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UNIVERSITY OF CALIFORNIA, SAN DIEGO

CALIFORNIA STATE UNIVERSITY, SAN MARCOS

Psychosocial Learning Environments and the
Mediating Effect of Personal Meaning upon Satisfaction with Education

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Education

in

Educational Leadership

by

Prapanna Randall Smith

Committee in charge:

California State University, San Diego
Professor Jennifer Jeffries, Chair
Professor Lorri Santamaría

University of California, San Diego
Professor Carolyn Hofstetter

2010

The Dissertation of Prapanna Randall Smith is approved, and it is acceptable

in quality and form for publication on microfilm and electronically:

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<div align="right">Chair</div>

University of California, San Diego

California State University, San Marcos

2010

DEDICATION

Like my life and all my work as a school founder and principal, this dissertation is dedicated, first of all, to the transformational work of my spiritual teachers, Sri Aurobindo and The Mother. Without them I would have not done what I have so far, and I would not have pursued this doctoral degree. I also dedicate this work to the memory of Shri Ramkrishna Das, whom I affectionately remember as Babaji Maharaj, my spiritual well-wisher who not only gave me my spiritual name, but also knowingly sent me on a journey through India in 1999, which included a visit to ten Integral Schools in his home state of Orissa, thus instilling in me a dream and a vision for a new education for the children of America and the world.

I would also not be here without the support of my late grandmother, Lauretta Cremer Colley, an elementary school teacher for many years, who always supported my educational aspirations. She and her two sisters, teachers all, set the stage for me and my work in education long before I was born.

To my wife, Indu, and to my daughter, Adhilakshmi, I don't think I can ever express to you how grateful I am to you for putting up with my one-pointed dedication to my work, often at your expense. You have stood by me through all difficulties and hard sacrifice, supported my dream to create our schools, and have become an important part in its manifestation at Rainbow Kids Integral Preschool. You are two of the brightest lights in my life.

To my son and daughter-in-law, Matthew and Ahana, thank you for your love and support. I am proud of you both and know that your life-experiences growing up and learning at SAICE will help you to manifest your shared aim in life. May you go forth and realize your dreams wherever life takes you, for the whole world is your playground.

To my dad, Stephen, we have been through a lot and have come out of it all extremely well. Thank you for your respect and love. You instilled in me the value of education when I was a small boy, and I hope I have lived up to your wishes for me.

This work is also dedicated to the memory of my mother, Joan Grizzell and her husband, Michael, who are not with us today to share with me this accomplishment. They are truly and deeply missed.

Finally, I dedicate this work to all children of the Divine Mother, for we are all together in this journey of the evolution of consciousness. By Her Grace, and through our active aspirations and participation, we shall individually and collectively manifest in ever increasing proportions of perfection, supreme Goodness, Truth, and Beauty. May the ideal of human unity in diversity become a realization for us all and our posterity.

EPIGRATH

One day a young boy of 5 years of age was sent to the principal's office:

Principal: Carson, do you know why you are here?

Carson: Because I am in trouble.

Principal: No. I mean, why are you in school?

Carson: Because my mom makes me.

Principal: There is another reason. Do you know what it is?

Carson: No. What is it?

Principal: You are in school so that you can find your mission.

Carson [perking up]: I have a mission?

Principal: Yes, you sure do.

Carson [still perking up]: What is it?

Principal: I don't know. You are the only one who can answer that question.

Carson: How do I do that?

Principal: You learn all about yourself and the world around you.

Carson: Oh. Do you have a mission, too?

Principal: Yes.

Carson: What is it?

Principal: My mission is to help you find your mission.

I saw the Omnipotent's flaming pioneers
Over the heavenly verge which turns towards life
Come crowding down the amber stairs of birth;
Forerunners of a divine multitude,
Out of the paths of the morning star they came
Into the little room of mortal life.
I saw them cross the twilight of an age,
The sun-eyed children of a marvellous dawn,
The great creators with wide brows of calm,
The massive barrier-breakers of the world
And wrestlers with destiny in her lists of will,
The labourers in the quarries of the gods,
The messengers of the Incommunicable,
The architects of immortality.
Into the fallen human sphere they came,
Faces that wore the Immortal's glory still,
Voices that communed still with the thoughts of God,
Bodies made beautiful by the spirit's light,
Carrying the magic word, the mystic fire,
Carrying the Dionysian cup of joy,
Approaching eyes of a diviner man,
Lips chanting an unknown anthem of the soul,
Feet echoing in the corridors of Time.
High priests of wisdom, sweetness, might and bliss,
Discoverers of beauty's sunlit ways
And swimmers of Love's laughing fiery floods
And dancers within rapture's golden doors,
Their tread one day shall change the suffering earth
And justify the light on Nature's face.

Sri Aurobindo
Savitri Book III, Canto IV

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VITA

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2010	Doctor of Education, Educational Leadership University of California, San Diego California State University, San Marcos

ABSTRACT OF THE DISSERTATION

Psychosocial Learning Environments and the
Mediating Effect of Personal Meaning upon Satisfaction with Education

by

Prapanna Randall Smith

Doctor of Education in Educational Leadership

Professor Jennifer Jeffries, Chair

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California State University, San Marcos

2010

A mixed methods study was conducted to investigate the relationships between psychosocial learning environments and student satisfaction with their education as mediated by Agentic Personal Meaning. The interdisciplinary approach of the study integrated the fields of Learning Environment Research (LER), Existential Meaning Research (EMR), and Positive Psychology Research (PPR). A review of the literature

within each field is provided. The mixed methods study included a quantitative phase in which a postulated model was tested using structural equation modeling to determine goodness-to-fit with data obtained from secondary and college level students in two progressive private schools in India. Findings indicate that the learning environment variables, Teacher Support, Task Orientation, Cooperation, Student Cohesiveness, Involvement, and Equity were significantly correlated with student Satisfaction with Education and with Agentic Personal Meaning. Findings also provide evidence that existential meaning and life-purpose mediates the relationships between the psychosocial learning environment variables, Teacher Support, Task Orientation, and Cooperation, and the outcome variable, student Satisfaction with Education. A qualitative phase explored through focus group interviews of school leaders and teachers how they foster meaning and purpose in the lives of their students. The data indicated that deep interpersonal relationships between students and teachers, freedom and opportunities for students to explore their interests through a wide variety of co-curricular activities, and an intention among teachers to expressly inspire students to become conscious, all taking place within a strong community context, serves to promote the development of meaning and purpose in the lives of students.

CHAPTER 1

Introduction

Personal Meaning and Education

Since time immemorial humanity has collectively strived to understand its

place in the world and in the cosmos. As individuals, human beings have the

important task of discovering their rightful place in society. People in all places and

times have sought to understand the meaning of life and the meaning behind events

that affect their lives. Indeed, there is abundant evidence across the span of human

activities – in the arts, history, philosophy, politics, sociology, psychology, science,

and religion - that human beings are by their very nature meaning makers (Frankl,

1963; Pink, 2005; Reker & Chamberlain, 2000).

If the search for meaning is of central importance in people's lives, then the

need to foster in students a strong sense of personal meaning and life purpose through

education becomes evident. Whereas life offers many opportunities for youth to

develop personal meaning and life purpose - such as through involvement in family,

peers, faith, community and work - schools and the educational opportunities they

offer also represent highly significant sources of meaning (Benson, Scales, Hamilton

& Sesma, 2006; Damon, 2008; Hamilton, Hamilton & Pittman, 2004).

Statement of the Problem

The experiences of students in educational settings have the potential to create

both positive and adverse effects on the development of meaning in their lives. In

their work with the American Psychological Association's Learner-Centered

Principles (APA LCPs), Deakin Crick and McCombs (2006) identify "meaning

making" as one of seven areas in which positive learning outcomes were found among students in American and British schools at the elementary and secondary levels. Damon (1995) found that "purposelessness" among youth has deleterious effects on personality development and leads to pathologies that affects individuals and the societies in which they live. It has been pointed out that even honor students have expressed the sense that they are trapped in their lives and feel disconnected, and that such feelings arise "not as responses to family stress, emotional disturbance, or maladaptive cognitions, but rather to the absence of engagement in a positive life trajectory" (Larson, 2000, p. 170). A recent study documented that when students experience a lack of meaningful learning, minimal student cohesiveness, and limited teacher support in their schools, they can fail to develop a sense of meaning and purpose, often with catastrophic results (Bridgeland, Dilulio & Morison, 2006).

The lack of meaningful learning, teacher support, and motivation during youth development has been identified as a leading contributing factor in student alienation and failure. Mau (1992) identified powerlessness, normlessness, social isolation, and meaninglessness as the four characteristics of alienation among Australian high school students. Brown, Higgins, and Paulsen (2003) pointed out that the level of student alienation has been found to be associated with a number of characteristics of school environments such as student and school culture, teacher control, student-teacher relationships, school size, and curriculum relevancy. When adverse, the effects of these conditions in schools can be devastating for students. Barton (2005) reported that in 2003 an astounding 3.5 million American youths, aged 16-25, had not graduated from high school and were not in school at all. In a recent issue of Time

Magazine, Wallis (2007) reported that about a third of America's high school students were dropping out. The Bill and Melinda Gates Foundation sponsored a study, *The Silent Epidemic: Perspectives of High School Dropouts* (Bridgeland, Dilulio & Morison, 2006), in which about 500 high school dropouts were asked to identify factors that contributed to their leaving school. In the study, 47% of the respondents reported that the main reason they dropped out of school was that their classes failed to be interesting or meaningful to them, and 69% said they did not feel motivated to learn. When asked what might have kept them in school many of the dropouts said that making classes more meaningful and engaging (81%), offering smaller class sizes and individualized instruction (75%), and fostering stronger student-teacher relationships (70%) would have better served them and increased their chances for success.

The importance of meaning in human development has been seen to be relevant across the span of life, including adolescence and young adulthood (Damon, 2008; Fry, 1998; Reker & Wong, 1998). Schools, and the environments and experiences they provide, can play an essential role in helping adolescent students become life-long learners who lead productive, value-added lives. This task is perhaps the most important challenge for educators who want to bring about change in our schools by reaching all students. The problem to be addressed through this study, therefore, is how can school leaders make schools and learning environments more interesting, meaningful, and engaging so that students will not only stay in school and succeed, but also develop a sense of personal meaning and life purpose that will serve them throughout their lives.

Theoretical Framework

For the purposes of this study, working definitions for personal meaning, life purpose, and personal agency are based on Reker and Wong's (1988) triadic structural component model of the *Personal Meaning System* (PMS). The cognitive component of the PMS is *Personal Meaning.* Personal meaning is a composite construct of *Purpose* and *Coherence.* Where there is coherence, there is a strong sense of personal identity. Where there is life purpose there are short and long-term personal goals, and a sense of having a mission in life that serves an ideal greater than one's self. This definition is consistent with that of Damon, Menon, and Bronk, who hold that "Purpose is a stable and generalized intention to accomplish something that is at once meaningful to the self and of consequence to the world beyond the self" (2003, p. 121). It is possible for a person to have a strong sense of personal meaning that is comprised of purpose and coherence and yet, due to a lack of motivation, not be able to act upon it. Thus, in order for a person to have a strong PMS, a second component is needed. That component is agency. *Personal agency* is, therefore, the dimension that represents the motivational component of Reker and Wong's model. Personal agency consists of having a sense of control over the directionality of one's life. Where there is agency there is a sense of freedom of choice in one's life, the intrinsic motivation to pursue meaningful activities, and the disposition to take personal responsibility for one's actions. Even with a sense of personal meaning and motivation, the personal meaning system can lack comprehensiveness. This is why a third, affective, component of the

PMS is necessary. The affective component is viewed as a value-oriented dimension of *Life Satisfaction,* which arises when goals are fulfilled and a life mission is pursued.

In what theoretical framework within educational research, then, might these cognitive, motivational, and affective dimensions of the Personal Meaning System be explored as essential outcomes? The field of Learning Environment Research (LER) offers a potent framework for exploring the relationships between education and development of a comprehensive PMS in students. Learning Environment Research investigates the complex interrelationships between teacher and student perceptions of school psychosocial climates and student cognitive, affective, and motivational outcomes (Moos, 1979; Fraser, 1998 and 1999; Lorsbach & Jinks, 1999; Taylor, Fraser & Fisher, 1997). The nature of a learning environment is influenced by the activities teachers provide in it, the social practices and affective attitudes of teachers and learners in it, and how it is structured psychologically and physically (Fraser & Fisher, 1982).

Learning Environment Research investigates a wide range of psychosocial dimensions found in classroom and school climates. The concept of *psychosocial climate* refers to the psychological, social, and systemic dimensions that can be identified by examining individual needs and the order and structure of social environments the individual operates in (Insel & Moos, 1974; Trickett, 1978). How these psychological and social climate factors mutually interact and affect learner affective, attitudinal, and cognitive outcomes represents the central focus in LER. Some of the outcomes investigated in LER include academic achievement, attitudes towards subject areas, and academic efficacy.

Previous LER researchers have classified variables under one of Moos' (1979) three psychosocial learning environment dimensions: *Relationships*, *Personal Development*, and *System Maintenance and Change*. A total of six independent variables will be investigated in this study. The Relationship variables are Student Cohesiveness, Teacher Support, and Student Involvement. *Student Cohesiveness* is found where students are friendly with each other in school, help each other, and are supportive of each other in the school context. *Teacher Support* is related to the extent to which teachers helps, befriends, trusts and are sincerely interested in their students. *Student Involvement* occurs when students show attentive interest in their schoolwork, participate in discussions, do additional work, and enjoy the school program. The Personal Development variables are Task Orientation, Involvement, and Cooperation. *Task Orientation* is related to how important it is to students that they stay on-task and complete schoolwork and assignments. *Involvement* means that students have attentive interest, participate in discussions, do additional work, and feel their teachers and peers value their participation. *Co-operation* occurs when students collaborate rather than compete with one another on learning tasks. The System Maintenance and Change variable is *Equity*, which refers to when students feel their teachers provide them with the same encouragement and opportunities, and allow them to have as much a say in the classroom as other students.

Purpose and Rationale for the Study

The purpose of the present study is to analyze the psychosocial learning environments in two schools founded by progressive thinkers and to learn how those environments contribute to students' sense of meaning and purpose, personal agency,

and life satisfaction. There is a significant need to explore these dimensions as an essential outcome in educational research. This is due to the fact that, despite their importance in human development, there has been a dearth of inquiry into meaning and purpose in educational research, and there has never been any study within the field of LER that explored the relationship between psychosocial learning environments and students' development of their sense of life purpose and personal meaning.

Other important points need to be made here. While academic achievement is obviously essential for success in education, a predominant emphasis on achievement misses the deeper question that many students ask of educators; namely, *"Why do you want us to excel in school?"* If educators cannot address this fundamental question for students, then they may adversely affect the chances of fostering the meaningful learning that can help students succeed academically and help them discover their rightful and most efficacious places in society.

It has been argued, moreover, that the personal and affective domains of education have been neglected in recent reform efforts that have overemphasized change in the technical and organizational domains of schooling, and that the "resulting imbalance has led to unhealthy system functioning as well as teachers and students feeling stressed, alienated, and demoralized" (McCombs & Miller, 2007, p. 19). It has also been argued that "the present focus on achievement lacks comprehensiveness" (Suldo, Shaffer & Riley, 2008, p. 56), thus contributing to the imbalance where students' larger psychosocial needs are neglected. Elevating student quality of life and other global indicators of human functioning as important areas of

inquiry in educational research is now an imperative that cannot be ignored. Studying to what extent and how schools foster meaning and purpose in the lives of students can help educators identify ways to restore a healthy balance in schools, not only for students but for teachers as well.

This is an inherently value-based orientation. By helping students with the cardinal task of finding meaning and purpose in their lives educators can help students increase their academic achievement and, in doing so, thus serve a greater existential purpose. Indeed, a central premise of this study is that making learning experiences meaningful is a prerequisite for increasing student achievement. When students have a strong sense of why they are here, and of what they want to dedicate their lives to, then achievement towards those aims will more likely follow. Past research has found that where the will to meaning is strong in students and people of all ages there will be a corresponding reduction in existential vacuum among them (Damon, 1995, 2008; Frankl, 1962). How education can play a role in helping students develop a sense of meaning and purpose, and sustain it throughout their lives thus needs to be an essential area of focus for education researchers. If educators can make progress in this endeavor, and adopt new approaches to education in light of what we learn, then they will be better able support students in developing the motivation to learn and grow in ways that will benefit themselves, their families, their communities, and the larger society in which they live.

