (Forster, 1991). K-12 character education was less emphasized from the mid-1940s to mid-1960s (McClellan, 1999). Then, during the 1960s and 1970s, the values clarification movement gained momentum (McClellan, 1999). Despite this revival in school-based moral growth, this
movement drew criticism for extreme relativism and lack of empirical support, as did Kohlberg’s subsequent focus on moral dilemmas in curricula (Berkowitz, 2002).

In the last few decades, various K-12 education stakeholders have complained about a character education failure, with advocates asserting that teachers and schools have shirked their responsibilities as evidenced by increasing negative youth behaviors, such as violence, drug abuse, teen pregnancy, and disrespectful behavior (Milson & Mehlig, 2002). Many educators fear character education will create controversy (Howard et al., 2004), and there is little consensus about the curriculum and methods that should be used (Milson & Mehlig, 2002). In the United States, there is a history of valuing the sanctity of family and this powerful, valid issue remains complex (Howard et al., 2004), as does the evaluation of character education programs. What counts as evidence and how does one measure it? Unlike measuring math, reading, and writing abilities, measuring non-cognitive skills may appear quite subjective.

Traditional character education has been defined to include two parts: (a) performance character and (b) moral character. Davidson, Lickona, and Khmelkov (2008) defined performance character to include character strengths such as self-discipline and best effort—virtuous behavior that enables someone to pursue a personal best self. Meanwhile, moral character consists of qualities such as integrity, justice, caring, and respect—these allow for successful relationships and ethical behavior (Davidson et al., 2008). These strengths, of course, also align with many of Peterson and Seligman’s (2004) more recent classification of strengths. And given positive psychology research into well-being and the effect positive psychology interventions have on character (both moral and performance character), these separate realms of effort both
concentrate on practices that foster the development of student character (Berkowitz, 2011). As Berkowitz noted, “whether called values education or character education (or for that matter any of a number of other current terms; e.g., moral education, social-emotional learning, positive psychology), it is a semantic morass” (Berkowitz, 2011, p. 153), and a diversion from shared concerns for the welfare of students.

Although strength interventions have more recently been used in schools, most of the research has been conducted with the general population or university students. Much less is known about the effects of strength interventions on children or whether particular adult character strength interventions will work with children or in a school setting (Quinlan et al., 2012).

**Positive Psychology and Character Development**

Positive psychology, the exploration of “what makes life worth living and building the enabling conditions of a life worth living” (Seligman, 2012, p. 2), has been studied for a little over a decade and has seen the development of many school interventions that positively affect student behavior and character. The study of the conditions that promote or motivate happiness is nothing new (Jahoda, 1958; Maslow, 1943). However, psychological interventions have traditionally focused on mental illness versus mental wellness (Keyes, 2002; Sheldon & Lyubomirsky, 2006). It remains important to note that positive psychology does not intonate that the rest of psychology is negative, simply that this realm focuses on how to increase positive emotion, character, and institutions (Gable & Haidt, 2005; Linley, Joseph, Harrington, & Wood, 2006).

Some have made a call for intentional well-being programs in schools (Veenhoven, 2004; Wolk, 2008). Research has demonstrated that such programs can be
effective and include many benefits. “There is substantial evidence from well-controlled studies that skills increasing resilience, positive emotion, engagement, and meaning can be taught to schoolchildren” (Seligman et al., 2009, p. 293). Seligman et al. concluded that well-being (via positive psychology interventions) should be taught as an antidote to depression, to increase life satisfaction, and to aid better learning and creative thinking. The efficacy of many positive activities for improving well-being, including expressing appreciation (including many studies on gratitude), have been tested empirically and shown to predict student success in multiple ways (Lyubomirsky et al., 2011; Lyubomirsky & Layous, 2013; O'Grady, 2013; Seligman et al., 2005b; Sin & Lyubomirsky, 2009), including aiding self-control, coping ability, prosocial abilities, increased hope, zest, integrity, self-discipline, and love of learning (Duckworth & Seligman, 2005; Lyubomirsky, Sheldon, & Schkade, 2005; Park et al., 2004), subsequently leading to increased academic achievement (Duckworth & Seligman, 2005; Seligman, 2012; Seligman et al., 2009). Moreover, studies have only begun to determine how increases in happiness and subjective well-being might be sustained (Cohn & Fredrickson, 2010; Jose, Lim, & Bryant, 2012; Schueller & Seligman, 2010; Sheldon & Lyubomirsky, 2006; Sin & Lyubomirsky, 2009).

**Appreciation**

Several empirical studies have demonstrated the relationship between appreciation and desirable outcomes. Increasing appreciation has resulted in increasing subjective well-being (Adler & Fagley, 2005; Emmons & McCullough, 2003; Fagley, 2012; Polak & McCullough, 2006). In a two-week experiment with two control groups (placebo and no treatment), 221 students recalled things in their life for which they were
grateful (note: this study therefore measured appreciation). Results demonstrated that students improved life satisfaction and satisfaction with their school experience at both post-intervention and after a three week follow-up (Froh et al., 2008). This study had a shortcoming in that the placebo group looked at daily hassles versus a more neutral control, such as daily events. Research has also shown that individual differences in appreciation are positively related to life satisfaction and positive affect (happiness), after controlling for gender, age, ethnicity, the Big 5 personality traits (agreeableness, conscientiousness, extraversion, neuroticism, openness), and gratitude (Fagley, 2012).

**Appreciation versus gratitude.** Appreciation has been defined to include both cognition and affect, as “acknowledging the value and meaning of something—an event, a person, a behavior, an object—and feeling a positive emotional connection to it” (Adler & Fagley, 2005, p. 81). Fagley (2012) posited that the construct of appreciation includes eight aspects that may contribute to subjective well-being:

- awe (feeling wonder or connection to beauty, nature, or life itself)
- gratitude (feeling gratitude to others for help, gifts, or benefits)
- having focus (focusing on what one has rather than what one lacks)
- the interpersonal (noticing and valuing how relationships contribute to one’s life and well-being, and expressing this—in explanation, being grateful *for* someone as opposed to being grateful *to* someone, which is gratitude)
- loss/adversity (using loss or adversity to increase appreciation—such as reminders about dying that have been shown to increase appreciation (Frias, Watkins, Webber, & Froh, 2011)
- present moment (engaging in mindful awareness of the present moment)
• self/social comparison (using the self/social comparison to foster appreciation, such as one comparing a current job to one’s previous job, or a peer’s previous job).

• ritual (engaging in rituals to foster appreciation)

Gratitude thus refers to noticing a benefit received and feeling grateful to someone for it; thus, in this light, much of the research literature has inappropriately labeled appreciation construct items as gratitude and vice versa (Fagley, 2012). Gratitude has also been defined as a grateful emotion directed toward someone for the benefits, or perceived benefits they have bestowed (Fredrickson, 2004; Wood, Maltby, Stewart, & Joseph, 2008). Another suggested term for gratitude in a broader sense has been generalized gratitude (Lambert, Graham, & Fincham, 2009); however, in this study, the term appreciation was used as a construct for the eight aspects, as described above.

Peterson and Seligman’s (2004) character strengths maintain gratitude as a separate construct from that of appreciation of beauty and nature. Most research to date in this area has concentrated on gratitude (Emmons & McCullough, 2003; Froh, et al., 2008; Froh, Yurkewicz, & Kashdan, 2009), but has used the term as an indicator of something closer to “a worldview orientated towards noticing and appreciating the positive in life” (Wood, Joseph, & Maltby, 2009, p. 443). This study used appreciation in its broader construct as described above, and the appreciation exercise kept the questions in broad terms, thus capturing both what Park et al. (2004) and Peterson and Seligman (2004) described as appreciation of beauty and excellence as well as gratitude.
Modern Character Strength Interventions and Outcomes

Many more recent interventions have been used to improve happiness and well-being. Researchers have had people count their blessings (Emmons & McCullough, 2003; Froh et al., 2008; Lyubomirsky et al., 2005; Seligman et al., 2005a), write gratitude letters (Boehm, Lyubomirsky, & Sheldon, 2012; Lyubomirsky et al., 2011; Peterson, Park, & Seligman, 2005), perform kind acts (Della Porta, 2012; Lyubomirsky et al., 2005; Sheldon & Lyubomirsky, 2012), cultivate their strengths (Biswas-Diener, Kashdan, & Minhas, 2011; Park & Peterson, 2006a, 2009b; Proctor, Maltby, & Linley, 2011; Proctor, Tsukayama, et al., 2011; Quinlan et al., 2012; Seligman et al., 2005b; Snyder et al., 2010), use visualization of their ideal selves (Boehm et al., 2012; Boyatzis & Akrivou, 2006; Layous, Nelson, & Lyubomirsky, 2012), and use meditation (Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008; Fredrickson & Losada, 2005). Using a Swiss sample of 334 adults, Buschor, Proyer, and Ruch (2013) found that character strengths, such as gratitude, play a key role with well-being in general, and life satisfaction in particular.

Positive education programming, which heavily involves character strengths assessment and intervention, led to improved student school skills and greater student enjoyment and engagement in school, such as improved curiosity, love of learning, and creativity (Seligman et al., 2009). Park and Peterson (2009a) found that perseverance, love, gratitude, and hope predicted academic achievement in middle school students. Also, after controlling for IQ, the strengths of fairness, gratitude (appreciation), honesty, hope, perseverance (sustained effort), and perspective predicted GPA (Park & Peterson, 2008). These results suggested that intentionally working on appreciation and integrity
(as related to honesty and sustained effort) would both improve academic achievement, as a welcome side benefit. Moreover, appreciation journaling can be easily administered and requires relatively little time and negligible fiscal requirements. Among the VIA strengths, gratitude (used in the general sense, i.e. appreciation) was found to be among the strongest predictors of life satisfaction (Park et al., 2004); this supports the assertion that appreciation, and transcendence strengths in general, lead to increased life satisfaction, and thus increased SWB. Indeed, in a very recent study examining strength factors, transcendence strengths proved to be the strongest predictor of subjective well-being, both life satisfaction and positive affect (Weber, Ruch, Littman-Ovadia, Lavy, & Gai, 2013). Adolescents who counted blessings, a form of appreciation as previously discussed, reported greater life satisfaction, less negative affect, and fewer physical health issues (Froh et al., 2008).

As part of their positive psychology program used at Geelong Grammar School in Australia, Martin Seligman and colleagues used the *Three Good Things* exercise (Seligman et al., 2009), having students write down three good things that happened each day for a week. The students followed each answer with a reflection on why this good thing happened, or what it meant to them, or how they could increase the likelihood of this good thing occurring again in the future. Results indicated that participants were happier and less distressed as much as six months later (Seligman et al., 2005b).

People who practice the virtue of transcendence, and appreciation/gratefulness in particular, have reported not only higher mood, life satisfaction, optimism, and academic achievement, but also higher vitality, spirituality, less depressions, and less envy (McCullough, Kimeldorf, & Cohen, 2008).
Integrity

Peterson and Seligman (2004) used the definition of integrity meaning “wholeness, soundness, untouched, whole, and entire” while also presenting their own behavioral criteria, including “a regular pattern of behavior that is consistent with espoused values” (p. 250). They went on to differentiate integrity from honesty (factual truthfulness and interpersonal sincerity) and authenticity (emotional genuineness and psychological depth) (Peterson & Seligman, 2004). Those who act in integrity, as defined above, have been shown to be viewed as more authentic (Robinson, Johnson, & Shields, 1995). Those who feel more authentic have reported greater emotional well-being (Sheldon, Ryan, Rawsthorne, & Ilardi, 1997) and produce fewer negative feelings and distress in others (Van Hecke, 2010). Meanwhile, according to self-determination theory (Ryan & Deci, 2000), when individuals act autonomously, they act authentically, and feel their behavior is internally caused. Subsequently, acting autonomously has been linked to well-being (Deci & Ryan, 2008) and thus it would ostensibly follow that acting with integrity leads to well-being, mediated by authenticity and autonomy. Indeed, research looking at Peterson and Seligman’s model of integrity has demonstrated a statistically significant correlation between integrity and well-being, though with relatively small outcomes as compared to other character strengths (Peterson et al., 2007). Although there is extensive research on normative models of integrity (judgmental models citing ethical or moral aims) (Berkowitz, 2011; Berkowitz & Bier, 2004, 2005a, 2007; Davidson et al., 2008; Howard et al., 2004; Lickona, 2001, 2004), there is little on positive models of integrity described by Peterson and Seligman’s original definition.
above (wholeness, completeness); however, promising new positive models of integrity have been developed.

**Behavioral integrity.** Certain performance character strength interventions (versus moral character interventions) have also led to moral behavior, thus skirting the parent-sensitive issue of whose values are being taught. Simons’ (2002) behavioral integrity (BI) construct, or simply the perceived alignment between one’s actions and one’s words, intentionally divorces itself from morality. BI has directly correlated with increased follower trust and satisfaction with a leader, subsequently correlating with practically significant increases in performance and organizational citizenship (helping) behaviors (Dineen, Lewicki, & Tomlinson, 2006; Palanski & Yammarino, 2011; Simons, Friedman, Liu, & Parks, 2007). Palanski and Yammarino (2011) found that followers’ behavioral integrity was directly related to inter-relational trust and performance. In addition, BI positively related to life satisfaction and negatively related to stress, poor health, and absenteeism (Prottas, 2008). Operating with behavioral integrity has shown great results in the business world and holds great promise if implemented in education; yet, another positive integrity construct appears to provide even stronger effects.

**The new model of integrity.** The New Paradigm of Performance (Erhard, Jensen, & Group, 2010; Erhard et al., 2006) includes the new model of integrity (NMI). Integrity constructs have usually aligned with “do not lie, cheat, or steal” (moral character). Lacking a consistent and distinct meaning for integrity, morality, and ethics, Erhard et al. (2006) created a positive (versus normative) model of integrity, aligned with performance character, based on honoring one’s word, or maintaining the wholeness or completeness of one’s word. Honoring one’s word takes behavioral integrity a step further—in
addition to keeping one’s word (and not giving one’s word unless one can keep it and intends to do so), one must confess to and fix any issues that arise from not keeping one’s word (which should only happen due to a higher commitment). The new model of integrity promises a strong increase in performance along with the benefit that this positive construct leads to ethical behavior—in explanation, applying the NMI provides a values-free approach to values with honesty, trust, effort, and performance all ostensibly improving (Erhard, Jensen, & Group, 2010; Erhard et al., 2006; Erhard, Jensen, et al., 2010b). Meanwhile, the most effective school communities have included trusting relationships between teachers, students, parents, staff, and community (J. Cohen, 2012). With keeping/honoring one’s word key to building this trust, BI or NMI would ostensibly lead to moral character. Such character strength interventions could avoid the values debate inherent with moral character programs. The current study will use integrity as a positive virtue versus the integrity constructs used in previous research; previous research has used moral elements in the construct, with survey questions such as “my life is guided and given meaning by my code of values” (Peterson & Seligman, 2004, p. 250). Again, the new model of integrity provides a means of increasing honesty, trust, effort, performance, and perhaps well-being and prosocial behavior, without stirring up debate about such values-laden approaches.

**Integrity and moral character development.** Moral character development can be accessed through traditional character education and has shown excellent promise. Many research-based character education programs have addressed moral character development (Berkowitz, 2011; Berkowitz & Bier, 2005b; Haynes & Berkowitz, 2007). Berkowitz and Bier (2007) validated that many of these complete programs have peer-
reviewed studies that support their effectiveness. Most of these programs included a combination of moral and performance character interventions. The current study concentrated on the effects of performance character interventions.

Traditional character education programs have correlated with better sociomoral cognition, prosocial behaviors and attitudes, problem-solving skills, reduced drug use, reduced violence/aggression, emotional competency, academic achievement, attachment to school, decreased general misbehavior (Benninga et al., 2003; Berkowitz & Bier, 2005b), with many character education programs having also led to increased academic achievement (Benninga et al., 2003). Although the current study may appear threatened by the lack of moral performance character, the integrity exercise will provide, as described by Erhard et al. (2006), a values-free approach to values (i.e. providing moral character benefits without specifically or primarily targeting morality).

**Theoretical Frameworks**

Three theories guided this study: Mezirow’s (2000) theory of transformational learning, Ford and Ford’s (1995) work on how conversations produce change, and Ryan and Deci’s (2000) research on self-determination theory. Although self-determination theory has been commonly used in character research, character strength studies to date have not utilized either Mezirow’s or Ford and Ford’s frameworks. These theories offer insight into the conversations and learning process necessary to produce a desired change in character, in this case higher levels of emotional well-being, effort, attitude, and prosocial behavior.

**Transformational learning theory.** Mezirow (2000) described a frame of reference as a structure of assumptions and expectations through which we filter our
impressions. A frame of reference includes a habit of mind and its resulting points of view. Mezirow described a habit of mind, which includes a set of assumptions that filter our interpretations and meaning-making. Examples include norms, customs, moral norms, learning styles, religious doctrine or transcendental world views, self-concepts, values, judgments, and tastes. A habit of mind gets expressed as a point of view, specific expectations, beliefs, feelings, attitudes, and judgments that shape and limit how we see the world and predispose our intentions, expectations, and purposes. Put together, these habits of mind and resultant points of view make up our frames of reference (Mezirow, 2000). Examples of frames of reference might be our most guarded beliefs about ourselves or the world, perhaps that we are intelligent or ignorant, right or wrong about a particular thing, a winner or a loser, or good or bad.

In transformative learning, we seek to reflect on our frames of reference, our assumptions, beliefs, and unexamined biases and become aware of our context of interpretations and beliefs such that in distinguishing them (versus allowing them to remain hidden from our consciousness), we are able to reconstruct them (Erhard, Jensen, & Group, 2010; Mezirow, 2000). As Mezirow (2000) pointed out, learning occurs in one of four ways through this model: by elaborating existing frames of reference, learning new frames, transforming points of view, or transforming habits of mind. In working with middle school adolescents, this study’s interventions will concentrate on the latter construct above—transforming habits of mind. Given the liminal state of adolescents, this period of learning will provide a strong opportunity to transform and develop positive habits that increase well-being and performance long term.
Transformations in students may be the result of what Mezirow (2000) called affective interaction or mindless assimilation (as in uncritically “trying on” another’s way of thinking). During the appreciation and honoring your word interventions, students will “try on” new habitual ways of thinking. Students may achieve improved emotional well-being and other desired outcomes without going through Mezirow’s entire process. Perhaps they will not require the dilemma Mezirow describes below, but the integrity intervention will provide a daily opportunity for students to process the dilemma of their behavioral discrepancies, or rather the theory of their way of being, and how they actually behave. Ultimately, this study will assume that transformations follow some variation (and at least some subset) of the following framework by Mezirow. Although students may not go through every step, this framework will guide this study’s research goals, questions, and implications as noted.

