EUDAIMONIA AND ENGAGEMENT IN THE CLASSROOM: USING EXPERIENCE SAMPLING IN AN EXPLORATORY STUDY OF WELL-BEING IN HIGH SCHOOL STUDENTS

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ABSTRACT

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This study examined 21 high school students' self-reports of their feelings of Eudaimonia, and academic engagement (Marks, 2000) in their classes over a two-week period. Data were collected using the Experience Sampling Method (Csikszentmihalyi & Larson, 1987) by repeatedly sending an Experience Sampling Form (ESF) to students' mobile phones during the school day. The students responded from 5 to 35 times for a total of 279 responses to the survey.

Eudaimonia is a type of well-being centered around the psychological concept of self-actualization. Eudaimonia was measured using a 15-item scale adapted from the work of Waterman (2010) and Ryff (1989). Measures of academic engagement were drawn from the work of Marks (2000). The study focused on three research questions: Students' reports of their experience of Eudaimonia in the classroom, how these reports varied by context and whether Eudaimonia and engagement shared a relationship in these classroom experiences.

Overall the students reported their states of well-being over this two-week period to be between neutral and eudaimonic on the 5-point Likert scales, with a smaller number of reports of occasions when they were very eudaimonic or non-eudaimonic. Students' reports of their levels of Eudaimonia and academic engagement varied significantly across different subject matter classes and time of day.

This exploratory study shows the potential value of using the Experience Sampling Method to teachers and schools to gather real-time self-reports of students' engagement and Eudaimonia levels. The results suggest a specific logic model where subject matter departments influence the experiencing of 4 components of Eudaimonia. This model may further imply that these 4 components may work together to form the larger construct of Eudaimonia, which in turn may act as a predictor of academic engagement. Keeping in mind what should be considerable concerns over the final sample size used in the study, methods and models such as these could be used to better understand how to create more optimal learning environments to promote students to engage in authentic, self-actualizing activities leading to academically engaged states.

Keywords: Eudaimonia, Engagement, Well-Being, High School, Experience Sampling

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Chapter 1

INTRODUCTION

The various meanings of happiness have been discussed by philosophers throughout history, with Aristotle having been one of the most influential (Waterman, 2013). Throughout that time period the world has seen philosophies such as hedonic utilitarianism take hold of the materialized and industrialized world. This has been to the detriment of other non-hedonic forms of happiness. As a consequence, hedonic utilitarianism has provided a structural framework upon which many educational goals and experiences have been built as well.

Modern research has begun to focus on happiness through the development of the positive psychology line of research within the realm of general psychology studies. By examining how people ought to live, this field of research has posited various new positions on matters of happiness and life satisfaction (Seligman & Csikszentmihalyi, 2000). In doing so, positive psychology has been able to distinguish between two notable orientations to happiness, or what it refers to as well-being: hedonia and Eudaimonia (Waterman, Schwartz & Conti, 2006). Eudaimonia is a conceptualization of well-being based on the ability of individuals to self-actualize and develop their perceived virtues (Ryff, 1989; Ryan & Deci, 2001; Ryff & Singer, 2006; Waterman, 2007). The subsequent understanding of Eudaimonia and the benefits of its presence in educational settings have continued to grow. Alongside these however, the goals and structures of the modern American educational system have been built on hedonia. These developments began with the rise of manufacturing, materialism and the acquisition of goods (a characteristic

of hedonia) in an effort to provide the greatest good for the greatest number of a community (Csikszentmihalyi, 1999).

While this may seem like a reasonable goal for education, it is not without its problems, especially when it comes to the inclusion and fair shot at the satisfaction of important psychological needs. Crowson, Wong & Aypay (2000) note that this structure often means that someone must get left out and prepare for a subordinate role in what Labaree (1997) calls a stratification process suit to fit white collar employment structures.

Need

As a result of these two developments in educational structure and educational goals, we find ourselves with a system predicated on utilitarian hedonistic philosophies and often void of important eudaimonic characteristics. This has potential impacts on the psychological needs of students, from perceived well-being and positive functioning to interest and engagement.

In philosophical circles, happiness has been called the ultimate goal of human functioning (Waterman et al., 2006). From the standpoint of biology, happiness (or well-being) is thought to contribute to effective functioning and even disease prevention (Ryff, Singer & Dienberg Love, 2004). Psychological research has focused upon effects from perceptions of happiness on psychological functioning through the conceptualization of well-being construct (Steger, Kashdan & Oishi, 2008). Other research in these fields has focused on well-being as influenced by a variety of factors from moral philosophy, to meaning in life, religion or relationships (Steger et al., 2008).

This progression has led to the deeper exploration of Eudaimonia as a form of well-being. Results of this exploration have established eudaimonic well-being (EWB) as

being more strongly correlated with values of self-realization, importance, effort and a balance of skills and challenges (Waterman et al., 2006). Steger et al. (2008) have also found that eudaimonic behavior may be more consistently related to well-being than hedonic behaviors.

This development of well-being research occurred simultaneously with a growing educational concern over increasing patterns of the inability of students to maintain interest and engagement. Some (Robinson, 2008) argue that students are being punished for being distracted from mostly boring material, and the common reaction is to anesthetize them with drugs. Engagement is also "considered the primary theoretical model for understanding dropout and is necessary to promote school completion" (Appleton, Christenson and Furlong, 2008). However, dropout rates throughout the United States have only increased, resulting in fewer high school graduates and profound impacts on income levels and poverty. This is a critical absence. Engagement may manifest itself in a variety of ways but regardless of the form, it is argued to have a positive impact on learning and what we choose to learn (Schraw & Lehman, 2001).

Thus, educational experiences should seek to increase general student engagement. Previous studies have begun to investigate facilitators of engagement and their implications for policy and practice (Appleton et al., 2008). This study suggests that one way to achieve more engagement is to provide more contexts that elicit experiences that facilitate self-actualization or eudaimonic well-being.

Study Goals and Organization

This study investigated the presence of Eudaimonia in a secondary school over a two-week period. The goal of this exploration was to better understand how Eudaimonia

exists in various educational contexts. Additionally, this exploration elicited additional understanding of Eudaimonia's associations with academic engagement. Eudaimonia has demonstrated (Waterman et al., 2006) a strong correlation with indicators of interest via academic engagement, intrinsic motivation and other constructs representative of sustained effort (Csikszentmihalyi, 1988). Given that these findings reflect positive correlational relationships between Eudaimonia and elements of engagement, a reasonable goal of this study would be to carry out further research on this relationship. This research expands on the existing studies by furthering that line of research as well as through focusing on secondary education students and by collecting data from these students while in the classroom and across contexts.

This paper is organized to reflect these goals. It begins with a brief theoretical background on basic human needs, the satisfaction of which may lead to Eudaimonia. This is followed by a conceptual framework detailing the structure of the Eudaimonia construct used in data collection including 4 characteristics of eudaimonic experiences. That conceptual framework helps lay the foundation for the empirical review of Eudaimonia and engagement research that follows.

Chapter 2

LITERATURE REVIEW AND RESEARCH QUESTIONS

The Self

This study is built upon the notion that students are likely to engage in tasks or material when those tasks feel like they are in line with that student's authentic self. To better understand the connection between engagement and the self, we must first layout the theoretical foundations and needs of the self.

Humans as autopoietic systems. Some conceptualizations of "self" can be traced back to Aristotle. More recently, conceptualizations of self have drawn from a biological science perspective. This section will discuss these conceptualizations in an effort to provide the theoretical framework upon which the constructs of interest in the present study will be grounded, including authenticity and autonomy.

This discussion of self-actualization will start with the concept of teleology, through the lens of biology (Weber & Valera, 2002). Teleology is a form of self-organization. Intrinsic teleology specifically suggests that organisms have a purposefulness and goal-directness that allows them to strive to develop and keep themselves balanced (Weber & Valera, 2002). Weber & Valera argue that intrinsic teleology comes from a biological individuality or a tendency to self-organize.

The notion of self-organization as an intrinsic purpose leads us to a connection with autopoiesis. An autopoietic system is a network of processes of production of components that allow a system to constantly regenerate the network that is producing it (Weber & Valera, 2002). In this way, a system both produces and maintains itself. Autopoiesis is different from other self-organizing concepts in that it has empirical

grounds in biology, but fits as a solid “entry point into the origin of individuality and identity." Individuality is argued to be “a relation of an organism with itself, and the origin of ‘concern’ based on its ongoing self-produced identity” (Weber & Valera, 2002).

This purpose of self-organization, known as teleology, would have two components. The first would be the maintenance of one’s identity. The second component is creating a sense of its environment, its structure and its relationship with the environment (Weber & Valera, 2002). In this way, autopoietic systems have an intrinsic telos or purpose. We are in a constant struggle to maintain our self and our identity. This process of constantly trying to find ourselves places us in a perpetual state of self-organization. Progressing down this path is often referred to as self-actualization.

Self-Actualization. Self-actualization then, ties us to basic psychological needs. The notion of basic human needs began to be conceptualized in the form of self-actualization theory through the work of Carl Rogers (1961) and Abraham Maslow (1943). Rogers suggested self-actualization is a basic motivational tendency toward growth and adaptation (Ford, 1991). Simply put, humans have a natural tendency to organize themselves, just as an autopoietic system should.

Maslow provides a simple version of the goal of self-actualization for individuals. It is the recognition of who we really are and, once we’re in touch with 'real' us (Rogers, 1961) finding ways to further that understanding. Maslow described self-actualization in terms of a hierarchy of basic needs. Koltko-Rivera (2006) summarizes Maslow’s view of self-actualization as a person’s desire or tendency to become actualized in what he is potentially. He goes on to argue that Maslow also began to develop a highest level to his hierarchy (Maslow, 1943) in the form of peak experiences. These peak experiences are

what Maslow would call self-actualizing experiences. The pyramid moves from the most basic of physiological needs like food and safety to more psychological needs such as these peak experiences. However, this pyramid has not received much empirical support. Another model that has is the Existence, Relatedness, Growth (ERG) Theory (Alderfer, 1969). This theory, like Maslow's hierarchy places an importance on personal development as its peak experience, but with more empirical support.

The self as a process. According to autopoietic theory, an organism is a process. As such, an organism must pay attention to its environment and what it experiences in any given context (Ginsburg, 1984). Experiences in different contexts vary in their ability to satisfy needs. Experiences that do not satisfy an organism's intrinsic telos of self-maintenance do not lead to growth.

Organisms need a process for evaluating environments and experiences. Two phenomena are involved in the process of evaluating environments: feedback and alignment. Alignment refers to the extent to which an experience aligns with the organism's telos or goals of self-maintenance and realization (Holton, 2014a). The biological, philosophical and psychological perspectives discussed above share similar concepts. Weber & Valera (2002) would identify alignment as being in "good form". Rogers would refer to this idea as congruence and would distinguish between actualizing tendencies (those that develop capacities that maintain the organism) and self-actualizing tendencies (a subsystem that actualizes self structure). Incongruence refers to when the "self-actualizing tendency is striving to maintain and realize a self-structure that is not synchronized with the organism" (Ford, 1991). As noted in Holton (2014a) Ginsburg's (1984) review of Rogers notes that a "lack of congruence between what we experience

internally and what we express socially is inauthenticity…. one can create authenticity by knowing internally and experientially what congruence among action, feeling and somatic expression feels like" (p. 71). Ginsburg also argues that humans are self-aware, self-controlling and see all experience from a subjective lens with differing qualities for self-organization. However, in order to regulate and judge such experiences, a feedback system is needed.

This feedback and recognition cycle is the second part of the self's process of maintenance. Simply put, feedback and recognition is theorized to be a cyclical process in that the growth and maintenance of the self is an ongoing process of experience, feedback, evaluation and re-organization. Again, when put against the perspectives discussed here, we find additional theoretical overlaps. Paying attention to one's feedback mechanisms is a staple of somatic philosophy (Ginsburg, 1984). Feedback serves to inform an organism of how it is maintaining and self-reproducing, a critical process for any autopoietic system, given its telos for self-organization. Weber & Valera, (2002) argue that, by acting as a process of corrective change and alignment, this is also the process through which an individual may form their identity. For the purposes of this study, self-actualization theory from Maslow may be the most critical to consider. He notes that when needs are "frustrated" or not met, it signaled by negative emotions such as boredom and apathy (Geller, 1982), a key point for the purposes of this study.