Context for the Study

This study was conducted with two progressive schools in India: the Sri Aurobindo International Centre of Education (SAICE), located in Pondicherry, and the

Future Foundation School (FFS) in Kolkata. These schools are private schools that offer to their students an Integral Education, which is based upon the teachings and philosophy of two spiritual teachers, Sri Aurobindo and Mirra Alfassa (a.k.a., The Mother). The schools were selected for this study because they expressly promote the development of meaning and life purpose among their students. They are successful schools that have created and maintained educational programs that have stood the test of time. Graduates from these schools are known to have moved on to successful lives, with many sending their own children to their respective alma mater.

Significance of the Study: An Interdisciplinary Approach

The theoretical framework of this study begins with the theoretical and research orientations of the LER field, Existential Meaning Research (EMR), and Positive Psychology Research (PPR). In this study, student perceptions of their psychosocial learning environments were measured, along with self-reports of their sense of personal meaning, personal agency, and their satisfaction with life and with their education. Structural equation modeling tested models involving these variables, with the learning environment dimensions constituting the independent variables, the satisfaction dimension constituting the outcome variables, and the personal meaning and agency dimensions acting as mediating variables. The psychosocial learning environment variables are student cohesiveness, teacher support, involvement, task orientation, co-operation, and equity. By establishing correlations between these independent variables and the satisfaction outcomes, mediated by personal meaning, life purpose, and personal agency, educators can utilize important leverage points for supporting students in meaningful learning that can positively impact youth

development in a more comprehensive manner. This interdisciplinary approach that integrates the heretofore disparate, but complementary, fields of LER, EMR, and PPR has the potential to make a significant contribution to the knowledge and understanding of the role that education can play in addressing the most pressing challenges humanity faces now and will continue to face in its immediate future.

Research Questions and Design

Four research questions - three quantitative and one qualitative - were addressed in this study:

1. What are the relationships between students' perceptions of their school psychosocial learning environments, and their global satisfaction with life and satisfaction with their education, as mediated by their sense of personal meaning, life purpose, and personal agency?

2. What differences does the data reveal between SAICE and FFS?

3. Does data support the mediating effect of Agentic Personal Meaning upon the relationships between student perceptions of the psychosocial learning environments in their schools and their self-report of satisfaction with education?

4. In what ways do school leaders create learning environments that foster a sense of meaning and purpose in their students' lives?

Given these research questions, this study was of an interdisciplinary nature and utilized a Mixed-Methods Sequential Explanatory Design (Creswell & Plano Clark, 2006) consisting of two distinct phases in multiple settings. First, a quantitative on-line survey was be administered to 10th, 11th, and 12th standard (grade level)

students in the participating schools, in addition to students in the Higher Course program (equivalent to standards 13-15) in of one of the two schools. The on-line student survey was a composite questionnaire comprised of six sub-scales from the What is Happening in This Class (WIHIC) questionnaire (Fraser, Fisher & McRobbie, 1996), three sub-scales from the Life Attitude Profile-Revised (LAP-R; Reker, 1992), the Satisfaction With Life Survey (SWLS; Denier, Emmons, Larsen & Griffen, 1985), and a version of the SWLS modified to measure students' domain-specific satisfaction with education.

The purpose of the first, quantitative, phase was to address the quantitative research question by providing descriptive and correlational data to determine the extent to which student perceptions of the psychosocial learning environments provided by their schools are related to the cognitive, affective, and motivational components of their personal meaning system. In order to link the mixed methods phases of the study, students were also provided at the end of the on-line survey the opportunity to write responses to three short essay questions.

The qualitative phase of the study addressed the qualitative research question through focus group interviews with teachers and administrators in each school. During the focus group interviews the findings from the quantitative student survey were shared with the teachers, who served as participant researchers to help me make sense of those findings. The purpose of the qualitative phase, therefore, was to build upon the first phase by giving teachers the opportunity to provide deeper insights as to how they, as educational leaders, create learning environments that help their students develop a sense of meaning and purpose in their lives.

The rationale for this methodological approach is that whereas the general findings from the quantitative phase address the "what" question of the study (namely, what are the correlations between learning environments and the personal meaning and life purpose outcomes?), the qualitative data and their subsequent analysis serve to explain in greater depth the findings from the quantitative phase by addressing the "how" question (namely, how and in what ways do specific aspects of the learning environment created by the educational leaders foster in students personal meaning and life purpose outcomes?).

CHAPTER 2

Literature Review

This chapter consists of four sections. Because this study utilizes an interdisciplinary approach grounded in Learning Environment Research (LER) Existential Meaning Research (EMR), and Positive Psychology Research (PPS) the first three sections of the chapter consists of three distinct literature reviews. Moreover, in order to align the interdisciplinary constructs to be utilized a fourth section discussing the overall theoretical framework of the study is included.

In the first section, I will critically review some of the scholarly works of LER investigators, identify domains and dimensions they investigate, examine their research methods and validated instruments, and explore some of the findings arising from their work. The theoretical foundations of the field based on the early work of Lewin and Murray, as well as the later work of Walberg and Anderson, Moos, and Tricket and Todd are discussed. Quantitative research using a variety of reliable and validated research instruments is presented. Of particular interest are studies using the *What is Happening in This Class* (WIHIC) questionnaire, which was developed using the more promising scales from earlier instruments. As will be seen, the variables measured using the WIHIC have been found to be correlated with a variety of student outcomes such as attitudes toward science and math, and academic efficacy.

In the second section, I will critically review theory and findings of Existential Meaning Research (EMR) field as it has emerged from within the fields of Developmental and Humanistic Psychology. Theoretical perspectives on the nature

and origin of meaning are analyzed and research within a variety of specialized areas investigating the role of personal meaning, or the lack of it, as a mediating influence on the lives of people facing life's challenges is reviewed. Survey instruments used in the field of EMR are discussed, and specific studies using the *Life Attitude Profile – Revised* (LAP-R; Reker, 1992) in a variety to contexts are reviewed.

In the third section I will discuss the *Satisfaction With Life Scale* (SWLS; Diener, Emmons, Larsen, & Griffen, 1985), which has been extensively used by researchers in the field of Positive Psychology Research (PPS), and review a recent study of satisfaction with life and schooling that represents an emerging educational research paradigm into school environments and global indicators of student functioning.

In the fourth section of this chapter, I weave together the themes and methodologies of the LER and EMR fields, and show how their theoretical constructs were aligned and integrated in this study. Specifically, I will show how components of theoretical constructs in the fields of LER, EMR, and PPR served as antecedent, mediating, and outcome variables, respectively.

Criteria for inclusion of studies for this review included the following: frameworks grounded in social ecology, critical constructivist, social cognitive, humanistic, existential, and positive psychological theories; early studies and seminal work that inaugurated the LER, EMR, and PPR fields; publications in a wide range of peer-reviewed journals; empirical designs that included quantitative methods employing instruments validated through factor analysis; mixed method designs that utilized qualitative methods in conjunction with quantitative ones; and studies spread

out among all educational levels (i.e., elementary schools, middle and high schools, and universities).

Learning Environment Research

Introduction

Since its inception in the USA within the Harvard Project Physics (Walberg & Anderson, 1968), Learning Environment Research has been carried out in many countries, some of which include Australia, Britain, Canada, Germany, Holland, Israel, Japan, Korea, the Netherlands, Singapore, Sweden, Taiwan, and the USA. A range of specialized areas of study have emerged within LER, particularly with regards to critical constructivist epistemology in the context of math and science education (Fraser, 1998; Nix, Fraser & Ledbetter, 2005); problem based learning (Dochy, et al., 2005); learner-centered education (Alfassi, 2004); and the development, validation, and application of research instruments (Fraser, 1999; Shavelson & Seidel, 2006).

A particularly interesting development relative to this study is the effort of researchers (Dorman, 2001; Dorman, Fisher & Waldrip, 2006; Lorsbach & Jinks, 1999) to integrate within LER the knowledge from Efficacy Research conducted by social learning theorists such as Bandura (1986, 1997). Both of these lines of disciplined inquiry have important implications for our understanding of learning and teaching, and their integration has the potential to substantially improve our understanding of education by examining the reciprocal relationship between psychosocial learning environments and the confidence students have toward learning tasks.

Scope of this Review

Eighteen articles published in the peer-reviewed *Learning Environments Research* journal are included, as well as three articles each from the *American Journal of Community Psychology* and *Research in Science Education*, and two articles each from the *Journal of Educational Psychology* and *Theory into Practice*. Also included is at least one article published in each of a variety of publications.[1] Several theoretical books are cited, one of which is of seminal value in LER. Four studies included in this review were reported in chapters of edited books. Thirty-four reports of empirical research are included in this review – 23 with correlational designs, one using a meta-analytic approach, five using mixed methods approaches, one using multiple methods, and four using qualitative designs.

Defining the LER Field: Theory, Methodology, and Social Climate Dimensions

Theoretical Foundations

Learning Environment Research is a field of disciplined inquiry that investigates a wide range of psychosocial dimensions found in classrooms and schools. The concept of psychosocial climate refers to both the psychological and social dimensions that can be identified by examining individual needs and the order and structure of social environments the individual operates in (Insel & Moos, 1974; Trickett, 1978). How these psychological and social climate factors mutually interact

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[1] These include: *American Educational Research Journal*; *American Psychologist*; *Child Development*; *Educational Evaluation and Policy Analysis*; *Evaluation and Research in Education*; the *International Journal of Educational Research*; the *Journal of Counseling Psychology*; the *Journal of Research in Science Teaching;* the *International Journal for Mathematics Teaching and Learning*; *Research in Science Education*; and the *Review of Educational Research*.

and affect learner affective, attitudinal, and cognitive outcomes is therefore the central focus in LER.

Interest in the relationship between environments and outcomes is not new. The early work of Lewin (1935) advanced the idea that behavior is a function of personality and environment (Fraser, 1998b, Trickett & Moos, 1973). Murray (1938) posited a model in which pressure from the environment interacted with individual needs thus impacting behavior outcomes in individuals (Trickett & Moos, 1974). Walberg and Anderson (1968), in a study undertaken within the Harvard Physics Project, advanced a model in which student cognitive, affective and behavioral outcomes arose out of the interaction of psychological and classroom dimensions. Trickett and Todd (1972) outlined an ecological perspective of school culture that took into consideration the ecological constructs of interdependence, adaptation, and cycling of resources. Bandura's (1986) Social Cognitive Theory posits a model of triadic reciprocal causation "in which behavior, cognitive and other personal factors, and environmental influences all operate interactively as determinants of each other" (p. 23). The distinctive aspect of LER is that instead of examining outcome measures as arising directly from specific educational programs *sans* intervening variables, the mediating effect of learner perceptions are taken into account when analyzing the associations between program components and student outcomes.

Insel and Moos (1974) synthesized and applied the ideas of some of these and other researchers into what they called the field of *Social Ecology*. For Insel and Moos this was at the time a new line of inquiry grounded in psychology and behavioral science. Social ecology transcended, they said, the human ecology of

geographers and sociologists by "systematically dealing with the social environment and its interaction with the physical milieu" using a value orientation that is "concerned with promoting maximally effective human functioning" (p. 180). This is to say that psychosocial climate, personal appraisal, and behavior are interrelated, thus facilitating sustainable progress or bringing about stagnation. In the context of education, social ecology essentially considers more than students' ability to adapt to existing environments they find themselves in; it also considers how they seek to shape and alter the environment itself in order increase the satisfaction of their perceived needs. In short, what do school social climates consist of, in terms of student and teacher perceptions, and how do those perceptions impact or promote behaviors that effect stability or change at the systemic, social, and personal levels?

Research Methods in LER

The broadest and most enduring theme of LER is the idea that students' perceptions of their environments exert a powerful influence over their cognitive, affective and behavioral outcomes (Allen & Fraser, 2007; Fraser, 1998b; Fraser & Fisher, 1982; Henderson, Fisher & Fraser, 2000; Rentoul & Fraser, 1978; Trickett, 1978; Trickett & Moos, 1974; Shavelson & Seidel, 2006; Walberg & Anderson, 1968). This emphasis on student perceptions has led to an almost exclusive reliance on correlational quantitative methods in LER. Also, some researchers have used structural equation modeling in the attempt to create path analyses (Allodi, 2007; Dorman, 2003; Dorman, Fisher & Waldrip, 2006). Learning environment researchers

have therefore put a great deal of effort into the development, validation, and application of a rich set of survey instruments (Fraser, 1998).[2]

This orientation towards quantitative methods substantially limited the field in that it focused on the identification of the associations between learning environments, student perceptions, and student outcomes, rather than on explaining why or how those associations existed. However, this orientation started to shift with the attempt to increase the explanatory power of LER through some recent studies that have mixed qualitative methods with quantitative ones (Aldridge, Fraser & Huang, 1999, Allen & Fraser, 2007; Johnson & McClure, 2004; Kim & Lorsbach, 2005; Wolf & Fraser, in press).

A common methodological approach in LER has been the use of multiple instruments to compare perceptions of environments with assessments of learner outcomes. For instance, Fraser and Fisher (1982) used the *Individualized Classroom Environment Questionnaire* (ICEQ), along with the *Classroom Environment Scale* (CES), to investigate the relationship between students' perceptions of their learning environments to learning outcomes, as measured by skills and attitude tests. Henderson, Fisher and Fraser (2000) used the *Questionnaire on Teacher Interactions* (QTI) and the *Science Laboratory Environment Inventory* (SLEI) to compare student perceptions of their teachers' behavior and learning environments with student outcomes related to their attitudes toward their class, work, and academic

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[2] These include the following: the *Learning Environment Inventory, Classroom Environment Scale, Individualized Classroom Environment Questionnaire, My Class Inventory, Questionnaire on Teacher Interaction, Science Laboratory Environment Inventory, Constructivist Learning Environment Survey,* and the *What is Happening in this Class?* Survey. See Appendix C.

performance. Researchers have also investigated the association of student efficacy outcomes with learning environment dimensions (Dorman, 2001; Dorman, Adams & Ferguson, 2003; Kim & Lorsbach, 2005).

The choice of the unit of analysis is an important decision for all researchers. Some investigators in LER used the individual as the unit of analysis. However, Fraser and Fisher (1982) and Henderson, Fisher and Fraser (2000) found that multiple correlation scores comparing outcome and environment measures were stronger for classes than for individual students. Thus many LER researchers, while initially looking at individuals, have used classroom or other school groups (such as grade level, gender etc.) for their unit of analysis (Dorman, 2001; Dorman, Adams & Ferguson, 2001; Fisher & Fraser, 1983; Johnson & McClure, 2004; Kim, Fisher & Fraser, 2000; Nix, Fraser & Ledbetter, 2005). Johnson and Stevens (2001, 2006) are two LER researchers who have focused exclusively on school level analyses using the *School Level Environment Questionnaire* (SLEQ) that measures teachers' perceptions of overall school climate.

Social Climate Dimensions: The Seminal Work of Harold Moos

The seminal book of Moos (1979), *Evaluating Educational Environments*, largely shaped the field of LER. Working out of the Social Ecology Laboratory of the Department of Psychiatry at the Stanford University of Medicine, Moos developed a *Model of the Relationship between Environmental and Personal Variables and Student Stability and Change* (see Appendix A). Moos' model was designed to

encompass a wide array of social contexts, not just educational ones.[3] For instance,

the model later informed research in which…

> community psychologists have used information about actual and preferred social climate to improve the family context for youth, design effective workplaces for health care staff, enhance the quality of educational settings, and foster the positive outcomes of intervention programs (Moos, 1994). It is in these endeavors that we adhere most closely to the founding vision of our field: Active participation in the process of social construction with the goal of enhancing personal relationships, task fulfillment, and social change. (Moos, 2003, p. 10)

Learning Environment researchers, like community psychology researchers, have

taken up Moos's participatory, social-constructivist approach and applied it in the

context of educational research. The significance in this line of research lies in its

attempt to assess traditional and progressive educational programs, support innovation,

and help educators become more consciously responsive to the affective, in addition to

the cognitive, needs of learners. However, an important limitation with regards to the

application of Moos' original scheme to the study of educational environments was

that he limited his inquiry to the investigation of secondary and higher education

environments (see Appendix B). Later LER researchers (i.e., Johnson & Stevens,

2000; Kim & Lorsbach, 2005) extended the field into the elementary school level.

From a theoretical perspective, the similarity of Moos' model and Bandura's

(1986, 1997) *Social Cognitive Theory* is evident in that both consider behavior,

personal factors, and environmental dimensions as interconnected and interrelated

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[3] As Holahan (2002) wrote in a tribute to Moos, "The scope of Rudy's impact is enormous. His thinking and research have enduringly shaped research and practice not only in community and clinical psychology, but also in psychiatry, geriatrics, behavioral medicine, nursing, social work, and sociology" (p. 66). This paper will show, however, that in failing to include education in his list, Holahan ignored an important contribution of Moos.

components that positively or negatively affect human functioning. Considering the fact that Moos and Bandura have been colleagues at Stanford University for several decades, this is perhaps not surprising. As will be noted later, the commonalities of these two theorists was not lost to LER researchers who used Moos' scheme to investigate how student efficacy, a major outcome investigated in Bandura's model, is associated with psychosocial learning environment dimensions.