10 Steps of Mezirow’s Transformational Learning Process

1. Experiencing a disorienting dilemma

Students who improved their well-being, effort, attitude, or prosocial behavior may or may not have had a dilemma, or a significant personal event, an acute internal and personal crisis (Mezirow, 2000). In his definition, Mezirow also includes “indefinite periods in which the persons consciously or unconsciously search for something which is missing in their life” (p. 299). The integrity intervention in particular provided an opportunity for students to identify and deal with the mess created from not keeping or honoring their word. This step may have also played a role in the appreciation exercise, as students may have “wanted” to feel ill-will yet found they had a lot to appreciate.
2. Self-examining one’s feelings of fear, anger, guilt, or shame

Both interventions provided opportunities to reflect positively or optimistically on challenging feelings.

3. Critically assessing one’s assumptions

Students had the opportunity to address their assumptions.

4. Recognizing that one’s discontent and the process of transformation are shared

This step may not have applied to this study. However, theoretically (students were not asked), students may have recognized that they share a lot of experiences for which they can be content versus discontent.

5. Exploring options for new roles, relationships, and actions

Both interventions provided this opportunity.

6. Planning a course of action

The integrity exercise asked students to do this.

7. Acquiring knowledge and skills for implementing one’s plans

Neither intervention directly asked for this, though the integrity exercise provided an opportunity for students to choose such a plan.

8. Provisional trying of new roles

Both studies invited students to think and act differently, practicing the associated virtues and strengths.

9. Building competence and self-confidence in new roles and relationships

In addition to both studies having students practice the associated virtues and strengths, the study occurred over 4 weeks, allowing for competence and self-confidence to grow.
10. Reintegrating into one’s life on the basis of conditions dictated by one’s new perspective

If the Aristotelian methodology of this study worked, the students would demonstrate continued (habitual) increased appreciation and integrity for long term. As described in the literature review, previous character strength research has shown long term effects. Note: effects lasting longer than four weeks were not measured.

**Conversations for change.** Character development requires conversation, whether in internal conversation or interpersonal conversation; and, conversations for change are required to produce an intentional positive change (Ford & Ford, 1995), or rather a positive change in character strength with this current study. Ford and Ford (1995, p. 543) argued that four conversations drive change.

- **Initial conversations (starting a change):** What could/should be done?
- **Conversations to gain understanding:** Claims, evidence, testimony, beliefs, feelings, sense-making discussed; conditions of change are determined.
- **Conversations to produce performance:** Requests are made; promises to produce results are made; the focus is producing the result via action.
- **Conversations to produce closure:** Participants make assertions or declarations that the process for change is complete, with regrets or congratulations.

This theoretical framework sheds light on the need for conversations of performance, and this guided intervention wording. In both exercises, conversation for change theory guided the use of committed language.
**Self-determination theory.** With self-determination theory (SDT), Deci and Ryan (2008; 2000) established that people have an underlying psychological need for autonomy, competence, and relatedness. Satisfaction of these needs promoted intrinsic motivation and emotional well-being, and also facilitated engagement and effort in both adults and in children as young as eight or nine (Ryan & Deci, 2000; Veronneau, Koestner, & Abela, 2005).

Seligman et al. (2005b) believed that strength interventions must be used, that merely identifying strengths did little to nothing to develop virtue. Indeed, Govindji and Linley (2007) and Proctor et al. (2011) found that one’s knowledge of strengths did not predict SWB, yet the use of strengths did predict SWB. Meanwhile, an intervention in which participants used expressions of gratitude found that participants increased self-reported autonomy and relatedness, in turn leading to increased life satisfaction (Boehm et al., 2012).

Boehm et al. (2012) have called for more research to determine whether competence mediates or otherwise affects the relationship between appreciation and well-being. The current study used interventions that target the other two aspects of SDT. As noted earlier, appreciation journaling targeted both autonomy and relatedness. The integrity exercise targeted both of these constructs as well. In practicing honoring their word, students may have learned to act autonomously in a more effective way. Moreover, per the new model of integrity’s theoretical underpinnings (Erhard et al., 2006), in honoring their word in social relations, students may have worked towards improving trust and positive relations.
This study used interventions that indirectly targeted the development of autonomy and relatedness in each student. Students were asked to take care of issues themselves versus asking another (thus, working on autonomy), and also were asked to create communication with others as necessary, to make relationships whole or complete if needed (thus, working on relatedness). While SDT guided intervention construction and use, care was taken not to undermine either intervention’s primary purpose—simply developing transcendence and courage, and the associated character strengths for each.

Positive (Non-Judgmental) Integrity Interventions: Behavioral Integrity and the New Model of Integrity

A search of research databases found no published research using either BI or the NMI with students. Although BI research has been sparse compared to other integrity research, strong relationships between BI and desirable outcomes have been established, albeit in the business environment rather than the academic environment. A meta-analysis on the effects of perceived leader BI on follower attitudes found a strong positive relationship \( r = .48, p < .001 \) between leader BI and the following outcomes: job satisfaction, organizational commitment, satisfaction with leader, and affect toward the organization (Davis & Rothstein, 2006). The link to satisfaction and positive affect could potentially be replicated within a school. Another study found significant results for life satisfaction, stress, and health (Prottas, 2008). The original author of the BI construct, Simons, found that BI has led to increased trust, satisfaction, and organizational performance (Simons, 1999, 2002; Simons et al., 2007; Simons & Peterson, 2000). Meanwhile, there has been no known peer-reviewed, published research testing the
efficacy of the new model of integrity. Moreover, this study constituted the first known experiment to gather data using the new model of integrity in an adolescent sample.

**How the new model of integrity should work.** This positive model of integrity aligns with performance character strength interventions as it concentrates on the non-judgmental realm of human behavior. The following section of the literature review explains the underpinnings and model of integrity created by Erhard, Jensen, and Zaffron (2006).

In reviewing various definitions of integrity, the authors found that there was confusion and confounding between integrity, morality, and ethics, ultimately deciding that morality and ethics fall into the virtue realm as phenomena that deal with the normative standards of right and wrong, desirable and undesirable, and good and bad (Erhard et al., 2006). So, while morality, ethics, and legality fall into this normative realm, the authors delineated integrity in the positive, non-judgmental realm. The authors chose a particular *Webster’s Dictionary* definition as aligning with their positive model, defining integrity as “a state or condition of being whole, complete, unbroken, unimpaired, sound, perfect condition” (Erhard, Jensen, & Zaffron, 2010, p. 19), and “whole and complete” will heretofore stand for this definition.

Using this definition, when an object or system has integrity, it must be whole and complete. Using a bicycle wheel as an example, the authors noted that removing any spokes from the wheel diminishes wholeness and completeness, and hence the integrity of the wheel (Erhard et al., 2006). Next, the authors defined workability as “the state or condition that determines the available opportunity for performance (the opportunity set)” and noted that as the integrity of this hypothetical wheel is diminished, the wheel
becomes less and less workable until at some point it fails (Erhard et al., p. 40). Erhard et al. then noted that a simple rule follows: As integrity declines, workability declines and the opportunity for performance (the opportunity set) declines. Hence, as integrity declines, the opportunity set of performance becomes more limited. So what is performance in this model?

Erhard et al. (2010) used the term performance in a broad sense, leaving the definition and measure up to individuals or organizations. For the purposes of this study, the authors noted that for individuals, performance might be the following: happiness, the quality of one’s life, or being whole and complete as a person. To reiterate, the cascade that occurs when something or someone is out of integrity, any diminution of integrity (being whole and complete) “is a diminution of workability, and any diminution of workability is a diminution of performance;” thus, integrity remains a necessary condition for maximum performance (though not sufficient) (Erhard, Jensen, & Zaffron, 2010, p. 6). Erhard et al. (2010) cited their associated “Ontological Law of Integrity: To the degree that integrity is diminished, the opportunity for performance (the opportunity set) is diminished” (2010, p. 7).

As previously discussed in the introduction, integrity for an individual remains simply a matter of that person’s word. Moreover, for a person to have integrity, his or her word must be whole, complete, unbroken, unimpaired, sound, or of perfect condition; and in the new model of integrity, this is achieved by honoring one’s word, whether one’s word is to oneself (i.e. making a promise to oneself, or comment about the way one is) or one’s word is to others (Erhard et al., 2006).
Erhard et al. (2006, p. 52) defined a person’s word as the following (note: the following definitions were written verbatim, as the authors cited being very specific about the meaning and placement of every word and phrase):

1. What you said: Whatever you have said you will do or will not do, and in the case of do, by when you said you would do it.

2. What you know: Whatever you know to do or know not to do, and in the case of do, doing it as you know it is meant to be done and doing it on time, unless you have explicitly said to the contrary.

3. What is expected: Whatever you are expected to do or not do (even when not explicitly expressed), and in the case of do, doing it on time, unless you have explicitly said to the contrary.

4. What you say is so: Whenever you have given your word to others as to the existence of something or some state of the world, your word includes being wiling to be held accountable that the others would find your evidence for what you have asserted also makes what you have asserted valid for themselves.

5. What you stand for: What you stand for is fundamental to who you are for yourself and who you are for others. What you stand for is a declaration constituted by 1) who you hold yourself to be for yourself as that for which you can be counted on from yourself (whether specifically articulated by you or not), and 2) who you hold yourself out to be for others as that for which you can be counted on by others (or have allowed others to believe as that for which you can be counted on).
6. Moral, ethical, and legal standards: The social moral standards, the group ethical standards and the governmental legal standards of right and wrong, good and bad behavior, in the society, groups and state in which one enjoys the benefits of membership are also part of one’s word (what one is expected to do) unless a) one has explicitly and publicly expressed an intention to not keep one or more of these standards, and b) one is willing to bear the costs of refusing to conform to these standards (the rules of the game one is in). (p. 52)

Noting the definition of a person’s word as stated by Erhard et al. (2006) and that integrity is honoring one’s word, what does integrity mean for a person, or in the case of this study, for an adolescent student?

As stated above, integrity for a person is honoring one’s word. Erhard et al. (2010) defined honoring one’s word as the following (underlining and syntax by the authors):

1. Keeping your word (and on time),

   And, whenever you will not be keeping your word:

2. Just as soon as you become aware that you will not be keeping your word

   (including not keeping your word on time) saying to everyone impacted

   a. That you will not be keeping your word, and

   b. That you will keep that word in the future, and by when, or that you will not be keeping that word at all, and

   c. What you will do to deal with the impact on others of the failure to keep your word (or to keep it on time). (p. 51)
With the model above, it remains impossible to always keep one’s word. As Erhard et al. (2010) noted:

Unless you are playing a small game in life, you will not always keep your word. However, it is always possible to honor your word. In other words, a person can always be in integrity with the model—one cannot “do” whole and complete, but one can always honor his or her word, leaving him or her whole and complete (Erhard et al., 2006). Moreover, while one can maintain a normative judgment about this model (making it right or wrong, good or bad), Erhard et al. (2010) pointed out that the consequences of honoring or not honoring one’s word remain independent of this judgment; the closer to integrity one operates, the larger the opportunity set for performance that will be available, with no limits (here, integrity is a mountain with “no top”) (p. 17).

If one never gives his or her word unless he or she intends to keep his or her word, this person of integrity will face a challenge when confronted with being unable to keep his or her word or when doing so would be inappropriate. Faced with such a challenge, even people committed to integrity often engage in out-of-integrity behavior such as avoidance, explaining, or in some way attempting to counter-balance failing to keep his or her word such as lying, implementing a cover-up, or blaming others (Erhard, Jensen, & Zaffron, 2010). The authors pointed out the high costs of such behavior, to include losing trust, decreasing happiness, decreasing the quality of one’s life, and being less than whole and complete, just as Simons (2002) pointed out the cost of being out of word-deed alignment (out of behavioral integrity). The new model of integrity solves this
paradoxical behavior (*if* one applies it). However, when one fails to honor one’s word, the true source of these costs usually remains hidden, and the authors called this the veil of invisibility.

Factors that conceal the impact of out-of-integrity behavior comprise this veil and include the following (note: not verbatim) (Erhard, Jensen, & Group, 2010):

- As a moral virtue instead of a necessary condition for performance, integrity is easily sacrificed when it appears this sacrifice is needed for the person or the organization to succeed. The challenge is that virtue is valued only to the degree that it engenders the admiration of others, and sacrificing it is like sacrificing courteousness.
- People are usually unaware that they have not kept their word. All they see is the excuse, or reason for not keeping their word.
- The belief that integrity is keeping one’s word leaves one unable to maintain integrity when a competing commitment makes this not possible (or when it is inappropriate to keep one’s word, or one simply chooses not to keep one’s word). This leads to concealing the violation of one’s word.
- When failing to keep one’s word, and confessing and solving any issues that result is perceived as a threat, most people choose the short term gain of hiding that they will not keep their word.
- Moral models of integrity are not seen as factors of performance or production; this leads people to make up unfounded rationalizations as to the source or sources of failure.
• People usually do not see giving their word as “I will do this,” instead intending to keep their word (mere sincerity). Using this model, to be in integrity, any cost/benefit analysis must occur before giving one’s word. When performing a cost/benefit analysis after giving one’s word, this is out of the new model of integrity.

• People almost always apply a cost/benefit analysis before honoring their word; this virtually guarantees they will be out of integrity.

Bitner, Booms, and Tetreault (1990), in a business study, were surprised to find that over 23% of highly satisfactory customer encounters involved a service failure, where the service provider subsequently honored their word.

**Outcome Measures**

**Emotional well-being.** Subjective well-being has been used since the 1950s as a way of measuring one’s quality of life (Land et al., 2001), with life satisfaction and happiness being emphasized as components of life quality soon thereafter (Bradburn, 1969; Cantril, 1965). With happiness viewed as the more immediate balance between one’s positive affect and negative affect (Bradburn, 1969), life satisfaction is considered the long-term assessment of one’s life. Subjective emotional well-being thus includes both a person’s cognitive and affective evaluations of his or her life (Layard, 2010). Although Diener et al. (2009) suggested that any new well-being measure include a more 360 degree view, to include self-report, informant reports, biological measures, and cognitive measures, and although Diener et al. also lament the lack of longitudinal research findings, subjective well-being measures have successfully been linked to a variety of antecedents and outcomes in the educational realm, including academic
achievement. Such positive outcomes have been aided by positive psychology and new ways of looking at well-being.

Keyes (2002) created a model and measure of well-being that fit the eudemonic tradition, incorporating emotional life (life satisfaction and positive affect), psychological life (individual functioning and realizing potential), and social life (including both the circumstances of and functioning in society), as well as the absence of mental illness. In his study of 3,032 American adults, Keyes found that mental health and mental illness constituted separate dimensions. Positive psychology addresses this difference, as flourishing consists of more than the absence of mental dysfunction (Keyes, 2007). Indeed, with adolescents, the absence of serious behavioral, emotional, or psychological problems does not mean they are flourishing, or thriving (Benson & Scales, 2009). Moreover, increasing well-being may prevent future mental illness. It may also benefit individuals in other ways. In a sample of 816 American adolescents, researchers found that adolescents who reported high life satisfaction had less chance of developing behavioral problems following a stressful event (Proctor, Linley, & Maltby, 2009). In another study of 397 adolescents, students with higher flourishing in non-academic realms reported higher self-control, lower procrastination, and higher academic achievement (Howell, 2009). Thus, research into how to improve adolescent thriving remains important.

Lyobomirsky, Sheldon, and Schkade (2005) proposed that genetics (50% of variation), uncontrollable life circumstances (10% of variation), and intentional activities (40% of variation) contribute to happiness. As we can only control our intentional activities, the authors argued for concentrating research efforts on intentional
interventions as a viable method for increasing and sustaining happiness. Sin and Lyubomirsky (2009), in a meta-analysis of 49 independent studies of positive interventions with 4,234 participants, found that intentional positive activities enhanced well-being ($r = 0.29$).

**Measuring life satisfaction.** Diener, Lucas, and Oishi (2010) provided an excellent review of measurement devices, noting that traditional life satisfaction measures usually used a single-item survey. Validity and reliability have always remained a concern with all SWB measures; after all, people might report that they are happy though they are not truly experiencing relatively high SWB (Diener, 2009). Thomas and Diener (1990) found a moderate match of measured mood and subjects’ recall of mood. Likewise, current affect may also influence the measured level of life satisfaction with LS potentially shifting depending on what is salient at the moment (Diener, Suh, Lucas, & Smith, 1999). Despite these limitations, a relatively new life satisfaction for children scale has demonstrated good validity and reliability; Gadermann et al.’s (2010) Life Scale for Children (SWLS-C) is an adaptation of the Satisfaction With Life Scale (SWLS), a 5-item scale assessing global life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985). The SWLS-C has been shown to be psychometrically sound with good validity in a sample of fourth to seventh graders (Gadermann et al., 2010). This dissertation study used the SWLS-C with a 6-point Likert scale (see Appendix A).

**Perceived attitude and effort.** The term attitude refers to the predisposition to evaluate an entity or object in a favorable or unfavorable manner (Crano & Prislin, 2008), while effort, in this study, will refer to mental exertion.
Historically, there has been little vigilance devoted to the design of instruments testing the subjective attitudes and effort of children towards school and achievement, with more rigorous scales being devoted to psychological measures of intrinsic and extrinsic motivation (Dweck, 2006; George, 2000; McKenna & Kear, 1990; Vallerand et al., 1992). Attitudes have been assessed since the earlier 1900s, with most work since the 1960s, but few authors have detailed the design of their scales for children (Bending & Hughes, 1954; Krynowsky, 1988; Misiti, Shrigley, & Hanson, 1991; Remmers, 1928). Though a literature search found there have been more than 100 attitude constructs developed over the years (Crano & Prislin, 2008), most studies using effort or attitude created their own survey questions, with example attitude questions being, “I like science,” or “I enjoy science” (George, 2000), and example questions regarding school attitude and effort being, “I do my best in school,” or “I try harder if I get bad grades” or “How do you feel about school?” (George, 2000; McKenna & Kear, 1990), with subsequent exploratory or confirmatory factor analysis then used to delineate effort or attitude constructs.

As previously discussed, courage and transcendence character strength exercises should theoretically increase academic performance, with autonomy mediating the process. Not surprisingly, many attitude and effort measures ask questions aligned with autonomy; the School Attitude Assessment Survey—Revised (SAAS-R) contains a large number of questions about student autonomy, as well as outright effort and attitude towards school and schoolwork (McCoach & Siegle, 2003); questions include “I am a responsible student,” “I complete my homework regularly,” “I want to do my best in school,” “It is important for me to do well in school,” “I work hard at school,” “I am self-
motivated to do my schoolwork,” and “I put a lot of effort into my schoolwork” (McCoach & Siegle, 2003). More autonomous, self-regulated learners exert increased effort with a better attitude leading to greater academic performance and achievement (Pintrich & Schunk, 2002).