However, in order for these systems and processes to effectively create an identity, the organism must also exist within a context. It is in this context where experiences take place and the subsequent feedback is formed. Thus, an aspect of environment plays a significant role in the process of self-organization and self-

maintenance. The self cannot exist isolated on its own. It must exist in the manner in which it copes, relates and couples with its surroundings (Weber and Varela, 2002). It is through this process that it creates identity. However, the necessary presence of a context is somewhat paradoxical. While on the one hand it is necessary for an organism to have a standard against which to evaluate experiences, that same context also means the potential for increased inauthentic experiences and alienation of the self.

Carl Rogers suggests this is a problem of conditions that create normative standards, which in turn have the potential to affect self-regard. For example, a person may judge his or her own weight against the normative standard of the culture in which they live. Ginsburg (1984) argues that the self is both a "product of biological individuality" and "social organization", thus the context and potential for incongruence is something of a necessary evil. However, one should take caution in straying too far down this path given that shifting from a naturally developing self to an object based on social interaction may lead to a lack of authenticity.

Eudaimonic Theory

Based on a review of the literature, this study proposes that a conceptual model for Eudaimonia and eudaimonic experience is made up of four characteristics related to these biological, philosophical and psychological underpinnings, (1) personal growth (2) purpose or meaning in life (3) sense of self and (4) relatedness to the environment. These four characteristics serve as a conceptual bridge to the study's proposed positive indicators of academic behavior. This study also proposes that a relationship exists between experiences of Eudaimonia and experiences of academic engagement.

Empirical work by the scholars has revealed several important and agreed upon characteristics of Eudaimonia. The first of these characteristics is *personal growth*. Eudaimonia specifically refers to an individual's identification, pursuit and development of their best attributes or virtues "in a manner that is authentic to their true self" (Waterman, 1984; Ryff, 1989; Waterman, 1993; Ryan & Deci, 2001; Peterson, Park & Seligman, 2005; Waterman, 2007; Huta, 2013). Personal growth refers to the development of one's skills, virtues, attributes and potentials (Ryff, 1989; Waterman, et al., 2010; Huta, 2013). Personal growth involves first being able to identify these virtues, after which meaning in life, purpose and self-acceptance can take hold in stronger way.

The second of these characteristics, *meaning*, suggests that eudaimonic experience means aligning one's actions with one's sense of true self (Huta, 2013). Waterman suggests this may mean orienting one's goals in a manner which allows them to use and cultivate their perceived virtues (Waterman, Schwartz, Zamboanga, Ravert, Williams, Agocha, Kim & Donnellan, 2010), where as Ryff's (1989) model suggests that meaning is derived from purpose in life or a sense of directedness. Thus, *purpose in life* and a *sense of self* act as a second and third components of Eudaimonia in this conceptual model.

The same can be said for the fourth aspect of eudaimonic experience, *relatedness to the environment*. Individuality cannot exist without a context and normative standards. From the standpoint of Eudaimonia, well-being experienced from cultivating one's skills, acting in accordance with one's true self and pursuing meaning could not exist without a context in which each of these characteristics might be formulated. If human beings are dependent upon said context for normative standards against which we evaluate

experiences then we must, in part, also depend on that context for the evaluative element of the judgments. Thus, Eudaimonia would only be experienced when the perceptions of virtue cultivation, personal growth, and purpose are in line with the standards of the context or contexts. Ryff (1989) refers to this as environmental mastery, or the ability to choose and use contexts that are suitable for the self and values. This paper will refer to this experience as *relatedness to the environment*, the fourth and final component of Eudaimonia.

Eudaimonia and Engagement in the classroom. Up to this point, the theoretical and conceptual frameworks presented philosophical, biological and psychological foundations for basic needs as a part of its process of self-organization. This study has conceptually linked these self-actualizing needs to four elements of well-being that are distinctly connected to Eudaimonia: personal growth, sense of self, purpose and relatedness to the environment or congruence with one's environment. We will now look at how these conceptual components of Eudaimonia share a connection with elements of indicators of academic behavior and achievement.

The issue of attention and effort in classrooms has become of increasing concern. Switzky & Schultz (1988) began to argue that classroom teachers were in a crisis in reaction to having to teach a growing number of students with mild handicaps such as learning disabilities or behavioral disorders. Existing research also suggests children's motivation decreases as they age, increasing their alienation from learning (Skinner & Belmont, 1993). More recent research suggests educators are still struggling with how to work with academically unmotivated students (Hidi & Harackiewicz, 2000 as cited in Hidi & Renninger, 2010). Simply put, motivation and engagement have long been

recognized as challenges to schools (Marks, 2000; Hidi and Harackiewicz, 2000: Ainley, 2006; Ainley & Ainley, 2011).

These challenges are particularly concerning given the potential impact engagement can have on educational experiences. Marks (2000) notes that students who are engaged are more likely to have both a rewarding learning experience and graduate and move on to higher education. He also argues that engagement has a logical connection to achievement and human flourishing. Appleton et al. (2008) suggest that educators have recognized the importance of engagement for years. Likewise, levels of interest may moderate motivational behavior of students (Ainley, Hidi & Berndorff, 2002) and help students enjoy the learning process (Durik & Harackiewicz, 2007). This study investigates student reports of their classroom experiences in an effort to better understand some of the possible deficiencies in academic engagement.

The development of engagement research has led to a variety of conceptualizations and sub-component models. Early on it was suggested that engagement was made up of two parts *behavioral* (positive conduct, effort, participation) and *affective* or *emotional* (interesting, belonging, positive attitude about learning) (Appleton et al., 2008). More recent research has suggested a third, *cognitive* dimension. Followed by an eventual four-type model with *psychological engagement* being the additional piece (Fredericks, Blumenfeld & Paris, 2003; Reschly and Christenson, 2006). The result of this research was the following proposed model: CONTEXT → SELF → ACTION → OUTCOME. Wherein a context that is aligned with the self may facilitate an action in desire of a particular outcome. The framework laid out thus far would suggest

that action and outcome may likely be the result of an inner telos or purpose to continuously self-organize and actualize.

Academic engagement (Marks, 2000) focuses on a three-type model, *behavioral* (effort) *affective* (investment) and *cognitive* (interest/attention), belonging and positive attitude toward learning. His theoretical model suggests an ecological perspective for engagement. This perspective argues for a variety of systems and that their interactions are dependent upon particular contexts and the extent to which consistency exists between these systems and larger culture. This shares conceptual overlaps with biological and psychological foundations of eudaimonic theory. In Marks' work he conceptualizes engagement more specifically as academic engagement and suggests that academic disengagement is a result of alienation in U.S. schools due to a lack of connections to the student's world. It is suggested that this is an ecological perspective in that this alienation is a failure of the student's set of systems and values of being congruent with their educational experience.

Accordingly, we again see overlap with eudaimonic theory. Alienation that is posited to create disengagement shares a theoretical similarity to the notion of congruence in autopoietic theory and notions of self-actualization. We see this pop up in additional research on engagement as well. Baumeister and Leary (1995) examined affective connections through the fundamental needs of humans to belong, and measured sense of belonging and relatedness in connection with human motivation. Additional studies on school warmth's impact on academic achievement came from Voelkl (1997). Most recently, Furrer & Skinner (2003) examined the role of relatedness in student engagement and subsequent academic performance (as cited in Appleton, 2008).

Like relatedness, the other 3 proposed components of eudaimonic experience also share overlaps with engagement research. Marks' (2000) conceptualization of academic engagement also focuses on components promoting significant effort and investment in activities. General engagement research has suggested a component of engagement that is focused on *personal goal orientations*, the notion that engaging activities are in line with a person's purpose. Significant relationships have been found between cognitive engagement, personal goal orientation and investment in learning (Green and Miller, 1996) as cited in Appleton et al., 2008). In Eudaimonia research, the framework on Waterman's *eudaimonistic identity theory* (Waterman, 1990) provides predictor variables such as congruence, intense involvement and needs fulfillment. Additionally, framework from Csikszentmihalyi's (1975) teleonomic theory of the self, posits connections between intense involvement and positive psychological functioning with a balance of challenges and skills.

Waterman built upon research in two 2005 articles (Waterman, 2005; Waterman et al., 2005); one on effort, and another on the two orientations to well-being (Eudaimonia and hedonia). The former found that high-effort activities were associated with eudaimonic characteristics like personal expressiveness, importance, interest and self-realization. This runs parallel the notions posited by engagement research, which suggest a behavioral component to engagement as well.

For this study, the study investigated academic engagement of students; specifically that of student engagement in academic work (Marks, 2000). This form of engagement refers to a student's psychological processes that regulate attention, interest, investment and effort. In doing so it is based upon the behavioral, affective and cognitive

components outlined. Marks built on the works of various authors (Newmann, Wehlage & Lamborn, 1992; Merton, 1968; and Connell, 1989) to propose that this form of engagement is, again, based on three needs (1) to develop and express competence (2) school membership and (3) authentic academic work. In eudaimonic theory these three needs are known as (1) personal growth (2) relatedness to the environment, (3) sense of self and (4) purpose. Given these connections, the study shows similar behavior among engagement and Eudaimonia, furthering the understanding of both constructs. This is one area in which the present study may add to the existing model. To this point, some research has been conducted examining connections between Eudaimonia or its components and indicators of purposeful engagement in work (Ryff, 2004; Ryff, 2014). However, little to no research has yet been done that addresses the implications of Eudaimonia on engagement in schoolwork. The study suggests that Eudaimonia fits in place of the "self" in this model, resulting in a new model CONTEXT → EUDAIMONIA → ACTION → OUTCOME.

However, this study also furthers the research on engagement and Eudaimonia by investigating context. This is done in two different ways. First, to this point, little research has been conducted examining the relationship between Eudaimonia and academic engagement in general. There has been even less investigating Eudaimonia in high school settings. The ESM methodology used in the present study gathers data from high school students while in the classroom.

Second, it expands on engagement research that has already begun to investigate context. Engagement research has suggested that we can better understand student levels of engagement through recognizing the "goodness of fit" between the students, his or her

environment and the factors that influence that congruence. Further, that this role of context in facilitating engagement should not go ignored (Appleton et al., 2008). This study furthers research (Ryff & Steger, 2006) on context by focusing on the relationship between contextual elements (curricular department and period of day) of students' experiences of Eudaimonia and engagement. Previous research from Marks (2000) has suggested that curricular subject matter may influence engagement. Additional studies have noted the contrast between contexts that promote indicators and facilitators of engagement. This study found contextual variables such as subject matter share a relationship with engagement. This kind of work, referred to as authentic work, constitutes activity with the effect of personal background. Social support for learning also contributes considerably to student engagement. This is typically defined as a "positive school environment" (p. 169). Likewise, class subject matter also proved to be a significant factor in academic engagement.

As such, this study addressed the following areas: First, it examined Eudaimonia in a high school context. Second, this study continued the tradition of engagement research that focuses on contextual influences of engagement by investigating relationships between engagement and subject matter and period of day. The final objective of this research was to further the understanding of engagement and Eudaimonia by investigating relationships between the two and across different contexts.

Research Questions

Research Question #1: To what extent do high school students experience Eudaimonia in school?

Research Question #2: How does Eudaimonia in high school students vary by context such as department and period of day?

Research Question #3: What is the nature of the relationships between high school students' experiences of Eudaimonia with their levels of engagement?

CHAPTER 3

DESIGNS AND METHODS

Participants

The population for this study is a group of high school students between the ages of 14-18. The original convenience sample was numbered and random numbers were generated and matched to the school's student roster. Invitations to participate in this study were sent to the individuals randomly selected with the intent of reaching a sample size between 20-30. The sample was taken from the population of grades 9-11 at an independent high school along the West Coast of the United States. Given the relatively late point in the school year, the data collection did not include students in 12th grade. This is an issue to be considered when generalizing to the larger school population.