The practical and scholarly significance of LER rests upon its investigation of the Social Climate Dimensions of Moos' model, which are situated within a set of three psychosocial domains: Relationship, Personal Growth (goal orientation), and System Maintenance and Change (see Appendix B). As the field has evolved, LER researchers have identified and aligned additional dimensions within Moos' domains (see Appendix C). Taken together and in various combinations, these dimensions offer a rich set of elements constituting models for scholarly inquiry into our research problem, namely, how to make schools more interesting, meaningful, and engaging so that students will experience the value of learning and become life-long learners. In looking at student perceptions of psychosocial learning environment dimensions, and their associations with student affective and cognitive outcomes, ways to assess successful educational programs in order to address the research problem can be identified. This approach to education research values teachers and students by empowering them to take up and share ownership over their social and psychological settings, thus vesting the LER field with practical value and significance.

State of Learning Environment Research

Themes and Findings in LER

In reviewing studies using Moos' framework, this paper addresses five related themes found in LER studies. First, early research in LER focused on measuring different types of learning environments, as perceived by students, and comparing those perceptions with certain student outcomes. This aspect of LER became the basis for all subsequent research in the field. Second, LER studies offered comparative analyses of student perceptions of their actual and preferred environments, as well as of student perceptions and teacher perceptions. This theme represents an orientation of the field that valued the input from all participants in the learning process. Arising out of this orientation is a third theme, found in later LER, which was related to a critical-constructivist analysis of learning environments. This postmodern perspective challenges the objectivist worldview that dominated the 20th Century by placing value on critical classroom discourse among co-learners (teachers and students) in relatively greater learner-centered environments. Finally, an interesting and important development in LER, with respect to the assessment of efficacy outcomes based on Bandura's (1986, 1997) Social Cognitive Theory and their association with psychosocial environments, is reviewed.

Early Research of Learning Environments Investigating Moos' Dimensions

Early LER used Walberg's and Anderson's (1968) *Learning Environment Inventory* (LEI) or the Classroom Environment Scale (CES) developed by Trickett and Moos (1973). Due to the predominant and strong influence of Moos in later LER, this paper does not review research using the LEI. The CES, however, was the first

instrument specifically designed to investigate classroom psychosocial environments using Moos' three psychosocial domains of Relationship, Personal Growth (goal orientation), and System Maintenance and Change. Following initial trials of the survey and interviews with respondents, a fourth version of the scale (CES Form D) was validated using factorial analysis of data obtained from 443 high school students. A significant methodological concern regarding the CES needs to be mentioned. That is, the CES was in a forced response (true-false) format, which may have limited the richness of the data. In this the CES had special distinction, for all other subsequent instruments developed and utilized by LER researchers were in multiple-point Likert formats. One wonders why Trickett and Moos did not use a Likert format, particularly since they would have known it existed at the time (Likert published his work four decades earlier). This problem with the CES was later addressed with the Japanese version by Hirata and Sako (1998), which used a 5-point Likert format.

Trickett and Moos (1974) used the validated CES to determine student satisfaction outcomes with different types of learning environments in 18 high school classrooms. Students in these classes were also asked to report their level of satisfaction with their teachers using another questionnaire. The findings suggested strong support for higher degrees of satisfaction in classes with greater Teacher Support and Innovation, Student Involvement, and Rule Clarity. Trickett (1978) used the CES to compare five different types of public high schools: urban, suburban, rural, vocational, and alternative. With regards to Relationship dimensions the study found that students in alternative schools reported significantly higher levels of Involvement, Affiliation, and Teacher Support. Alternative schools were also found to have the

lowest level of competition, and the highest level of innovation. In addition to establishing the strength of some of Moos' participatory variables that can be seen as aligned with a social constructivist approach to education, these early studies represented some of the seminal work that the LER field was later founded upon.

Rentoul and Fraser (1978) were the first LER researchers to develop and validate a questionnaire to explore new dimensions that were situated within Moos' Psychosocial Domains. Their purpose was to compare teacher and student perceptions of actual and preferred science classroom environments using the Individualized Classroom Environment Questionnaire (ICEQ). The ICEQ was designed to investigate variables that were found in inquiry-based and open classroom programs: Personalization and Participation; Independence and Investigation; and Differentiation of instruction based on student abilities and learning styles.

Fraser and Fisher (1982) used the ICEQ and two forms of the CES in a quasi-experimental investigation of Australian high school students' perceptions of their actual and preferred learning environments, compared to student cognitive and affective learning outcomes. The outcome measures were administered at the beginning and end of the year, while the ICEQ and CES were given at midyear. Using the class mean as the descriptive statistical measure (N=116) the study found that specific outcomes were positively associated with certain dimensions. For instance, they found that student awareness of Social Implications of Science would likely be fostered in classrooms with greater Participation, and Order and Organization. Involvement, Order and Organization, and Innovation were all found to be associated with Leisure Interest in Science. These findings relate directly to our

research problem, which is to identify components of learning environments that foster engaging, interesting, and meaningful learning experiences for students. For instance, a leisure interest in science would indicate a degree of intrinsic motivation to independently pursue scientific inquiry. If student involvement and program innovations are associated with leisure interests, then one can conclude that programs that foster involvement and innovation would be successful in creating meaningful learning for students.

Fisher and Fraser (1983) administered the CES twice, with different instructions, to find out what Australian high school students would report as the ideal environment they preferred and what they reported their actual classroom environments were. The scores from the two administrations of the CES were then compared, which showed that there was a significant difference between ideal and actual learning environments in seven of the nine dimensions measured. Fisher and Fraser also compared teacher and student perceptions of the environment and found that teachers had more positive perceptions of their environments than their students did with regards to four dimensions (Involvement, Teacher Support, Order and Organization, and Rule Clarity). These findings suggested that teachers could help to develop more positive learner outcomes by striving to make their approaches to teaching more congruent with their student's preferences. This conclusion is given greater strength when viewed in light of the findings of Fraser and Fisher (1982) that established a link between innovation and meaningful learning.

A Critical Constructivist Approach to Learning Environment Research

Constructivism is an epistemological orientation that recognizes the cognitive process whereby learners draw on existing understandings while acquiring and assimilating new information. It is a process that culminates in the "construction" of new knowledge and understandings. This sequence loops in an iterative process as the learner grows and gains experiential knowledge. When internalized as a habit of thought and action, this process has the potential to bring about continuous life-long learning. Critical theory calls for an emancipation of the individual from the objectivist worldview that has dominated past scientific inquiry. It recognizes the classroom as having a socio-cultural milieu in which it is possible for a rich critical discourse to occur between active participants in the learning process (Lorsbach & Tobin, 1995; Taylor, Dawson & Fraser, 1995). Taylor, Dawson and Fraser (1995) explained how learning environments are understood from this perspective:

> Critical theory draws to our attention the ways in which the social environment constrains the teacher and students to act in accordance with political agenda whose interests can be antithetical to good meaning-making and ethical social interactions. Whereas constructivism entails an *instrumentalist ethic* – knowledge is valued because it works, or is viable – critical theory challenges us to adopt a *discourse ethic* that values (self-) knowledge for its potential to enable us to communicate openly and richly, thereby realizing the full potential of our species' most distinctive attribute. (p. 2)

Learning environment research grounded in this critical constructivist epistemology examines the personal relationships between teacher and student, and between student and student, in an attempt to explore the extent to which innovation has become a normative orientation in the classroom. It places all learners in the classroom (teachers, as well as students) on a more equal footing as co-learners in a co-created

learning process. This line of inquiry is directly related to the problem of identifying

learning environment dimensions positively associated with meaningful learning. It

seeks to understand how the integration of self-knowledge, critical thinking, and

engagement in learning environments can foster meaningful learning.

A significant amount of research in LER has investigated science and

mathematics environments using this framework. Taylor, Dawson and Fraser (1995)

and Taylor, Fraser and Fisher (1997) validated the Constructivist Learning

Environment Survey (CLES) using multiple (small-scale qualitative and large-scale

quantitative) methodologies in order to enable teachers and researchers to assess

innovation in science classrooms based on the learner-centered critical-constructivist

epistemology. The validated factors of the CLES were aligned with Moos' Social

Climate Domains. Following initial tests by Taylor, Dawson and Fraser (1995),

Taylor, Fraser and Fisher (1997) tested the CLES for validity through two large-scale

quantitative correlational analyses: an evaluation of constructivist reform efforts in

urban areas of Dallas, Texas, and an Australian study conducted within the Third

International Mathematics and Science Study (TIMSS). Findings from these studies

suggested that there was internal consistency and factorial validity for the CLES.

Moreover, the positive Dallas findings related to the orthogonal structure of the CLES

were replicated in the Australian TIMSS study. Pointing to the scholarly and practical

significance of this line of research, the authors concluded that the CLES can be a

valuable tool for assessing and monitoring constructivist reforms in schools, and

particularly within action research studies of practioners-researchers. Future studies

using the CLES were called for to explore the relationship between teacher efficacy

and the rigorous process of implementing student-centered constructivist classroom programs, and to determine how students can best be supported through the transition from teacher-centered approaches to learner-centered ones based upon critical self-reflective inquiry into real-world challenges.

Johnson and McClure (2003) reported on a mixed methods study using a version of the CLES to assess student and teacher perceptions of science classroom environments. This pilot study was part of a longitudinal research project of the Teacher Research Network (TRN) in Minnesota. Findings from the study were based on the administration of the CLES, interviews with teachers and students, and researcher classroom observations. In one case, the findings suggested that students' perception of Critical Voice in the classroom was lower than the level of Critical Voice reported by the teacher. Several instances were reported of teachers having higher perceptions of Personal Relevance than was perceived by their students. These findings, which were similar to those of Fisher and Fraser (1983), suggests that teachers need to become more aware of what students' perceptions of teacher practices are.

Dart, et al. (1999), while not using the CLES, offered a definition of the constructivist approach to learning that is consistent with the CLES scales: "...learning in which learners should find personal relevance in what they learn, share control over their learning, view knowledge as ever changing, and interact with each other to foster improved understanding" (p. 138). They conducted a quantitative correlational study of secondary school students' perceptions of their learning environments. The key theoretical link to the research was related to the distinction

between transmissive education, referred to as a *surface approach* to learning, and constructivist education, referred to as a *deep approach* to learning. The purpose of the study was to see if students would exhibit behaviors and attitudes associated with deep learning when they are learning in constructivist environments. The findings suggest that there were significant correlations between the variables tested. Learner self-concept was positively associated with deep approaches to learning, personalization within the classroom, and student participation and active investigation in the learning process.

In the Dart, et al. (1999) study, there was a negative association between learner self-concept and surface approaches to learning. In practical terms, this means that students will be more likely to engage in deep approaches to learning when teachers create constructivist learning environments that fosters close interactions between teachers and students, encourage students to be active participants in the learning process, discourage passive student learning, incorporate inquiry processes in the classroom, and foster inquiry skills among students. Additional findings indicated that the students prefer more student-centered environments than they actually find themselves in. Based upon these findings the authors suggest that to increase student interaction - that is, deep learning behaviors - a more constructivist, active, individualized processes between teachers and students need to be implemented. One of the most important suggestions of the study is related to the link between developmental progress or stagnation and learning environment. That is, the authors argue that their findings support the notion that traditional learning environments may actually result in developmental stagnation. This was also a concern that inspired the

work of Moos (1979).[4] Moreover, this conclusion gains credibility in light of the

findings of the Gates Foundation study (Bridgeland, Dilulio & Morison, 2006) cited in

the Research Problem section of this dissertation.

In a study comparing learner-centered and traditional high school programs in

Israel, Alfassi (2004) arrived at findings similar to those of Dart, et al. (1999). The

research design was quasi-experimental, consisting of a control group of 20 students in

a traditional learning environment and two experimental groups of 54 and 26 students,

respectively, who were enrolled in two alternative learner-centered school programs.

Alfassi tested the hypothesis that students in a learner-centered, personalized

environment would attain to higher levels of achievement in language and

mathematics than students in transmissive (rote-based) learning environments. The

null hypothesis was rejected and the relationship between the two variables was

established. Additionally, she found that intrinsic motivation was greater among

students in learner-centered environments than among those in traditional

environments. Though the she did not use the terms "constructivist" or

"constructivism," the definition Alfassi provided for the learner-centered perspective

(McCombs, 2003) indicated she was analyzing the effects of a constructivist approach

to learning and teaching.

Nix, Fraser and Ledbetter (2005) conducted a multi-level assessment of an

educational innovation in Texas using three versions of the CLES. Teachers, who

were trained in the Integrated Science Learning Environment (ISLE) model at the

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[4] Moos (1979) indicated that he was influenced by Jonathan Kozol's *Death at an Early Age*, which, he said, "vividly described the destructive impact of the physical and social environments of the Boston public schools on the hearts and minds of black children" (p. 3).

university level, took an adult form of the CLES. For this study, the instrument's five

scales were aligned with the Science Learning Environments standards of the National

Board for Professional Teaching Standards. The teachers who went on to use the

model in the classroom with students also took a comparative teacher form of the

CLES, and their students took a comparative student form of the survey. The

objective of the study was to determine the effects of the ISLE program upon two

different learning environments (university and school classrooms) and upon two

populations (teachers and students). The CLES was found to be a reliable tool for

assessing classroom contexts and useful in assessing the extent to which students felt

that constructivist principles had been implemented in their classrooms. The study

concluded that ISLE program was effective in implementing constructivist approaches

in science classes.

Fraser, Fisher and McRobbie (1996) developed the What is Happening in this

Class? (WIHIC) survey, which was hybrid, or "contextually modified derivative"

(Dorman, 2001), using scales for dimensions that were previously assessed using the

CES, ICEQ, and SLEI (see, Appendix C). Two new scales were developed to

measure Cooperation and Equity. Dorman (2003) conducted a cross-national

validation of the WIHIC with high school students in Australia, Canada, and the

United Kingdom. He found that the WIHIC could bring reliability to studies of

learning environments in Western countries, and called for validation of the survey in

other educational cultures. Kim, Fraser and Fisher (2000) responded to this call with

their assessment of associations between learning environments and teacher-student

interactions in Korean high school science classes. They used the WIHIC for

assessing the environment and the Questionnaire on Teacher Interaction (QTI),

developed by Wubbels et al. (1985, 2005), to measure teachers' interpersonal

behavior. Their findings not only validated the scales of the two instruments, but also

added further support to the central assertion of LER that psychosocial environments

are significantly associated with student outcomes.

Teacher Behavior Associations with Student Outcomes

An important area of LER is the investigation of student outcome associations

with their perceptions of learning environments and their teachers' behavior with

respect to teacher-student interactions (Fraser & Walberg, 2005; Shavelson & Seidel,

2006). This research primarily uses the Questionnaire on Teacher Interactions (QTI),

which measures dimensions that were aligned with two of Moos' three domains (see,

Appendix C). For over twenty-five years the QTI, which was based upon a *Model for*

Teacher Interpersonal Behavior, has been an important instrument in the study of

student perceptions of teacher interactions (Fraser & Walberg, 2005; Wubbels &

Brekelmans, 2005).

Goh and Fraser (2000) conducted a study using the QTI in Singapore

elementary mathematics classes to investigate the extent to which teacher interactions

were associated with learner outcomes of affective attitudes and student achievement.

Working with the student and the class as the units of analysis using Hierarchical

Linear Modeling (HLM), the researchers found that teachers' behaviors that are

Helping/Friendly and Understanding toward students were positively associated with

the student outcomes, while Uncertainty and expressions of Dissatisfaction were not.

When using correlational analyses with the class as the unit of analysis all of the

teacher behaviors, except Strictness, were found to be associated with student attitudes and achievement. Since both outcomes were associated with positive teacher behaviors, Goh and Fraser concluded that teachers do not have to choose between meeting affective student needs and fostering student achievement. Both outcomes are important, particularly since they are not mutually exclusive with regards to associations with teacher behaviors.