Meanwhile, previous studies have successfully measured effort with as few as 2-item surveys with questions on English, mathematics, social studies, and science, such as “How often do you really try in each of these classes?” and “How often do you really pay attention during each of these classes?” (Ajzen & Cote, 2008; Schwarz, 2008). Researchers have been urged to write clear and simple questions with unambiguous terms (Sudman & Bradburn, 2012).

**Prosocial behavior.** Prosocial behavior is defined as voluntary actions that are intended to benefit another individual or group (Eisenberg & Mussen, 1989). Prosocial behavior can be acquired, and thus can be modified; theoretically educators can find ways to improve prosocial behavior and thereby improve the human condition and general welfare of society (Eisenberg & Mussen, 1989).

Through one theoretical lens of this study, self-determination theory posits that increasing the degree to which a prosocial act is autonomous affects the degree of increase of well-being (Deci & Ryan, 2008). In a review of four studies on prosocial behavior, Weinstein & Ryan (2010) noted that these studies’ findings all support autonomous motivation yielding greater benefits for both the helper and recipient through greater psychological need satisfaction. Given that both the appreciation and integrity exercises should thus theoretically increase autonomy, prosocial behavior will be thus
measured as a potential desired outcome of this increased autonomy (a theoretical, unmeasured mediating variable—see Figure 3).

**Figure 3.** Research model

Previous studies have successfully used shorter surveys. In a study on counting blessings (Froh et al., 2008), researchers used the following two yes/no questions: (a) “Have you helped someone with a problem since yesterday?,” and (b) “Have you offered someone emotional support since yesterday?” Similar items were used by Emmons and McCullough (2003).

**Trust as a mediating variable.** “There is no single variable which so thoroughly influences interpersonal and group behavior as does trust” (Cook & Wall, 1980, p. 39). “Lack of trust is a serious impediment to many of the reforms taking shape in American schools” (Tschannen-Moran & Hoy, 2000, p. 548). Trust increases open communication between people and within a school, with increases in trust creating more willingness to share accurate, relevant, and complete thoughts, feelings, and ideas (Kramer, 1999).

Trust has been defined as a cognitive and affective measure or evaluation of another person’s alignment with expected prosocial and predictable behavior (Berkowitz, 2011; Lickona, 2012). Trust among school adults has been found to be critical to school
success (Bryck & Schneider, 2002). Moreover, trust has been found to be a critical mediator between increasing strengths associated with the courage virtue (positive integrity models) and improved performance (Erhard, Jensen, & Group, 2010; Simons, 2002). Increased trust in the classroom has been shown to yield both psychological and performance benefits for students (Bryck & Schneider, 2002).

Based on the student trust research of Ghosh, Whipple, and Bryan (2001), the following model of the relationship between the interventions (independent variables), trust (mediating variable), and desirable outcomes (dependent variables) informed this study.

*Figure 4. Trust as a mediator*

*Student propensity to take risk, and perception of risk, were accounted for using fixed effects and removed from the study model.*

As noted by Snyder et al. (2010), teachers must avoid becoming cynical or critical of students lest they undermine trust and subsequently student effort—students would rather misbehave (i.e. avoid giving effort and suffer any associated punishment) than look stupid in front of their peers. This supports the model shown in Figure 2, specifically that increased trust leads to increased effort (or at least lack of counter-productive work).
Integrity (as defined in this study) has been shown to be highly correlated with trust (Davis & Rothstein, 2006; Dineen et al., 2006; Dirks & Skarlicki, 2004; Hooijberg, Lane, & Diverse, 2010; Leroy, Palanski, & Simons, 2012). In turn, trust has been shown to successfully mediate the relationship between leadership interventions/attitudes and desirable outcomes (Dirks & Skarlicki, 2004; Palanski & Yammarino, 2009, 2011; Simons, 2002; van Aswegen & Engelbrecht, 2009).

Early measurements of trust measured general expectancies, asking respondents about trust in society (Rotter, 1967). Trust measures have graduated over the years into generalized trust, trust in relationships, and trust of organizations (Tschannen-Moran & Hoy, 2000).

**Summary**

As described above, traditional performance character education and the positive psychology character strength interventions share common goals and means and have been shown to increase student well-being, positive moral and performance character, and achievement. Parents and educators have seen the promotion of character and well-being as an important aspect of schooling (J. Cohen, 2006). Other researchers have noted the relationship:

Academic achievement among school children is predicted by perseverance, which is hardly surprising, but also by love and gratitude, interesting findings that remind us that learning is not something that happens just within people but also something that happens between them. (Donaldson, Csikszentmihalyi, & Nakamura, 2011, p. 56)
Developing character strengths of the head (the courage virtue) and heart (the transcendence virtue) have been valued and shown to produce positive effects on children, yet stakeholders have called for more research. Choosing what intentional activities and what character strengths to target in research remains the next obvious question.

Only a small number of strength interventions have been published to date, with most of these being conducted on adults (Quinlan et al., 2012). The benefits of character strengths come from using them, versus simply identifying them (Seligman et al., 2009). Improving one’s character strength of integrity using the new model of integrity has been observed to result in multiple positive outcomes among adults (Erhard et al., 2006). Appreciation journaling has been shown to improve multiple outcomes as well (Emmons & McCullough, 2003; Fagley, 2012; Froh et al., 2008; Lyubomirsky & Layous, 2013). Despite recent calls for more research, experimental studies have remained lacking for both of these interventions among adolescents. The strengths of the “heart,” including gratitude, have been more strongly correlated with emotional well-being than the strengths of the “head,” including integrity (Park & Peterson, 2008; Park et al., 2004). This study tested this finding using an existing best practice “heart” intervention, appreciation journaling, versus a new “head” intervention, the honoring your word exercise, while additionally looking at outcomes of effort, attitude, prosocial behavior, and trust. Trust was investigated as a mediating variable.
CHAPTER III

METHODS

Research Questions

• What effect does the appreciation journaling exercise have on adolescent life satisfaction, attitude, effort, and prosocial behavior?
• What effect does practicing a positive integrity exercise have on adolescent life satisfaction, attitude, effort, and prosocial behavior?
• Does trust mediate either of these relationships?

Sample and Recruitment

This study examined data from adolescents attending a suburban middle school in the western United States. Demographic information about the sample was obtained from the parent handbook for the middle school and the Colorado Department of Education. Sample descriptive frequencies are presented in Table 1. This school was chosen for its large population (863 students) and high number of students on free and reduced lunch (lower socio-economic scale).

This study was approved by the school board of the participating school district and by the Institutional Review Board of the University of Colorado Colorado Springs. Young adolescent middle schoolers (Grades 6 through 8) were recruited to participate in this study, examining the effects of two interventions—an appreciation journaling exercise and the “honoring your word” exercise. During the 2013-2014 academic school year, student assent and parent consent forms (see Appendix C) were obtained from the students. Students completed a baseline pre-test survey (see Appendix A). Table 1 will also show the sample randomly assigned to the appreciation exercise, the ‘honoring your
word’ exercise, or to the control group. Note that age was not collected on individual surveys; as adolescence is not necessarily defined by age (P. Cohen & Cohen, 1996), it would have allowed another student identifier to be present on the study for no ostensible gain.

Table 1

*Sample Descriptives*

<table>
<thead>
<tr>
<th></th>
<th>n (percent of sample)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sex</strong></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>435 (50)</td>
</tr>
<tr>
<td>Female</td>
<td>428 (50)</td>
</tr>
<tr>
<td><strong>6th Graders</strong></td>
<td>310 (36)</td>
</tr>
<tr>
<td><strong>7th Graders</strong></td>
<td>280 (33)</td>
</tr>
<tr>
<td><strong>8th Graders</strong></td>
<td>270 (31)</td>
</tr>
<tr>
<td><strong>Free lunch/Low SES</strong></td>
<td>482 (56)</td>
</tr>
<tr>
<td><strong>Caucasian</strong></td>
<td>490 (57)</td>
</tr>
<tr>
<td><strong>Hispanic</strong></td>
<td>258 (30)</td>
</tr>
<tr>
<td><strong>African American</strong></td>
<td>95 (11)</td>
</tr>
<tr>
<td><strong>Asian</strong></td>
<td>20 (2)</td>
</tr>
<tr>
<td><strong>American Indian</strong></td>
<td>7 (1)</td>
</tr>
<tr>
<td><strong>Appreciation Exercise</strong></td>
<td>300 (35.2)</td>
</tr>
<tr>
<td><strong>Honoring Your Word Exercise</strong></td>
<td>324 (38.0)</td>
</tr>
<tr>
<td><strong>Control</strong></td>
<td>228 (26.8)</td>
</tr>
</tbody>
</table>

**Procedure**

Once the University of Colorado Colorado Springs IRB, school principal, and school district IRB approvals were obtained, eight teachers were recruited and trained on the interventions and experimental design as necessary. All teachers were trained during two sessions together. Subsequently, using an experimental design, 30 classes of middle school students (grades 6 through 8) were randomly assigned to one of three conditions.
(i.e. appreciation journaling exercise, honoring your word exercise, or control). Ten classes received the appreciation journaling exercise and ten other classes received the honoring your word exercise, with ten additional classes serving as no-treatment controls. Students filled out the pre-test before each teacher learned of random class assignments to intervention or control, to eliminate any biased treatment before the interventions began. Figure 5 provides a simple flowchart of the procedure used.

Figure 5. Experimental flow

Based on the research background in the previous chapter, the following character strength interventions were used in this study:

**Experimental intervention 1: Appreciation journaling exercise.** Based on the research described in the literature review, a reflective journaling exercise, modeled after Seligman’s *Three Good Things* (Seligman et al., 2009) was used. In Seligman’s exercise, students were asked to write down three good things that happened each day for a week.

The three things students list can be relatively small in importance (“I answered a really hard question right in Language Arts today”) or relatively large in importance (“The guy I’ve liked for months asked me
Next to each positive event listed, they write a reflection on one of the following questions: “Why did this good thing happen?” “What does this mean to you?” “How can you increase the likelihood of having more of this good thing in the future?” (Seligman et al., 2009, p. 9).

Multiple studies have used the Three Good Things exercise or something similar, alternatively called the appreciation journaling or gratitude journaling (Lyubomirsky & Layous, 2013; Seligman et al., 2005a; Snyder et al., 2010). These studies have seen enduring positive results after interventions as short as one week (Seligman et al., 2005b; Snyder et al., 2010). However, Lyobomirsky et al. (2011) suggested that the longer the intervention the better and longer lasting the results, to a degree. Given this better result, this experimental study ran for four weeks.

Exercise instructions for the various intervention groups were as follows (see Appendix B: Interventions for full instructions). Teacher training involved performing this exercise and asking questions of the researcher so that all teachers fully understood the language and could both share their understanding and their experiences with the exercise.

**Appreciation journaling exercise group instructions.** The following instructions were provided daily to the students.

Take 10 minutes and do the following:

- Write down three good things that happened to you today.
- For each event, choose at least one of the following reflections to add:
  - Why did this good thing happen to you?
  - What does this good thing mean to you?
• How can you make this good thing (or something like it) happen again?

**Experimental intervention 2: Honoring your word exercise.** An integrity intervention was developed for adolescents, based on an integrity model developed by Erhard, Jensen, and Zaffron (2006) and the integrity exercise used in the associated course they created with Granger, “Being a leader and the effective exercise of leadership: An ontological model” (Erhard, Jensen, & Granger, 2012; Erhard, Jensen, et al., 2010a).

Students were to practice only giving their word if they would keep it, and then confess and fix any resulting issues should they not be able to keep their word. Exact exercise wording is below. As with the appreciation exercise, teacher training with the new model of integrity involved performing this exercise and asking questions of the researcher so that all teachers fully understood the language and could both share their understanding and their experiences with the exercise. In addition, teachers read about the new model of integrity and met for discussion with the researcher.

**New model of integrity exercise group instructions.** The following instructions were provided to students daily:

Honoring your word is:

Keeping your word

--AND--

Whenever you will not be keeping your word, confess to anyone impacted:

1) That you will not be keeping your word *for now, or at all*, and 2) what you can/will do about it

What is Your ‘Word’?
1. What you said you would do

2. What you know you should do

3. What you are expected to do (unless you say you will not do it)

4. What you say is so (if you say all cars are pink outside, take responsibility if I look out and see they are not)

5. What you say you stand for (you stand for fairness? I expect you to be fair or confess/fix if changing your mind).

DAILY ACTIVITY:

Take 10 minutes and journal the following:

1) Where did you keep your word today/yesterday?

   Who trusts you now? (At least you do, and who else?)

2) Where did you break your word and honor your word today/yesterday? (Include how you confessed and fixed it, if able)

   Who trusts you now?

3) Where did you not keep your word and not honor your word (yet)?

   Who do you need to communicate with? Exactly when will you be in communication, and what could you do to honor your word?

4) If you can, note how ‘honoring your word’ has enhanced your performance, in or out of school.

Honoring your words leads to trust and workability. We all fail at times—it does not mean there is something wrong with you. Dust yourself off and keep climbing this mountain with no top. Remember, integrity is necessary and not sufficient for performance. Integrity leads to workability and workability leads to performance.
**Control groups.** These groups spent the 10 minutes of class working on normal schoolwork for that school period.

**Teacher Training**

Teachers read a paper on the new model of integrity and were provided additional reading on both exercises. Teachers then met with the researcher to discuss the exercises and the underlying research supporting their use. Teachers were given the opportunity to perform the exercises themselves and had the opportunity for a group discussion with the researcher to ensure full understanding and how best to lead students in their use, to include modeling and sharing their own use of the exercises. Teachers learned how to use the codebook and perform other experiment administrative tasks (consents, assents, and procedural processes). Teachers were also coached on capturing dosage data. For each day of the four-week (20 day) intervention, teachers annotated the number of minutes students spent on the intervention on their code sheet.
Table 2

*Teacher Assignments (Random)*

<table>
<thead>
<tr>
<th>T1 (6)</th>
<th>T2 (8)</th>
<th>T3 (8)</th>
<th>T4 (6)</th>
<th>T5 (7)</th>
<th>T6 (6)</th>
<th>T7 (7)</th>
<th>T8 (7, 8)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P1</td>
<td>Control</td>
<td>Apprec</td>
<td>Apprec</td>
<td>Honor</td>
<td>Honor</td>
<td>Honor</td>
<td>Control</td>
</tr>
<tr>
<td>P2</td>
<td>Apprec</td>
<td>Honor</td>
<td>Honor</td>
<td>Control</td>
<td>Apprec</td>
<td>Apprec</td>
<td>Apprec</td>
</tr>
<tr>
<td>P3</td>
<td>Honor</td>
<td>Control</td>
<td>Control</td>
<td>Control</td>
<td>Control</td>
<td>Honor</td>
<td>Honor</td>
</tr>
<tr>
<td>P4</td>
<td>Apprec</td>
<td>Control</td>
<td>Honor</td>
<td>Control</td>
<td>Apprec</td>
<td>Honor</td>
<td>Apprec</td>
</tr>
</tbody>
</table>

T = teacher (with grade level of students in parentheses); P = class period; Apprec = appreciation exercise; Honor = honoring your word exercise; Control = control group; blank = teacher four (T4) did not have four periods of classes.

**Outcomes of Interest**

*Emotional well-being.* The positive psychology lens used in this study focused on one aspect of emotional well-being—life satisfaction. While measures such as the Positive and Negative Affect Scale (PANAS), measuring the positive emotion aspect of SWB, have shown good validity and reliability (Crawford & Henry, 2004; Watson, Clark, & Tellegen, 1988), such scales have remained more prone to measuring one’s current mood (Seligman, 2012). Given that this study looked at adolescents in middle school, a particularly impressionable age with large neural changes (Oberle, Schonert-Reichl, & Zumbo, 2011; Sameroff, Seifer, Baldwin, & Baldwin, 1993; Schultz, Selman, & LaRusso, 2003; Spear, 2000), life satisfaction was measured, as a potentially more stable indicator of subjective well-being. Indeed, researchers (Diener, Emmons, et al., 1985; Diener, Larsen, Levine, & Emmons, 1985) found that, although emotions fluctuate,
stable patterns of individuals’ average life satisfaction emerge. Moreover, life satisfaction has been strongly connected with happiness as well as a variety of positive personal, behavioral, psychological, and social outcomes (Diener, 2009; Lyubomirsky & Layous, 2013; Lyubomirsky et al., 2005). The Satisfaction with Life Scale for Children has shown good reliability (Cronbach’s Alphas of between .75 and .87 depending on the degree of student satisfaction) (Gadermann et al., 2010), and was used in this study.

Gadermann et al. (2010) note the following attributes of the SWLS-C:

- This scale becomes unreliable for students scoring overall less than 10 (items added), and is most reliable for students scoring in the 20 to 24 range.
- SWLS-C (1) has a unidimensional factor structure
- SWLS-C has high internal consistency
- SWLS-C performs in the same way for different groups of children (i.e., gender, first language, and across grades)
- SWLS-C has statistically non-significant or small associations with demographic variables

**Attitude and effort.** This study measured student perceptions of attitude and effort instead of measuring performance; while the theoretical underpinnings of this study predicted improved student performance, this study looked for increases in attitude and effort, behavior that has been shown to increase academic achievement (Ajzen & Cote, 2008; McCoach & Siegle, 2003; Pintrich & Schunk, 2002). A small subset of questions similar to those on the SAAS-R (McCoach & Siegle, 2003) was used on this study; students were asked four simple questions regarding whether they perceived or felt they were making great efforts, maintaining a good attitude towards school, and wanting to do
their best (see Appendix A).

**Prosocial behaviors.** Prosocial behaviors are voluntary actions to benefit another person or group (Eisenberg & Mussen, 1989) and act as a theoretical outcome of the two interventions in this study. Previous studies with children have successfully measured prosocial behavior with as few as three items, asking about efforts to share with and help peers with academic problems (Wentzel, 1994).

In this study, students were asked to indicate the degree to which they engage in prosocial behavior using a more detailed measure. Specifically, using a Likert-scale (versus previous studies’ yes/no survey constructs) students were instructed to answer questions such as, “I willingly give my time to help students who have school-related problems,” and “I encourage others when they feel down” (See Appendix A for full survey). This prosocial behavior survey construct is a modified subset of the Prosocial Tendencies Measurement, after reviewing a study on the validation of this scale in adolescents (Carlo & Randall, 2002; Eisenberg & Mussen, 1989), other prosocial behavior scales (Eisenberg & Mussen, 1989), and the helping behavior survey items used in citizenship behavior research (Organ, 1997; Organ & Konovsky, 1989; P. M. Podsakoff, MacKenzie, Paine, & Bachrach, 2000; Van Dyne, Graham, & Dienesch, 1994).