Contact was made via the school's email lists, through which all students and faculty are connected. This communication was approved and overseen by the school's communications department. Once students agreed to participate, they received all permission forms before the study moved forward. All participants signed assent forms and their parents signed consent forms. Additionally, all teachers willing to participate signed consent forms.

Setting

Students at this school generally come from affluent communities. Tuition at the school is over $30,000 a year. Most come from two-parent homes and have little concern over the satisfaction of Maslow's most basic needs such as food, water, safety or belonging. Consequently, this is an ideal context to study self-actualization. Further, the students

may enroll in as many as 10 classes over a two-day period. This variety and change from period to period or day-to-day provides a great deal of contexts and contextual variables to evaluate.

The school itself is an independent religious high school of grades 9-12 and has a population of approximately of 600 students. As a religious institution, students must take a core curriculum of 6 subjects; the typical 4 of Social Science, English, Math, Science plus an additional two in the form of Jewish Studies and Hebrew. Consequently, the school's calendar is run on an A day B day schedule where students' schedules alternate depending on the day. Mondays and Wednesdays constitute the "A days" while Tuesdays and Thursdays are the "B Days". Fridays alternate between the A and B schedule each week. Thus, in a two-week period, students have 5 A days and 5 B days. A student's "A day schedule" and "B day schedule" holds a potential of 5 different classes, so a student could take 10 classes every A day B day cycle and meet with those classes 5 times every two weeks. Within those 10 classes, they need to fit the 6 core curricular courses, plus additional electives and the option to leave these periods open as "free periods".

The final sample of n = 21 students has a few characteristics that need to be mentioned. The small sample size is certainly not generalizable to the larger population of secondary students, but may be somewhat generalizable to the school's population. Regardless, additional studies of larger sample sizes will need to be conducted. The sample contained a normal distribution of responses by day, and a mostly equal distribution of responses across the different periods of day, gender and curricular departments. The one issue that stands out however, is that students in 11^{th} grade account for over half of the total $n = 279$ responses. Thus, any developmental differences

between 11th grade and the rest of the school, as well as its implications on experiences could be heavily weighing the overall results.

Procedures

Once student participants were gathered and consent forms were signed, a matrix of student schedules was created. To do this, a matrix of the participants and their daily schedules was made. This also allowed the researcher to identify the teachers who would need to provide permission allowing the study to take place. This matrix was also used to ensure that no more than 3 participants were in any single section or class at a time, thus limiting disruption to the teacher's lesson. These teachers were then contacted through face-to-face communication. They were asked to volunteer to be a part of the study by allowing the student to fill out surveys on their mobile phones during class time. Teachers were free to decline participation in the study.

Of the 56 teachers contacted, all 56 agreed to participate. Participation only included a willingness to allow students to answer these signals when appropriate. The teachers also reserved the right to tell a participating student they could not respond to a prompt in the event it came at an inappropriate time such as during a test. Thus, teachers acted both as enablers of students to respond to the signals as well as potential hindrances to response rates. No actual data was collected from these teachers however.

Student response data were gathered via a survey (Appendix A) sent to students' personal cellular phones using the Experience Sampling Method (ESM) (Csikszentmihalyi & Larson, 1987). ESM is a signal contingent method of data collection in which participants report on multiple dimensions of their momentary experience in response to generated signals at multiple time points throughout a day. The ESM prompts

were sent using a commercial service (SurveySignal.com). Prompts were sent 3 to 5 times per day and no more than once during any class period. These signals lasted for 2 weeks of class time. Thus, students typically received 3-5 signals per day, across different classes, days, and points in time over a two-week period. This technique was used successfully in an earlier study of perceptions of well-being (Holton, 2014a). With the sample including 21 students and all students having to take the same 6 core required courses, each core department stood the potential of having over 100 signals respectively. Each of the 6 core departments (Jewish Studies, Math, Science, Social Science, Hebrew and English) received between 37-40% of their potential responses. Part of this may have been due to the length of the Experience Sampling Form.

Each prompt asked the student to complete the 53-item Experience Sampling Form (see Appendix A). The ESF was originally 53 items as the initial study also sought to explore elements related to hedonia, interest and intrinsic motivation. The data were later reduced and cleaned to focus on Eudaimonia and engagement only. Pilot testing showed that the completion time for the 53-item ESF was between 3-5 minutes. The approximate actual mean completion time was 6.89 minutes but with a median of 4.5 minutes. A concern with this procedure was the anxiety or dissatisfaction created for both the student and the teacher if the form took too much time to complete. This may have ultimately led to lower than normal (Holton, 2014b) response rates.

Previous findings on the consistency of this method suggest comparable parameter rates to that of older methods of ESM such as with PDAs, beepers and watches. Hoffman and Patel (2014) measured mean response rates to the mobile surveys (76.7%), retention rates throughout the duration of the study (89.4%), full completion of the

surveys for every response, or response ratio (96.4%) and intake or completion survey rates (95.4%). The authors note that the 77% response rate was either higher or no different from responses in other Experience Sampling studies (Hoffman & Patel, 2014). These findings have been further validated by Holton (2014b). Thus, response rates relatively close to these were expected to occur for this study.

That did not occur. As students began to get signals, Survey Signal seemed to send signals at odd times. Other times, students simply could not receive their signal given variance in cellular service carriers and what part of campus the students were in at that moment. For instance, a participant with one particularly weak cellular carrier who has a class on the interior of a campus built into a mountainside may not have had a signal strong enough to receive the signal prompt. Consequently, no true response rate was able to be calculated as students reported not getting certain signals that Survey Signal claimed to have sent. Furthering the issue of response rates was the length of the ESF itself.

In recent research, Ryff (2014) noted the tension between respondent burden and the goals of adequate depth of measurement. In this exploratory study, 13 total scales were created. The survey included multiple scales, but the primary focus on this study is on the measures of Eudaimonia. The relationship of these Eudaimonia scales to several other measures is examined briefly. Although longer than most ESM surveys, a substantial number of complete responses were collected. In retrospect, it might have been better to administer a shorter instrument, a possibility to be discussed in the conclusions section. Hektner, Schmidt & Csikszentmihalyi (2007) suggest that Experience Sampling forms should have no more than 35 questions.

Table 3.1. Outline of Scales and Items Used in Experience Sampling Form

ESF Scale	Item Totals	Original Scales Used in Creating Adapted ESF Items
Characteristics (Items 1-4): Gender, Grade level, period of the day & Name	4	
Engagement (Items 22-24)	3	(Marks, 2000)
Eudaimonia (Items 26-45) *Personal Growth* (Items 26-29) *Relatedness* (Items 31, 33, 38-39) *Purpose* (Items 34, 40-42) *Sense of Self* (Items 32, 43-45)	4 sub-scales making up a 15-item composite	Questionnaire for Eudaimonic Well-Being (Waterman et al., 2010) and Basic Psychological Needs Scales (Ryff, 1989)

Table 3.2. Data Structure

	Description	Totals
Students	High school students at West Coast private school. Well-funded and all with their own personal mobile devices.	21
Days	School days included; weekends excluded over two-week period.	10 school days
Prompts/Day	Some students have 5 classes per day and others have 3 or 4 depending on individual schedules.	3-5
Prompts/Class	1 per class period	1
Questions/Survey	Experience Sampling Form includes 53 items.	53
Survey Questions Used in Analysis	Refined study goals meant focusing on Eudaimonia, Engagement and Context only	22
Total Survey Prompts/Submissions	Total number of data collection prompts after cleaning	279
Median Response Time	Time taken for a typical response to be completed	4:30

Each student received fixed survey signals based on their specific class schedule. To do this, separate, individualized survey signals were created for each student. A process similar to that of Holton (2014a) was then followed. Since the school runs an alternating "A day/B day" schedule, each student's signal times needed to correspond to a particular hour of the day in which that student was in a class with a teacher who has assented to participate. Additionally, Friday schedules alternate between A and B days and have a different time layout than Monday-Thursday. Thus, those times were carefully inputted to reflect varying daily time schedules.

After signals were purchased and ready to be sent, each individual schedule was created and named. As outlined in Holton (2014a), parameters were set up for each

survey signal schedule. Survey distribution was set to occur via SMS text message. (In the event that a student wanted to participate but was not allowed access to their smartphone or does not have their own, the survey signal could have also been set to e-mail survey prompts. However, that did not occur during data collection.)

Signals were set to time out after 15 minutes to ensure students' close proximity to the experience and enable more real-time responses. The survey signaling program avoided having random signals sent out at any incorrect times. The survey schedule and type of randomization was set to "fixed" with the number of fixed signals per day set to 3 to 5 depending on how many classes with teacher consent the student had each day.

Once these parameters were set, individual survey schedules were created based on the student's class schedule. Using the already created matrix of student schedules and the list of teachers who have consented to participate, the researcher was able to determine the appropriate block of time in which to schedule each signal. At that point each individual signal time was typed into individual cells using the 24-hour time format, individualizing each ESF schedule for each participant.

Instruments and Measures

Academic engagement. The academic engagement measure was constructed by taking the mean of 4 items developed by Marks (2000) (See items 22-25 of the ESF in Appendix A). However, reliability analyses in SPSS suggested removing item 25 "Do you feel bored during this activity". The study had trouble with this item due to it needing to be reverse coded. After removal, the engagement measure achieved a Cronbach's alpha

measure of .803. Responses were on the same 5-point Likert scale as the individual interest scale

Eudaimonia. Eudaimonia is made up of 4 of sub-scales measuring the 4 components laid out in chapter 2: relatedness, personal growth, purpose and sense of self. The survey used in this study used only 4 items per construct. This remains consistent across all sub-components. However, item 33 "I'm managing my responsibilities quiet well during this class" was removed after reliability analyses suggested doing so would increase the relatedness measure's alpha level. Thus, the composite scale for Eudaimonia is made up of 15 individual items, respectively. Alpha levels were calculated for the composite and sub measures; Eudaimonia (.91), relatedness (.6), personal growth (.92), sense of self (.69), sense of purpose (.73). Intrinsic motivation, hedonic motives and eudaimonic motives were originally measured for as part of the Experience Sampling Form (ESF). However, a shift in study focus meant more attention on engagement and Eudaimonia. Thus, the data for these other variables were removed at the first level of analyses.

The ESF subscales and items outlined in Table 3.1 depict scales mostly adapted from the aforementioned original scales of measurement. To suit the variability in context and subsequent changes in emotions, original scale items from Ryff (1989) and Waterman et al. (2010) need to be re-worded to suit momentary experiences. In the case of an item from Ryff's Basic Needs Scale that reads, "I have the sense that I have developed a lot as a person over time" was adapted to read as a momentary experience. For example, "I have a sense that this topic or activity is helping me develop as a person".

The resulting Experience Sampling Form then measured constructs in a similar manner as Ryff and Waterman but with a focus on the context and momentary experiences.

To investigate curricular departments, they first needed to be coded. In this case, the researcher used the school's department titles and course alignment to guide the coding process. Any course that is listed in the department of Social Sciences was coded as a 2 "Social Science". The only exception to this was the department of performing and visual arts, which were combined into a single curricular department, 7 "Arts". Within these departments, classes were taught by a variety of teachers. Thus, any results for these departments are not representative of specific teachers, but rather a subject-matter effect or social environment effect. Teacher distribution by department was relatively even as well with the median of 7 teachers per department, a mean of 6.7 per department and a range from 4 (Languages) teachers to 10 (Science) teachers.

CHAPTER 4

ANALYSIS AND RESULTS

Exploring the Data

Upon initial investigation of the returned data a few characteristics became clear. First, there is high variability in the number of responses provided by each of the n = 21 participants. Second, many of the participants submitted responses that were incomplete. Third, some of the responses were outside of the designated class periods. This may have been user error or an issue with the time zone selection for that signal. Regardless, all incomplete responses and responses taking place outside of the classroom were eliminated from the data. The result is an *n* of 288 responses from 21 total participants, a typical class size at the school under investigation. It should be noted as a limitation that these 288 represent a mean response rate of 27.96%. This response rate may be due in part to poor signals to cellular phones by some carriers on certain parts of campus as well as a result of the length of the survey itself.