Henderson, Fisher and Fraser (2000) used two instruments, the QTI and SLEI, to compare student perceptions of teacher behavior and learning environment with their attitudes, achievement, and performance in Australian Biology classes. They conducted a similar analysis in Korean Science classes, except that they used the QTI and WIHIC to find the extent to which student attitudes towards science were associated with student perceptions of teacher behaviors and learning environments. Henderson, Fisher and Fraser found that while there were some common contributions of dimensions in the QTI and SLEI to the variance in the student outcomes, the unique contributions were more significant. In practical terms, achievement outcomes were found to be fostered by strong teacher leadership, greater degrees of student responsibility and freedom, and the integration of theory and practical applications. Similar findings were established regarding attitudinal outcomes.

Kim, Fisher and Fraser (2000) also found significant associations between environment and learner attitudinal outcomes and teacher behavior dimensions, particularly for girls. Based on these findings, they concluded that in order to make science learning more meaningful to students and to better serve their needs, teachers should provide more support and involvement to their students and create more

cooperative and engaging environments. They also found that student interest in science could be fostered when teachers are more helpful, friendly, and understanding toward their students.

Overall, the findings and conclusions from these studies indicate that student affective attitudes toward learning and their achievement outcomes are significantly associated with their perceptions of environment and teacher behavior dimensions. These dimensions represent variables that can be seen as important in providing students the meaningful, interesting, and engaging learning experiences that are called for in the research problem addressed in this dissertation.

Learning Environment Research and Efficacy Research

The importance of the relationship between efficacy and learning cannot be overstated. Self-efficacy refers to one's beliefs or confidence in one's ability to perform tasks in any given domain of human functioning (Bandura, 1986, 1997). Multon, Brown and Lent (1991), in their frequently cited meta-analysis of findings in the field of efficacy research, reported that "self-efficacy beliefs account for approximately 14% of the variance in students' academic performance and approximately 12% of the variance in their academic persistence" (p. 34). Pajares (1996), in his review of research into how the components of Bandura's Social Cognitive Theory have contributed to the study of self-regulation, motivation, and achievement in academic settings, also stressed the need to further explore the relationship between psychosocial environments and self-efficacy. Of particular interest for the purposes of this study, however, is Pajares' research-based observation that "the empirical connection between self-efficacy and academic performances and

achievement has by now been reasonably secured" (p. 563). This is particularly important in that these studies provide support for the viability of using efficacy measures in lieu of standardized test scores when investigating the relationships between environments and student learning outcomes. The link between these two distinct lines of inquiry was succinctly posited by Dorman (1991): "While a substantial body of knowledge has demonstrated that classroom environment is a strong predictor of student outcomes, self-efficacy researchers have compelling evidence about the importance of academic efficacy to student outcomes" (p. 225).

Lorsbach and Jinks (1999) examined the question of how learning environments can be improved by understanding how student perceptions of their psychosocial learning environments are associated with efficacy outcomes. They defined self-efficacy as the sense of confidence that a learner displays toward learning tasks. This definition is based upon the work of Bandura (1997) that emphasizes student perceptions of abilities. Lorsbach and Jinks argued that students' sense of academic efficacy will be affected by their perceptions of their learning environments, which in turn influences motivation and persistence in the performance of learning tasks.

Kim and Lorsbach (2005), in their study of writing efficacy of students at the early elementary grade levels, addressed a gap in self-efficacy research with young children that was noted by Multon, Brown and Lent (1991) and Pajares (1996). Their study was based upon a multiple methods approach to data collection and analysis. A qualitative approach was used to see if young children are able to articulate their writing efficacy. Quantitative data of teacher and researcher perceptions of student

writing efficacy was generated via a self-efficacy scale using a modified version of the Morgan-Jinks Student Efficacy Scales. Interviews with participants were conducted over two years. Several "assertions" arose from this multiple methods analysis.

Assertion 1 stated that children at the elementary level can and do in fact display and report efficacy behavior patterns seen in older children. Assertion 2 stated that patterns of unwillingness to persist in a writing task among high and low writing efficacy students was similar to those of older students. That is, high writing efficacy students did not persist in a task if it was too easy or boring for them and low efficacy students would give up when faced with challenging tasks. Moderate writing efficacy students were more persistent in writing tasks than the higher and lower groups. Assertion 3 stated that high and low writing efficacy students would take more time to complete their tasks, though for different reasons. Low efficacy students took time because the work was more challenging. Higher efficacy students took more time because they wanted to do their work more perfectly. Assertion 3, however, diverged from findings with older children by Bandura (1986) and Pajares (1996), who found that older children with low self-efficacy would give up in the face of challenging tasks. The findings of this study suggest that younger children of low efficacy will display a wider range of strategies to complete a task than older children with low efficacy.

Dorman (2001) responded to Lorsbach and Jinks' (1999) call for research relating psychosocial learning environments to student self-efficacy. He conducted a correlational study using seven scales from the "What is Happening in This Class?" (WIHIC) instrument and three scales from the Constructivist Learning Environment

Survey (CLES). The survey was administered to 1055 Australian secondary

mathematics students and compared with the same sample group's responses to a

seven-item Academic Efficacy Scale (AES).   The objective of the study was to

validate the scales from the first two instruments, examine the relationship between

classroom environment and academic efficacy, and establish whether the scales from

the WIHIC and CLES accounted for unique variances in the AES. The study found

highly significant correlations between the WIHIC and CLES scales and the AES.

The most important finding of the study was that there were highly significant

correlations between learning environment and academic self-efficacy variables. This

finding supported the importance of Lorbach and Jink's (1999) call for inquiry

integrating LER and self-efficacy research.

Dorman, Adams, and Ferguson (2003) significantly advanced the examination

of efficacy outcomes in LER. They conducted a cross-national correlational study of

3,602 mathematics students from Australian, British and Canadian secondary schools.

The purpose of the study was to compare student perceptions of mathematics learning

environments and their sense of efficacy to perform mathematic tasks.   The

investigators found that for the two units of analysis investigated (individual students

and grade level groups) dimensions from the CLES and WIHIC scales had strong

correlations with academic efficacy. The authors concluded that this study adds

further evidence that student academic efficacy is influenced by learning

environments.

Dorman, Fisher, and Waldrip (2006) offered another important contribution to

LER and self-efficacy research. This particular study represents the model for the

qualitative phase of the study for this dissertation in that it employed structural
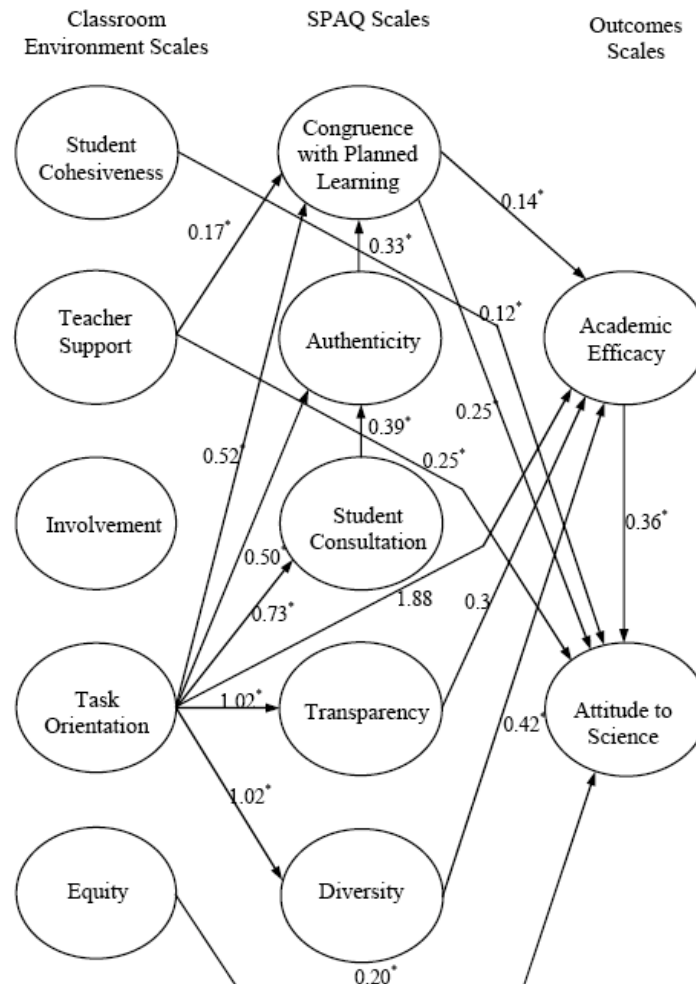
Figure 2.1: Final model, Dorman, Fisher, and Waldrip (2006). *p<0.05

equation modeling to test the goodness-to-fit of a hypothesized model to the data

obtained using the WIHIC. Figure 2.1 presents what they refer to as the "Final

Model" findings from the study. This correlational study identified perceptions of

assessment and learning environment variables, which were found to have a causal

relationship with efficacy and student attitudes toward science. The WIHIC classroom

environment scales of Student Cohesiveness, Teacher Support, Involvement, Task

Orientation, and Equity represented the independent variables in the analysis. Scales

from the SPAQ were used as mediating variables. These were Congruence with

Planned Learning, Authenticity, Student Consultation, Transparency, and Diversity.

Multiple regression analysis revealed that these dimensions were significant predictors

of the two outcome variables, Academic Efficacy and Attitudes Towards Science.

The data were then used to develop a "postulated" model, which was later successfully

tested through structural equation modeling using a LISREL analysis. Of all the

variables, Task Orientation was found to have the strongest relationship with

Academic Efficacy and Attitudes Towards Science.   Overall, 66% of the variance in

attitudes toward science was attributed to Student Cohesiveness, Teacher Support,

Equity, Congruence with Planned Learning, and Academic Efficacy. Additionally,

80% of the variance in academic efficacy was attributed to the combined effects of

Task Orientation, Diversity, Congruence with Planned Learning, and Transparency.

This study demonstrated that relationships between many variables related to learning

environment and academic efficacy could be successfully tested and utilized to

develop complex models in which independent and mediating variables are associated

with student efficacy. The authors call for replicating research to substantiate the

findings of this study.

<div align="center">Existential Meaning Research</div>

Introduction

Existential Meaning Research (EMR) has been an important area of focus for

theorists and researchers within the fields of Developmental, Humanistic, and Positive

Psychology. In the field of Humanistic Psychology the study of the positive effect of existential meaning and life purpose upon human functioning represented an alternative approach to Freudian "depth psychology" in which psychoanalysis emphasize the subconscious sources of psychopathology. (Battista & Almond 1973; De Vogler & Ebersole, 1983; Frankl, 1962; Maslow, 1971; Maddi, 1970; Reker & Wong, 1998; Zika & Chamberlain, 1992). Existential psychotherapists seek to direct patients toward positive pursuits and the cultivation of positive attitudes towards life in order to help them overcome psychopathologies (Yalom, 1980).   For example, Viktor Frankl established a new school of psychotherapy, known as *Logotherapy*. Logotherapy, according to Frankl, is "height psychology" in which therapists help their patients understand the meaning of their lives and find their life purpose in order to break free from psychopathological conditions (Guttmann, 2000). For Logotherapists, the essential question for their patients to ask themselves is, "What is it that life is calling for me to do?"

The Importance of Meaning and Purpose

Existential meaning and purpose have been seen to be of critical importance and even life-saving in extreme conditions. Viktor Frankl (1962), a survivor of the Nazi death camp at Auschwitz, saw that those like himself who survived the horrors of Nazi atrocities had some strong existential purpose (work or a career, a family member, or a cause) that compelled them to survive. Death camp inmates who lacked such a purpose gave up on life and perished. Frankl attributed his own survival to both luck (he was not, as so many were, randomly sentenced to death by the Nazi SS) and to his strong sense of life purpose and consequent motivation and commitment to

resume his life's work. When he entered the concentration camp a completed

manuscript he had in his possession was confiscated. Afterwards, while struggling to

survive, he envisioned taking up his work again and rewriting his book. He delivered

lectures to imaginary audiences and to his bunkmates, and observed how those around

him coped with their condition.   When he finally resumed his work Frankl studied

what he called the *will to meaning*. For Frankl, the will to meaning was the "primary

motivation" in a person's life. Later, he called the absence of the will to meaning

existential vacuum, and considered it to be the most challenging psychopathology in

society in his time. He believed that the most effective way to deal with the

pathologies associated with existential vacuum is to awaken patients to a higher

purpose, usually in the service of those they love or of some cause that is bigger than

one's self.

Frankl's thesis has stood the test of time, for it has been seen that failure to

discover or create meaning and develop a sense of life purpose can have devastating

effects upon normal human functioning. The developmental psychologist William

Damon (1995, 2006) found that "purposelessness" has deleterious effects on the

personality development of adolescents and leads to pathologies that affects both the

individual and society. Symptoms include a loss of motivation and lack of sustained

commitment, self-destructive behavior, hedonism, depression, and "an inner life of

anxiety and a sense of being trapped in a life that is not under their control" (2006, p.

10). Maddi (1967) identified several *psychopathologies of meaning*. In the extreme

these show up in cognitive, affective, motivational domains:

> Cognition in this disorder expresses meaninglessness, or the chronic
> inability to believe in the truth, importance, usefulness, or interest value

of any of the things one is engaged in or can imagine doing… The affective tone in this vegetative sickness is blandness and boredom… As to the realm of action in this disorder, one observes an activity level that may be low to moderate, but more important than amount of activity is the introspective and objective observable fact that activities are not chosen. (p. 140)

Yalom (1980), in his highly readable and thorough book on *Existential Psychotherapy*, identified meaninglessness as one of the four "ultimate concerns of life" (the others being death, freedom, and isolation) that represent the unavoidable challenges that everyone must confront in life. For Maslow (1966, 1971) meaninglessness is a *metapathology*, marked by despair and the virtual absence of directionality in life. Decades later Csikszentimihalyi (1990), one of the most prominent theorists in the field of Positive Psychology, also considered what various theorists called *ontological anxiety* or *existential dread* as a serious disorder for people in his own time. This state, for him, "is a fear of being, a feeling that there is no meaning to life and that existence is not worth going on with. Nothing seems to make sense" (p. 12). Csikszentimihalyi has dedicated his life to finding ways to help people overcome this dreaded state of being by studying and understanding its opposite: the optimal flow of experience. His solution to the problem is for people to manifest their maximum potential by finding their inner source of purpose, freeing themselves from constraints imposed by society, and developing the capacity for personal mastery and maximum human functioning.

The participating schools in this study have embraced an approach to education known as Integral Education. The cardinal aim of this approach is the discovery and living out of one's life purpose. In 1950, Mirra Alfassa, a French woman of Turkish

and Jewish descent, who was a spiritual teacher in India known among her adherents as *The Mother*, told the teachers and students in the Integral Education school she founded,

> *Une vie sans but est une vie sans joie. Ayez tous un but; mais n'oubliez pas que de la qualité de votre but dépendra la qualité de votre vie. Que votre but soit élevé et vaste, généreux et désintéressé; ainsi votre vie deviendra précieuse pour vous-mêmes et pour les autres.*[5] (Alfassa, 1950, p. 3)

She goes on to say that, to do so, one must develop personal mastery over one's nature by cultivating self-knowledge and self-discipline, discovering one's unique capacities, and finding meaning in one's life.

Past evidence, therefore, clearly suggests that meaning and purpose are important for all human beings, regardless of their particular life circumstances, or of the era or country in which they live. Where there is existential vacuum or psychopathologies of meaning, the effects can be debilitating (Damon, 2006; Frankl, 1963; Maddi, 1967, 1970; Yalom, 1980). Where there is meaningfulness, people are better able to live healthy, productive and rewarding lives (Alfassa, 1950; Csikszentimihalyi, 1990; Maslow, 1968; Seligman & Csikszentimihalyi, 2000). Positive human functioning is enhanced through the strengthening *of Subjective Well-Being* (SWB) and limited or supported by the social and ecological influences one lives with. How one conducts oneself in choosing one's path in life is directly related to one's sense of personal meaning comprised of one's cognitive interpretation of life events, the motivational drives arising out of one's self-constructed value system, and

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[5] "An aimless life is always a miserable life. Everyone one of you should have an aim. But do not forget that the quality of your life will depend upon the quality of your aim. Your aim should be high and wide, generous and disinterested; this will make your life precious to yourself and to others." [Translation mine.]

the delight of affective being, fulfillment, or satisfaction that one seeks, strives for, and obtains (Reker, 2000; Reker & Wong, 1988, 2008).