**Trust.** Trust was investigated as a mediating variable in this study (see Figure 1). Sharing mutual appreciation and doing what you say you will do (or confessing) both have previously led to trust (Erhard, Jensen, & Group, 2010; Salamon & Robinson, 2008; Simons, 2002), which in turn has led to multiple positive outcomes. In this study, the relationship between trust and well-being, effort, attitude, and prosocial behavior was
investigated. Trust was measured to determine whether student trust of the organization or trust within interpersonal school relationships changed due to either intervention. To measure this, questions from multiple surveys were modified for the middle school sample. The following example questions were taken from the Dyadic Trust Scale (Larzelere & Huston, 1980), Specific Interpersonal Trust Scale (Johnson-George & Swap, 1982), Trust in Close Relationships Scale (Rempel, Holmes, & Zanna, 1985), the Trust Survey (Shaw, 1997), Trust in School (Hoy & Tschanen-Moran, 2007), and from the 2012 Ethics of American Youth Questionnaire ("Ethics of American youth: 2012," 2012):

- [Subject] is perfectly honest and truthful with me.
- If [subject] promised to do me a favor he/she would follow through.
- I could expect [subject] to tell me the truth.
- I usually know how [subject] is going to act. He/she can be counted on.
- I believe [subject] has high integrity.
- I can trust the people in this organization.
- People follow through with their promises and commitments.
- The principal in this school keeps his or her word.
- Teachers can depend on one another in this school.
- Teachers in this school have faith in the integrity of their colleagues.
- The students in this school have to be closely supervised.
- Trust is very important in my relationships.
- It is important that others trust me.
A relatively small sample of simple questions was derived from these surveys to measure student peer-to-peer trust. Due to school district concerns, and to achieve district IRB approval, the trust measured in this study was limited to trust between students’ relationships and the measurement of students’ trust in teachers, the principal, or the organization was removed. The impact of how much trust students had at the beginning of the exercise was taken into account using the pre-post survey experimental method.

Whether or not trust mediated the relationships in this experiment, increasing trust remains an extremely important goal for schools; without trust, a student’s attention and energy becomes diverted away from learning (toward self-protection), and more quantitative research on trust in schools has been needed (Tschannen-Moran & Hoy, 2000). Given this, trust stood as an important outcome of interest in this study, and trust was expected to increase.

Measures

**Dependent variables.** Dependent variables included subjective emotional well-being (life satisfaction aspect), effort with schoolwork, attitude towards school, and prosocial behavior. Variables were measured using the following constructs:

- Life satisfaction: Life Scale for Children (Gadermann et al., 2010).
- Attitude and effort: Modified subset taken from the School Attitude Assessment Survey—Revised (SAAS-R; McCoach & Siegle, 2003).
- Prosocial behavior: Modified subset of the Prosocial Tendencies Measurement and helping behaviors from citizenship behavior (altruism) constructs (Carlo & Randall, 2002; Eisenberg & Mussen, 1989; Organ, 1997; Organ & Konovsky,


**General considerations.** The full survey (see Appendix A) used a 6-point Likert scale for all measurement constructs listed below; the 6-point scale ensured that students could not sit “on the fence” as to whether they felt positive or negative on each measure. Surveys were provided with pre-printed coding of grade, class, and student ID for teachers to use with a provided codebook. Teachers subsequently entered student names in the codebook next to ID numbers to keep track for follow-on surveys.

Measures and scales were derived from research previously described, with some measures modified to include increased coding options (i.e. life satisfaction includes a 6-point Likert scale instead of a 5-point Likert scale as previously used). Table 3 identifies variables and associated coding. See Appendix A for the survey.
Table 3

Quantitative Coding of Dependent Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life satisfaction</td>
<td>1=strongly disagree, 2=disagree, 3=slightly disagree, 4=slightly agree, 5=agree, 6=strongly agree</td>
</tr>
<tr>
<td>Effort/attitude</td>
<td>1=strongly disagree, 2=disagree, 3=slightly disagree, 4=slightly agree, 5=agree, 6=strongly agree</td>
</tr>
<tr>
<td>Prosocial behavior</td>
<td>1=strongly disagree, 2=disagree, 3=slightly disagree, 4=slightly agree, 5=agree, 6=strongly agree</td>
</tr>
<tr>
<td>Trust</td>
<td>1=strongly disagree, 2=disagree, 3=slightly disagree, 4=slightly agree, 5=agree, 6=strongly agree</td>
</tr>
</tbody>
</table>

Analysis

This study investigated the effects of two separate interventions, appreciation journaling and new model of integrity journaling (independent variables) on emotional well-being (life satisfaction), effort and attitude, prosocial behavior (dependent variables), and trust (as both a DV and a mediator). Other than the life satisfaction scale, all measurement constructs are modified versions of previously validated scales. Given these modifications, a split-half factor analysis was performed to verify the validity of all four outcome constructs (life satisfaction, effort and attitude, prosocial behavior, and trust). Both pre-survey and post-survey data was used in this analysis, with a random half of the surveys used for exploratory factor analysis (EFA) and the remaining half used for a confirmatory factor analysis (CFA). The exploratory factor analysis used Principal Components Analysis with Varimax rotation and Kaiser normalization. Cronbach’s alpha
was used to calculate all instrument construct reliabilities. Meanwhile, the confirmatory factor analysis used SPSS AMOS, reporting goodness-of-fit statistics to determine model accuracy (Ong & Van Dulmen, 2007).

The exploratory factor analysis produced four components for the survey, with all four components well supported. Individual component items delineated as theorized, with the exception of one question that did not load onto any of the constructs: “My classmates are predictable.” The remaining items strongly supported the respective construct, and this initial solution accounted for 63.5% of the variance. Results of this 16-item EFA are in Table 4 below.
An exploratory factor analysis using this same technique was run without the item that did not load. The 15 remaining items in the four constructs showed adequate internal consistency and accounted for 67.7% of the variance. Cronbach’s Alpha showed good reliability for all components of this final version. Results are tabulated in Table 5.
Table 5

*Split Factor Analysis: Exploratory Factor Analysis (15 Remaining Items)*

<table>
<thead>
<tr>
<th>Construct with component items (Cronbach’s Alpha)</th>
<th>Load factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life satisfaction (.831)</td>
<td></td>
</tr>
<tr>
<td>-- In most ways my life is close to the way I would want it to be</td>
<td>.840</td>
</tr>
<tr>
<td>-- The things in my life are excellent</td>
<td>.831</td>
</tr>
<tr>
<td>-- So far I have gotten the important things I want in life</td>
<td>.811</td>
</tr>
<tr>
<td>-- If I could live my life over, I would have it the same way</td>
<td>.801</td>
</tr>
<tr>
<td>Effort/attitude (.815)</td>
<td></td>
</tr>
<tr>
<td>-- I make great efforts while in school</td>
<td>.777</td>
</tr>
<tr>
<td>-- I make great efforts on my homework</td>
<td>.721</td>
</tr>
<tr>
<td>-- I want to do my best in school</td>
<td>.812</td>
</tr>
<tr>
<td>-- I have a good attitude while doing schoolwork</td>
<td>.748</td>
</tr>
<tr>
<td>Prosocial behavior (.826)</td>
<td></td>
</tr>
<tr>
<td>-- I willingly share my knowledge</td>
<td>.726</td>
</tr>
<tr>
<td>-- I willingly give my time to help students who have school-related problems</td>
<td>.829</td>
</tr>
<tr>
<td>-- I take steps to prevent problems with other students</td>
<td>.655</td>
</tr>
<tr>
<td>-- I help out if someone falls behind in his or her work</td>
<td>.672</td>
</tr>
<tr>
<td>-- I encourage others when they feel down</td>
<td>.674</td>
</tr>
<tr>
<td>Trust (.769)</td>
<td></td>
</tr>
<tr>
<td>-- My classmates can be trusted to do what they say they will do</td>
<td>.876</td>
</tr>
<tr>
<td>-- I trust my classmates</td>
<td>.868</td>
</tr>
<tr>
<td>Did not load on any construct</td>
<td></td>
</tr>
<tr>
<td>-- My classmates are predictable</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The confirmatory factor analysis (CFA) used SPSS AMOS. The initial CFA model included all 16 survey items and confirmed what was shown during EFA—one trust question (“My classmates are predictable”) did not load (standardized regression
weight = .147, squared multiple correlation = .022). This was labeled question “T2” in the initial CFA model. The final CFA model is presented below in Figure 6, with life satisfaction construct items (LS1 through LS4), effort and attitude construct items (EA1 through EA4), prosocial behavior construct items (PS1 through PS5), and trust construct items (T1 and T3, with T2 removed per EFA results).

Figure 6. Model of confirmatory factor analysis (T2 removed)

This confirmatory factor analysis, using the remaining 15 items from the EFA, found good fit. For this model, Comparative Fit Index (CFI) = .980, Root Mean Square Error of Approximation (RMSEA) = .038, and Minimum Discrepancy (CMIN) = 135.5. Chi-square ($\chi^2$) results were 136.5, $p = .000$. $\chi^2$/df ratio was 1.625. This analysis followed the recommendations of Hu and Bentler (1999): RMSEA cutoff value was 0.06, and CFI
A data screening checked for skew, outliers, linearity, normality, and homoscedasticity. Skew fell between +/-3. To test independence of observations (independence of residuals), the Durbin-Watson statistic was computed and found acceptable for each model and each DV, ranging between 1.11 and 1.45 for all models. As the MCAR (Little’s) test was not significant \((p = .388)\), the pairwise deletion method for missing data was used, and this did not threaten the final sample size. The final sample included 427 students who completed both the pre- and post-surveys.

Interventions were randomly assigned to classes rather than individual students. Thus, students were clustered by teacher and by grade level, creating the chance that standard errors needed to be adjusted for clustering. However, ICC analyses resulted in near zero design effects. Therefore, clustered standard errors were not necessary and not applied in subsequent analyses. Instead, research questions were analyzed using fixed effects models. Model One included the interventions, time dummy, and two interaction terms for each intervention with time, respectively. This was the most parsimonious model. Models two and three added in teachers (dummy coded) and then grade level (dummy coded), respectively, to examine potential teacher or grade level effects.
Table 6

Descriptive Statistics of CFA Individual Items

Pre-Survey (Time 0) and Post-Survey (Time 1)

<table>
<thead>
<tr>
<th>Construct item</th>
<th>Pre-Survey Time 0</th>
<th>Post-Survey Time 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td><strong>Life satisfaction construct</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-- In most ways my life is close to the way I would want it to be</td>
<td>4.13</td>
<td>1.32</td>
</tr>
<tr>
<td>-- The things in my life are excellent</td>
<td>4.28</td>
<td>1.35</td>
</tr>
<tr>
<td>-- So far I have gotten the important things I want in life</td>
<td>4.28</td>
<td>1.41</td>
</tr>
<tr>
<td>-- If I could live my life over, I would have it the same way</td>
<td>3.75</td>
<td>1.74</td>
</tr>
<tr>
<td><strong>Effort/attitude construct</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-- I make great efforts on my homework</td>
<td>4.43</td>
<td>1.12</td>
</tr>
<tr>
<td>-- I want to do my best in school</td>
<td>5.56</td>
<td>0.80</td>
</tr>
<tr>
<td>-- I make great efforts while in school</td>
<td>4.84</td>
<td>1.05</td>
</tr>
<tr>
<td>-- I have a good attitude while doing schoolwork</td>
<td>4.43</td>
<td>1.18</td>
</tr>
<tr>
<td><strong>Prosocial behavior construct</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-- I willingly share my knowledge</td>
<td>4.84</td>
<td>1.14</td>
</tr>
<tr>
<td>-- I willingly give my time to help students who have school-related problems</td>
<td>4.14</td>
<td>1.33</td>
</tr>
<tr>
<td>-- I take steps to prevent problems with other students</td>
<td>4.20</td>
<td>1.34</td>
</tr>
<tr>
<td>-- I help out if someone falls behind in his or her work</td>
<td>3.95</td>
<td>1.25</td>
</tr>
<tr>
<td>-- I encourage others when they feel down</td>
<td>4.91</td>
<td>1.19</td>
</tr>
<tr>
<td><strong>Trust construct</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-- My classmates can be trusted to do what they say they will do</td>
<td>3.43</td>
<td>1.23</td>
</tr>
<tr>
<td>-- I trust my classmates</td>
<td>3.53</td>
<td>1.34</td>
</tr>
</tbody>
</table>

Note: these results include all students, including those in the control group
The fixed effects (FE) OLS regression models took the following form:

FE Model One:

\[
DV (LS/EA/PS/T) = \alpha + \beta_1(\text{Honoring Your Word Intervention}) + \beta_2(\text{Appreciation Intervention}) + \beta_3(\text{Time}) + \beta_4(\text{Honoring Your Word Intervention} \times \text{Time}) + \beta_5(\text{Appreciation Intervention} \times \text{Time}) + \varepsilon
\]

where

Dependent variables (DV): LS = life satisfaction; EA = effort/attitude; PS = prosocial behavior; T = trust.

\(\alpha\) represents the regression intercept

\(\beta\) represents the coefficients to be estimated

Intervention represents the particular intervention used (coded as 0 for a control group and 1 for an intervention group)

Time represents survey time 0 or 1 (dummy coded 0 and 1)

\(\varepsilon\) is the error

FE Model Two:

Model One + teachers added as an IV (dummy coded)

FE Model Three:

Model Two + grade level added as an IV (dummy coded)

**Testing trust as a mediator.** To determine whether trust mediates the relationships (see Figure 1) Baron and Kenny’s (1986) three-step process below was used.

- Step 1: The independent variable must affect the mediator.
- Step 2: The independent variable must affect the dependent variable.
• Step 3: The mediator must affect the dependent variable, with the independent variable included in this equation.

In addition to these relationships, the strength of the relationship between the independent variable and the dependent variable in step three must be weaker than the strength of their relationship in step two (clean relationship). A fully mediated relationship exists when the independent variable has no significant relationship with the dependent variable on step three. If the independent variable has a weaker relationship than the mediator in step three, then a partially mediated model exists. The following equations represent the steps that were taken to initially examine the mediated model, using life satisfaction as an example (dependent variable). Had significance been found in the first two steps, the more parsimonious Model One and Model Two would have been examined in step 3.

- Step 1: Models One through Three above were run with trust as the DV.
- Step 2: Models One through Three above were run with life satisfaction, effort/attitude, and prosocial behavior as the DVs (three separate analyses).
- Step 3: This is Model 3 with trust included as an IV (the $\beta_6$ term below).

\[ DV \ (LS/EA/PS) = \alpha + \beta_1(\text{Honoring Your Word Intervention}) + \beta_2(\text{Appreciation Intervention}) + \beta_3(\text{Time}) + \beta_4(\text{Honoring Your Word Intervention}*\text{Time}) + \beta_5(\text{Appreciation Intervention}*\text{Time}) + \beta_6(\text{Trust}) + \varepsilon \]

**Ethical Concerns**

This study maintained student privacy by using a codebook. Teachers were provided with a blank codebook for each of their classes. Teachers filled in names next to survey numbers. Although the data gathered did not have any obvious potential for harm to either the student or teacher, surveys were promptly gathered and given to the
researcher so that they were not stored with the codebook, eliminating the possibility for student answers to be associated with them.

**Validity**

Distinct construct outcome measures were preferred for this experiment, yet were not always available as pre-tested and pre-validated, much less for an adolescent population in particular. Care was taken to ensure each outcome measure contained questions that pointed to the desired outcome of interest and that the outcome of interest was understood. Obviously, it is important to understand a measurement construct’s meaning in order to accurately and effectively implement it. However, as noted by Bryant (2000), there remains no standard to use in deciding whether necessary conditions exist to claim or verify a construct’s presence. Ong and van Dulmen (2007) noted the necessity of understanding the underlying concept of interest in order to have measurement validity, to include (a) content validity (degree to which construct covers all desired aspects of the behavior), (b) criterion validity (degree to which the construct can predict relevant, external outcomes—albeit not a factor in this study), and (c) construct validity (degree of confidence in labeling measurement in theory-relevant terms); in other words, we desire measures to thoroughly measure a concept or meaning, with good predictive ability and accuracy. This study concentrated on accurately measuring the desired outcomes, using EFA and CFA (as described above) to validate the content and accuracy of each construct. Confirmatory factor analysis (CFA) provided a way to evaluate structural (hence content) validity, and structural validity can be viewed as a form of construct validity (Ong & Van Dulmen, 2007).
Bias

Subjective measurement of the student outcomes remained prone to student bias, with a tendency for students to answer as they perceive others in our culture and society would value (Eisenberg & Mussen, 1989). This limitation was mitigated through the emphasis of study anonymity; however, it could not be eliminated. If the students actually answered the questions authentically, another limitation remains—human beings maintain a healthy gap between their espoused theory regarding their own motivations and behavior, and reality (Kahneman, 2003). Indeed, researchers have long concerned themselves with self-deception, and students certainly hold attitudes of which they may not be aware, and hence cannot report upon, or do not want to admit (Ajzen & Cote, 2008).

Finally, the effects of priming were not addressed in this study; contextual events or teacher attitudes encountered shortly prior to giving the survey could have potentially primed answers to attitudinal survey questions and biased the results (Wittenbrink, 2007). Peer effects, another source of potential priming, was also not taken into account.

Limitations of the Study

Developmental systems theory views adolescent behavior as a bidirectional process involving the individual and his or her context, with multiple levels of social ecology affecting the outcome (Balsano, Phelps, Theokas, Lerner, & Lerner, 2009). Fostering optimal interplay between the adolescent and the multiple contexts in which they operate would increase the likelihood of positive development and flourishing (Lerner, von Eye, Lerner, Lewin-Bizan, & Bowers, 2010). Thus, this experiment would
have been strengthened if these various contexts—such as family support, school culture, peer groups, and overall community—were utilized to reinforce the interventions.

Next, during the researcher’s multiple school visits, the volunteer teachers demonstrated outstanding motivation, exhibited genuine care for their students, and maintained excellent student rapport. However, this study was still limited by variance in their delivery of the interventions. Although all of the teachers reported performing the interventions as instructed (with proper dosage), and did not share the interventions with their control group classes, other forms of variance appear to have occurred. Anecdotal evidence suggested that teacher sharing helped, i.e. some teachers willingly gave personal examples to the students every day (and that this seemed to help). Meanwhile, other teachers did not do this after the first day, or did so in limited fashion.