The next step required coding and recoding some of the data for further analysis. This included recoding for the day of the week and curricular department. After discussion, it was decided to also include curricular department or course subject at the time of the response, so an additional variable was added to reflect the curricular department. Of the 9 departments coded, one only received 9 responses compared to the next closest minimum of 22. Thus, department 9 was eliminated from the data, leaving n = 279 total responses.

Research Question #1

The first research question sought to investigate *to what extent do high school students experience Eudaimonia in school*. Descriptive statistics were then calculated for all variables of interest (see Table 4.1**).** A 5 point Likert scale was used in all measurements. Thus, general patterns show collective high engagement while students generally experienced collectively low purpose and personal growth.

Table 4.1. Descriptive Statistics for all Variables

	N	Mean	Std. Deviation
Engagement Composite	279	3.9131	.86914
Eudaimonia Composite	279	3.0411	.75454
Sense of Self	279	3.3047	.78481
Purpose	279	2.8450	.90806
Relatedness	279	3.4484	.71549
Personal Growth	279	2.6729	1.04695
Valid N (listwise)	279		

Correlational analyses were also run to examine how the scale for Eudaimonia and its subcomponents generally hung together. The resulting table (see Table 4.2) demonstrates strong correlations at .01 levels of significance for the n = 279 responses. This demonstrates a level of convergent validity. Of particular interest in these results are the strong correlations between all four subcomponents of Eudaimonia and the Eudaimonia 15-item construct. Additionally, strong correlations exist between Personal Growth and

Eudaimonia (*r = .914*) as well as Personal Growth and Purpose (*r = .702*), three components related to personal goal orientations.

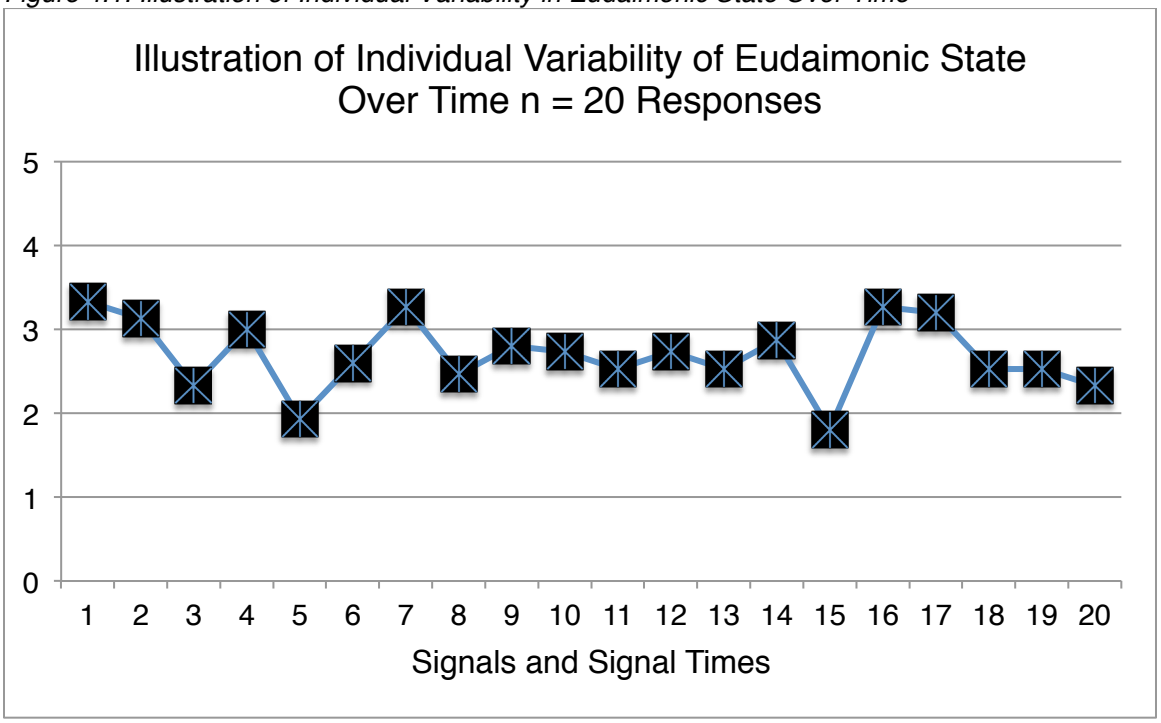
Table 4.2. Correlations Among Eudaimonia and Sub-Components

		Eudaimonia	Sense of Self	Purpose	Relatedness	Personal Growth
Eudaimonia	Pearson Correlation	1	.753**	.791**	.702**	.914**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	279	279	279	279	279
Sense of Self	Pearson Correlation	.753**	1	.682**	.502**	.603**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	279	279	279	279	279
Purpose	Pearson Correlation	.791**	.682**	1	.480**	.702**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	279	279	279	279	279
Relatedness	Pearson Correlation	.702**	.502**	.480**	1	.510**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	279	279	279	279	279
Personal Growth	Pearson Correlation	.914**	.603**	.702**	.510**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	279	279	279	279	279

** $p < 0.01$

The study also sought to investigate the way Eudaimonia generally behaved in high school classrooms. Figure 4.1 shows the results from these analyses. This displays the 20 responses of a single student and their reported Eudaimonia score. We see a great deal of variability from point to point. This supports the notion that student perceptions of Eudaimonia seems to be more of a state than a trait, at least when measured with the conceptualization used in this study. It also suggests that Eudaimonia varies from classroom to classroom, day-to-day, subject-to-subject, etc. This naturally leads to the study's second research question.

Figure 4.1. Illustration of Individual Variability in Eudaimonic State Over Time



Research Question #2

The study's second research question asked *how does Eudaimonia in high school students vary by context such as department and period of day?* In examining Eudaimonia throughout the two-week period, Eudaimonia varied over time. It also appeared to vary by context. In this case, context was measured by curricular department and class period of the day. This was demonstrated by the manner in which eudaimonic experiences varied from period to period as students changed classes. However, the raw data only shows student responses on a Likert scale of 1-5 and does not take into account that students' own levels of Eudaimonia or perceptions of those experiences may differ from one another. Thus, all scores for Eudaimonia and its sub-components were standardized as person-level z-scores. These new scores reflect standardized measures of

students' experiences relative to their other reported experiences. Thus, scores showing positive or negative numbers <.5 are considered relatively high/low compared to that participant's mean response. The resulting z-scores were then investigated for variance throughout the two-week period.

To investigate this question, ANOVAs and correlations were run to examine the effects of gender, period of school day, day of week and grade level and curricular departments on student levels of Eudaimonia and academic engagement. Of these variables, only period of day (see table 4.3) and curricular department (see table 4.4) demonstrated significant associations.

Period of day. Table 4.3 suggests a relationship between period of day and Eudaimonia, and eudaimonic characteristics with the exception of sense of self. To ensure these results weren't being confounded by the curricular departments, the data was sorted and checked for departmental inclusion in these different periods. Of the 5 periods under investigation, each of them had responses from all 8 curricular departments, thus alleviating some of the concern over results being confounded by department. However, it should still be noted that the sample size and variance in responses is a limitation of the study.

Table 4.3. ANOVA: Eudaimonia, Sub-components & Engagement by Period of Day

		Sum of Squares	df	Mean Square	F	Sig.
Eudaimonia	Between Groups	28.162	4	7.041	7.721	.000
	Within Groups	249.838	274	.912		
	Total	278.000	278			
Engagement	Between Groups	3.061	4	.765	.763	.550
	Within Groups	274.939	274	1.003		
	Total	278.000	278			
Relatedness	Between Groups	22.289	4	5.572	5.971	.000
	Within Groups	255.711	274	.933		
	Total	278.000	278			
Personal Growth	Between Groups	29.513	4	7.378	8.136	.000
	Within Groups	248.487	274	.907		
	Total	278.000	278			
Sense of Self	Between Groups	4.954	4	1.238	1.243	.293
	Within Groups	273.046	274	.997		
	Total	278.000	278			
Purpose	Between Groups	16.091	4	4.023	4.208	.003
	Within Groups	261.909	274	.956		
	Total	278.000	278			

The final results suggest that there may be a sweet spot for experiencing Eudaimonia and its sub-components (with the exception of sense of self). However, given the multiple comparisons being made, concern existed over the potential for Type 1 errors. To control for the Type 1 error rate, Scheffe post hoc tests were administered. Figure 4.1 shows the post hoc test results. Periods 1 and 4 had negative mean eudaimonic experiences that varied at a significant level while period 3 had a significantly varied positive mean Eudaimonia. Periods 1 and 3 also maintained this variance pattern when relatedness, personal growth and purpose were each analyzed (See Figures 4.4-4.9).

Notice that in most cases, period 1 (A) significantly varies and does so negatively. Period 3 (C) also varies significantly, however it does so positively. However, none of the periods varied significantly when analyzing both engagement and sense of self. Figure 4.2 further shows this pattern.

Table 4.4. Scheffe Post Hoc Results for Eudaimonia by Period of Day

		Subset for alpha = 0.05	
PeriodofSchoolDayQ4	N	1	2
1.00 (A)	68	-.3734864	
4.00 (A)	43	-.1407367	
5.00 (B)	51	-.0640525	-.0640525
2.00 (B)	48	-.0030817	-.0030817
3.00 (C)	69		.5052660
Sig.		.401	.051

Table 4.5. Scheffe Post Hoc Results for Relatedness by Period of Day

Period of School		Subset for alpha = 0.05	
Day Q4	N	1	2
1.00 (A)	68	-.2793285	
4.00 (A)	43	-.1846391	
2.00 (B)	48	-.0734511	-.0734511
5.00 (B)	51	-.0374825	-.0374825
3.00 (C)	69		.4691460
Sig.		.793	.078

Table 4.6. Scheffe Post Hoc Results for Personal Growth by Period of Day

Period of School		Subset for alpha = 0.05	
Day Q4	N	1	2
1.00 (A)	68	-.4496225	
5.00 (B)	51	-.0902694	-.0902694
4.00 (B)	43	-.0096933	-.0096933
2.00 (B)	48	.0686303	.0686303
3.00 (C)	69		.4681250
Sig.		.096	.058

Table 4.7. Scheffe Post Hoc Results for Sense of Self by Period of Day

Period of School Day Q4	N	Subset for alpha = 0.05
		1
4.00	43	-.2178080
2.00	48	-.0630101
1.00	68	-.0134323
5.00	51	-.0071863
3.00	69	.1981178
Sig.		.325