Scope of this Review

During the second half of the 20th century an emergent body of research documented the study of existential meaning and life purpose, particularly in the areas of gerontology (Ebersole & DePaola, 1987, 1989; Depaola & Ebersole, 1995; Reker, 1991, 1992, 1994, 1997, 2000; Reker, Peacock & Wong, 1987; Reker & Chamberlain, 2000; Reker & Wong, 1988), holistic nursing and health (Bauer-Wu & Farran, 2005; Farran, Graham & Loukissa, 2000), and in existential, clinical, positive, and social psychology (Damon, 2008; Battista & Almond, 1973; Csikszentimihalyi, 1990; Debats, 2000; Frankl, 1963; Maddi, 1970; Maslow, 1968; Seligman & (2000); Yalom, 1980; Zika & Chamberlain, 1987, 1992). These disciplines have roots in the modern school of the existential philosophers Kierkegaard, Heidegger, Jaspers, Tolstoy, and Sarte, as well as in the humanist psychology of Maslow, Rogers, Assagioli, and May (Lurie, 2000; Maddi, 1968; Yalom, 1980).

The distinctive thrust of these fields of inquiry is the exploration of the antecedent and mediating role that the presence or lack of existential meaning plays in the lives of people who are coping with personal challenges such as aging, addictions, delinquency, divorce, psychopathology, and various health issues. Other studies have examined meaning as an outcome measure of positive human development and effective human functioning.

The breadth of human conditions addressed in meaning studies is quite breathtaking. The International Network on Personal Meaning (2008) has published a

bibliography on its website listing almost 180 articles and books on personal meaning. The bibliography lists a total of sixty-one research articles that addressed issues related to AIDS, addictions, aging, cancer, illness and disability, depression, death and dying, divorce, growth and happiness, health, spirituality, stress, suffering, and work. Virtually all of this research studied people who either lost their sense of meaning or who had never developed it in the first place.

Eight articles published in the *International Forum of Logotherapy* are included in this review, as well as six articles from the *Journal of Humanistic Psychology*; four articles each in the *Journal of Clinical Psychology*, the *Journal of Personality and Social Psychology*, *Personality and Individual Differences*, and *Psychological Reports*; three articles in the *American Psychologist*; and two articles each in the *British Journal of Psychology*, the *Canadian Journal of Behavioural Science*, *the Journal of Counseling Psychology*, *Psychology in the Schools*, and *Psycho-Oncology*. Also included is one article published in each of a variety of publications.[6] Additionally, 17 books and 23 chapters in edited books are cited or reviewed.

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[6] These include: *Ageing and Society; American Sociological Review; Applied Developmental Science; Behavioral Medicine; British Journal of Clinical Psychology; Ceskoslovenskii Psycologie; Chinese Journal of Psychology; Clinical Rheumatology; Clinical Nursing Research; Clinical Psychology Review; Educational Research and Evaluation; European Journal of Psychiatry; The Gerontologist; The Humanistic Psychologist; International Journal of Ageing and Human Development; International Journal of Nursing Studies; Intervention in School and Clinic; Issues in Educational Research; Journal of Advanced Nursing; Journal of Aging Studies; Journal of American College Health; Journal of Aging Studies; Journal of Gerontology; Journal of Happiness Studies; Journal of Psychology and Theory; Journal of Social Behavior and Personality; Journal of Social Distress & the Homeless; Journal of Holistic Nursing; The Journal of Positive Psychology; New Directions in Youth Development; Oncology Nursing Forum; Psychiatry; Psychological Assessment; Psychology of Addictive Behaviors; Psycho-Oncology; Research in Education; Studia*

What does "Meaning" Mean? Theoretical Perspectives on Existential Meaning and Life Purpose

Researchers have noted, depending upon their personal preferences or theoretical orientations, that theorists and researchers have employed a variety of operational conceptions of meaning and purpose, emphasized one or the other, or collapsed them into a unitary construct (Damon, 1995; Kenyon, 2000). A significant aspect of the theoretical discussion relates to whether meaning and purpose are, in fact, essentially the same thing, or whether they are distinct constructs, with one being a dimension of, or constituting a component of, the other. Frankl (1962) used the terms existential meaning and existential purpose interchangeably, thus considering them to mean the same thing. Damon (1995) distinguished meaning from purpose and argued, "that purpose indeed has a special developmental role not captured by the more inclusive, diffuse, and pluralistic concept of meaning" (p. 121). Yalom (1980) pointed out that whereas meaning refers to a sense of coherence, purpose is connotative of intention. The articulation of intentionality, for Csikszentimihalyi (1990), is one of three ways human beings understand meaning, in that "people reveal their purposes in action; that their goals are expressed in predictable, consistent, and orderly ways" (p. 216). Beside the common sense of the term used to denote the classification of words, Csikszentimihalyi views the third usage of meaning as reflecting the worldview that there are ultimate concerns in life through which all

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Psychologica; Review of General Psychology; Theory into Practice; Urban Education; and Women & Health.

phenomena are interconnected as inherent aspects of a unified existence and coherent

life purpose.
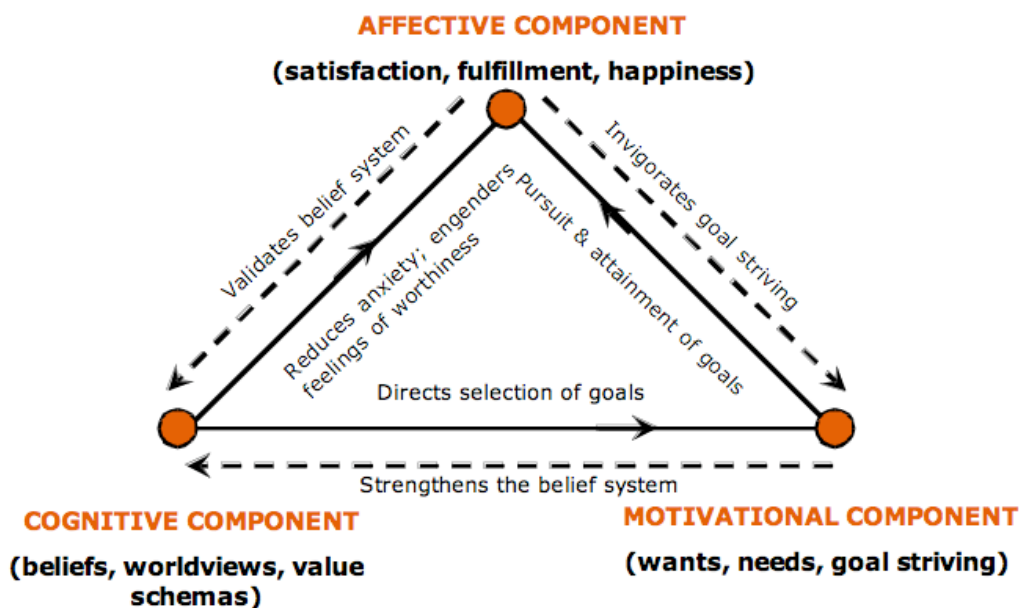
Note. Solid arrows represent the direction of influence; dashed arrows represent feedback.
Figure 2.2: The Triadic Model of the Personal Meaning System.

As seen in Figure 2.2, Reker and Wong (1988) treated personal meaning as a

triadic construct, consisting of cognitive, motivational, and affective structural

components. Their view is consistent with that of Damon (1995), in that the cognitive

component of their conception of personal meaning essentially constitutes a self-

chosen life purpose. Indeed, they introduce a *choice postulate* in their model to

account for an individual's interaction with their societal and environmental

influences. That is, they "argued that while the individual lives out his or her life

within societal constraints, he or she has a certain amount of freedom to choose how

life is to be lived. Such freedom increases choices that influence the structure of the

meaning system" (Reker and Wong, 1988, p. 214). Reker and Wong's model is

important in that it accounts for the fact that it is possible to have a sense of meaning and purpose, yet lack the motivation or the personal responsibility requisite to manifesting purpose, which results in a lack of fulfillment or satisfaction in life (Halama, 2002). When the reciprocal relationships between the three components are healthy and strong in an individual, then it can be said that that individual will more likely achieve greater SWB and satisfaction in life.

Another aspect of the theoretical discussion has to do with the nature and origin of existential and personal meaning. Specifically, is existential meaning discovered or created? Is it something that exists as an ontological (objective) or phenomenological (subjective) reality? Frankl (1963) viewed purpose and meaning as an objective, self-existent reality that represents the calling in life that one must discover, thus drawing a human being towards personal fulfillment or transcendence, sometimes during or arising out of times of suffering and stress. Frankl emphasized that people have the choice to follow their calling or not, but this fact does not negate the ontological nature of meaning. Maslow's (1967, 1971) *Theory of Metamotivation* holds that meaningfulness is one of fifteen being-values, or highly personal and phenomenological *metaneeds*, which self-actualizing individuals seek through creative agency. Similarly, Maddi (1988) posits that meaning is self-created and continually in flux, depending upon one's momentary *facticity*, which is comprised of the set of traits and possibilities that makes one who one is at any given time. For Yalom (1980) the distinction rested in the dichotomy between *cosmic meaning* and *terrestrial meaning*. Cosmic meaning falls within the purview of theological, metaphysical, or spiritual worldviews, and relates to ultimate concerns about the meaning of life. Terrestrial

meaning is "entirely secular" (p. 423) and is constituted by the sense of an individual

that his or her life has some personally meaningful aim that is worthy of pursuit.

Baumeister (1991, 2005) posits that meaning is a quadratic construct comprised of

purpose, efficacy, value, and self-worth, and is constructed through the appraisal of

life events (Sommer & Baumeister, 1998).

Reker and Wong (1988) reconcile this dichotomy between the ontological and

phenomenological views of existential meaning by embracing and integrating

elemental and holistic understandings of life:

> According to the elemental view, it is not meaningful to talk about life
> as a whole as having meaning; life only *contains* meanings – a series
> of meaningful activities, quests, and goals. However, such a view may
> be an inadequate antidote for ontological anxiety. One also needs a
> vision, no matter how dim, of some ultimate purpose or total meaning.
> To achieve an enduring type of personal meaning, specific activities
> need to be integrated into a larger and higher purpose. (p. 221)

Reker (2000) later clarified this view further when he added:

> However, specific encounters need to be integrated into a larger and
> higher purpose, as expressed through philosophical understanding and
> spiritual connectedness, from which meaning can be discovered. In
> effect, an enduring type of existential meaning can only be achieved
> through the dual process of creating and discovering meaning. (p. 41)

This perspective represents an important synthesis of the ontological and

phenomenological orientations towards meaning and purpose. In the most elemental

sense, the purpose of life is life itself; it is evident from the mere fact that life exists

that it is inherently meaningful. With the emergence of higher life forms, culminating

(so far) in the human being who can not only interact with and adapt to his

environment, but also change it, the sense of purpose takes on a greater

phenomenological significance. As Reker and Wong (1988) state: "Individuals

discover meaning from the givens, such as the existence of the universe, the existence of life. Individuals also create meaning through making choices, taking actions, and entering into relationships" (pp. 222-223). Figure 2.3 shows Reker and Wong's (in press, 2008) *Contextual Model of Personal Meaning in Life* that posits that a sense of purpose is formed by elemental or ultimate concerns arising out of situational meaning and global meaning. That is, individual experiences are seen as arising from an elemental "bottom-up" orientation in which is meaning created. The contemplation of ultimate concerns in life is seen as arising from a holistic "top-down" orientation in which meaning is discovered. The distinction between the two lies in where an individual's frame of reference is located at a given time, thus determining the most significant source of meaning in one's life. An exclusive reliance on one or the other type of concern can result in an imbalance resulting in unhealthy behavior. In their extreme forms, one can easily envision the invariably hedonistic materialist on the one hand and the emaciated ascetic living a contemplative life in complete isolation from the larger human world on the other. Taking into account the two orientations will result in a greater degree of Agentic Personal Meaning in which one's personal life is marked by the healthy integration of a personal sense of purpose and an existential sense of life purpose. Put another way, the individual who achieves a positive sense of well-being does so by embracing both greater span and greater depth of being in relation to self, world, and cosmos.

Survey Measures Used in Existential Meaning Research

Most studies in EMR have used quantitative methods using survey instruments developed by researchers and theorists. Indeed, like the field of LER, researchers in

EMR have dedicated considerable efforts to developing and validating a variety of

survey instruments. Each represented an effort to measure a variety of components of

Most Comprehensive

Least Comprehensive

Global Meaning

Creating Meaning:

Choosing, acting, relating to others

Values that encompass cosmic meaning and ultimate purpose

Service to others and commitment to a larger societal and political cause

Devotion of time and energy to the realization of personal potential

Self-preoccupation with hedonistic pleasure and personal comfort

Discovering Meaning:

Reflecting on the givens of life

Situational Meaning

Figure 2.3: A Contextual Model of Personal Meaning in Life.

existential meaning. These include the *Purpose in Life* (PIL) test (Crumbaugh &

Maholick, 1964), the *Life Regard Index* (Battista & Almond, 1973), the *Life Purpose*

Questionnaire (LPQ, Hablas & Hutzell, 1982), and the *Life Attitude Profile-Revised*

(LAP-R, Reker, 1992). These instruments represent general measures of existential

meaning in that they take a "top-down" orientation that encompasses ultimate rather

than secular concerns. Other, more domain-specific, and therefore "bottom-up"

oriented, measures are the *Sources of Meaning Profile-Revised* (SOMP-R) developed

by Reker (1996), and the *Meaning Essay Document* (MED, DeVogler & Ebersole,

1980). Unlike all the other measures discussed here, the MED uses a qualitative

methodology in which respondents answer, in writing or orally during interviews, two

personal questions related to meaning in life. Melton and Schulenberg (2008) report findings from a variety of studies that report that these instruments have reliable internal consistency and validity.

Purpose in life (PIL) test. The PIL test is a 20-item measure based upon Frankl's Logotherapy orientation, with each item rated on a 7-point Likert scale. The measure has been used in numerous studies and found to be a valid and reliable instrument (Crumbaugh & Maholick, 1964, 1969; Chamberlain & Zika, 1988; Zika & Chamberlain, 1992; Reker, 1977; Melton & Schulenberg, 2008). Researchers using the PIL test have found relatively low senses of life purpose among high school students involved in the use of narcotics (Padelford, 1974), prison inmates (Reker, 1977), apathetic college students (Coffienld, 1981), patients with psychopathological syndromes (Gonsalvez & Gon, 1983), drug addicts (Nicholson, et al., 1994), college students with anger issues (Sappington & Kelly, 1995), adolescent children of Bangladeshi divorcees (Rahman, 2004); and college students who engage in isolating verses interpersonal activities (Molasso, 2006). Positive correlations have been reported between the PIL test measures and psychological well-being among Chinese college students (Shek, 1993), self-efficacy among college students (DeWitz, 2004), adult sobriety (Junior, 2006), spirituality among HIV-positive patients (Litwinczuk & Groh, 2007), and even quality in life among patients with rheumatoid arthritis (Verduin, 2008). King et al. (2006) found correlations between the PIL and two of the three components of SWB, positive and negative affect.

Life regard index (LRI). The LRI is a multidimensional measure of meaning comprised of two sub-scales for life framework and life fulfillment, which Batista and Almond (1973) posited as the two defining characteristics of a meaningful life. Life framework refers to when a person has a coherent aim in life, goals, and a worldview grounded in a sense of purpose. Life fulfillment is an affective measure of satisfaction arising from the pursuit or attainment of purpose. The LRI consists of 14 items for each sub-scale rated on a 5-point Likert scale. Research using the LRI has reported that meaningfulness is positively correlated with psychological well-being (Debats, 1998, 2000; Debats, Van der Lubbe & Wezeman, 1993; Scannell, Allen & Burton, 2002), effective coping with stress (Debats, Drost & Hansen, 1995), significant commitments in life (Dabats, 1999), and social desirability (Harris & Standard, 2001). Negative correlations between the LRI measures have been reported with regards to high school student depression (Jensen, Svebak & Gotestam, 2004), and stress and depression among college students (Mascaro & Rosen, 2006). Some problems with the internal consistency of the LRI were detected by Debats (1990), who reported only a satisfactory factorial validity of the two components with a correlation of .54. This led Reker (2000) to question the status of the LRI as a multidimensional measure of meaning. Reker and Fry (2002) later reported substantial correlations between the Framework and Fulfillment scales of the LRI among younger (.76) and older (.86) adults.

Life purpose questionnaire (LPQ). The LPQ was specifically designed to measure meaning in life among institutionalized geriatric patients. It was intended to measure the same constructs for meaning as the LRI, but in a much simpler format, since many patients were unable to complete the LRI (Hablas & Hutzell, 1982). Schlenberg (2004) reported a covariance of .64 between the LRI and LPQ measures and found that respondents generally preferred taking the LPQ rather than the LRI. Findings from research using the LPQ indicated that a positive sense of life purpose was negatively correlated with psychopathology among patients in an alcohol dependency program (Kish & Moody, 1989), recidivism among men convicted of driving-under-the-influence (Little & Robinson, 1989), adolescent membership in drug/alcohol support groups (Hutzell & Finck, 1994), the absence of depression among elderly adults (Garner, Bhatia, Dean & Byars, 2007).