Finally, the study sample included a limited school choice. A lower income public school in Colorado, United States, was utilized. Generalizing results remains limited as an array of public, private, charter, and religious schools with varying socio-economic statuses was not used.
CHAPTER IV

RESULTS

Fixed Effects Ordinary Least Squares Regression Analysis

A linear regression analysis using the enter method and pairwise deletion of missing data examined whether either the honoring your word intervention or the appreciation intervention affected life satisfaction, effort or attitude, prosocial behavior, or trust. Results demonstrated that neither intervention significantly affected the outcome measures. Collinearity was not a factor among independent variables. See Tables 7, 8, and 9 for descriptives of each student group (interventions and control) and Tables 10 through 21 for regression results for outcome measures for Models One through Three, respectively.

Table 7

Honoring Your Word Intervention: Dependent Variable Descriptive Statistics

<table>
<thead>
<tr>
<th>Construct</th>
<th>Pre-Survey Time 0</th>
<th>Post-Survey Time 1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>4.06</td>
<td>1.26</td>
</tr>
<tr>
<td>Effort/attitude</td>
<td>4.81</td>
<td>0.83</td>
</tr>
<tr>
<td>Prosocial behavior</td>
<td>4.40</td>
<td>0.98</td>
</tr>
<tr>
<td>Trust</td>
<td>3.43</td>
<td>1.21</td>
</tr>
</tbody>
</table>

For students who participated in the honoring your word intervention, the post survey means for life satisfaction, prosocial behavior, and trust increased by .18, .06, and .16, respectively. The mean for effort/attitude decreased by .01. Standard deviations remain as noted, and sample size varied depending on missing data.
Table 8

Appreciation Intervention: Dependent Variable Descriptive Statistics

<table>
<thead>
<tr>
<th>Construct</th>
<th>Pre-Survey</th>
<th>Post-Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time 0</td>
<td>Time 1</td>
</tr>
<tr>
<td></td>
<td>M  SD</td>
<td>N</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>4.13 1.12</td>
<td>146</td>
</tr>
<tr>
<td>Effort/attitude</td>
<td>4.86 0.84</td>
<td>143</td>
</tr>
<tr>
<td>Prosocial behavior</td>
<td>4.49 0.91</td>
<td>148</td>
</tr>
<tr>
<td>Trust</td>
<td>3.51 1.12</td>
<td>148</td>
</tr>
</tbody>
</table>

For students who participated in the appreciation intervention, the post survey means for life satisfaction and trust increased by .22 and .20, respectively. The mean for effort/attitude decreased by .01, and the prosocial behavior mean decreased by .04. Standard deviations remain as noted, and sample size varied depending on missing data.

Table 9

Control Group: Dependent Variable Descriptive Statistics

<table>
<thead>
<tr>
<th>Construct</th>
<th>Pre-Survey</th>
<th>Post-Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time 0</td>
<td>Time 1</td>
</tr>
<tr>
<td></td>
<td>M  SD</td>
<td>N</td>
</tr>
<tr>
<td>Life satisfaction</td>
<td>4.16 1.09</td>
<td>111</td>
</tr>
<tr>
<td>Effort/attitude</td>
<td>4.73 0.86</td>
<td>110</td>
</tr>
<tr>
<td>Prosocial behavior</td>
<td>4.29 0.93</td>
<td>106</td>
</tr>
<tr>
<td>Trust</td>
<td>3.52 1.14</td>
<td>112</td>
</tr>
</tbody>
</table>
For control group students, the post survey means for life satisfaction and prosocial behavior increased by .09 and .05, respectively. The mean for effort/attitude remained the same. The mean for trust decreased by .02. Standard deviations remain as noted, and sample size varied depending on missing data.

Model One included the fixed effects analysis with the two intervention-time interaction terms. Results are tabulated in Table 10.

Table 10

*Life Satisfaction: Fixed Effects OLS Regression Results (Model One)*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Parameter</th>
<th>SE</th>
<th>Sig.</th>
<th>Standardized Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.164</td>
<td>.113</td>
<td>.000</td>
<td>-.043</td>
</tr>
<tr>
<td>Honoring Your Word Intervention</td>
<td>-.107</td>
<td>.148</td>
<td>.469</td>
<td>-.013</td>
</tr>
<tr>
<td>Appreciation Intervention</td>
<td>-.033</td>
<td>.150</td>
<td>.826</td>
<td>.026</td>
</tr>
<tr>
<td>Time</td>
<td>.061</td>
<td>.160</td>
<td>.702</td>
<td>.041</td>
</tr>
<tr>
<td>Interaction: Honoring*Time</td>
<td>.126</td>
<td>.209</td>
<td>.548</td>
<td>.049</td>
</tr>
<tr>
<td>Interaction: Appreciation*Time</td>
<td>.154</td>
<td>.212</td>
<td>.467</td>
<td>-.043</td>
</tr>
</tbody>
</table>

*Adjusted $R^2$*  
835

With other factors being controlled, the regression constant was 4.16. None of the independent variables produced meaningful or significant results.

Model Two included the Model One variables and added the IV teacher dummy terms. Results are presented in Table 11.
Table 11

*Life Satisfaction: Fixed Effects OLS Regression Results (Model Two: Teachers Added)*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Parameter</th>
<th>SE</th>
<th>Sig.</th>
<th>Standardized Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.452</td>
<td>.228</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Honoring Your Word Intervention</td>
<td>-.132</td>
<td>.150</td>
<td>.379</td>
<td>-.054</td>
</tr>
<tr>
<td>Appreciation Intervention</td>
<td>-.088</td>
<td>.155</td>
<td>.569</td>
<td>-.035</td>
</tr>
<tr>
<td>Time</td>
<td>.061</td>
<td>.160</td>
<td>.701</td>
<td>.026</td>
</tr>
<tr>
<td>Interaction: Honoring*Time</td>
<td>.126</td>
<td>.209</td>
<td>.547</td>
<td>.041</td>
</tr>
<tr>
<td>Interaction: Appreciation*Time</td>
<td>.154</td>
<td>.212</td>
<td>.467</td>
<td>.049</td>
</tr>
<tr>
<td>Teacher 1 dummy</td>
<td>-.021</td>
<td>.234</td>
<td>.927</td>
<td>-.006</td>
</tr>
<tr>
<td>Teacher 2 dummy</td>
<td>-.419</td>
<td>.260</td>
<td>.107</td>
<td>-.087</td>
</tr>
<tr>
<td>Teacher 3 dummy</td>
<td>-.336</td>
<td>.238</td>
<td>.158</td>
<td>-.087</td>
</tr>
<tr>
<td>Teacher 4 dummy</td>
<td>-.178</td>
<td>.230</td>
<td>.438</td>
<td>-.053</td>
</tr>
<tr>
<td>Teacher 5 dummy</td>
<td>-.302</td>
<td>.225</td>
<td>.180</td>
<td>-.098</td>
</tr>
<tr>
<td>Teacher 6 dummy</td>
<td>-.329</td>
<td>.234</td>
<td>.160</td>
<td>-.092</td>
</tr>
<tr>
<td>Teacher 7 dummy</td>
<td>-.355</td>
<td>.222</td>
<td>.110</td>
<td>-.117</td>
</tr>
</tbody>
</table>

*Adjusted $R^2* 
\[ .003 \]

*N* 
\[ 835 \]

*Note:* Teacher 8 was the reference teacher.

With other factors being controlled, the regression constant was 4.45. Again, none of the independent variables produced meaningful or significant results.

Model Three included the Model Two variables and added the IV grade level dummy terms. Results are tabulated in Table 12.
Table 12

*Life Satisfaction: Fixed Effects OLS Regression Results (Model Three: Grade Level Added)*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Parameter</th>
<th>SE</th>
<th>Sig.</th>
<th>Standardized Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.563</td>
<td>.235</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Honoring Your Word Intervention</td>
<td>-.175</td>
<td>.152</td>
<td>.249</td>
<td>-.071</td>
</tr>
<tr>
<td>Appreciation Intervention</td>
<td>-.135</td>
<td>.157</td>
<td>.391</td>
<td>-.054</td>
</tr>
<tr>
<td>Time</td>
<td>.060</td>
<td>.159</td>
<td>.707</td>
<td>.025</td>
</tr>
<tr>
<td>Interaction: Honoring*Time</td>
<td>.125</td>
<td>.208</td>
<td>.549</td>
<td>.041</td>
</tr>
<tr>
<td>Interaction: Appreciation*Time</td>
<td>.158</td>
<td>.212</td>
<td>.456</td>
<td>.050</td>
</tr>
<tr>
<td>Teacher 1 dummy</td>
<td>.059</td>
<td>.343</td>
<td>.863</td>
<td>.017</td>
</tr>
<tr>
<td>Teacher 2 dummy</td>
<td>-.485</td>
<td>.266</td>
<td>.069</td>
<td>-.101</td>
</tr>
<tr>
<td>Teacher 3 dummy</td>
<td>-.287</td>
<td>.325</td>
<td>.377</td>
<td>-.074</td>
</tr>
<tr>
<td>Teacher 4 dummy</td>
<td>-.103</td>
<td>.339</td>
<td>.760</td>
<td>-.031</td>
</tr>
<tr>
<td>Teacher 5 dummy</td>
<td>-.248</td>
<td>.227</td>
<td>.276</td>
<td>-.080</td>
</tr>
<tr>
<td>Teacher 6 dummy</td>
<td>-.121</td>
<td>.259</td>
<td>.641</td>
<td>-.034</td>
</tr>
<tr>
<td>Teacher 7 dummy</td>
<td>-.114</td>
<td>.257</td>
<td>.658</td>
<td>-.038</td>
</tr>
<tr>
<td>Grade level 6</td>
<td>-.153</td>
<td>.249</td>
<td>.541</td>
<td>-.062</td>
</tr>
<tr>
<td>Grade level 8</td>
<td>-.316</td>
<td>.171</td>
<td>.066</td>
<td>-.129</td>
</tr>
</tbody>
</table>

*Adjusted R²*: .005  
*N*: 835

*Note*: Teacher 8 was the reference teacher; Grade 7 was the reference grade level.
With other factors being controlled, the regression constant was 2.56. Again, none of the independent variables produced meaningful or significant results.

Model One included the fixed effects analysis with the two intervention-time interaction terms. Results are tabulated in Table 13.

Table 13

*Effort/Attitude: Fixed Effects OLS Regression Results (Model One)*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Parameter</th>
<th>SE</th>
<th>Sig</th>
<th>Standardized Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.725</td>
<td>.084</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Honoring Your Word Intervention</td>
<td>.085</td>
<td>.109</td>
<td>.437</td>
<td>.047</td>
</tr>
<tr>
<td>Appreciation Intervention</td>
<td>.131</td>
<td>.111</td>
<td>.236</td>
<td>.072</td>
</tr>
<tr>
<td>Time</td>
<td>.002</td>
<td>.118</td>
<td>.986</td>
<td>.001</td>
</tr>
<tr>
<td>Interaction: Honoring*Time</td>
<td>-.013</td>
<td>.154</td>
<td>.933</td>
<td>-.006</td>
</tr>
<tr>
<td>Interaction: Appreciation*Time</td>
<td>-.009</td>
<td>.157</td>
<td>.957</td>
<td>-.004</td>
</tr>
</tbody>
</table>

\(Adjusted \ R^2\) -.003
\(N\) 813

With other factors being controlled, the regression constant was 4.72. None of the independent variables produced meaningful or significant results.

Model Two included the Model One variables and added the IV teacher dummy terms. Results are presented in Table 14.
### Table 14

**Effort/Attitude: Fixed Effects OLS Regression Results (Model Two: Teachers Added)**

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Parameter</th>
<th>SE</th>
<th>Sig.</th>
<th>Standardized Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>5.134</td>
<td>.166</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Honoring Your Word Intervention</td>
<td>.082</td>
<td>.110</td>
<td>.455</td>
<td>.046</td>
</tr>
<tr>
<td>Appreciation Intervention</td>
<td>.144</td>
<td>.113</td>
<td>.203</td>
<td>.079</td>
</tr>
<tr>
<td>Time</td>
<td>.002</td>
<td>.117</td>
<td>.986</td>
<td>.001</td>
</tr>
<tr>
<td>Interaction: Honoring*Time</td>
<td>-.013</td>
<td>.152</td>
<td>.932</td>
<td>-.006</td>
</tr>
<tr>
<td>Interaction: Appreciation*Time</td>
<td>-.009</td>
<td>.155</td>
<td>.956</td>
<td>-.004</td>
</tr>
<tr>
<td>Teacher 1 dummy</td>
<td>-.297</td>
<td>.171</td>
<td>.082</td>
<td>-.115</td>
</tr>
<tr>
<td>Teacher 2 dummy</td>
<td>-.531</td>
<td>.190</td>
<td>.005</td>
<td>-.151</td>
</tr>
<tr>
<td>Teacher 3 dummy</td>
<td>-.402</td>
<td>.174</td>
<td>.021</td>
<td>-.144</td>
</tr>
<tr>
<td>Teacher 4 dummy</td>
<td>-.222</td>
<td>.168</td>
<td>.187</td>
<td>-.090</td>
</tr>
<tr>
<td>Teacher 5 dummy</td>
<td>-.630</td>
<td>.165</td>
<td>.000</td>
<td>-.281</td>
</tr>
<tr>
<td>Teacher 6 dummy</td>
<td>-.396</td>
<td>.171</td>
<td>.021</td>
<td>-.151</td>
</tr>
<tr>
<td>Teacher 7 dummy</td>
<td>-.494</td>
<td>.162</td>
<td>.002</td>
<td>-.224</td>
</tr>
</tbody>
</table>

*Adjusted R²: 0.022  
N: 813

*Note:* Teacher 8 was the reference teacher.

With other factors being controlled, the regression constant was 5.13. Again, none of the independent variables produced meaningful or significant results.

Model Three included the Model Two variables and added the IV grade level dummy terms. Results are tabulated in Table 15.
Table 15

*Effort/Attitude: Fixed Effects OLS Regression Results (Model Three: Grade level Added)*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Parameter</th>
<th>SE</th>
<th>Sig.</th>
<th>Standardized Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>5.256</td>
<td>.171</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Honoring Your Word Intervention</td>
<td>.036</td>
<td>.110</td>
<td>.741</td>
<td>.020</td>
</tr>
<tr>
<td>Appreciation Intervention</td>
<td>.096</td>
<td>.114</td>
<td>.399</td>
<td>.053</td>
</tr>
<tr>
<td>Time</td>
<td>.001</td>
<td>.116</td>
<td>.992</td>
<td>.001</td>
</tr>
<tr>
<td>Interaction: Honoring*Time</td>
<td>-0.014</td>
<td>.152</td>
<td>.925</td>
<td>-0.006</td>
</tr>
<tr>
<td>Interaction: Appreciation*Time</td>
<td>-0.005</td>
<td>.154</td>
<td>.973</td>
<td>-0.002</td>
</tr>
<tr>
<td>Teacher 1 dummy</td>
<td>-.275</td>
<td>.250</td>
<td>.272</td>
<td>-.107</td>
</tr>
<tr>
<td>Teacher 2 dummy</td>
<td>-.615</td>
<td>.194</td>
<td>.002</td>
<td>-.175</td>
</tr>
<tr>
<td>Teacher 3 dummy</td>
<td>-.406</td>
<td>.236</td>
<td>.086</td>
<td>-.145</td>
</tr>
<tr>
<td>Teacher 4 dummy</td>
<td>-.206</td>
<td>.247</td>
<td>.405</td>
<td>-.083</td>
</tr>
<tr>
<td>Teacher 5 dummy</td>
<td>-.574</td>
<td>.165</td>
<td>.001</td>
<td>-.256</td>
</tr>
<tr>
<td>Teacher 6 dummy</td>
<td>-.165</td>
<td>.189</td>
<td>.382</td>
<td>-.063</td>
</tr>
<tr>
<td>Teacher 7 dummy</td>
<td>-.227</td>
<td>.187</td>
<td>.227</td>
<td>-.103</td>
</tr>
<tr>
<td>Grade level 6</td>
<td>-.103</td>
<td>.181</td>
<td>.570</td>
<td>-.058</td>
</tr>
<tr>
<td>Grade level 8</td>
<td>-.351</td>
<td>.125</td>
<td>.005</td>
<td>-.197</td>
</tr>
</tbody>
</table>

*Adjusted R²* = .029

*N* = 813

*Note*: Teacher 8 was the reference teacher; Grade 7 was the reference grade level.

With other factors being controlled, the regression constant was 5.27. Again, none of the independent variables produced meaningful or significant results.
Model One included the fixed effects analysis with the two intervention-time interaction terms. Results are tabulated in Table 16.

Table 16

*Prosocial Behavior: Fixed Effects OLS Regression Results (Model One)*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Parameter</th>
<th>SE</th>
<th>Sig.</th>
<th>Standardized Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.300</td>
<td>.092</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Honoring Your Word Intervention</td>
<td>.099</td>
<td>.120</td>
<td>.410</td>
<td>.050</td>
</tr>
<tr>
<td>Appreciation Intervention</td>
<td>.193</td>
<td>.122</td>
<td>.114</td>
<td>.096</td>
</tr>
<tr>
<td>Time</td>
<td>.042</td>
<td>.130</td>
<td>.744</td>
<td>.022</td>
</tr>
<tr>
<td>Interaction: Honoring*Time</td>
<td>.019</td>
<td>.170</td>
<td>.912</td>
<td>.008</td>
</tr>
<tr>
<td>Interaction: Appreciation*Time</td>
<td>-.084</td>
<td>.172</td>
<td>.627</td>
<td>-.033</td>
</tr>
</tbody>
</table>

*Adjusted R²*        
*N*                   
825

With other factors being controlled, the regression constant was 4.30. None of the independent variables produced meaningful or significant results.

Model Two included the Model One variables and added the IV teacher dummy terms. Results are presented in Table 17.
Table 17

Prosocial Behavior: Fixed Effects OLS Regression Results (Model Two: Teachers Added)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Parameter</th>
<th>SE</th>
<th>Sig.</th>
<th>Standardized Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.662</td>
<td>.184</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Honoring Your Word Intervention</td>
<td>.124</td>
<td>.121</td>
<td>.306</td>
<td>.062</td>
</tr>
<tr>
<td>Appreciation Intervention</td>
<td>.164</td>
<td>.125</td>
<td>.189</td>
<td>.081</td>
</tr>
<tr>
<td>Time</td>
<td>.042</td>
<td>.129</td>
<td>.742</td>
<td>.022</td>
</tr>
<tr>
<td>Interaction: Honoring*Time</td>
<td>.019</td>
<td>.168</td>
<td>.911</td>
<td>.008</td>
</tr>
<tr>
<td>Interaction: Appreciation*Time</td>
<td>-.084</td>
<td>.171</td>
<td>.623</td>
<td>-.033</td>
</tr>
<tr>
<td>Teacher 1 dummy</td>
<td>-.144</td>
<td>.188</td>
<td>.446</td>
<td>-.050</td>
</tr>
<tr>
<td>Teacher 2 dummy</td>
<td>-.385</td>
<td>.209</td>
<td>.066</td>
<td>-.099</td>
</tr>
<tr>
<td>Teacher 3 dummy</td>
<td>-.422</td>
<td>.192</td>
<td>.028</td>
<td>-.136</td>
</tr>
<tr>
<td>Teacher 4 dummy</td>
<td>-.233</td>
<td>.185</td>
<td>.208</td>
<td>-.085</td>
</tr>
<tr>
<td>Teacher 5 dummy</td>
<td>-.455</td>
<td>.181</td>
<td>.012</td>
<td>-.183</td>
</tr>
<tr>
<td>Teacher 6 dummy</td>
<td>-.291</td>
<td>.188</td>
<td>.123</td>
<td>-.100</td>
</tr>
<tr>
<td>Teacher 7 dummy</td>
<td>-.598</td>
<td>.179</td>
<td>.001</td>
<td>-.244</td>
</tr>
</tbody>
</table>

*Adjusted $R^2$* .019  
*N* 825  

*Note:* Teacher 8 was the reference teacher.