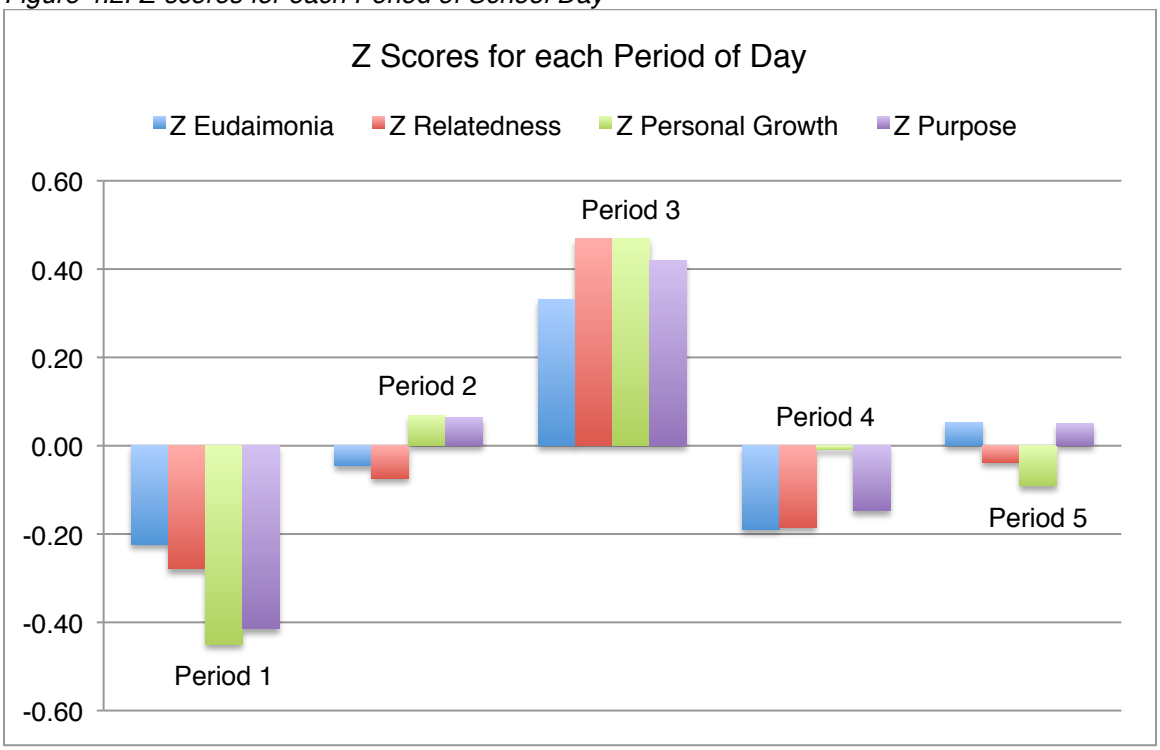
Table 4.8. Scheffe Post Hoc Results for Purpose by Period of Day

Period of School Day Q4	N	Subset for alpha = 0.05	
		1	2
1.00 (A)	68	-.3556175	
4.00 (B)	43	-.1174037	-.1174037
2.00 (B)	48	.0846779	.0846779
5.00 (B)	51	.0897388	.0897388
3.00 (C)	69		.2983932
Sig.		.236	.304

Table 4.9. Scheffe Post Hoc Results for Engagement by Period of Day

Period of School Day Q4	N	Subset for alpha = 0.05
		1
1.00	68	-.1592107
4.00	43	-.0335146
3.00	69	.0389742
2.00	48	.0441538
5.00	51	.1462520
Sig.		.645

Figure 4.2. Z-scores for each Period of School Day



Curricular departments. The ANOVA for examining the strength of the relationships between curricular departments and all variables of interested demonstrated more significant results. Table 4.2.1 shows a significant relationship (<.05) between departments and all variables of interest, including eudaimonic sub-components.

Table 4.2.1. ANOVA for Eudaimonia and Sub-components by Curricular Department

		Sum of Squares	df	Mean Square	F	Sig.
Eudaimonia	Between Groups	39.057	7	5.580	6.328	.000
	Within Groups	238.052	270	.882		
	Total	277.109	277			
Engagement	Between Groups	47.170	7	6.739	7.908	.000
	Within Groups	230.069	270	.852		
	Total	277.239	277			
Relatedness	Between Groups	23.880	7	3.411	3.640	.001
	Within Groups	253.022	270	.937		
	Total	276.902	277			
Personal Growth	Between Groups	46.055	7	6.579	7.720	.000
	Within Groups	230.091	270	.852		
	Total	276.146	277			
Sense of Self	Between Groups	24.257	7	3.465	3.709	.001
	Within Groups	252.287	270	.934		
	Total	276.544	277			
Purpose	Between Groups	25.677	7	3.668	3.925	.000
	Within Groups	252.312	270	.934		
	Total	277.989	277			

As done with period of day, Scheffe post hoc tests were run to further analyze these relationships and account for unequal sample groups. Table 4.2.2 shows 3 departments that have reported negative mean experiences of Eudaimonia and vary significantly; department 1 (Jewish Studies), department 4 (Hebrew) and department 5 (Science). These negative trends and significant variance for Jewish Studies and Hebrew remains consistent when analyzing engagement, personal growth and purpose (see Tables 4.2.3-4.2.5). These figures also show that departments like Social Science (department 2)

and Arts (department 7) trended positively while also varying significantly from these other departments.

Table 4.2.2 Scheffe Post Hoc Results for Eudaimonia by Curricular Department

		Subset for alpha = 0.05	
Department	N	1	2
1 (A)	40	-.4854946	
4 (A)	35	-.4493799	
5 (A)	39	-.1380340	
3 (B)	37	-.0182601	-.0182601
8 (B)	25	-.0024853	-.0024853
2 (B)	43	.2556234	.2556234
6 (B)	37	.3710945	.3710945
7 (B)	22		.7949658
Sig.		.060	.093

Table 4.2.3 Scheffe Post Hoc Results for Engagement by Curricular Department

		Subset for alpha = 0.05		
Department	N	1	2	3
1 (A)	40	-.6280136		
4 (B)	35	-.5686364	-.5686364	
5 (C)	39	-.1059170	-.1059170	-.1059170
8 (C)	25	.0549020	.0549020	.0549020
6 (C)	37	.2141272	.2141272	.2141272
3 (D)	37		.2346507	.2346507
2 (E)	43			.3504517
7 (E)	22			.6925430
Sig.		.060	.090	.094

Table 4.2.4 Scheffe Post Hoc Results for Purpose by Curricular Department

Department	N	Subset for alpha = 0.05	
		1	2
4 (A)	35	-.4428380	
1 (A)	40	-.4074408	
8 (B)	25	-.0164989	-.0164989
2 (B)	43	.0234532	.0234532
5 (B)	39	.0718830	.0718830
3 (B)	37	.0963042	.0963042
6 (B)	37	.3195295	.3195295
7 (C)	22		.5961936
Sig.		.178	.469

Table 4.2.5 Scheffe Post Hoc Results for Purpose by Personal Growth by Curricular Department

Department	N	Subset for alpha = 0.05		
		1	2	3
1 (A)	40	-.5293357		
4 (B)	35	-.3971492	-.3971492	
8 (B)	25	-.2606987	-.2606987	
3 (B)	37	-.1329147	-.1329147	
5 (B)	39	.0246228	.0246228	
2 (C)	43	.2901805	.2901805	.2901805
6 (D)	37		.4027458	.4027458
7 (E)	22			.8876564
Sig.		.076	.093	.439

The remaining components, sense of self and relatedness all continue to show Jewish Studies, Hebrew and Science trending negatively. However, whether or not each department significantly varies changes from variable to variable (see Tables 4.2.6 & 4.2.7). For relatedness, Jewish Studies varies significantly and trends negatively as shown in previous tables. However, Science is the only department that varies significantly when sense of self is examined. Arts (department 7) continue to trend positively and vary significantly for all components and composite variables.

Table 4.2.6 Scheffe Post Hoc Results for Relatedness by Curricular Department

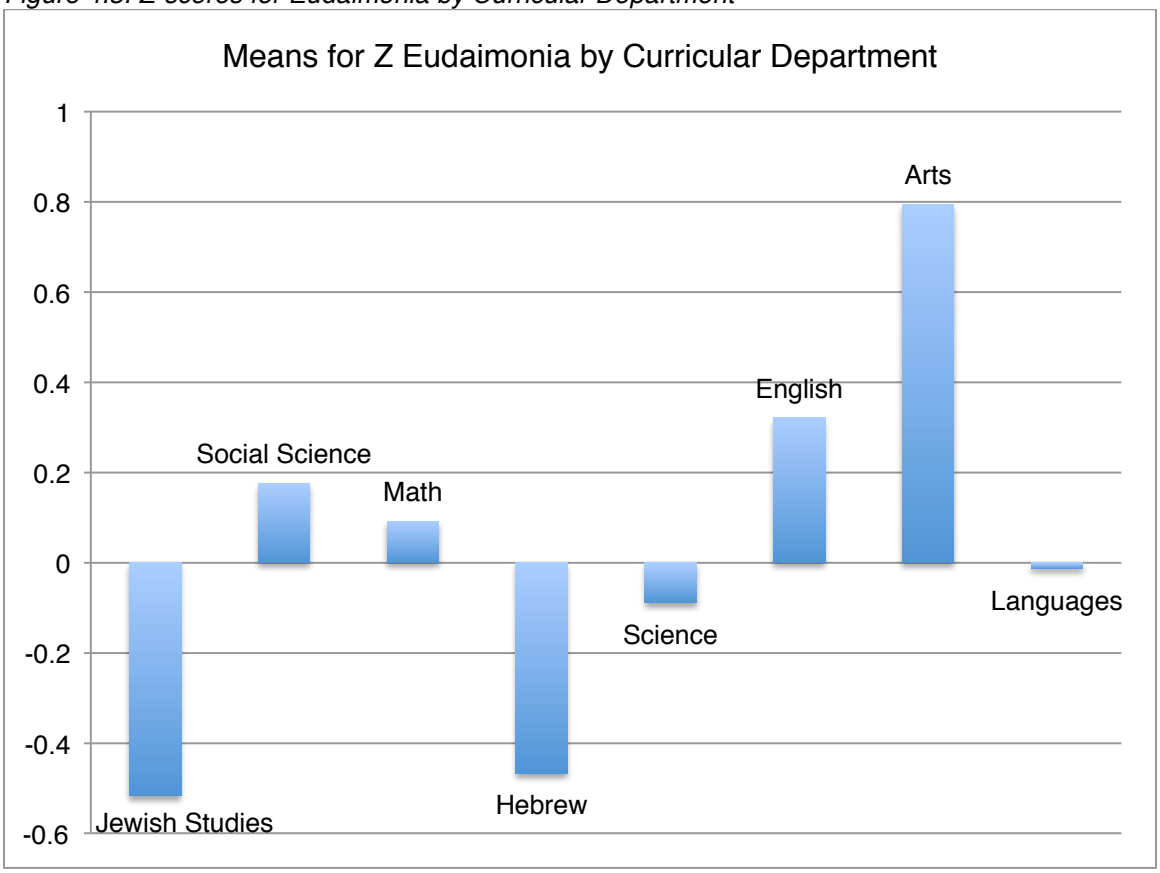
Department	N	Subset for alpha = 0.05	
		1	2
4 (A)	35	-.4429929	
1 (B)	40	-.2947436	-.2947436
5 (B)	39	-.1966402	-.1966402
3 (B)	37	.0948005	.0948005
2 (B)	43	.0948883	.0948883
8 (B)	25	.1615849	.1615849
6 (B)	37	.3365539	.3365539
7 (C)	22		.5422503
Sig.		.157	.094

Table 4.2.7 Scheffe Post Hoc Results for Sense of Self by Curricular Department

Department	N	Subset for alpha = 0.05	
		1	2
5 (A)	39	-.3881937	
4 (B)	35	-.2516735	-.2516735
1 (B)	40	-.2448475	-.2448475
3 (B)	37	-.0093808	-.0093808
6 (B)	37	.0250567	.0250567
8 (B)	25	.1851913	.1851913
2 (B)	43	.3155734	.3155734
7 (C)	22		.6253656
Sig.		.275	.063

These analyses suggested a general pattern. Jewish Studies, Hebrew and Science trend negatively across all variables of interest. Jewish Studies and Hebrew also vary at significant levels for Eudaimonia, engagement, personal growth and purpose. Figures 4.3-4.5 were generated to explore these relationships further. Figure 4.3. displays a pattern that suggests students enjoy more eudaimonic experiences in departments like Social Science, English and the Arts while experiencing less in departmental classes for Jewish Studies and Hebrew just as the Scheffe tests results suggest.

Figure 4.3. Z-scores for Eudaimonia by Curricular Department



This trend continues in Figure 4.4 when we look at z scores for engagement across these different departments. Notice again, Social Sciences and Arts seem to be the contexts in which more engaged experiences take place while Jewish Studies, Hebrew and Science experience less. So too is this the case in Figure 4.5 which investigated the behavior of the 4 characteristics of Eudaimonia.