Life attitude profile – revised (LAP-R). The Life Attitude Profile was originally developed by Reker and Peacock (1981) and later modified to its current form as the LAP-R (Reker, 1992). The LAP-R is a multidimensional measure of the positive components of holistic (discovered) meaning: Purpose, Coherence, Choice/Responsibleness (agency and motivation), and Death Acceptance. Negative components relative to meaning in the LAP-R are Existential Vacuum and Goal Seeking arising from the need to escape from life's routine. Each subscale of the LAP-R contains eight items rated on a 7-point Likert scale. Two composite constructs are computed by summing the scores of the subscales. First, the Personal Meaning Index (PMI) is a construct based on the sum of score of the Purpose and Coherence subscales. Next, summing the scores from the first four subscales for Purpose,

Coherence, Choice/Responsibleness, and Death Acceptance, and then subtracting the

scores from the remaining two subscales for Existential Vacuum and Goal Seeking

results in a measure of an Existential Transcendence construct. Appendix D lists the

LAP-R dimensions along with the definitions for each given by Reker.

Sources of meaning profile – revised (SOMP-R). The development of the

SOMP-R (Reker, 1996) was an attempt to measure elemental (created) meaning in

light of Reker and Wong's (1988) theoretical framework based on the concept of the

Personal Meaning System (PMS). As previously noted, Reker and Wong had posited

that both an elemental (bottom-up, situational, created) sense of meaning and a holistic

(top-down, global, discovered) sense of meaning are required for a personal meaning

system to be sufficiently comprehensive (greater depth) and balanced (greater span).

As we have already seen, in their most recent work Reker and Wong (in press, 2008)

refer to this as the Contextual Model of Personal Meaning in Life. The original LAP,

which predated the PMS model, did not represent all three components of the model; it

measured the cognitive and motivational components, but lacked the affective

component. Moreover, the LAP was designed to measure discovered meaning, not

created meaning. The same is still the case with the LAP-R. Therefore, the

development of the SOMP and its later revision into the SOMP-R was undertaken to

remedy the deficiency of the LAP-R so that more a complete analysis of the PMS

encompassing the elemental and holistic orientations toward meaning would be made

possible.

It is important to note the SOMP-R, particularly since it's existence points to

one of the limitations of this dissertation research, as I will explain in Chapter 3. The

SOMP-R measures a variety of sources of meaning: Individualism, Self-Transcendence, Collectivism, and Self-Preoccupation. The taxonomy of these sources is provided in Appendix E. Additionally, composite constructs for Actualizing (Individualism plus Self-Preoccupation) and Transcendence (Self-Transcendence plus Collectivism) are calculated using the SOMP-R subscales. Several studies have established the factorial validity and reliability of the SOMP-R (Ellis, 1994; Bar-Tur & Prager, 1996; Prager, 1995, 1996; Reker, 1991, 1992, 1996).

Research on Existential Meaning Using the LAP-R

Due to the fact the *Agentic Personal Meaning* (APM) constructed from the LAP-R was used in this dissertation study, a more detailed review of research and findings using the LAP-R instrument is provided here. The LAP-R has been extensively used in the fields of Gerontology, Holistic Nursing, and Psychosocial Oncology. In each of these, meaning and purpose are important variables associated with health, subjective well-being, and the promotion of positive human functioning.

Life-span and gerontology studies. Research in the field of Gerontology Studies represents one of the most extensive lines of inquiry into existential meaning. Reker (1994) reports findings from several studies using the PMI and SOMP in an attempt to explore the hypothesis that both breadth and depth of meaning are important for a healthy personal meaning system across the span of life. While older groups generally scored higher than middle and young age groups, all three groups reported significant levels of personal meaning in relation to breadth and psychological well-being. Reker and Fry (2003) ran first and second order confirmatory factor analysis to explore the factor structure of the several personal

meaning measures (PIL, LRI, LPQ, and PMI) and to explore invariance between two age groups. Participants in the study included 163 psychology and gerontology students and 144 older adults. Results of the study indicated that the first and second order factor structures of all the scales held up well and that the hierarchical factor model provided a good fit to the data. Moreover, second order latent mean scores of the variable were not significantly different between the two groups.

The authors thus concluded that all the measures represent a clearly delineated construct for personal meaning across age groups. Reker (2000) used EQS to run a multistage analysis of the PMI construct of the LAP-R with over 2000 adults classified into young, middle-aged, and older groups. First, a confirmatory factor analysis of the data confirmed the overall factor structure of the PMI for each age group. Next, a six-order CFA was computed for males and females in each age group, which provided additional validation of the PMI. Interestingly, a number of items on the PMI were found to be variant between age groups, particularly between young and old males. As a result, four items were dropped from the PMI to create a new factor, PMI-12, which resulted in variance between age and gender groups. Reker suggests using the modified PMI-12 when comparing age groups in future studies. However, it is important to note that these findings suggest that the PMI is a robust measure for meaning among all adult-age and gender groups.

Health, holistic nursing, and psychosocial oncology. Nicholson, et al. (1994), in an early study using the LAP-R, investigated the differences of meaning in life between 49 drug abuse patients and a control group of 49 subjects. Multivariate analysis resulted in findings indicating significant differences in the mean scores

between the two groups for the LAP-R constructs of the Personal Meaning Index (Purpose + Coherence, F=14.47) and the Life Attitude Balance Index (Purpose + Coherence + Choice/Responsibleness, F=22.34), as well as the LAP-R dimension for Existential Vacuum (F= 25.28). All three findings were significant to .001.

Bauer-Wu and Farran (2005) studied meaning in life, spirituality, perceived stress, and psychological distress among breast cancer survivors (BCS) and healthy women. Three scales from the LAP-R - Purpose and Coherence (PMI), and Existential Vacuum (EV) - were used in the study, along with items from four other measures for momentary meaning in life (*Ladder of Life Index*, Reker, unpublished), core spiritual experiences (INSPIRIT; Kass, et al., 1991), stress (PSS, Cohen, Kamarck, & Mermelstein, 1983), and mood states (POMS, Cella, et al., 1987). Reliable alpha scores for the dimensions of all the measures were reported. For the LAP-R variables these were .86 and .84 for the PMI and EV, respectively. The findings from the study supported the essential propositions of personal meaning theorists. The authors reported that correlation analysis revealed the PMI scores were highly and positively correlated with the scores for core spiritual experiences and negatively correlated with Existential Vacuum, perceived stress, and mood states. The most striking finding of this study was that BCS women with children reported significantly higher levels of meaning and spirituality, and less psychological stress and distress than BCS women without children. While this finding is of great interest, it is limited in that the sample of BCS and non-BCS subjects was limited primarily to educated and married Caucasian women of high socioeconomic status.

Bowen, Morasca, and Meischke (2003) used the Coherence and Purpose scales (PMI) and the Choice/Responsibleness scale (control/agency) of the LAP-R in a six-month pre-post study of 357 women with a family history of breast cancer. The purpose of the study was to evaluate a number of variables related to psychological resilience, including discovered meaning as measured by the LAP-R. The authors reported significant negative correlations between the LAP-R variables and depression, and significant positive correlations with tangible support, affectionate support, information support, positive social interaction, mental health, physical functioning, and general health. Moreover, mean differences of the three LAP-R scales for women with low and high quality of life was found to be significant.

Erci (2008) validated the LAP-R in a study involving 199 Turkish cancer patients. Two translators who had not worked on the original translation into Turkish translated it back into English. This approach allowed Erci to compare the various translations to ensure that the content and meaning of the original was preserved in the Turkish version of the measure. After checking for internal consistency, the Death Acceptance and Existential Vacuum items were removed from the survey. This finding was not consistent with that of Bauer-Wu and Farran (2005), which found that the Death Acceptance and Existential Vacuum scales had Cronbach's alpha scores of .86 and .84, respectively. Alpha scores for the remaining dimensions in Erci's study were all .71 or higher. The author concluded that the Turkish version of LAP-R could help caregivers provide holistic nursing interventions in order to increase life satisfaction of cancer patients.

Vickberg, et al., (2000) studied 61 breast cancer survivors using the PMI for the measurement of global meaning, as well as three other measures for intrusive thoughts, psychological distress, and physical functioning. The PMI was used as an mediating variable between intrusive thoughts and psychological distress. Hierarchical regression analysis revealed that breast cancer survivors with high global meaning reported lower levels of psychological distress and those with lower levels of global meaning reported significantly greater psychological distress. These findings were consistent with other studies in which meaning acted as a buffer against stress (Mascaro & Rosen, 2006).

Vickberg, et al., (2001) administered via telephone interviews the LAP-R and other measures of psychological distress, quality of life, physical functioning, and stress to 85 bone marrow transplant (BMT) survivors. The purpose of the study was to determine the effect of global meaning, as measured by the PMI, upon the dependent variable measured, and compare its effect with that of other independent variables, such as number of days hospitalized, times rehospitalized, physical functioning, and gender. Simultaneous regression analyses of the variables revealed global meaning had a greater effect than the other independent variables on the dependent variables global distress (.41), quality of life (.39), depression (-.46), anxiety (-.30), avoidance and numbing (-.32), and hyper-arousal (-.32), and mental health (.35). With regard to relationships with other dependent variables global meaning was second only to physical functioning in effect upon BMT-related distress (-.29 and -.53, respectively), hyper-arousal (-.32 and -.44, respectively), emotional role functioning (.26 and .27, respectively), and vitality (.29 and .57, respectively). All of

these relationships were statistically significant and provided additional empirical

evidence of the importance and viability of the PMI construct in health studies.

Positive Psychology Research: Satisfaction with Life

Towards the end of the 20th Century Positive Psychology theorists built upon

the foundations of Humanistic Psychology. Unlike the therapeutic orientations of

Freudian and Humanistic Psychotherapy, Positive Psychology seeks to promote

positive human functioning in order to prevent the onset of psychopathology in human

beings at the subjective, individual, and group levels. Seligman and Csikszentmihalyi

(2000) introduced the field with the following:

> The field of positive psychology at the subjective level is about valued
> subjective experiences: well-being, contentment, and satisfaction (in
> the past); hope and optimism (for the future); and flow and happiness
> (in the present). At the individual level, it is about positive individual
> traits: the capacity for love and vocation, courage, interpersonal skill,
> aesthetic sensibility, perseverance, forgiveness, originality, future
> mindedness, spirituality, high talent, and wisdom. At the group level, it
> is about the civic virtues and the institutions that move individuals
> toward better citizenship: responsibility, nurturance, altruism, civility,
> moderation, tolerance, and work ethic. (p. 5)

Positive psychology, then, is concerned with building a strengths-based approach to

human development (Csikszentmihalyi & Csikszentmihalyi, 2006) by emphasizing

Subjective Well-Being (SWB). With regards to SWB, Csikszentmihalyi (1990) has

postulated that the making of meaning and the cultivating of life purpose is essential

for attaining to a highly functional cognitive, affective and motivational state of being

he refers to as the optimal flow of experience. A large body of research in Positive

Psychology has found that SWB is correlated with positive and negative cognitive,

affective and behavioral outcomes (Huebner, 2004; Pavot & Deiner, 1993, 2008;

Steger, Frazier, Oishi & Kaler, 2006). Closely aligned with this approach is Positive

Youth Development (Benson et al., 2006; Damon, 1995, 2008; Larson, 2000;

Hamilton & Hamilton, 2004) in which a sense of purpose is one of four developmental

assets that promote a positive identity in youth (the remaining three being personal

power, self-esteem, and a positive view of personal future).

The Satisfaction With Life Scale

Up to 1985 most research into SWB focused on the affective and emotional

components of positive and negative affect, but neglected the study of life satisfaction

that is considered the third, cognitive, component of SWB. Theorists also

distinguished between global SWB and domain-specific SWB. Denier, Lucas and

Oishi (2005) argue that in light of SWB research, there are "two varieties of happiness

and satisfaction - evaluations of specific aspects of life and on-line at-the-moment

feelings of well-being versus larger, global judgments about one's happiness and

satisfaction" (pp. 65-66). With the view of addressing this deficiency in the literature,

Diener, Emmons, Larsen, and Griffen (1985) developed the Satisfaction With Life

Scale (SWLS). The SWLS is a five-item global assessment of life satisfaction that is

scored in a seven-point Likert scale.

In the course of time, the SWLS has been found to be a reliable measure and

internally consistent with alpha scores reported in many studies in the .70s range and

above (Pavot & Diener, 1993). Pavot and Diener (2008) reviewed research using the

SWLS in a variety of diverse studies and found that the SWLS held up very well. The

SWLS has been utilized in studies in many countries including Australia, Belarus,

England, Greenland, Kenya, Korea, Holland, Spain, and Taiwan. Correlations

between the SWLS and personality and emotion variables were reported (see Table

2.1). These include positive correlations with positive affect, self-esteem, optimism,

and extraversion. Negative correlations were found with negative affect, pessimism,

depression, neuroticism, perceived stress, and suicide ideation.

Table 2.1: Correlations of personality and emotion variables with the Satisfaction With Life Scale (SWLS). Source: Pavot and Diener (2008, p. 144).

Variable	Sample reference number								
	1	2	3	4	5	6	7	8	9
Positive affect	0.47	0.41	0.44	0.36	0.55				
Negative affect	-0.44	-0.44	-0.57	-0.40	-0.44				
Self-esteem	0.64			0.58		0.55			
Optimism		0.48				0.50			
Pessimism		-0.45							
Depression		-0.50					-0.56	-0.57	
Extraversion								0.42	0.42
Neuroticism								-0.49	-0.54
Perceived stress		-0.56					-0.52		
Suicide ideation		-0.44							

Notes: 1 = Kang, Shaver, Sue, Min, & Jing, 2003; 2 = Chang & Sanna, 2001;
3 = Chang et al., 2004; 4 = Arrindell et al., 2001; 5 = Palmer et al., 2002; 6 = Steger et al., 2006; 7 = Tremblay et al., 2006; 8 = Schimmack et al., 2004; 9 = Hayes & Joseph, 2003.

School Psychology and Satisfaction with Life

Whereas considerable attention has been given to the study of SWB and

satisfaction with life, there have been few such studies in the field of education.

Suldo, Shaffer, and Riley (2008) recently reported a rare, but significant, study

involving 321 students in a comprehensive high school. Noting that the NCLB focus

on academic achievement neglects the global concept of life satisfaction and pointing

out that the influence of educational experiences can have a strong impact on students'

emotional and social development, they wrote:

> Given that educators' relative lack of attention to global indicators of students' functioning, it appears plausible that student's well-being is either undervalued or assumed distinct from academic achievement. In

reality, what occurs in school affects more than just academic skills; thus the present focus on achievement lack comprehensiveness. (p. 56)

Citing the lack of research investigating school factors that influence life satisfaction, the authors conducted a study to test a theoretical model in which behavioral, social, and cognitive contexts are posited to be significant factors in student SWB.

Components of the model included the independent variables School Climate, Academic Achievement, Behavior Problems, Attachment to School, and Personal Academic Beliefs, and the dependent variables Satisfaction with School and Global Life Satisfaction. Personal academic beliefs and attachment to school were measured using the *School Attitude Assessment Survey – Revised* (SAAS-R; McCoach & Siegle, 2003). School climate was measured using the *School Climate Survey – High School Student Version* (SES; Haynes, Emmons, & Ben-Avie, 2001). School Satisfaction was measured using the School Satisfaction subscale of the *Multidimensional Students' Life Satisfaction Scale* (MSLSS; Huebner, 1994). Global satisfaction was measured using Huebner's (1999) *Students' Life Satisfaction Scale* (SLSS). The use of these two scales for school and global satisfaction is important because Huebner's theoretical framework is consistent with Positive Psychology theory that distinguishes between domain-specific and global measures of satisfaction.

Of particular interest related to this study, the authors reported significant correlations between the global satisfaction and school climate variables. These were: order and discipline, .19; sharing of resources, .18; parent involvement, .22; school building appearance, .18; student interpersonal relations, .24; and student-teacher relations, .33. Interestingly, the personal relationship variables had the greatest effect,

particularly student-teacher relations. The authors also reported findings of significant

intercorrelations between school climate variables and global life satisfaction. These

were: school satisfaction, .44; personal academic beliefs, .44; attachment to school,

.37; school climate, .35; academic achievement, .21; and school behavior problems, -

.16. Intercorrelations reported between the independent variables and the domain-

specific school satisfaction were also significant: personal academic beliefs, .56;

attachment to school, .53; school climate, .42; academic achievement, .19; and school

behavior problems, -.28.