With other factors being controlled, the regression constant was 4.66. Again, none of the independent variables produced meaningful or significant results.

Model Three included the Model Two variables and added the IV grade level dummy terms. Results are tabulated in Table 18.
Table 18

*Prosocial Behavior: Fixed Effects OLS Regression Results (Model Three: Grade level Added)*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Parameter</th>
<th>SE</th>
<th>Sig</th>
<th>Standardized Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>4.752</td>
<td>.189</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Honoring Your Word Intervention</td>
<td>.085</td>
<td>.122</td>
<td>.486</td>
<td>.043</td>
</tr>
<tr>
<td>Appreciation Intervention</td>
<td>.117</td>
<td>.126</td>
<td>.355</td>
<td>.058</td>
</tr>
<tr>
<td>Time</td>
<td>.040</td>
<td>.128</td>
<td>.756</td>
<td>.021</td>
</tr>
<tr>
<td>Interaction: Honoring*Time</td>
<td>.020</td>
<td>.168</td>
<td>.906</td>
<td>.008</td>
</tr>
<tr>
<td>Interaction: Appreciation*Time</td>
<td>-.080</td>
<td>.170</td>
<td>.640</td>
<td>-.031</td>
</tr>
<tr>
<td>Teacher 1 dummy</td>
<td>.093</td>
<td>.276</td>
<td>.737</td>
<td>.032</td>
</tr>
<tr>
<td>Teacher 2 dummy</td>
<td>-.408</td>
<td>.214</td>
<td>.057</td>
<td>-.105</td>
</tr>
<tr>
<td>Teacher 3 dummy</td>
<td>-.231</td>
<td>.261</td>
<td>.377</td>
<td>-.074</td>
</tr>
<tr>
<td>Teacher 4 dummy</td>
<td>-.003</td>
<td>.273</td>
<td>.991</td>
<td>-.001</td>
</tr>
<tr>
<td>Teacher 5 dummy</td>
<td>-.402</td>
<td>.183</td>
<td>.028</td>
<td>-.162</td>
</tr>
<tr>
<td>Teacher 6 dummy</td>
<td>-.132</td>
<td>.209</td>
<td>.528</td>
<td>-.045</td>
</tr>
<tr>
<td>Teacher 7 dummy</td>
<td>-.415</td>
<td>.207</td>
<td>.046</td>
<td>-.169</td>
</tr>
<tr>
<td>Grade level 6</td>
<td>-.288</td>
<td>.201</td>
<td>.152</td>
<td>-.146</td>
</tr>
<tr>
<td>Grade level 8</td>
<td>-.240</td>
<td>.138</td>
<td>.082</td>
<td>-.121</td>
</tr>
</tbody>
</table>

Adjusted $R^2$  .022

$N$  825

*Note: Teacher 8 was the reference teacher; Grade 7 was the reference grade level.*
With other factors being controlled, the regression constant was 4.75. Again, none of the independent variables produced meaningful or significant results.

Model One included the fixed effects analysis with the two intervention-time interaction terms. Results are tabulated in Table 19.

Table 19

Trust: Fixed Effects OLS Regression Results (Model One)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Parameter</th>
<th>SE</th>
<th>Sig.</th>
<th>Standardized Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.522</td>
<td>.111</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Honoring Your Word Intervention</td>
<td>-.095</td>
<td>.145</td>
<td>.513</td>
<td>-.039</td>
</tr>
<tr>
<td>Appreciation Intervention</td>
<td>-.016</td>
<td>.148</td>
<td>.916</td>
<td>-.006</td>
</tr>
<tr>
<td>Time</td>
<td>-.018</td>
<td>.157</td>
<td>.910</td>
<td>-.008</td>
</tr>
<tr>
<td>Interaction: Honoring*Time</td>
<td>.176</td>
<td>.206</td>
<td>.393</td>
<td>.058</td>
</tr>
<tr>
<td>Interaction: Appreciation*Time</td>
<td>.217</td>
<td>.209</td>
<td>.298</td>
<td>.070</td>
</tr>
</tbody>
</table>

Adjusted $R^2$ | .000
$N$            | 836

With other factors being controlled, the regression constant was 3.52. None of the independent variables produced meaningful or significant results.

Model Two included the Model One variables and added the IV teacher dummy terms. Results are presented in Table 20.
Table 20

*Trust: Fixed Effects OLS Regression Results (Model Two: Teachers Added)*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Parameter</th>
<th>SE</th>
<th>Sig.</th>
<th>Standardized Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.351</td>
<td>.223</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Honoring Your Word Intervention</td>
<td>-.097</td>
<td>.147</td>
<td>.510</td>
<td>-.040</td>
</tr>
<tr>
<td>Appreciation Intervention</td>
<td>-.009</td>
<td>.151</td>
<td>.951</td>
<td>-.004</td>
</tr>
<tr>
<td>Time</td>
<td>-.018</td>
<td>.156</td>
<td>.910</td>
<td>-.008</td>
</tr>
<tr>
<td>Interaction: Honoring*Time</td>
<td>.176</td>
<td>.204</td>
<td>.389</td>
<td>.058</td>
</tr>
<tr>
<td>Interaction: Appreciation*Time</td>
<td>.217</td>
<td>.207</td>
<td>.294</td>
<td>.070</td>
</tr>
<tr>
<td>Teacher 1 dummy</td>
<td>.288</td>
<td>.228</td>
<td>.208</td>
<td>.083</td>
</tr>
<tr>
<td>Teacher 2 dummy</td>
<td>-.221</td>
<td>.254</td>
<td>.385</td>
<td>-.047</td>
</tr>
<tr>
<td>Teacher 3 dummy</td>
<td>.511</td>
<td>.233</td>
<td>.028</td>
<td>.135</td>
</tr>
<tr>
<td>Teacher 4 dummy</td>
<td>.310</td>
<td>.224</td>
<td>.167</td>
<td>.093</td>
</tr>
<tr>
<td>Teacher 5 dummy</td>
<td>.161</td>
<td>.220</td>
<td>.464</td>
<td>.053</td>
</tr>
<tr>
<td>Teacher 6 dummy</td>
<td>.124</td>
<td>.229</td>
<td>.589</td>
<td>.035</td>
</tr>
<tr>
<td>Teacher 7 dummy</td>
<td>-.002</td>
<td>.217</td>
<td>.993</td>
<td>-.001</td>
</tr>
</tbody>
</table>

*Adjusted $R^2*   | .017
*N*   | 836

*Note: Teacher 8 was the reference teacher.*

With other factors being controlled, the regression constant was 3.35. Again, none of the independent variables produced meaningful or significant results.

Model Three included the Model Two variables and added the IV grade level dummy terms. Results are tabulated below in Table 21.
Table 21

*Trust: Fixed Effects OLS Regression Results (Model Three: Grade level Added)*

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Parameter</th>
<th>SE</th>
<th>Sig.</th>
<th>Standardized Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>3.460</td>
<td>.230</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Honoring Your Word Intervention</td>
<td>-.138</td>
<td>.148</td>
<td>.352</td>
<td>-.057</td>
</tr>
<tr>
<td>Appreciation Intervention</td>
<td>-.053</td>
<td>.153</td>
<td>.728</td>
<td>-.022</td>
</tr>
<tr>
<td>Time</td>
<td>-.019</td>
<td>.156</td>
<td>.904</td>
<td>-.008</td>
</tr>
<tr>
<td>Interaction: Honoring*Time</td>
<td>.175</td>
<td>.204</td>
<td>.391</td>
<td>.058</td>
</tr>
<tr>
<td>Interaction: Appreciation*Time</td>
<td>.220</td>
<td>.207</td>
<td>.287</td>
<td>.071</td>
</tr>
<tr>
<td>Teacher 1 dummy</td>
<td>.342</td>
<td>.336</td>
<td>.308</td>
<td>.098</td>
</tr>
<tr>
<td>Teacher 2 dummy</td>
<td>-.289</td>
<td>.260</td>
<td>.267</td>
<td>-.061</td>
</tr>
<tr>
<td>Teacher 3 dummy</td>
<td>.538</td>
<td>.317</td>
<td>.091</td>
<td>.142</td>
</tr>
<tr>
<td>Teacher 4 dummy</td>
<td>.359</td>
<td>.331</td>
<td>.279</td>
<td>.107</td>
</tr>
<tr>
<td>Teacher 5 dummy</td>
<td>.213</td>
<td>.222</td>
<td>.337</td>
<td>.070</td>
</tr>
<tr>
<td>Teacher 6 dummy</td>
<td>.328</td>
<td>.253</td>
<td>.197</td>
<td>.093</td>
</tr>
<tr>
<td>Teacher 7 dummy</td>
<td>.234</td>
<td>.251</td>
<td>.352</td>
<td>.078</td>
</tr>
<tr>
<td>Grade level 6</td>
<td>-.125</td>
<td>.244</td>
<td>.608</td>
<td>-.052</td>
</tr>
<tr>
<td>Grade level 8</td>
<td>-.310</td>
<td>.168</td>
<td>.064</td>
<td>-.128</td>
</tr>
</tbody>
</table>

*Adjusted R²* = .018  
*N* = 836

*Note:* Teacher 8 was the reference teacher; Grade 7 was the reference grade level.

With other factors being controlled, the regression constant was 3.46. Again, none of the independent variables produced meaningful or significant results.
Mediated Analysis

Baron and Kenny’s (1986) three-step process was used with results included below each step.

- Step 1: The independent variable must affect the mediator.
  - Neither intervention (IV) affected the trust construct significantly.

- Step 2: The independent variable must affect the dependent variable.
  - Neither intervention (IV) affected life satisfaction, effort/attitude, or prosocial behavior.

- Step 3: The mediator must affect the dependent variable, with the independent variable included in this equation.
  - Given that neither of the first two steps produced significant results, Step 3 was superfluous.

Trust was neither a statistically significant outcome nor a statistically significant mediator for either intervention.

Findings and Interpretations

Measurement devices. The measurement tools (measuring life satisfaction, effort, attitude, prosocial behavior, and trust) all appeared to work as designed, with the exception that students answered “My classmates are predictable” (an item intended to load on the trust construct) such that this item did not load on any of the outcome constructs. The students apparently interpreted the word “predictable” somehow other than intended. The word predictable is in the definition of trust; yet, students answered this question differently than the other two trust questions. The remaining 15 items all loaded as theorized, and this supported their use on the survey.
**Intervention results.** The fixed effects regression models (one through three) examined differential growth between the treatment and control groups, treating the individuals as randomly assigned and assuming that growth occurred in both the treatment and control groups. No significant results were found. The treatment variables (intervention variables, dummy coded), measured on average (for pre- and post-intervention) whether student scores were greater for the treatment group as compared to the control. Meanwhile, the time variable measured whether, on average, groups had greater scores for the post-survey versus pre-survey. Finally, the interaction terms (treatment times time terms) measured whether the growth in the included group (appreciation group or honoring your word group) was greater than the growth in the reference control group.

**Appreciation intervention.** For students who participated in the appreciation intervention, the post survey means for life satisfaction and trust increased by .22 and .20, respectively. Although a positive result with respect to the mean difference, all three fixed effects regression models demonstrated that these were not statistically significant changes to the student sample. None of the independent variables (treatment, time, or interaction terms) produced meaningful or significant results. Finally, the mean for effort and attitude decreased by .01, and the prosocial behavior mean decreased by .04; these also were not statistically significant results.

**Honoring your word intervention.** For students who participated in the honoring your word intervention, the post survey means for life satisfaction, prosocial behavior, and trust increased by .18, .06, and .16, respectively. As with the appreciation exercise, although this represents a positive result with respect to the mean average of
these outcomes of interest, all three fixed effects regression models demonstrated that these were not statistically significant changes to the student sample. None of the independent variables (treatment, time, or interaction terms) produced meaningful or significant results. Finally, the mean for effort and attitude decreased by .01, also not a statistically significant result.

control group. For the control group students, the means for life satisfaction and prosocial behavior increased by .09 and .05, respectively. The mean for effort and attitude remained the same. The mean for trust decreased by .02. Standard deviations remained around 1.

other results. The closest either intervention came to significant results occurred with the appreciation exercise effect on prosocial behavior \( (p = .114) \). According to Simon and Goes (2011), this result approached suggestive evidence \( (p < .100) \).

While there were multiple instances of significance for teacher or grade level, these signified effects of the teacher or grade level on the outcome in question, with respect to the reference teacher (Teacher 8) or the reference grade (Grade 7), and simply confirm that some teachers appear to effect greater life satisfaction, effort, attitude, prosocial behavior, and/or trust among students in their classrooms (and likewise some grade levels have greater life satisfaction, etc. as compared to other grade levels).
CHAPTER V
CONCLUSION, DISCUSSION, AND IMPLICATIONS FOR FUTURE RESEARCH

Conclusion

Green and Norrish (2013) noted that although there has been substantial research on interventions that prevent or treat mental distress, interventions that promote well-being have remained less common, and the field is still considered young. Seligman et. al (2009) identified a gap between what schools deliver (performance skills) and what parents appear to really want for their children (happiness, balance, confidence, kindness, health, and satisfaction). This gap provides an opportunity for research-based solutions, and a child who practices simple, intentional changes in behavior can produce practically significant increases in emotional well-being and positive changes in his or her character (Berkowitz & Bier, 2005a; Lyubomirsky & Layous, 2013).

This study experimentally evaluated the efficacy of two interventions with young adolescents (grade levels six through eight) practicing particular virtues. With appreciation journaling, students practiced the virtue of transcendence, specifically practicing the strength of appreciation in its larger definition, including the appreciation of beauty, excellence, and appreciation of and for people (gratitude of individuals for the social benefits bestowed by them, as well as appreciation for people). With the new model of integrity exercise, students practiced the virtue of courage, specifically practicing the strengths of integrity and perseverance. The appreciation journaling intervention provided the modification of an exercise that had been used in multiple research studies (most often with adults) to compare and contrast against the never-before-tested honoring one’s word exercise. Outcomes of interests included life
satisfaction (measuring long term emotional well-being), effort, attitude, and prosocial helping behaviors, with trust measured not only as an outcome of interest, but as a potential mediating variable that influences interpersonal and group behavior (Cook & Wall, 1980). Trust has also been shown to improve school effectiveness (Bryck & Schneider, 2002).

Reviewing the theoretical framework, it was predicted that (a) having such conversations in class, the students would experience positive change (Erhard, Jensen, & Group, 2010; Ford & Ford, 1995), (b) practicing these strengths the students would develop stronger habits of mind in these areas, leading to learning and positive change (Mezirow, 2000), and (c) these interventions would help students develop autonomy and relatedness, factors that help develop increased performance and well-being (Deci & Ryan, 2008).

The appreciation intervention used in this study aimed to address several shortfalls in the research literature. A literature review suggested that positive interventions such as the appreciation exercise would produce greater life satisfaction, and overall well-being (Adler & Fagley, 2005; Diener & Scollon, 2014; Diener et al., 2010; Emmons, 2008; Froh et al., 2008; Froh, Yuskewicz, & Kashdan, 2009; Howell, 2009; Lyubomirsky & Layous, 2013; O'Grady, 2013; Oberle et al., 2011; Seligman, 2012; Seligman et al., 2009; Weber et al., 2013; Wood et al., 2009). Transcendence strengths have been shown to be the strongest predictors of life satisfaction and well-being in general (Weber et al., 2013). Multiple studies on appreciation, gratitude, and counting your blessings interventions have all shown significant positive results on life satisfaction, and subjective well-being in general (Bolier et al., 2013). This study aimed
to improve upon previous gratitude or appreciation interventions by (a) working for a period of time that had shown previous positive results (four weeks) (Lyubomirsky & Layous, 2013), (b) providing a variety of conversation to avoid adaptation (training students to look in eight possible areas of their lives for what they appreciate) (Fagley, 2012; Kahneman, Diener, & Schwarz, 1999; Sheldon & Lyubomirsky, 2012), and (c) using a survey that was improved over many of the one- or two-item surveys used in previous research (Emmons & McCullough, 2003; Froh et al., 2008). Also, relatively little research examining life satisfaction had occurred with children and adolescents (Froh et al., 2008; Gadermann et al., 2010; Howell et al., 2013; Huebner et al., 2012; Layous & Lyubomirsky, 2014; Lyubomirsky & Layous, 2013; Proctor, Tsukayama, et al., 2011), and there had been recent calls to further define the gratitude/appreciation constructs used in research (Fagley, 2012). This study aimed to address these additional research gaps with the appreciation journaling exercise.

Additionally, no known peer-reviewed, published research had tested the efficacy of the new model of integrity. Previous research in this area used judgmental models, citing ethical or moral aims (Berkowitz, 2011; Berkowitz & Bier, 2004, 2005a, 2005b, 2007, 2014; Davidson et al., 2008; Howard et al., 2004; Lickona, 2001, 2004; Marzano, 2003). This study tested honoring your word, aiming to develop a positive (non-judgmental) model of integrity (Erhard et al., 2006; Erhard, Jensen, & Zaffron, 2010; Erhard, Jensen, et al., 2010a, 2010b; Peterson et al., 2007). Character development studies suggested that the new model of integrity exercise had strong potential for positive results (Allan & Duffy, 2013; Baker, 1969; Berkowitz, 2011; Berkowitz & Bier, 2005b; Buschor et al., 2013; Davidson et al., 2008; Donaldson et al., 2011; Erhard,
Jensen, & Group, 2010; Govindji & Linley, 2007; Park & Peterson, 2006b, 2009a; Park et al., 2004; Peterson et al., 2007; Peterson & Seligman, 2004; Proctor, Maltby, et al., 2011; Proctor, Tsukayama, et al., 2011; Quinlan et al., 2012), yet no published study had investigated this model of integrity.