Figure 4.4. Z-Scores for Engagement by Curricular Department

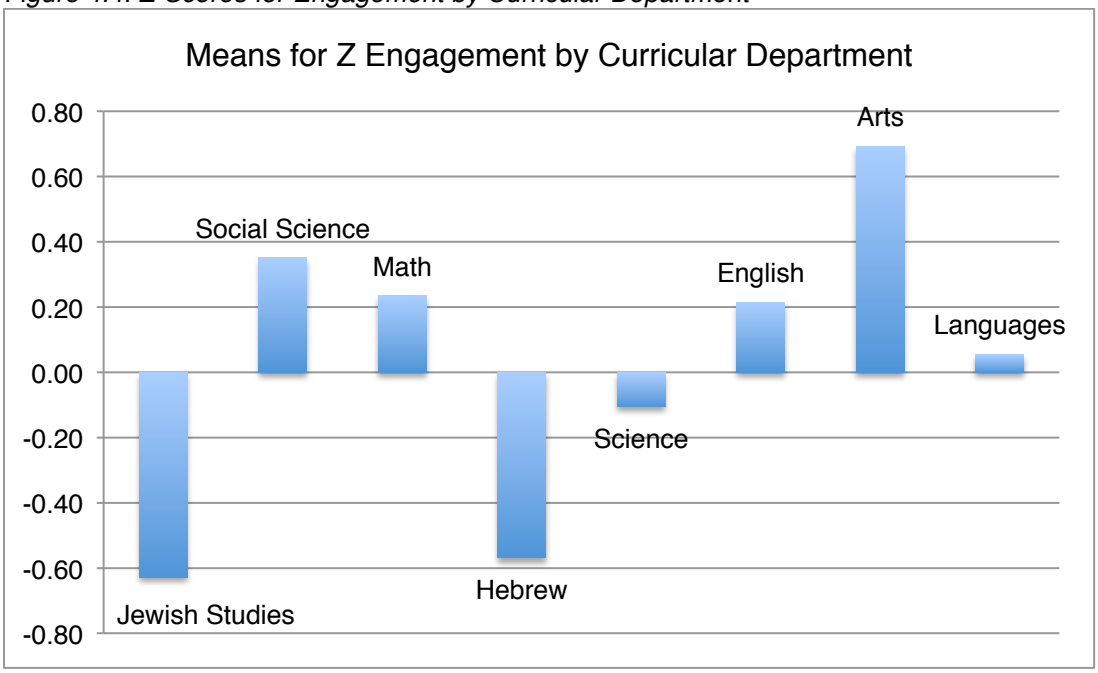
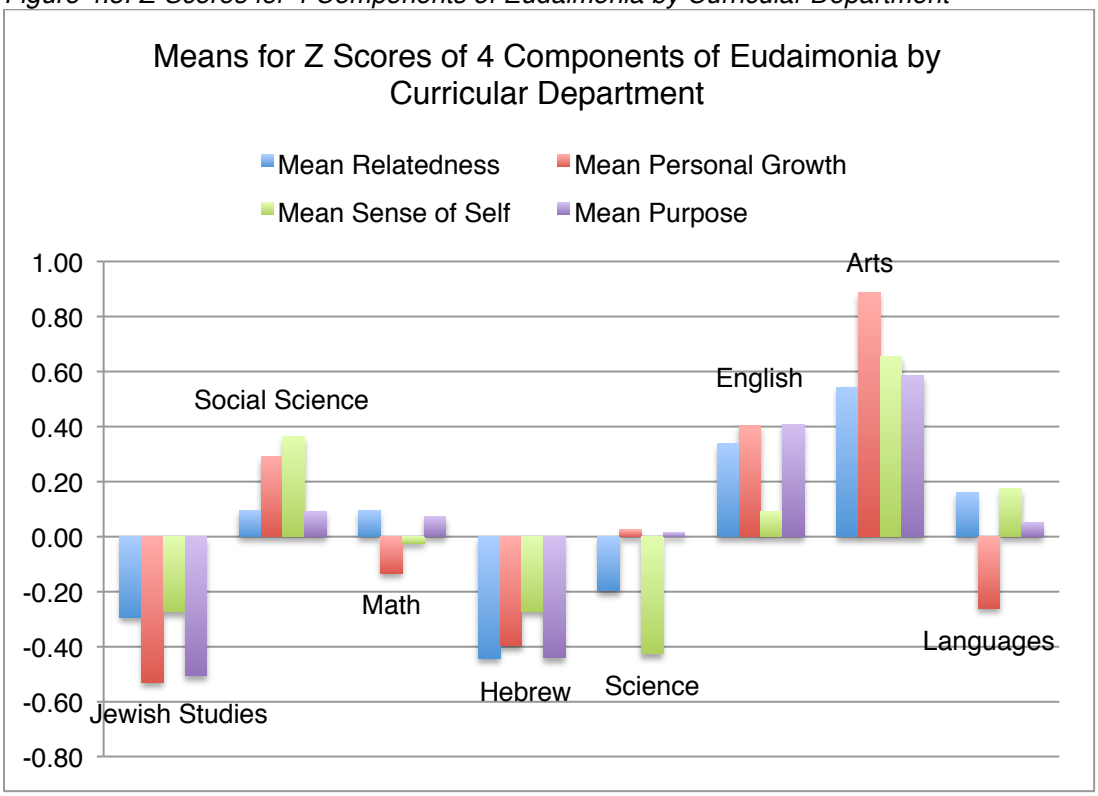


Figure 4.5. Z-Scores for 4 Components of Eudaimonia by Curricular Department



Research Question #3

The third and final research question asked *what does the relationship between Eudaimonia and Academic Engagement look like during this two-week period?* To investigate whether these different variables shared any relationships with one another, correlations were generated. The results in Table 4.2.8 between engagement and Eudaimonia suggest relatively strong ($r = .493$) relationships at a .001 level of significance. We also see that 3 sub-components of Eudaimonia (Personal Growth, Sense of Self and Purpose) look to have a decidedly stronger relationship with engagement than does Relatedness, with the strongest relationships being between Purpose and Engagement ($r = .456$) as well as Personal Growth and Engagement ($r = .425$).

Table 4.2.8. Correlations Among all Variables of Interest

		Engagement	Eudaimonia	Relatedness	Personal Growth	Sense of Self	Purpose
Engagement	Pearson Correlation	1	.493**	.311**	.425**	.411**	.456**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	279	279	279	279	279	279
Eudaimonia	Pearson Correlation	.493**	1	.702**	.914**	.753**	.791**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	279	279	279	279	279	279
Relatedness	Pearson Correlation	.311**	.702**	1	.510**	.502**	.480**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	279	279	279	279	279	279
Personal Growth	Pearson Correlation	.425**	.914**	.510**	1	.603**	.702**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	279	279	279	279	279	279
Sense of Self	Pearson Correlation	.411**	.753**	.502**	.603**	1	.682**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	279	279	279	279	279	279
Purpose	Pearson Correlation	.456**	.791**	.480**	.702**	.682**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	279	279	279	279	279	279

** $p < .01$

In order to take a deeper look at these correlations, slices of data were pulled out in which specific variables scored high or low relative to their baseline. To do this, SPSS was used to generate quartiles for Z scores for Eudaimonia, engagement, and the 4 components of Eudaimonia (Burbridge, McGee and Robb, 1988). Then, scores for each variable were selected and pulled out if they met or exceeded the value of the top or

bottom quartiles. The resulting data charts only included "extreme" scores, when participants scored their experiences in the top or bottom 25% of their overall experiences. In those extreme data sets, t-tests were used to assess whether the presence or absence of Eudaimonia (or other variables) had significant associations with other variables.

The most significant results from the t-tests run across these different subsets of the data suggest interesting relationships supported by effect sizes. Effect sizes were calculated by following Rosnow and Rosenthal's model as cited in Field (2005). To calculate *r* then meant taking the t-squared value and dividing it by the t squared value plus the degrees of freedom; then taking the square root of that number. The difference between high and low eudaimonic states had a large effect ($r = .57$) on engagement. The same was not found in reverse however. In high or low engagement experiences the effect on Eudaimonia was only small ($r = .25$). This suggests that perhaps when students felt eudaimonic, they also felt engaged. However, it looks as though a student who is engaged is not as likely to also feel eudaimonic. In the final chapter, some of these conclusions and limitations will be discussed further.

CHAPTER 5

DISCUSSION

This study was conducted in order to investigate Eudaimonia in the context of one secondary school. Consequently, research questions were designed to explore the presence and variability of Eudaimonia along with any potential relationships with Academic Engagement. Resulting ANOVAs, correlations and investigations revealed important methodological and potential substantive findings. The following conclusions must all be taken with the understanding of the limitations this data has placed upon them. The sample size and the variance of responses within the sample are both significant limitations. This issue is only furthered when slicing down into the data to create the "Extreme" data sets. That said, the analyses provide evidence for several tentative conclusions and directions for future research.

First, variability in Eudaimonia was found throughout the two-week period surveyed. It is interesting to note the variability of reported Eudaimonia. One question regarding Eudaimonia, is whether it should be conceptualized as more of an individual's stable feelings (a trait) or as an individual's feelings that vary by setting and time (a state). Analyses in this study suggest that, at least during adolescence, individual students' experiences of Eudaimonia and its characteristics vary considerably over time and experiences of Eudaimonia are potentially under the influence of actions by teachers and schools. However, this conclusion should be taken with caution. Outside of the concern over sample size, it should be noted that this study has used a conceptualization of Eudaimonia designed to measure in the moment experiences. Alternative measures and studies might suggest more fundamental, stable traits for the Eudaimonic experience.

The second conclusion surrounds the contexts, which seem to affects students' Eudaimonia and engagement. Eudaimonia was found to be somewhat influenced by the period of day. However, the more significant finding comes from the associations with curricular department. Subject-matter appears to share significant relationships with both engagement and Eudaimonia. Given the previous research presented in the study's framework on engagement, this variance across subject matter departments is not surprising. It was suggested that the components of relatedness, personal growth, sense of self and purpose would impact the experience of Eudaimonia. Relatedness was expected to have an effect given the literature on the contributions of relationships and authentic surroundings to happiness and personal growth. Given the changing context from class to class, including relationships with the teachers or other students in these classes, one would expect relatedness to fluctuate and the Eudaimonia experienced in part due to that relatedness to also vary.

What is more interesting is to see that, more than relatedness, personal growth, sense of self and purpose all seem to have significant relationships with Eudaimonia and engagement. This suggested that the theoretical grounds laid out the framework might be plausible. Again, given the framing of the research questions, this is not all that surprising. It was suggested that a large portion of engagement is made up of alignment or congruence with personal goal orientations. In eudaimonic theory this was represented by personal growth, sense of self and purpose. The t-tests revealed each of these components to have at least a medium (>.3) effect on engagement.

Additionally, examination of the relationships between Eudaimonia, its sub-components and engagement revealed generally positive relationships. Extreme scores

for the different variables were isolated into their own unique data sets. Those data sets were used to run t-tests, which elicited relationships between a variety of variables. The presence or absence of Eudaimonia had a large effect on the experience of engagement. As expected, each of the 4 sub-components had large effects on Eudaimonia. However, only 3 of these components had medium or larger effects on engagement (personal growth, sense of self and purpose). Relatedness was limited in its effect size in relation to engagement. This suggests that relatedness contributes to engagement more significantly when it is grouped with the other three components of Eudaimonia. As the framework notes, this suggests a two-part conceptualization for academic engagement is made up of behavioral, affective and cognitive components represented by interest, attention, investment and effort.

Perhaps most interestingly, findings also indicate that when students scored highly on this engagement scale it generally correlated with high experiences of relatedness, personal growth, sense of self and purpose. The effect sizes from the t-tests show the magnitude of relationships. However, the manner in which they vary also implies a possible direction to the relationships in addition to the magnitude. When Eudaimonia is high or low, the effect size on high or low engagement is large (.58). However, the same does not occur when engagement is high or low. It appears experiencing Eudaimonia may be a key to encouraging engagement. Likewise, the general correlations and effect sizes for the four components (Relatedness, Personal Growth, Sense of Self and Purpose) are all positive.