Two interesting observations with regards to these findings can be made. The

first is that the independent variables had a greater effect upon the domain-specific

measure of satisfaction and they did on global satisfaction. This points to the immense

importance of the role that school plays in the lives of students. The second

observation is that, with the exception of the negative effect of school behavior

problems, academic achievement had the least impact on school and life satisfaction.

These findings led the authors to the important conclusion that "the effects of social

and cognitive contexts of schooling extend beyond academic achievement, thus

attending to students' life satisfaction may be an important component of

demonstrating accountability in education" (p. 67).

<div align="center">An Interdisciplinary Approach to Educational Research</div>

There are several important conclusions from the empirical studies reviewed in

this chapter. First, the field of LER is clearly a vibrant and significant field of study

that has successfully utilized a number of useful and important frameworks such as

Moos' Social Climate Domains, the postmodern critical-constructivist epistemology,

and Bandura's Social Cognitive Theory. Findings arising from LER support for the idea that a rich variety of student outcomes are associated with student perceptions of the learning environments.

Second, EMR is also a dynamic line of inquiry that embraces a wide range of research into the human condition. The breadth of EMR is a reflection of the fact that human beings are by their nature meaning makers and that without meaning and purpose their lives can become miserable and without hope. Where the sense of meaning and purpose is strong, people can be more efficacious, persistent, and have greater resilience and coping mechanisms in the face of even the most difficult of life's challenges. The EMR literature informs us about how meaning and purpose can be studied as antecedent, intervening, or outcome variables in a wide range of contexts.

Third, the emphasis on positive development, prevention, and therapy in the field of Positive Psychology is a natural evolutionary advance built upon the insights developed in psychology in general, but more specifically upon those within the fields of Humanistic and Existential Psychology. It is no mistake that Seligman (2005), a past President of the American Psychological Association who first coined the term "Positive Psychology" named Allport and Maslow as its "distinguished ancestors" (p. 7). The importance of SWB and its global components such as life satisfaction in the PPR field has, despite its relative youth, sustained a level of research interest similar to that of meaning and purpose in EMR. The connection between these complimentary lines of inquiry cannot be ignored.

Fourth, researchers in all three fields have made great progress in developing, validating, and utilizing survey instruments to assess many dimensions and domains within their fields. All of the studies examined in this literature review utilize such survey instruments to generate data for quantitative analysis. These instruments are economical and easy for practitioners and researchers to administer to students and teachers. The practical and scholarly feedback that these instruments provide can assist educational researchers in identifying the strengths of educational programs that successfully provide meaningful learning for students, thus helping them to discover and create their sense of meaning and purpose, become motivated to fulfilling that purpose and consequently achieve a quality of life grounded in a strong sense of well-being.

Fifth, the continued viability of these fields has been strengthened in that researchers have been able to develop highly compatible models and theories from a variety of frameworks. What is extremely important for my purposes is that these fields offer an extensive and rich set of dimensions to help identify educational programs that address the needs of students as outlined in my research problem. In particular, the distinction between global and domain-specific constructs of meaning and satisfaction represents an important alignment of the disciplines, for we have seen that the Personal Meaning Index (PMI) of the LAP-R is a global measure of meaning that can be theoretically linked to the global sense of life satisfaction as measured using the SWLS. Indeed, this alignment of global and ultimate concerns related to cognitive appraisal of meaning and well-being is a critical theoretical link within the multidisciplinary approach of this study.

Finally, significant gaps in the research literature between these fields are evident, however. For example, despite the rich set of affective student outcomes investigated in LER, there are no studies in the LER field that explores student existential meaning, life purpose, or satisfaction with education and life as measurable outcomes. Given that much of what it means to be a human being is to be a meaning maker who strives to understand oneself and one's place in the world, and given that life purpose is such an important quality for adults, I find this gaping hole in education research to be rather astonishing. Moreover, the fact that psychology researchers have conducted the little research in the context of schools that addresses important human developmental and functioning concerns serves to underscore the notion that education often lacks comprehensiveness. It is interesting to note that education in recent decades has focused on breadth rather than depth and has called this emphasis "comprehensive." However, as we have seen in the EMR and PPR literature, depth is as important a component of optimal human development and functioning, as is breadth, perhaps even more so.

In Chapter 3, I provide the details of the research design for this study, which employed a mixed methods approach that utilized both quantitative and qualitative methods, and integrated the LER, EMR, and PPR fields. A model is postulated in which the mediating effect of global measures of meaning and purpose upon global satisfaction with life and satisfaction with schooling in the context of psychosocial learning environment dimensions and domains was explored. The qualitative phase of the study provided additional data in order to dig deeper into the domain of specific

educational program components, and to lend explanatory power to the overall inquiry

into learning environments, existential meaning, and subjective well-being outcomes.

CHAPTER 3

Methodology

Overview of the Research Design

Figure 3.1 provides a summary of the study design, based on Creswell and

Plano Clark (2007). The study employed a Mixed-Methods Sequential Explanatory

Design consisting of two distinct phases in two settings. First, a quantitative on-line

survey was administered to 10th, 11th, and 12th standard (grade level) students in two

progressive schools located in India, as well as to students in 13th-15th standards in one

of the two schools. The purpose of this phase was to address the quantitative research

questions by providing descriptive and correlational data using SPSS, and to

determine goodness-to-fit of the data with a hypothesized model through structural

equation modeling using EQS. The hypothesized model involved observed

independent variables for psychosocial learning environments, observed dependent

variables for satisfaction with life and education, and a latent mediating variable for

Agentic Personal Meaning (APM). Next, the qualitative phase of the study addressed

the qualitative research question through focus group interviews with teachers and

administrators in each school.
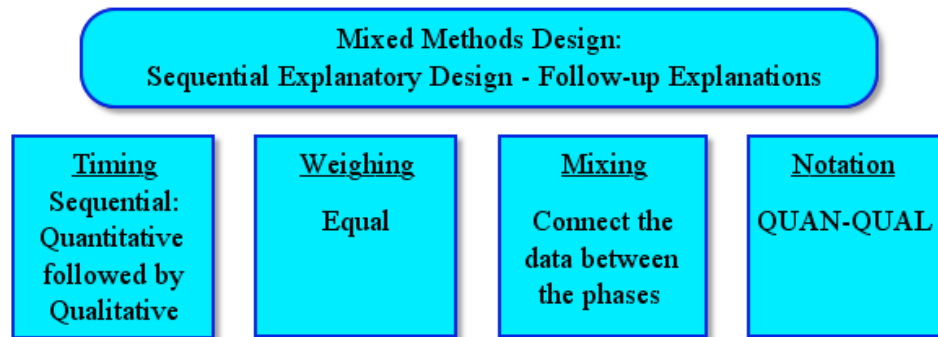
Figure 3.1: Mixed Methods Design, Creswell and Plano Clark (2007).

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School Sites and Participants

The two schools for this study were purposively chosen for two reasons. First, both schools are based upon the Integral Education philosophy that my own schools are based upon. My intention was to study my forebears in praxis and learn if and how they foster meaning and purpose among their students. Second, these schools are widely considered exemplar schools that offer many avenues for students to find meaning in their lives.

All grade 10-12 students in these schools, as well as the 18-21 year-old students in the college-level Higher Course of SAICE, were afforded the opportunity to participate on an entirely voluntary basis. About 290 students ranging in ages of 15 to 21 years participated in the on-line survey. A recruitment flier describing the study was distributed to students at the schools at least 24 hours prior to the activation of an on-line survey. The fliers clearly stated that participation is voluntary, that the decision to participate or not will have no adverse impact on their status among school authorities, and that the information provided by participants will be completely confidential.

In addition to receiving the information flier, students were asked to read an informed consent page at the beginning of the on-line survey (see, Appendix F). Participants were provided the opportunity to either opt out by discontinuing the survey, or to acknowledge their understanding of the intent and procedures for the study and give consent by clicking on the hyperlink that took them to the first page of survey questions. On each page of the survey an exit link was provided so that participants could exit the survey if they decided to opt out at anytime while taking it.

Response rate among students in the two schools are provided in Chapter 3. The results of the quantitative data analysis are presented in Chapter 4.

Participants for the second, qualitative, phase of the study, were invited to participate through recruitment fliers describing the study, which were distributed to the teachers at the schools about three days prior to the focus group interviews. The fliers clearly stated that participation in the study was to be voluntary, that the decision to participate or not would have no adverse impact on their status among school authorities, that the interview sessions would be video-taped and audio recorded, and that their comments would be attributed to aliases in the published version of this dissertation. Prior to the interviews all participants were asked to sign an Informed Consent form (see, Appendix F). The focus group interviews were conducted in single sittings of about two hours each, during which the data from the respective school's student on-line survey was shared with the focus group participants. The results of the focus group interviews are presented in Chapter 5.

Research Questions and Hypotheses

Four research questions - three quantitative and one qualitative - were addressed in this study:

1. What are the relationships between students' perceptions of their school psychosocial learning environments, and their global satisfaction with life and satisfaction with their education, as mediated by their sense of personal meaning, life purpose, and personal agency?

Hypothesis 1a: The learning environment variables are related to the observed variables of purpose, coherence, personal agency,

and satisfaction with education.

Hypothesis 1b: In these schools there is evidence supporting the presence of Agentic Personal Meaning and satisfaction with education.

2. What differences does the data reveal between SAICE and FFS?

Hypothesis 2: There is no evidence of significant differences between the two schools with respect to the relationships between the variables.

3. Does data support the mediating effect of Agentic Personal Meaning upon the relationships between student perceptions of the psychosocial learning environments in their schools and their self-report of satisfaction with education?

Hypothesis 3: There is evidence that Agentic Personal Meaning mediates the relationship between psychosocial learning environments and student satisfaction with education in these schools.

4. In what ways do school leaders create learning environments that foster a sense of meaning and purpose in their students' lives?

Survey Instrument and Variables

The survey used to explore the quantitative questions was a composite instrument comprised of selected scales from three reliable and validated instruments that have been extensively used in previous research with underage students and with

at-risk populations. Table 3.2 provides descriptive information for the variables to be analyzed in the present study.

A slightly modified version of the *What is Happening in This Class* (WIHIC) questionnaire constituted the first part of the on-line survey. The WIHIC was modified for a school-level analysis rather than an individual classroom level analysis. That is, instead of framing the questions by using the phrase, "In this class…" the modified versions says, "In this school…" and instead of the phrase, "My teacher…" the modified version says, "My teacher(s)…"). The eight questions comprising the scales for each WIHIC variable are provided in Appendix G.

The second part of the on-line survey was made up of scales from Reker's (1992) *Life Attitude Profile – Revised* (LAP-R). In Chapter 2 a number of studies using the LAP-R were reviewed. These studies employed the LAP-R dimensions primarily as moderating or intervening variables, as well as outcome measures. The first of the three LAP-R scales used in this study represented the dimension of *Coherence,* consisting of a "logically integrated and consistent analytical and intuitive understanding of self, others, and life in general" (Reker, 1992, p. 15). Coherence embraces a sense of order and reason for existence, personal identity, and a strong social awareness. Next, the dimension of *Purpose* refers to when a person has sense of a mission in life that gives them direction from the past, in the present, and towards the future. Such a mission would be of central importance in one's life. Coherence and Purpose constitutes the cognitive component of Reker and Wong's (1988) *Structural Component Model of the Personal Meaning System.* The third LAP-R scale used in the study is *Choice/Responsibleness*, which is a measure of personal agency in

which a person has a positive attitude regarding his or her ability to take personal

responsibility for decisions and to freely direct his or her life. Where there is

Choice/Responsibleness there is a strong motivation to exercise personal mastery in

Table 3.1: Descriptive Information for the WIHIC, LAP-R, and SWES.

Scale	Scale Descriptions	Latent Constructs
Observed Independent Variables: Learning Environment – WIHIC		
Student Cohesiveness	The extent to which students know, help and are supportive of one another.	Relationship Domain
Teacher Support	The extent to which the teacher helps, befriends, trusts and is interested in students.	Relationship Domain
Involvement	The extent to which students have attentive interest, participate in discussions, do additional work and enjoy the class.	Relationship Domain
Task Orientation	The extent to which it is important to students to stay on-task and complete school work.	Personal Development Domain
Cooperation	The extent to which students co-operate rather than compete with one another on learning tasks.	Personal Development Domain
Equity	The extent to which students feel their teachers treat them equally.	System Maintenance and Change Domain
Observed Dependent and Mediating Variables: Personal Meaning System – LAP-R and Modified SWLS (SWES)		
LAP-R - Purpose	A sense of direction from the past, in the present, and toward the future. Purpose provides thrust and direction to one's life.	Cognitive Component: Global Personal Meaning, Agentic Personal Meaning, and Personal Meaning System
LAP-R - Coherence	A sense of order and reason for existence, a sense of personal identity, and greater social consciousness.	Cognitive Component: Global Personal Meaning, Agentic Personal Meaning, and Personal Meaning System
LAP-R - Choice/Responsibleness (Agency)	An operational index of the degree to which a person perceives to have personal agency in directing his or her life.	Motivational Component: Agentic Personal Meaning and Personal Meaning System
Observed Outcome Variable		
SWES – Satisfaction with Education	Extent to which one is satisfied with one's educational experiences in school.	Affective Component: Personal Meaning System

one's life and achieve one's aims. This dimension represents the motivational component of the Structural Component Model of the Personal Meaning System.

In this study these three LAP-R dimensions were computed and employed as a mediating latent variable: Agentic Personal Meaning (APM). This construct is a global measure pertaining to ultimate concerns. This is an important composite construct because it has been observed that having a sense of personal meaning is not sufficient for a person to fulfill his or her life purpose unless that person also has a strong sense of efficacy that carries with it the motivation to exercise personal agency.

The unused scales from the original version of LAP-R represented the dimensions of Death Acceptance, Existential Vacuum, and Goal Seeking. These scales were not excluded due to a lack of value in using them. Rather, they were not used partly to ease the burden of having the participants respond to an extensively long survey as well as to reduce the possible adverse effects that questions about death attitudes may have on the adolescent minds of the students. The LAP-R items are provided in Appendix D.

The *Satisfaction With Life Scale* (SWLS; Diener, Emmons, Larsen & Griffen, 1985) and a modified domain-specific form of the SWLS, the *Satisfaction with Education Scale* (SWES) designed to measure satisfaction with education, made up the third part of the composite on-line survey. These observed variables represent the outcome variables in this study. For the purpose of this study the SWLS measured variable will be referred to as Satisfaction with Life (SWL) and the SWES variable will be referred to as Satisfaction with Education (SWE). The items for the SWLS and SWES are provided in Appendix H.

Instrument Reliability and Validity

The student survey, therefore, was a composite of three instruments that had

been validated and tested for reliability in previous research: the What is Happening in

Class questionnaire (WIHIC), the Life Attitude Profile – Revised (LAP-R), and a

modified version of the Satisfaction with Life Scale (SWLS) that was contextualized

for Satisfaction with Education (SWES).[7] Table 3.2 provides data from this study on

Table 3.2: Internal Consistency Reliability, Scale Statistics, Internal Consistency, Error Variances   for Six Classroom Environment, Five LAP-R Scales, and Two Outcome Scales (SAICE-FFS, n=267)

Scale	Cronbach α (*r*)	Mean	Standard Deviation	$\lambda = \sqrt{r}$	$\theta = 1 - r$
Independent Variables (WIHIC)					
Student Cohesiveness	.83	4.04	.585	.91	.17
Teacher Support	.89	3.41	.827	.94	.11
Cooperation	.86	3.40	.695	.93	.14
Involvement	.85	4.18	.717	.92	.15
Task Orientation	.77	3.85	.563	.88	.23
Equity	.94	3.87	.986	.97	.16
Intervening Variables (LAP-R)					
Purpose	.82	5.15	.963	.91	.18
Coherence	.86	5.18	1.021	.93	.14
Choice/Responsibleness (Agency)	.83	5.45	1.022	.91	.17
Personal Meaning Index (PMI)	.90	5.17	.912	.95	.10
Agentic Personal Meaning (API)	.91	5.21	.840	.95	.09
Outcome Variable					
Satisfaction with Education	.90	4.88	1.408	.95	.10

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[7] This composite survey was field tested at a private high school prior to this study to establish its reliability and validity.

the reliability and internal consistency of these instruments, as well as scale mean and standard deviation from the mean of each variable. Cronbach Alpha scores for each variable exceeded .80, with the exception of Task Orientation, measured at .77, which is still well over the .70 required for sufficient scale reliability. Lamba scores reveal good internal consistency for all scales, exceeding .90 for each.