The research questions were as follows:

- What effect does appreciation journaling have on adolescent life satisfaction, effort, attitude, and prosocial behavior in young adolescents?
- What effect does practicing a positive integrity exercise have on adolescent life satisfaction, effort, attitude, and prosocial behavior in young adolescents?
- Does trust mediate these relationships?
Diagram of the research model:

**Figure 7.** Research model

While the mean averages of several outcomes of interest increased between pre- and post-survey, neither the appreciation journaling intervention nor the new model of integrity intervention produced statistically significant results in this study. However, this study adds to the positive psychology and character development literature in several ways. It is the first known study to examine the following in adolescence: appreciation intervention (in its larger definition) in a middle school, the new model of integrity intervention (in any context), and a study design that compared a character strength intervention against a known positive psychology intervention. Moreover, most of the previous positive psychology research in adolescent development has been cross-sectional versus experimental (Wood, Froh, & Geraghty, 2010). Finally, no known research had pitted a new character strength exercise against a relatively known positive psychology exercise. This study aimed to be the first to run a (character) strength of the head exercise versus a (positive psychology) strength of the heart exercise. Overall, this
study illuminated many limitations and provided recommendations to improve future research.

The lack of statistically significant results suggested that the interventions did not produce positive changes in the students. However, given the informal, verbal feedback received from intervention teachers, there appears to be high potential for future success if design issues are properly addressed with the future research changes suggested later in this paper. The high level of observed teacher enthusiasm and the anecdotal positive teacher feedback both suggest that these changes be made, and the interventions re-attempted.

**Discussion**

This study illuminated two interventions for consideration by practitioners in schools (in any field of education) who may wish to implement these exact or similar well-being or character strength interventions.

The possibility exists that these interventions (as implemented) may never positively affect students or this particular population. Without statistical or practical significance, the positive increase in certain outcome means may merely be noise in the data. Yet the study may have failed to achieve statistical significance for a simple reason, such as sharing of the interventions among the students in the control groups. Control group students knew they were in a study via the assent and consent forms, and sharing would be easy via texting during school. Such diffusion remains challenging to control. Further possible improvements are discussed in chapter five.

Despite the lack of statistically significant results, this study succeeded in other ways. All of the teachers related positive observations of change in their students. Two
teachers had tears of gratitude as they related student success stories that they attributed to the study. The anecdotal evidence strongly suggested that the new model of integrity provided a new positive, non-judgmental way for students to deal with what was not working in their lives, as opposed to making experiences good, bad, right or wrong. Moreover, the study appeared to positively affect the teachers (who participated daily in the interventions as they led them). With the appreciation exercise, one teacher concentrated daily on what she appreciated versus a major, distressing event in her life. She went so far as to credit the study with having “saved [her] from depression.”

Overall, given the strong evidence cited by previous studies in the literature review, and the anecdotal qualitative evidence of positive changes that were cited by teachers in this short four-week study, state education policy makers should consider funding opportunities for schools to pursue positive psychology and character development programs.

Implications for Future Research

This study pointed to several new possibilities for future research. Going beyond the specific recommendations already made for this study, the following represent ideas that would ostensibly work better for future research.

**Teacher training.** Better fidelity and improved consistency of implementation might be achieved with better training and support during the intervention. The teachers in this study were all highly motivated and observed to be very caring of their students. Future studies may not have such highly motivated teachers, and thus teacher training will remain key. Future interventions could have teachers distinguish strong examples of each of the six words, practice helping others discern all eight aspects of the appreciation
construct, and discern strong personal examples that they feel comfortable sharing with students. This is not to fault any teacher; sharing was voluntary and they were encouraged, but not required or trained to share. The school district agreed to two training sessions for the teachers, in order to limit the impact on their time, and these sessions were already replete with the basic information required for the study and the interventions. However, most teachers did not finish the training exercises that were handed out for completion after training, and several did not appear to have applied the interventions (especially the honoring your word intervention) to their own lives. Hence, their ability to lead and help students practice the virtuous behaviors appeared to have remained less than it might have been. One week into the intervention, three teachers asked questions about implementing the new model of integrity, and about better examples of the six definitions of one’s word; meanwhile, five of the teachers, when subsequently asked if they would like any help with the new model of integrity, said that they did not go into much detail with their students, or said that they did not provide personal examples and felt that the provided examples were enough. The researcher recommends that future educational efforts that use these (or similar) interventions eliminate such inconsistent implementation through better training. Also, additional time to train the teachers would have allowed for them to better understand and relate the veil of invisibility—the (often) invisible sources of out-of-integrity behavior (Erhard, Jensen, & Zaffron, 2010). This powerful knowledge may have helped both the teachers and the students to better distinguish the larger out-of-integrity behaviors in their lives, and addressing these design issues could improve the consistent implementation of these interventions.
Next, teachers clearly make a difference in such intervention outcomes as leaders, role models, mentors, and instructors, and it only takes one sarcastic or negative teacher to significantly lower a child’s attitude towards school (Chang & Muñoz, 2006). Obviously, anything teachers can do to demonstrate that they care—motivating, creating resilience, nurturing a growth mindset—might help an intervention to produce positive results. Although teacher support could be measured, and such mediating analyses have been called for (Suldo et al., 2009), receiving district approval for this portion of a study might prove challenging. Instead of monitoring/coaching/examining teachers, future studies might find it easier to train teachers to use the suggestions of O’Grady (2013) and incorporate the intervention(s) into some or all of the following school events, programs, or daily activities:

- Class greetings, journaling (used), pledges, creeds, art, music, dance, drama,
- stress reduction activities, learning centers, teams and clubs, academics, e-learning, and class meetings (to include brainstorms, recognition, celebrations, literature circles, and a variety of other ideas).

Also, future studies should consider increased teacher training in the conversations required to effect change (Ford & Ford, 1995). These conversations could have been better used and highlighted in this study, and consistency of the implementation of initial conversations, conversations for understanding, and conversations for performance were not measured. Perhaps most important were conversations to produce performance, where requests and promises to produce results are made; i.e. the focus is producing the result via action. These conversations were discussed with the teachers, yet no follow-up conversation occurred with the researcher.
(i.e., no coaching occurred to help the teachers produce conversations to produce performance with the students). Teachers were not trained in conversations for closure, and it remained unclear to the researcher exactly how such training would have aided these interventions. In addition to more training time, a qualitative or mixed methods design would have allowed both examination of what conversations were taking place and follow-on support or continuation training for teachers.

Finally, teachers could be trained to be aware of the complementary negative side of these constructs—as noted by Friedman and Robbins (2012) “constructs that seem on the surface to be overwhelmingly positive may actually have significant shadow sides … the road to hell is paved with good intentions” (p. 99). As an example, students could become very powerful at honoring their word towards nefarious means (thus ignoring Word #6, the element that includes ethical standards).

**Longer study time.** First, despite research that cautioned against longer interventions causing hedonic adaptation (Fagley, 2012; Layous et al., 2012; Sheldon & Lyubomirsky, 2012), recent meta-analysis has recommended that instead of a four-week time frame, positive psychology interventions should last eight weeks (Bolier et al., 2013). Perhaps an eight-week study would have produced stronger results with these interventions. However, a six-week study showed that participants who counted their blessings (considered what they appreciated) only once a week exhibited greater gains in well-being than participants who did so three times a week (Lyubomirsky et al., 2005). A longer study time in connection with lower density appreciation journaling might work best. Finally, a design that provides reinforcement after the intervention ends may improve long term effects; three studies have found that those who engage in positive
activities after the prescribed study period continue to show improvements in well-being over a control group (Cohn & Fredrickson, 2010; Lyubomirsky et al., 2011; Seligman et al., 2005b). Rashid et al. (2013) found that an eight-week character strength study produced significant results, but these results were not maintained after six months. However, a follow-up character strength study (which lasted an entire year, integrated strengths into the curriculum, and involved parents) yielded lasting positive effects in social skills, academic performance, and problem-solving behavior (Rashid et al., 2013). To allow more opportunities for students to grow like this, and for other students to witness more model virtuous responses, future studies might consider increasing the length of the intervention, perhaps eight weeks or even longer.

Transformational learning theory supports this use of a longer intervention in future studies to allow for additional practice with habits of mind. Specifically, the following steps (out of the 10-steps) from Mezirow’s (2000) Transformational Learning Process would have benefited from a longer study, allowing students to better transform their habits of mind through practice.

- Experiencing a disorienting dilemma
  - The integrity intervention in particular provided an opportunity for students to identify and deal with the mess created from not keeping or honoring their word. Indeed, two teachers spoke of an adolescent who was suspended from school for fighting. They said the language he used and the heartfelt promise he made to them (without prompting) to get back to school and finish both came right out of the honoring your word intervention. He was no longer just practicing the exercise, but using it. A
longer intervention would have allowed more opportunity for other children to address a disorienting dilemma, and for others to witness them dealing with it by honoring their word.

• Self-examining one’s feelings of fear, anger, guilt, or shame
  o Both interventions provided opportunities to reflect positively or optimistically on challenging feelings. Again, a longer intervention may have helped provide more opportunities for these reflections, and for students to feel more comfortable sharing their more challenging experiences.

• Critically assessing one’s assumptions
  o Students had ample opportunity to address their assumptions. While better teacher training would appear to have helped, a longer study may have best provided an opportunity for students to witness others delving deeper and motivated them to critically assess assumptions.

• Building competence and self-confidence in new roles and relationships
  o Practicing the associated virtues and strengths over four weeks may have allowed for competence and self-confidence to grow; yet perhaps a longer intervention would work better.

• Reintegrating into one’s life on the basis of conditions dictated by one’s new perspective
  o Whether any of the students exhibited continued (habitual) increased appreciation and integrity for long term was not measured. As described in the literature review, previous character strength research has shown long
term effects with intervention longer than four weeks. With a longer intervention and follow-on measurements, researchers would have an opportunity to determine any lasting effects after six months or a year.

Finally, anecdotal evidence also supports the use of a longer intervention in future studies. Four teachers informally shared that a longer intervention would have worked better for them.

**Larger sample size (greater likelihood of achieving statistical significance).**

Green and Norrish (2013) noted that, of the two published studies using single component positive interventions using gratitude or appreciation, only one study had statistically significant results, with the other needing a larger sample size. Upon further review of the intervention that had significant results, the author reported “marginally significant” results (Froh et al., 2008). This study used a lower-income middle school. While using a larger school may have produced statistically significant results, future studies should also consider increasing sample size while utilizing an array of public, private, charter, and religious schools with varying SES so that results may be generalized.

**Contexts.** As the interplay between an adolescent and the multiple contexts in which they operate would increase the likelihood of positive development and flourishing (Lerner et al., 2010), this study would have been strengthened if other contexts, such as family support, school curriculum and culture, peer groups, and overall community, had been utilized to improve the effectiveness of the interventions. Involving these additional contexts would provide greater support to students (greater support and opportunity for the student to practice the intervention; less likelihood the intervention is undermined by
conversations with a student’s parents or other adults). For peer effects, the “fourth pillar” of character strength training (O'Grady, 2013) could also be added: encouraging others to use their strengths to accomplish particular goals. Although teachers encouraged the students, the students were inconsistently motivated to encourage other students.

**Expanded appreciation construct.** Using the eight-aspect construct of appreciation and maintaining the distinctions between this construct and gratitude may aid future research attempts to discern causal processes and the mechanisms that lead to life satisfaction and positive affect. For example, Fagley (2012) found that life satisfaction correlated .60 with the “have” focus of this new construct, but only .27 with the self/social comparison. As future studies demonstrate the aspects of appreciation that account for greater gains in well-being, and other desirable outcomes for different populations, interventions may be modified to meet the needs and desires of educators, parents, and students more effectively.

**Expanded use and investigation of transformational learning theory.** The following steps in Mezirow’s theory (steps four through eight of the 10-step process) had either specific possibilities for future research or had no evident data from this study:

- Recognizing that one’s discontent and the process of transformation are shared
  - According to at least two teachers (informally), students appeared to recognize that they shared a lot of experiences for which they could be content versus discontent. Students in some classes shared a good deal more with one another than in other classes. A future mixed methods study might best help with such sharing practices, with additional
coaching available during the intervention, as well as a structure in place for teachers to share best practices with one another.

- Exploring options for new roles, relationships, and actions
  - Both interventions provided this opportunity, yet no data were produced or informally gleaned from conversations with the teachers. Researchers should consider gathering such data in a future qualitative or mixed method study.

- Planning a course of action
  - The integrity exercise asked students to plan a course of action. No results were obtained. Again, a qualitative or mixed methods study would help examine whether students were planning a course of action to honor their word, and hence examine the efficacy of this exercise. Also, teachers could have been better trained to encourage this.

- Acquiring knowledge and skills for implementing one’s plans
  - The integrity exercise provided an opportunity for students to choose such a plan. Future research could collect and examine this information.

- Provisional trying of new roles
  - Per informal teacher feedback (anecdotal evidence), both studies appeared to have at least some students acting and thinking differently about their various roles. Future studies could explore this further.

**Expanded use of conversations for change theory.** Although conversation for change theory guided the use of committed language that was used in both intervention exercise prompts, this theory could have been much better used. Teachers were not made
fully aware of the power of this theory. For instance, future efforts using the new model of integrity might include conversations for understanding and conversations for performance about the veil of invisibility. Then, a qualitative or mixed methods design could capture what conversations were taking place and provide follow-on support or continuation training for teachers to expand use of these conversations.

**Expanded use of self-determination theory (SDT).** Deci and Ryan (2008; 2000) found that people have an underlying psychological need for autonomy, competence, and relatedness. As previously noted, one gratitude intervention found that participants increased self-reported autonomy and relatedness, and this in turn led to increased life satisfaction (Boehm et al., 2012). The current study used interventions that aimed to indirectly develop autonomy and relatedness in each student. Students were asked to take care of issues themselves (i.e., practice autonomy) and were asked to communicate with others as necessary (i.e., practice relatedness). However, this study did not follow up on whether the students successfully practiced autonomy and relatedness, increasing competence. Thus, the current study supported Boehm et al.’s (2012) call for more research to determine whether competence mediates or otherwise affects the relationship between practicing a strength such as appreciation (or NMI) and well-being. While SDT guided intervention construction and use, future research could use a feedback loop (a qualitative piece) and better teacher training (with regular follow-on coaching).

Moreover, future research design could investigate this theoretically mediated relationship (appreciation→relatedness/autonomy→life satisfaction/well-being). Finally, self-determination theory might be used to produce more effective measurement tools.
Researchers have noted the power of including students in the design and implementation of measurement tools (Field, 2013).

**Addressing measurement challenges and response shifting.** Although all of the measurement tools had been previously used and found valid and reliable in earlier research, questions remain as to whether this study fully measured what it intended to measure. The life satisfaction, effort and attitude, prosocial behavior, and trust outcomes each have particular challenges to measurement, as previously noted in the literature review and methods sections. Upon further review, self-reported prosocial behavior was perhaps the most challenged measurement. Researchers have noted the need for multiple measures of prosocial development in previous studies, because it is difficult to obtain accurate measurement as it naturally occurs, and subjects’ responses are prone to purposeful distortion, lapses in memory, or misrepresentation stemming from psychological needs, whether conscious or unconscious in nature (Eisenberg & Mussen, 1989). The bottom line is that empathy is difficult to measure, and this study measured students’ anonymous subjective assessment of how well they help out in school. Future studies should consider additional measurements, perhaps even a 360-degree measurement to ascertain student growth. Moreover, future studies might address a potentially more powerful force with respect to outcome measures for studies of this type: response shifting.

Oort, Visser, and Sprangers (2009) noted:

Personal attributes (e.g., personality characteristics, skills, cognitions, emotions, moods, attitudes, and behavior) are generally measured through self-report. Self-assessment brings about the problem that respondents
may have different frames of reference when answering questionnaire or
test items. As a result, the measurement may be biased. That is, observed
differences between respondents’ test scores may reflect something other
than true differences in the attribute that we want to measure. The
measurement of change through self-report brings about the additional
problem that respondents may also change their frame of reference,
rendering scores from different measurement occasions incomparable.
Such a change of frame of reference may cause ‘‘response shift.’’ With
response shift, observed changes in respondents’ test scores may reflect
something other than true changes in the attribute that we want to
measure. (p. 1126)

In the four weeks between the pre- and post-survey, students may have shifted
how they perceived survey items. One student wrote a note on the survey after the
question, “If I could live my life over, I would have it the same way.” This student
answered this question “slightly disagree” after previously answering it “agree,” and
handwrote on the survey, “I would do my very hardest to make it better. I have messed
up so much” (underlines by the student). This student appeared to be taking responsibility
for his or her life. Thus, it appears that the student had a shift in how he or she perceived
the question. Also, as the researcher went by hand through students’ pre- and post-
surveys comparing them side-by-side, the researcher noticed that not only did some
students shift how they viewed entire constructs (to be expected), but they shifted how
they viewed constructs internally. For example, with the life satisfaction questions,
several students shifted to answering two of the life satisfaction questions in the positive,
and the other two questions in the negative. The interventions may or may not have caused these shifts in perception. All of these observations bring into question the methodology itself. A qualitative or mixed methods design may have been more effective, and the purely quantitative design, though using commonly used measures of change, may have presented more challenges.

Golembiewski, Billingsly, and Yeager (1980; 1976) found that commonly used measures of change are inappropriate where deliberate interventions are used, or with any approach to planned change. Their idea of “response shift” includes three types of possible change to measurement responses, summarized as follows: (a) alpha change: actual change, (b) beta change: change in internal standards, and (c) gamma change: reconceptualization. Zmud and Armenakis (1978) described these changes as follows: Alpha change involves some level of change in existential state in a constant conceptual domain, using a measuring instrument that is constantly calibrated; beta change involves some level of change in existential state that is obscured by the fact that a recalibration of the measurement continuum has occurred; gamma change involves a redefinition or reconceptualization of the domain or some frame of reference about reality.

All three types of change may have affected this study, yet beta and gamma change may have posed the largest threats to survey reliability. As an example, if students consistently appreciate how others help them, they might either shift their internal standard regarding how well they help others, or reconceptualize what it means to “really” help others. With honoring your word, students spent their time reconceptualizing integrity and distinguishing where they had not kept their word or honored their word. This exercise appears to be a prime candidate for these types of
errors, as the students change their internal standards of what “keeping your word” means and distinguish how often they are actually failing to keep their word to themselves or to others (they recalibrate their personal integrity measurement tool). In reviewing surveys by hand, the researcher noted one student who appeared to become “angry” in the responses (the student answered high effort, but low attitude, low prosocial behavior, and low trust, negative shifts from the initial survey). Another student answered “strongly disagree” for every single question. Did the student mean this? The honoring your word exercise, of course, involved a redefinition or reconceptualization of integrity and how one might operate in integrity using an entirely new paradigm. This threatened measurement validity, or at least called into question the consistency and reliability of student responses on the survey.