The result of these analyses suggests a model that could potentially further the earlier proposed model of CONTEXT → SELF → ACTION → OUTCOME. While the

conclusion should certainly be considered tentatively, the relationship between Eudaimonia and engagement and the subsequent effect sizes suggests Eudaimonia and its components may be precursors to academic engagement. Thus, by helping to clarify the sort of contexts that may help to elicit engagement (eudaimonic) contexts a new model may look like the following CONTEXT (4 components of Eudaimonia) → SELF (Eudaimonia) → ACTION (engagement) → OUTCOME (Achievement). However, while research has suggested a strong relationship between engagement and achievement (Miller, Greene, Montalvo, Ravindran, & Nichols, 1996; Voekl, 1995; Furrer & Skinner, 2003; Appleton, J., Christenson, S, Kim, D and Reschly, A., 2006), the present study did not gather data on achievement. This is certainly an area of focus in which future research could be directed.

This model is also supported by the pattern seen in the variance explained by curricular department. Recall that certain departments demonstrated a pattern of low or high mean z scores for Eudaimonia, engagement and the 4 components of Eudaimonia. The departments in which Eudaimonia and engagement were low also demonstrated low mean levels of purpose, personal growth and sense of self. Personal growth and purpose have the lowest means of the variables of interest sample wide, suggesting that the institution may explore ways to facilitate experiences that foster these sub-experiences of Eudaimonia.

Limitations

There are several important limitations to this study that should be kept in mind. The first is the issue of sampling. The study used a convenience sample at the researcher's primary place of work. Participation in the study required the permission of

parents, students, teachers and administrators. A degree of randomization of the timing of the ESM prompts was achieved. This study was conducted at a wealthy private school, so generalizability to other school settings is unknown. The study also relied upon students owning smartphones and approval of the school for their use.

The context created potential for bias and feelings of compulsion in the student participants. Some students randomly selected from the school's master roster were in the researcher's class, for example. Though participation was voluntary, students may have felt some pressure to participate. The researcher and the consent forms assured that the decision to participate would not affect students' grades or relationships with teachers.

In retrospect, perhaps the survey included too many items, especially for a survey administered by ESM. The length of the survey likely contributed to the low average response rate of 27%. In future research perhaps a shorter but still reliable version of the survey could be used.

The variability in student response totals created a relatively small and complicated data set. An effort was made to control for the variability in student responses by generating z-scores and calculating means. Still, the variability of response totals combined with the small sample size is a major limitation of this exploratory study as has been laid out in previous chapters.

Future Research

These conclusions, though tentative, raise interest possibilities for future research. This study has shown the potential for using the methodology of experience sampling by surveys sent to students' cellphones. In schools where many students own cellphones teachers, as well as researchers, could gather real-time data on students'

motivation, for example, and explore ways of responding. As this approach is still relatively new, additional research on response rates and successful practices is needed. Reducing the number of items on the survey may help to increase response rates and increase sample size. Still, the findings point to the possible value of further research on Eudaimonia and academic engagement.

The relationship between these two constructs and the variability across different curricular departments is deserves further study. The school may find it productive to gather more information from students that might shed further light on why experiences of Eudaimonia and engagement vary considerably across subject matters. One line of inquiry that might provide a deeper insight into these overall variations would be to identify students whose levels of engagement in specific subjects matters differs from the means.

Further, this tentative suggestion of the potential influence of Eudaimonia on engagement should be further explored. We know that we can increase achievement, decrease dropout rates and positively affect biological and emotional health by creating more engagement and Eudaimonia. However, this new model suggests that Eudaimonia may actually serve as a precursor. Further exploration of this potentially causal model could elicit important contributions to both Eudaimonia and engagement research.

Additionally, a more granular examination of the components of Eudaimonia is needed. If scholars were to find more evidence of Eudaimonia contributing to engagement, then the field will clearly need a greater understanding of eudaimonic components (relatedness, personal growth, sense of self and purpose). This would not only allow scholars to continue to address the relationship between these components and

engagement, but also allow for additional study of the structure and experience of Eudaimonia by individuals as a fluctuating state.

In continuing to address these various possibilities for future research, this study may serve as a small piece in addressing a much larger concern. As we continue to educate adolescents, how can we effectively address the declining levels of engagement, motivation and interest? This study has suggested that these students we are trying to educate have fundamental needs and that perhaps these needs are not consistently and effectively being met. If research can contribute to an understanding of how to better meet these basic needs, perhaps we can find a path to greater student engagement and the subsequently greater achievement that accompanies that engagement.

APPENDICES

APPENDIX A: Experience Sampling Form

Eudaimonia and Indicators of Academic Achievement

The following questions address your own perceptions of your experience at this moment. Please remember there are no right or wrong answers.

Section 1: Context

1. Please provide your first and last name

2. Choose one of the following

(1) Male (2) Female (3) Gender Neutral or (4) Transgender

3. Choose one of the following

(1) Freshman, (2) Sophomore, (3) Junior or (4) Senior

4. Choose one of the following time ranges

(1) 7:00-9:00 (2) 9:01-11:30 (3) 11:30-1:30 (4) 1:31-2:30

5. Choose the response that most accurately reflects your current mood

Very Unhappy, Unhappy, Neutral, Happy, Very Happy

Section 2: Experience

Part A: Intrinsic Motivation
Please use the following scale when responding to items.

1	2	3	4	5
Not at all True		Somewhat True		Very True

6. I feel like I can make a lot of inputs in deciding how this learning gets done.
7. I really like the people I am learning with.
8. I do not feel very competent when I doing this activity.
9. I feel pressured in this activity.
10. I am getting along with the teacher of this class.
11. I am pretty much keeping to myself at this moment.
12. I am free to express my ideas and opinions during this activity.
13. I have been able to learn interesting new skills in this during this activity.
14. I have to do what I am told during this activity.

15. I feel a sense of accomplishment from this activity.
16. There are not many people in this class that I feel close to at the moment.
17. I often do not feel very capable during this activity.

Part B: Individual Interest
Please use the following scale when responding to items.

1	2	3	4	5
Very little		Some		A lot

18. How much do you know about this topic?
19. How important is this topic to you?
20. How much interest do you have in knowing more about this topic?
21. How much interest do you have understanding this topic?

Part C: Academic Engagement
Please use the following scale when responding to items.

1	2	3	4	5
Very Rarely		Some		Very Often

22. In this activity, are you trying as hard as you can?
23. Are you completing your assignment for this task?
24. Are you paying attention during this activity?
25. Do you feel bored during this activity?

Part D: Eudaimonia
Please use the following scale when responding to items.

1	2	3	4	5
Strongly Disagree		Neutral		Strongly Agree

26. This topic or this activity helps me develop my best potentials.
27. This activity or topic is in line with my purpose in life
28. I have the sense that I have developed a lot as a person during this activity
29. This activity helps me develop strengths that are personally expressive of who I am
30. I am not afraid to voice my opinions, even when they are in opposition to the opinions of this teacher
31. My efforts to find the kinds of experiences and relationships that I need have been quite successful during this activity
32. This activity or topic reinforces my sense of who I am
33. I am managing the many responsibilities in this class quite well
34. This topic/activity is in line with and helps me become the person I want to be
35. My decisions are not being influenced by what other people are doing at this moment
36. I don't care if others approve of what I'm doing right now
37. I'm not giving into social pressures during this activity
38. I feel like I'm on the outside looking in when it comes to the personal relationships that exist in this class.

39. I feel like I am getting a lot out of my relationships during this class
40. I feel good when I think of what I'm doing during this class and what I hope to do with it in the future
41. I find it satisfying to think about what I'm accomplishing during this class
42. I sometimes feel aimless during class activities but this is not one of those times
43. At this moment I feel confident and positive about myself
44. When I compare myself to my friends and acquaintances in this class it makes me feel good about who I am
45. This class or activity has helped me discover something important about myself

Part E: Eudaimonic and Hedonic Motives
Please use the following scale when responding to items.

1	2	3	4	5
Not At All		Neutral		Very Much

To what degree do you typically approach your activities in this class with each of the following intensions?

46. Seeking pleasure?
47. Seek to use the best in you?
48. Seeking to develop a skill, learn or gain insight into something?
49. Seeking fun?
50. Seeking to pursue a personal ideal?
51. Seeking relaxation?
52. Seeking to do what you believe in?
53. Seeking to take it easy?

APPENDIX B: Student Assent Form

Student Assent Form for Participation in a Research Study
Michigan State University

Principal Investigator: Nick Holton
Study Title: Eudaimonia in the classroom: Using experience sampling in an exploratory study of well-being in high school students.

Introduction

You are cordially invited to participate in a research study to better determine the variables that affect positive experiences in high school students. You are being invited to participate because you are in a prime position to provide quality feedback that will help determine answers to this question.

This permission form will give you the information you will need to understand why this study is being done and why you are being invited to participate. It will also describe what you will be asked to do to participate and any known risks, inconveniences or discomforts that you may have while participating. We encourage you to take some time to think this over. We also encourage you to ask questions now and at any time. If you decide to participate, you will be asked to sign this form.

Why is this study being done?

The purpose of this research study is to better determine some of the variables that affect positive experiences in high school students. The proposed study suggests that experiences in which students feel they are progressing down a path in line with who they feel they are supposed to be are stronger predictors of happiness. In doing so, it is hypothesized that these psychological states will correlate positively with indicators of achievement and attention control. I am conducting this study in the hope that it will lend evidence to the notion that education should invest more resources in ensuring more school activities are in line with the students sense of self and who they feel they want to become. In doing so, my hope is to increase the relevance of educational instruction and experiences in schools while at the same time positively affecting achievement.

What are the study procedures? What will you be asked to do?

If you decide to participate in this study, you will need to complete the following steps:

1) Sign up to receive URL links to surveys via text message on your phone
2) Receive an SMS text message prompting you to complete a single 53-item survey at 3-5 times a day, one per class period.
3) Fill out this survey once per day for approximately 2 weeks

The survey that you will be prompted to respond to attempts to get a sense of your perceived experience at that particular moment. The bulk of survey will ask you to assess whether or not the activity feels in line with who you are as an individual and the extent

to which it is helping you to actualize your true self. The survey will also inquire into your psychological states as they pertain to motivation, interest and engagement.

The survey will take approximately 3-5 minutes each time. Given that you will receive 5 prompts per class over the two-week-long period it will potentially take 15-20 minutes of your focused attention on each class depending on how long your response time is. It is likely that these surveys may possibly disrupt the flow of your activity in that class at that time. Permission from school to conduct the study in this manner has been granted and now we are seeking your permission.

You are being given this form because you have responded in the affirmative to an e-mail request from me for participants. In this e-mail I revealed the purposes, goals, steps and expectations for this research study to them.

What are the benefits of the study?

The potential benefits of this study may be seen in its ability to inform educators and decision-makers of the elements of optimal experience for high school students in realizing their own potential and true selves. In doing so it may allow for administrators and policy makers to consider ways in which the school experience can further facilitate these types of experiences.

There are no known risks associated with this study.

How will your information be protected?

While you will need to sign up to receive the surveys via text message on their phones, your identity and will be protected. The data collected for this research study will be protected on a password-protected computer or in a locked file cabinet on the campus of Michigan State University for a minimum of three years after the close of the project. Only the appointed researchers and the Institutional Review Board will have access to the research data. All information is behind the system's firewall and is only accessible via log in information, which only I have access to. I will only be using the responses to help identify any student that may qualify for the additional interview and assess the effects of different variables

Data will be shared in the published version of the study's findings and these findings may or may not be shared with academic journals, school personnel, etc. If the data is published, no names will be included in the write-up.

Whom do I contact if I have questions about the study?

Take as long as you like before you make a decision. We will be happy to answer any question you have about this study. If you have further questions about this study or if you have a research-related problem, you may contact the principal investigator, (Nick Holton nholton@milkenschool.org). If you have any concerns or questions about this study, such as scientific issues, how to do any part of it, or to report an injury, please contact the researcher or project investigator.

Project investigator: Dr. Patrick Dickson, 509E Erickson Hall, East Lansing, MI 48824. Email address: pdickson@msu.edu. Phone: 517-355-4737.