Future studies would do well to incorporate a structure or structures to address response shifting. A “post hoc pre-test” might effectively address response shifting (Paresky, 2015). Such a survey would be administered after the intervention, yet ask participants about their perceptions of growth and whether they read pre-survey items in a different way. After the honoring your word intervention, students might be much more likely to distinguish where in their lives they failed to help others (prosocial behavior), or whether they were truly giving strong effort with a good attitude, and hence answer the survey questions lower than they previously would have.

**Qualitative model.** As discussed earlier, adding a qualitative methodology (mixed methods design) or using a complete qualitative model would have provided richer data and the opportunity for better implementation of the interventions. A
A qualitative methodology would also allow for future research to investigate other questions and create additional opportunities:

- **Initial state of the student.** Large research gaps remain with respect to the role of one’s initial affective state (Lyubomirsky & Layous, 2013).

- **Reaction of challenged students during the intervention.** Researchers have posed the interesting possibility that people might need a baseline level of well-being before they are ready to benefit from positive activities (Layous & Lyubomirsky, 2014). Research has questioned whether student depression or otherwise challenged students might react negatively to positive psychology or character strength interventions; Green et al. (2012) noted that strengths-based interventions may worsen a clinical disorder rather than improve the student’s well-being. A qualitative model would likely give insight into this possibility.

- **Social support during the intervention.** Future research could address gaps in the role of social support (Lyubomirsky & Layous, 2013). Social support ties in with the additional contexts mentioned previously, and a qualitative model would help distinguish how and why different social supports in various contexts improve intervention efficacy, increase student well-being, or improve character strengths. Moreover, a qualitative piece could ensure that sharing between all students occurs. In a four-week gratitude study, Lambert et al. (2013) found that students who shared their appreciation (gratitude) experience with someone else reported significantly more happiness, positive affect and life satisfaction than those participants that used journaling yet did not share.
• Peer and supervisor (teacher) effects. The tendency for students to answer as they perceive others in our culture and society would value (Eisenberg & Mussen, 1989) was decreased through the emphasis of study anonymity, yet was not eliminated. Peer effects, contextual events, and teacher attitudes experienced shortly prior to taking the survey could have potentially primed student answers and biased the results (Wittenbrink, 2007). Future research should consider adding qualitative or quantitative structures that could determine such effects.

• Response shifting. Potential response shifting should be addressed. Survey scores may have reflected something other than the true changes in life satisfaction, effort, attitude, prosocial behavior, and trust. It is recommended that future studies include at the very least follow-on questions about what students mean by their answers, as suggested by Huebner, Hills, and Jiang (2013)—for instance, “What made you agree/disagree that your life is good?”). Better yet, a qualitative design piece would allow the researcher to fully investigate what a student means by an answer.

• Post-state of the student. Little is known about the long-term efficacy of positive psychology or character development interventions (Cohn & Fredrickson, 2010; Fredrickson, 2004; Garland et al., 2010). Post-intervention interviews at six months or a year would provide better data regarding efficacy, and also help eliminate the threat of response shift. Moreover, leading researchers in positive psychology and character development continue to call for more research to determine how increases in happiness and subjective well-being might be sustained (Cohn & Fredrickson, 2010; Diener, 2012; Diener & Scollon, 2014;
Green & Norrish, 2013; Jose et al., 2012; Schueller & Seligman, 2010; Sheldon & Lyubomirsky, 2006; Sin & Lyubomirsky, 2009).

- Capture stories that might influence policy-makers. The teachers in this study informally shared powerful stories with the researcher (both about students and themselves), and additional teachers mentioned they had positive student stories but never sat down with the researcher to share them. A qualitative design would not only capture and rigorously examine these stories, but also provide a powerful piece to share with state legislators making decisions about funding for such well-being or character development programs. Informal teacher feedback suggested that at least a few students practiced the new model of integrity with positive results. This included one student who made a big mistake with about one month left in the school year. Surprising to the teachers, this student took responsibility using the language of the new model of integrity and made a plan to “clean up his mess.” The teachers told the researcher they credited the intervention with this result, though this cannot be confirmed.

In summary, future studies may consider the following changes: (a) use a qualitative or mixed methods design, with student interviews to better determine what, if any, changes take place with the students (to include potential response shifting), (b) provide better teacher training with continued teacher training throughout the intervention to ensure fidelity and consistency of implementation, (c) increase the sample size to achieve statistical significance, (d) add supportive structures for the students using additional context (family, entire school, peers, or even the community), and (e) increase the length of intervention from four to eight weeks or longer, while also increasing the
variety of implementation. Future generations of students will benefit from researchers’ continued efforts to improve educational practices and programs. Positive psychology and character strength interventions hold great promise in future research.
REFERENCES


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APPENDICES

Appendix A
Survey Protocol—UCCS IRB #13-230

Thank you for participating. Your name will not be associated with these answers.

Circle Grade Level: 6 7 8

Indicate your agreement with each statement below by circling the appropriate number.
Please be open and honest in your responses.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Slightly Disagree</th>
<th>Slightly Agree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>In most ways my life is close to the way I would want it to be</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I make great efforts on my homework.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My classmates can be trusted to do what they say they will do</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I willingly share my knowledge if it will help another student.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I want to do my best in school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>The things in my life are excellent</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>My classmates are predictable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I make great efforts while in school.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I have a good attitude while doing schoolwork.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I trust my classmates</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I willingly give my time to help students who have school-related problems.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I take steps to prevent problems with other students.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>So far I have gotten the important things I want in life</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I help out if someone falls behind in his/her work.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>I encourage others when they feel down.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>If I could live my life over, I would have it the same way</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

PI: Phillips
IRB#: 13-230 rec’d1.27.14       Class __ Student __
Appendix B
Interventions

“Honoring Your Word Leads to Much Higher Performance”
Do NOT believe this—try it and see for yourself!

‘Honoring’ your word is:

**Keeping** your word
--AND--

Whenever you will **not** be keeping your word, **communicate** to anyone impacted:
1) that you will not be keeping your word *for now, or at all, and* 2) what you can/will do about it...

**What is Your ‘Word’?**
1. What you said you would do
2. What you know you should do
3. What you are expected to do (unless you say you will not do it)
4. What you say is so (if you say all cars are pink outside, take responsibility if I look out and see they are not)
5. What you say you stand for (you stand for fairness? I expect you to be fair or fess up/fix if changing your mind).

**DAILY ACTIVITY:**
Take 10 minutes and journal the following:

1) Where did you keep your word today/yesterday?  
   Who trusts you now? (at least you do, and who else?)

2) Where did you break your word and then honor your word today/yesterday? (include how you communicated with those affected and fixed it, if able)  
   Who trusts you now?

3) Where did you not keep your word *and* not honor your word (yet)?  
   Who do you need to communicate with? Exactly when will you be in communication, and what could you do to honor your word?

4) If you can, note how ‘honoring your word’ has enhanced your performance, in or out of school.

Honoring your word leads to trust and ultimately greater performance. We all fail at times—it does not mean there is something wrong with you. Dust yourself off and keep climbing this mountain with no top. Remember, integrity ultimately leads to better performance.
DAILY APPRECIATION JOURNAL

Take 10 minutes and do the following.

--Write down 3 good things that happened to you in the last 24 hours.

--For each event, choose at least one of the following reflections to add:

a) Why did this good thing happen to you?
b) What does this good thing mean to you?
c) How can you make this good thing (or something like it) happen again?

Based on the work of Dr. Martin Seligman (reference available)
Appendix C
IRB approvals and IRB approved forms

Institutional Review Board (IRB) for the Protection of Human Subjects

Date: 1/31/2014

IRB Review

IRB PROTOCOL NO.: 13-250
Protocol Title: The Effects of Honoring Your Word and Appreciation in the Middle School Classroom
Principal Investigator: Tyler Phillips
Faculty Advisor if Applicable: Corrine Harmon
Application: New Application
Type of Review: Full
Risk Level: No more than Minimal Risk
Review Level Report of Change or Renewal Review Level (if Applicable): Expedited
This Protocol involves a Vulnerable Population: Children
Expires: 30 January 2015

Note, if exempt: If there are no major changes in the research, protocol does not require review on a continuing basis by the IRB. In addition, the protocol may match more than one review category not listed.
Externally funded: ☐ No ☐ Yes
OSP #: Sponsor:

Thank you for submitting your Request for IRB Review. The protocol identified above has been reviewed according to the policies of this institution and the provisions of applicable federal regulations. The review category is noted above, along with the expiration date, if applicable. Changes to this protocol and/or renewals may be reviewed under expedited procedures only provided there is no change in the risk level of the study, AND it is reviewed by the IRB representative for children.

Once human participant research has been approved, it is the Principal Investigator’s (PI) responsibility to report any changes in research activity related to the project:
- The PI must provide the IRB with all protocol and consent form amendments and revisions.
  - The IRB must approve these changes prior to implementation.
- All amendments recruiting study subjects must also receive prior approval by the IRB.
- The PI must promptly inform the IRB of all unanticipated serious adverse events (within 24 hours). All unanticipated adverse events must be reported to the IRB within 1 week (see 45 CFR 46.103(b)(3)). Failure to comply with these federally mandated responsibilities may result in suspension or termination of the project.
- Renew study with the IRB prior to expiration.
- Notify the IRB when the study is complete

If you have any questions, please contact Michelle Mello in the Office of Sponsored Programs at 719-255-3903 or irb@uccs.edu

Thank you for your concern about human subject protection issues, and good luck with your research.
Sincerely yours,
Deborah T. Neary
UCCS IRB Co-Chair

www.ukcs.edu/go/dmellom@email.com 1420 Austin Bluffs Parkway Colorado Springs, CO 80918 719-255-3321 phone 719-255-3700 fax

[Image of UCCS logo]
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IRB Review

IRB PROTOCOL NO.: 13-230
Protocol Title: The Effects of Honoring Your Word and Appreciation in the Middle School Classroom
Principal Investigator: Tyler Phillips
Faculty Advisor if Applicable: Dr. Corinne Harmon
Application: Renewal
Type of Review: Full
Risk Level: No more than Minimal Risk
Renewal Review Level (If changed from original approval) if Applicable: Expedited
This Protocol involves a Vulnerable Population: Children
Expires: 07 December 2016
*Note: if exempt: If there are no major changes in the research, protocol does not require review on a continuing basis by the IRB. In addition, the protocol may match more than one review category not listed.
Externally funded: ☒ No ☐ Yes
OSP #: Sponsor:

Thank you for submitting your Request for IRB Review for renewal of an approved protocol. The protocol identified above has been reviewed according to the policies of this institution and the provisions of applicable federal regulations. The review category is noted above, along with the expiration date, if applicable.

Once human participant research has been approved, it is the Principal Investigator’s (PI) responsibility to report any changes in research activity related to the project:
- The PI must provide the IRB with all protocol and consent form amendments and revisions.
  - The IRB must approve these changes prior to implementation.
- All advertisements recruiting study subjects must also receive prior approval by the IRB.
- The PI must promptly inform the IRB of all unanticipated serious adverse (within 24 hours). All unanticipated adverse events must be reported to the IRB within 1 week (see 45CFR46.103(b)(9)). Failure to comply with these federally mandated responsibilities may result in suspension or termination of the project.
- Renew study with the IRB prior to expiration.
- Notify the IRB when the study is complete

If you have any questions, please contact Research Compliance Specialist in the Office of Sponsored Programs at 719-255-3902 or irb@uccs.edu

Thank you for your concern about human subject protection issues, and good luck with your research.

Sincerely yours,

Sonja B. Braun-Sand, PhD
IRB Reviewer

www.uccs.edu/~osp/compliance/ 1420 Austin Bluffs Parkway Colorado Springs, CO 80918 719-255-3321 phone 719-255-3706 fax
Version 2/12/13
IRB-approved Assent and Consent Forms

PI: Phillips IRB#13-230
Rec’d 1.27.14

Teacher Consent Form
valid for use through 1.30.15

Hello,

My name is Tyler Phillips. We are doing a study to learn about students who 1) honor their word* and students who 2) think about what they appreciate. We are asking you to help because we don’t know very much about how well middle school children can increase their performance and feel better about life after being helped to honor their word better and appreciate life more.

Two teacher training sessions will be provided, and I will also be available to answer any questions throughout the 4-week period of the project. Please see the student writing prompts that are attached (one for appreciation journaling and one for honoring your word) and ask if you have any questions.

The project will have you delivering one of (not both) these daily 10-minute exercises or a 10-minute control placebo to each of your classes over the course of 4 weeks, with a survey given before and after the 4-week period. The anonymous surveys are the only item collected. A codebook will be used to make sure the researchers know which pre-survey aligns with which post-survey. Daily reflections will not be collected from the students. Only students who return assent and consent forms will fill out the surveys and do the daily exercises.

By signing this consent, I affirm I have read and understand the writing prompts that I am being asked to incorporate into my lessons as part of participation in this study. I believe use of these writing prompts aligns with either or both the academic standards I cover and/or the character development programming used at Sahin. I further agree to adhere to students’ rights as outlined by the Federal Educational Right to Privacy Act and Colorado law regarding students’ and parents’/guardians’ rights.

Student assent and parent consent forms are also included with this information packet for your reference.

You can ask questions at any time that you might have about this study. You can call me at 719-209-1677. Also, if you decide at any time not to finish, you may stop whenever you want.

Please mark one of the choices below to tell us what you want to do:

___ No, I do not want to be in this study.  ___ Yes, I want to be in this study.

Write your name here ___________________________ Date ____________

Notes from the District 11 EDSS for your edification:
• Only students who provide both their assent and consent forms will be given the pre/post surveys; you will need to track which students turn in the forms and which do not.
• It will be your responsibility to collect and give these forms to Principal Kalbach
• Students not participating will have an alternate activity (as discussed in our initial meeting).
• To protect student identity they will be given a code by you, and you will maintain the codebook (provided by me).
• Again, no student written responses to the daily activities will be collected.

Attachments:
• Appreciation Exercise (student writing prompt)
• Honoring Your Word Exercise (student writing prompt)
• Pre/post survey (same form)
• Student Assent Form
• Parent Consent Form
Hi,

My name is Tyler Phillips. We are doing a study to learn about students who 1) honor their word* and students who 2) think about what they appreciate. We are asking you to help because we don’t know very much about how well kids your age can increase their performance and feel better about life after being helped to honor their word better and appreciate life more.

*Honing your word means keeping your word, or telling others when you can no longer keep it.

If you agree to be in our study, you will first answer some questions on a short survey. This will be anonymous (your name will not be on the survey), and the survey will be the only item collected from you. We want to know how strong of an effort you feel you give, how well you feel you help others, and how satisfied and happy you are. You will then spend 10 minutes a day doing 1 of 2 exercises. The first exercise will help you to keep your word better and also deal with when you cannot keep your word to others (we cannot always keep our word unless we only say we’ll stay in bed this morning!). The second exercise will help you appreciate what happened each day, and help you figure out why good things happen to you. You will be randomly assigned to one of these exercise teams, or to the control group that does neither exercise (at least at first). You will have the opportunity to do the other exercise (or both) no matter which group you are initially assigned to. Nothing you write or say will be collected or recorded. You will do this for 4 weeks and then answer the short survey questions again, to see if you changed. This anonymous survey will be collected. There are no personal risks to you, but you may find yourself performing better at school and/or feeling better about life.

You can ask questions at any time that you might have about this study. You can call me at 719-209-1677. Also, if you decide at any time not to finish, you may stop whenever you want. Remember, the survey questions and exercises are only about what you think. There are no right or wrong answers because this is not a test.

Please talk to your parents about this study before you decide whether to participate. We will also ask your parents if it is all right with them for you to take part in this study. If your parents say that you can be in the study, you can still decide not to participate. Remember, being in the study is up to you, and no one will be mad if you don’t sign this paper or even if you change your mind later.

Please mark one of the choices below to tell us what you want to do:

___ No, I do not want to be in this study. ___ Yes, I want to be in this study.

Write your name here   Date
University of Colorado
Colorado Springs (UCSS)
Consent for Research

Parental Consent Form

Your child is invited to be in a research study conducted by Dr. Corinne Harmon and Mr. Tyler Phillips in the Department of Leadership, Research, and Foundations at the University of Colorado Colorado Springs (UCSS). The study is about keeping your word and appreciating daily events. Your child was selected as a possible participant because your child is in the age range and at a school we are interested in studying. We ask that you read this form and ask any questions you may have before agreeing to have your child in this study. You will be given a copy of this consent form.

The purpose of this study is to see how young adolescents' attitude, effort, helping behaviors, and well-being increase when children learn to honor their word and/or appreciate daily events. If you agree to have your child in this study, your child will be asked to complete a 5-minute questionnaire before and after the study. Your child will be asked to rate themselves on effort, helping others, and well-being. Your child will then be asked to reflect and write for 10 minutes daily (for four weeks) on either 1) how they have honored their word (kept their word and, if not, what they have done to fix not being able to keep their word) and/or 2) what they have appreciated about their day, why, and how they can create more of the same positive experiences. Some students will initially be a part of a control group that does not participate in the exercise, though they may choose to participate in the exercise at a later time. All 6th, 7th, and 8th grade students in your school are requested to please participate during the 4-week period, as this study aims to have 700+ participants.

Risks/benefits: There is no foreseen risks to your child. Only the anonymous survey answers are collected at the beginning and end of the project. Each child does not have to share his or her daily answers with anyone, and so there is minimal risk.

Confidentiality: Only survey answers will be collected with a student ID number (no name attached), and will be collected and stored by the researchers. Since questionnaires will ask only grade level, it has been made impossible to identify subjects by name. Nonetheless, the anonymous survey data will be maintained and used only by the researchers.

Voluntary participation/withdrawal: Your decision whether or not to allow your child to participate will not affect your current or future relations with your school. If you decide to allow your child to participate, you are free to withdraw your child at any time without affecting your relationship with your school. Furthermore, your child may also discontinue participation at any time.

Contact information: If you have any questions regarding this project, you may contact 719-255-4537 or tphillips@uccs.edu and Dr. Corinne Harmon at 719-255-4537 or charmon2@uccs.edu. If you have questions regarding your rights as a research participant or any concerns regarding this project, you may report them confidentially, if you wish, to the Research Compliance Coordinator of the UCSS Institutional Review Board, at (719) 255-3903 or irb@uccs.edu.

Consent: I understand the above information and voluntarily consent to my child participating in the research. By signing this consent, I am confirming that I am the parent or guardian of

____________________________  _______________________
Signature of Parent or Guardian Date

____________________________
Printed Name