Researcher: Nick Holton, PhD student. Michigan State University. Milken Community Schools, room 4-111. 15800 Mulholland Dr, Los Angeles, CA 90049. E-mail address: nholton@milkenschool.org Phone: 818-599-5936

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail irb@msu.edu or regular mail at 202 Olds Hall 408 W Circle Drive, MSU, East Lansing, MI 48824.

Student Permission Form for Participation in a Research Study
Michigan State University

Principal Investigator: Nick Holton
Study Title: Eudaimonia in the classroom: Using experience sampling in an exploratory study of well-being in high school students.

Documentation of Permission:

I have read this form and decided that I assent to participate in the study described above. Its general purposes, the particulars of my involvement and possible risks and inconveniences have been explained to my satisfaction. My signature also indicates that I have received a copy of this student permission form. Please return this form to the researcher upon signing

_____	_____	_____
Student Signature:	Print Name:	Date:
_____	_____	_____
Signature of Person Obtaining Consent	Print Name:	Date:

APPENDIX C: Parental Permission Form

Parental Permission Form for Participation in a Research Study
Michigan State University

Principal Investigator: Nick Holton
Study Title: Eudaimonia in the classroom: Using experience sampling in an exploratory study of well-being in high school students.

Introduction

Your child is invited to voluntarily participate in a research study to better determine the variables that affect positive experiences in high school students. Your son or daughter is being asked to participate because he/she is in a prime position to provide quality feedback on classroom experiences and because they attend Milken Community Schools where the study will be taking place. They were randomly selected from the school's roster.

This permission form will give you the information you will need to understand why this study is being done and why your child is being invited to participate. It will also describe what your child will be asked to do to participate and any known risks, inconveniences or discomforts that your child may have while participating. We encourage you to take some time to think this over and to discuss it with your child, other family members and friends. We also encourage you to ask questions now and at any time. If you decide to allow your child to participate, you will be asked to sign this form and it will be a record of your permission to allow your child to participate. You will be given a copy of this form.

Why is this study being done?

The purpose of this research study is to better determine some of the variables that affect positive experiences in high school students. The proposed study suggests that experiences in which students feel they are progressing down a path in line with who they feel they are supposed to be are stronger predictors of happiness. In doing so, it is hypothesized that these psychological states will correlate positively with indicators of achievement and attention control. I am conducting this study in the hope that it will lend evidence to the notion that education should invest more resources in ensuring more school activities are in line with the students sense of self and who they feel they want to become. In doing so, my hope is to increase the relevance of educational instruction and experiences in schools while at the same time positively affecting achievement.

What are the study procedures? What will my child be asked to do?

If you give permission for your child to voluntarily take part in this study, he/she will be asked to go through a number of steps.

1) Sign up to receive URL links to surveys via text message on their phones
2) Receive an SMS text message prompting them to complete a single 53-item survey at 3-5 times a day, one per class period.
3) Fill out this survey once per day for approximately 2 weeks (5 total responses per class)

The bulk of survey will ask them to assess whether or not the activity feels in line with who they are as an individual and the extent to which it is helping them to actualize their true selves. The survey will also inquire into their psychological states as they pertain to motivation, interest and engagement.

The survey will take approximately 3-5 minutes each time. Given that they will receive 5 prompts per class over the two-week-long period it will potentially take 15-20 minutes of their focused attention on each class depending on how long their response time is. It is likely that these surveys may possibly disrupt the flow of their activity in that class at that time. Permission from school to conduct the study in this manner has been granted and now we are seeking your permission.

You are being given this form because your child has responded in the affirmative to an e-mail request from me for participants. In this e-mail I revealed the purposes, goals, steps and expectations for this research study to them.

What are the benefits of the study?

The potential benefits of this study may be seen in its ability to inform educators and decision-makers of the elements of optimal experience for high school students in realizing their own potential and true selves. In doing so it may allow for administrators and policy makers to consider ways in which the school experience can further facilitate these types of experiences.

There are no known risks associated with this study.

How will my child's information be protected?

While your son or daughter will need to sign up to receive the surveys via text message on their phones, their identities and any personal information will be protected. The data collected for this research study will be protected on a password-protected computer or in a locked file cabinet on the campus of Michigan State University for a minimum of three years after the close of the project. Only the appointed researchers and the Institutional Review Board will have access to the research data. All information is behind the system's firewall and is only accessible via log in information, which only I have access to. I will only be using the responses to help identify any student that may qualify for the additional interview and assess the effects of different variables

Data will be shared in the published version of the study's findings and these findings may or may not be shared with academic journals, school personnel, etc. If the data is published, no names will be included in the write-up.

Beyond this, your child's information will be protected to the maximum extent allowable by law.

Can my child stop being in the study and what are my and my child's rights?

Your child's participation in this research study is voluntary. Your child does not have to be in this study if you do not want him/her to participate. If you give permission for your child to be in the study, but later change your mind, you may withdraw your child at any time. There are no penalties or consequences of any kind if you decide that you do not want your child to participate.

Whom do I contact if I have questions about the study?

Take as long as you like before you make a decision. We will be happy to answer any question you have about this study. If you have further questions about this study or if you have a research-related problem, you may contact the principal investigator, (Nick Holton nholton@milkenschool.org).

If you have any concerns or questions about this study, such as scientific issues, how to do any part of it, or to report an injury, please contact the researcher or project investigator.

Project investigator: Dr. Patrick Dickson, 509E Erickson Hall, East Lansing, MI 48824. Email address: pdickson@msu.edu. Phone: 517-355-4737.

Researcher: Nick Holton, PhD student. Michigan State University. Milken Community Schools, room 4-111. 15800 Mulholland Dr, Los Angeles, CA 90049. E-mail address: nholton@milkenschool.org Phone: 818-599-5936

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail irb@msu.edu or regular mail at 202 Olds Hall, 408 W Circle Drive MSU, East Lansing, MI 48824.

Parental Permission Form for Participation in a Research Study
Michigan State University

Principal Investigator: Nick Holton
Study Title: Eudaimonia in the classroom: Using experience sampling in an exploratory study of well-being in high school students.

Documentation of Permission:

I have read this form and decided that I will give permission for my child to participate in the study described above. Its general purposes, the particulars of my child's involvement and possible risks and inconveniences have been explained to my satisfaction. I understand that I can withdraw my child at any time. My signature also indicates that I have received a copy of this parental permission form. Please return this form to the child's teacher by (November 8th, 2013).

_____	_____	_____
Parent/Guardian Signature:	Print Name:	Date:

Relationship to Child (e.g. mother/father): _____

_____	_____	_____
Signature of Person Obtaining Consent	Print Name:	Date:

APPENDIX D: Teacher Permission Form

Teacher Permission Form for Participation in a Research Study Michigan State University

Principal Investigator: Nick Holton
Study Title: Eudaimonia in the classroom: Using experience sampling in an exploratory study of well-being in high school students.

Introduction

You are cordially invited to allow participation in a research study to take place in your classroom. This study is designed to better determine the variables that affect positive experiences in high school students. No more than three students in a section or more of your courses are being asked to participate because he/she is in a prime position to provide quality feedback that will help determine answers to this question.

This permission form will give you the information you will need to understand why this study is being done and your student(s) are being invited to participate. It will also describe what your student will be asked to do to participate and any known risks, inconveniences or discomforts that they may have while participating. We encourage you to take some time to think this over. We also encourage you to ask questions now and at any time. If you decide to allow participation, you will be asked to sign this form.

Why is this study being done?

The purpose of this research study is to better determine some of the variables that affect positive experiences in high school students. The proposed study suggests that experiences in which students feel they are progressing down a path in line with who they feel they are supposed to be are stronger predictors of happiness. In doing so, it is hypothesized that these psychological states will correlate positively with indicators of achievement and attention control. I am conducting this study in the hope that it will lend evidence to the notion that education should invest more resources in ensuring more school activities are in line with the students sense of self and who they feel they want to become. In doing so, my hope is to increase the relevance of educational instruction and experiences in schools while at the same time positively affecting achievement.

What are the study procedures? What will you be asked to do?

If you give permission for your class/students to take part in this study, they will be asked to go through a number of steps.

1) Sign up to receive URL links to surveys via text message on their phones

2) Receive an SMS text message prompting them to complete a single 53 item survey at 3-5 times a day, one of which will be during your class
3) Fill out this survey once per day for approximately 2 weeks (5 total responses in your class)

The survey that your student will be prompted to respond to attempts to get a sense of their perceived experience at that particular moment. The bulk of survey will ask them to assess whether or not the activity feels in line with who they are as an individual and the extent to which it is helping them to actualize their true selves. The survey will also inquire into their psychological states as they pertain to motivation, interest and engagement.

The survey will take approximately 3-5 minutes each time. Given that they will receive 5 prompts over the two-week-long period it will potentially take 15-20 minutes of their focused attention on your class depending on how long their response time is. It is likely that these surveys may possibly disrupt the flow of their activity in that class at that time. Permission from school to conduct the study in this manner has been granted and now we are seeking your permission.

You are being given this form because one of your students has responded in the affirmative to an e-mail request from me for participants. In this e-mail I revealed the purposes, goals, steps and expectations for this research study to them.

What are the benefits of the study?

The potential benefits of this study may be seen in its ability to inform educators and decision-makers of the elements of optimal experience for high school students in realizing their own potential and true selves. In doing so it may allow for administrators and policy makers to consider ways in which the school experience can further facilitate these types of experiences.\

There are no known risks associated with this study.

How will your information be protected?

While your student will need to sign up to receive the surveys via text message on their phones, their identities and yours will be protected. The data collected for this research study will be protected on a password-protected computer or in a locked file cabinet on the campus of Michigan State University for a minimum of three years after the close of the project. Only the appointed researchers and the Institutional Review Board will have access to the research data. All information is behind the system's firewall and is only accessible via log in information, which only I have access to. I will only be using the responses to help identify any student that may qualify for the additional interview and assess the effects of different variables

Data will be shared in the published version of the study's findings and these findings may or may not be shared with academic journals, school personnel, etc. If the data is published, no names will be included in the write-up.

Beyond this, your information and the data will be protected to the maximum extent allowable by law.

Whom do I contact if I have questions about the study?

Take as long as you like before you make a decision. We will be happy to answer any question you have about this study. If you have further questions about this study or if you have a research-related problem, you may contact the principal investigator, (Nick Holton nholton@milkenschool.org).

If you have any concerns or questions about this study, such as scientific issues, how to do any part of it, or to report an injury, please contact the researcher or project investigator.

Project investigator: Dr. Patrick Dickson, 509E Erickson Hall, East Lansing, MI 48824. Email address: pdickson@msu.edu. Phone: 517-355-4737.

Researcher: Nick Holton, PhD student. Michigan State University. Milken Community Schools, room 4-111. 15800 Mulholland Dr, Los Angeles, CA 90049. E-mail address: nholton@milkenschool.org Phone: 818-599-5936

If you have questions or concerns about your role and rights as a research participant, would like to obtain information or offer input, or would like to register a complaint about this study, you may contact, anonymously if you wish, the Michigan State University's Human Research Protection Program at 517-355-2180, Fax 517-432-4503, or e-mail irb@msu.edu or regular mail at 202 Olds Hall 408 W Circle Drive, MSU, East Lansing, MI 48824.

Teacher Permission Form for Participation in a Research Study
Michigan State University

Principal Investigator: Nick Holton
Study Title: Is Flow Enough? A Review of Flow Theory and its Adequacy in Explaining Happiness in Educational Settings

Documentation of Permission:

I have read this form and decided that I will give permission for student(s) to participate in the study described above. Its general purposes, the particulars of my student's involvement and possible risks and inconveniences have been explained to my satisfaction. My signature also indicates that I have received a copy of this teacher permission form. Please return this form to the researcher upon signing

_____	_____	_____
Teacher Signature:	Print Name:	Date:
_____	_____	_____
Signature of Person Obtaining Permission	Print Name:	Date:

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REFERENCES

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