Factor analyses for the three measures were computed, with the results reported in the Methodology Appendix (see, Appendix J). The six factors of the WIHIC explained 55.27% of the variance, the three factors of the LAP-R explained 50.6% of the variance, and the two scales for Satisfaction with Education and Life explained 52.95% and 14.93%, respectively. Interestingly, seven of the eight items of the WIHIC variable for Teacher Support cross-loaded with the items for Equity. Given that the factor loadings for seven of the eight items for Teacher Support were greater than .300, and in accordance with past research and the theoretical framework of this study, the factor structure of the WIHIC scales were retained for the purposes of this analysis.

Confirmatory Factor Analysis, Multiple Regression Analysis and Structural Equation Modeling

Structural Equation Modeling is a form of statistical testing that integrates factor analysis and multiple regression analysis in a simultaneous model extraction. It provides for the testing of goodness-to-fit between a postulated model and sample data, resulting in a graphic presentation of the path coefficients among and between observed and latent variables. Specific items on research instruments are considered observed variables since they directly assess survey respondents' reporting of their

perception or experiences of specific phenomena. When a factor structure computed

for a set of observed variables is found to be reliable, that structure inferentially

represents a theoretical construct that, for purposes of analysis, is referred to as a latent

variable. Observed and latent variables can be used in a hypothesized model as

independent (antecedent), intervening (mediating), or outcome (consequent)

variables.

Postulated structural model. Figure 3.2 illustrates the hypothesized model

tested using the data obtained in this study. The model depicts a series of path

coefficients between the variables to be measured. Essentially, the model postulates
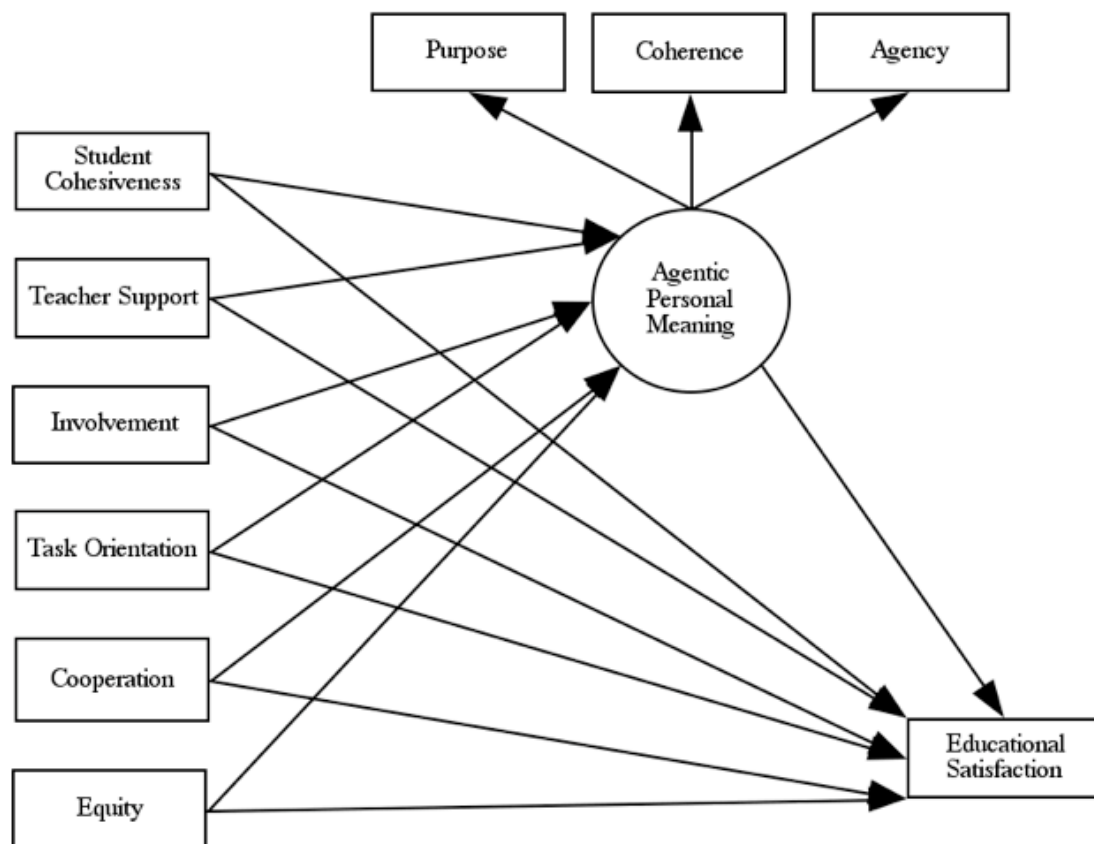
Figure 3.2: Postulated Model of APM as a mediator between psychosocial environments
and satisfaction with education.

the relationships between the latent psychosocial learning environment variables, Agentic Personal Meaning, satisfaction with education and with life. Additionally, the model postulates that Agentic Personal Meaning mediates the relationship between learning environment and satisfaction. The learning environment variables are therefore the independent variables, satisfaction with education and life are dependent variables, and Agentic Personal Meaning is a latent dependent variable (in relation to learning environments), an independent variable (in relation to satisfaction), and a mediating variable between learning environment and satisfaction. During the SEM analysis all of these relationships will be computed simultaneously to check the goodness-to-fit of the postulated model to the data.

Qualitative Question

The research question for the qualitative phase of the study is: In what ways do school leaders create learning environments that foster a sense of meaning and purpose in their students' lives? In order to address this question it will be necessary to consider another, mixed methods, research question. That is, in what ways will the qualitative data help to explain the results of the quantitative phase of the study?

Questions that were posed to participants related to the variables tested in the qualitative phase of the study, inquired about how the school philosophy supports the development of students' personal meaning and satisfaction, explored the extent to which the school environment is congruent with the school's philosophy and objectives, and sought to identify specific ways that school leaders and teachers address their objectives. The interview protocol is provided in Appendix I.

Purpose and Rational for the Mixed Methods Design

The purpose of the qualitative phase was to build upon the first phase by giving teachers the opportunity to provide deeper insights as to how they, as educational leaders, create learning environments that help their students develop a sense of meaning and purpose in their lives. The rationale for this methodological approach is that whereas the general findings from the quantitative phase addresses the "what" question of the study (namely, what are the correlations between learning environments and the personal meaning and life purpose outcomes?), the qualitative data and their subsequent analysis serves to explain in greater depth the findings from the quantitative phase by addressing the "how" question (namely, how and in what ways do specific aspects of the learning environment created by the educational leaders foster in students personal meaning and life purpose outcomes?).

The qualitative data in the form of focus group audio recordings were transcribed and then analyzed using HyperResearch software (Miles & Huberman, 1994). Data was encoded using nodes consistent with the Learning Environment Research (LER) framework of the study. That is, focus groups were asked to consider the quantitative results from the student survey within the context of Moos' psychosocial environment dimensions, their constituent variables, as well as Reker's personal meaning scales, each of which constituted a parent node in the HyperResearch data base. In the process I looked for significant trends in the data to see if the qualitative data serves to explain on some level the quantitative data, and to find out if there are salient points made by the teachers to explain how they create learning environments that help students develop their sense of meaning and purpose.

Contributions of the Study

This study provided several important contributions to the research literature. First, this study was the first to analyze the role of existential meaning and life purpose in the context of educational research, thus addressing a critical gap in the research literature. More specifically, this was the first study within the LER field that took up existential meaning and purpose as an outcome and mediating variable. Second, from a methodological standpoint, this study addressed a gap in the measuring of the Personal Meaning System by accounting for its affective domain through the factoring in of satisfaction with education and life measures based on the SWLS. This is necessary due to the fact that the LAP-R (Reker, 1994) was developed prior to Reker and Wong's (1998) publication of their model for the Personal Meaning System (Reker, personal communication), and as such, the instrument only measures the cognitive and motivational components of the model. This study therefore sought to integrate all three components of the PMS model by combining the LAP-R and SWLS measures. Finally, it was intended that this study spark further investigation of existential meaning and purpose within the field of educational research. The possibilities for this line of inquiry are numerous and can lead to some important findings that may have enduring implications for educational practice.

Ethical Issues and the Role of the Researcher

There were some potential risks for the students taking this survey. The research questions ask students about their perception of their learning environment at school and their sense of personal meaning in their lives. Any time adolescents are asked about their experiences in school there is potential of adverse psychological or

emotional reactions to the content or implications of the questions posed to them.

Moreover, student may have been reluctant to answer questions about their school if

they were concerned that school authorities would become aware of what they said.

The questions in the on-line survey have been extensively used in previous

research with at-risk populations. They have been carefully selected to minimize

psychological and emotional reactions. Questions that have higher risk for such

reactions in the original surveys were not used. For example, questions pertaining to

attitudes towards death in the Life Attitude Profile have been specifically removed

from the survey for this study. Participants were assured of the confidentiality of their

responses to the on-line survey and told that their participation was entirely voluntary.

The main risk to the confidentiality of the data is that hackers may enter the

Survey Monkey system and access the raw data. Also, if the researcher's computer is

lost or stolen there is the potential that unauthorized individuals may access the data.

To address this risk I personally took steps to ensure the confidentiality of the data.

As soon as data collection was completed, and after the data has been downloaded into

the researcher's password-protected computer, the Survey Monkey data files were

deleted. At all times my computer remained in my personal possession and kept under

lock and key to protect its contents.

Teachers were informed that the video and audiotapes of their focus group

interviews would be strictly protected. The video recordings were viewed only by the

researcher and then destroyed following the transcription of the interviews. Only the

researcher and independent transcribers listened to the audio recordings, which were

also destroyed following transcription. All data collected was kept in a secure place

until destroyed. My role as the researcher was to remain as an objective observer and an analyst of the quantitative data, and a participant in the interview process.

Limitations of the Study

There are a number of limitations to this study. First, the WIHIC questionnaire was originally designed for use in individual classrooms. I have slightly modified it to embrace a school-level analysis of relatively small schools. So there may be some issues as to validity as a result of using the WIHIC in this modified form. In a subsequent study a new school-level LER survey may need to be developed to explore the relationships between psychosocial learning environments and the outcome variables used in this study. Second, given the small student populations of the schools studied, there will be some question as to the generalization of the findings. The validity and applicability of the findings will be likely be limited to schools that are unusually small in size. Next, given that this study is international in character, it will be important to explore in subsequent research the universality of the variables and constructs investigated here.

Finally, this study specifically addresses what Reker and Wong (1988, 2008) called the holistic or "bottom-up" orientation in the study of meaning, which considers the phenomenological experiences of the participants in the study. The LAP-R and SWLS are both measures of global constructs for personal meaning and satisfaction with life. I am attempting to ameliorate this limitation including a more domain-specific measure of satisfaction with education with the SWES. Nevertheless, this study does not essentially address the elementary or "top-down" orientation, which would investigate how education fits into the mix of sources of meaning in people's

lives. As Reker and Wong point out, both the elemental and holistic perspectives are valid and an integration of the two would result in a more complete understanding of personal meaning. In the context of educational research highly significant contributions to the field can be pursued along these lines in the future. For that one will have to expand the scope of this study by investigating how school learning environments represent one of several significant sources of meaning and subjective well-being in students' lives.

CHAPTER 4

Quantitative Data Results

The quantitative phase of this study tested four hypotheses, addressing three research questions, using a variety of statistical analyses. A summary of the research questions, hypotheses, and tests are provided in Table 4.1. The hypothesis on the relationships between student perceptions of the their psychosocial learning environments, their attitudes toward life, and satisfaction with education, as well as a second question related specifically to the life attitude composite construct, *Agentic Personal Meaning* (APM), were analyzed using Bivariate Correlations and Scale Statistics. With the exception of the Structural Equation Models tested using EQS, all the statistical tests for this study were conducted using SPSS.

Participants

Students attending two schools participated in this phase of the study. Table 4.2 provides the data on the participants who had completed the student survey in its entirety. A total of 32 respondents did not complete the survey items related to the dependent variable, Satisfaction with Education. In order to retain a more complete data set and to eliminate the need to estimate the scores for the missing data on this critical variable, those 32 cases were deleted from the data set. Moreover, as explained below, an additional six cases with multivariate outliers were removed as well. The figures reported in Table 4.2 do not include these dropped cases. This yielded a total of 267 completed surveys from SAICE and FFS, with a total response rate of 67%. Of these, 218 students were in grades 10, 11, and 12, and 49 students were in the Higher Course Program (equivalent to grades 13, 14, and 15) of SAICE.

Table 4.1: Description of Data Analysis to Test Study's Hypotheses.

Research Question	Hypothesis	Data Collection	Data Analysis
1. What are the relationships between students' perceptions of their school psychosocial learning environments, and their satisfaction with their education?	1a. The learning environment variables are related to the observed variables of purpose, coherence, personal agency, and satisfaction with education.	Student survey on Learning Environments, Life Attitudes, and Satisfaction.	Simple bivariate correlation
	1b. In these schools there is evidence supporting the presence of Agentic Personal Meaning and satisfaction with education.	Student survey on Learning Environments, Life Attitudes, and Satisfaction.	Scale Statistics
2. What differences does the data reveal between SAICE and FFS?	2. There is no evidence of significant differences between the two Indian schools with respect to the relationships between the variables.	Student survey on Learning Environments, Life Attitudes, and Satisfaction.	Independent sample t-Test Kenny test Multiple regression using interaction terms
3. Does data support the mediating effect of Agentic Personal Meaning upon the relationships between student perceptions of the psychosocial learning environments in their schools and their self-report of satisfaction with education?	3. There is evidence of that Agentic Personal Meaning mediates the relationship between psychosocial learning environments and student satisfaction with education in these schools.	Student survey on Learning Environments, Life Attitudes, and Satisfaction.	Structural equation modeling
4. In what ways do school leaders create learning environments that foster a sense of meaning and purpose in their students' lives?		Teacher and Administrator Focus Group Interviews	HyperResearch Qualitative analysis

Interestingly, a large number of these students have attended their respective school

for five to ten or more years. In order to see if there were any differences in the results

Table 4.2: Population Size (Number of Respondents) and Response Rate, by School.

School	10	11	12	13	14	15	Total N	(n)	%
FFS	69 (52)	106 (95)	72 (32)	--	--	--	247	(179)	0.72
SAICE	19 (13)	36 (12)	23 (14)	20 (13)	28 (19)	28 (17)	154	(88)	0.57
							401	(267)	0.67

between the entire data set and the data from students attending five or more years, separate analyses were conducted that found no major differences. Therefore the findings reported here include all students, regardless of how long they attended their school.

Identification of Outliers and Checks for Violation of Assumptions

After testing the survey instrument scales for validity and reliability (see, Chapter 3), the data was explored to identify potential outliers and check for assumptions required for the statistical analyses to be conducted in the study. Box plots generated for each variable revealed the presence of six multivariate and 18 univariate outliers. Whereas the respondents with the univariate outliers were retained in the data set, the respondents with the six multivariate outliers were deleted from it. Regressions ran for both data sets, with and without the six multivariate outliers, revealed no major impact on the results. Therefore, in order to retain a "cleaner" data set for this study, all subsequent analyses were conducted on the data minus the six multivariate outliers, with the final number of cases as reported in Table 4.2.

The first assumption to consider in multiple regression analysis is sample size. According to Tabachnick and Fidell (2007, p. 123), the ratio of cases to independent

variables should be calculated as $N \geq 50 + 8m$ (where m is the number of independent

variables). Given the six independent variables in this study, the sample size should

be at least 98 cases. Given that the sample size for SAICE is only 88, there is some

cause for concern for the disaggregated analysis on this school. However, as will be

seen, only two of the six independent variables were ultimately factored into the

equations for this school, thus eliminating this concern.

In order to check for any remaining violation of assumptions, a series of

multiple regressions were run on the aggregate data (that is, including both schools)

and disaggregated data (the two schools separately) with Satisfaction with Education

as the dependent variable. Among the independent variables, only Equity and Teacher

Support revealed a correlation greater than .700, as would be expected in light of the

factor analysis reported above. However, the collinearity statistics were well within

the acceptable ranges for tolerance ($> .10$) and the VIF (< 10.0). Thus, the assumption

of the absence of multicollinearity is verified by the data. An examination of the

residual scatter plots showed no evidence of deviation from the assumptions of

normality, linearity, and homoscedasticity.

Data Analysis

The results of the multiple regression analysis of Hypothesis 2 for Research

Question 2 were used to select the independent variables included in the Structural

Equation Models testing Hypothesis 3, which addresses the third research question on

the mediating effect of Agentic Personal Meaning upon the relationship between

learning environments and student satisfaction with education. According to Baron

and Kenny (1986), certain conditions must exist for the testing of a model of

mediation. First, the independent variables must be correlated with the dependent

variable and the mediating variable, and second, the mediating variable must be

correlated with the dependent variable. To establish these conditions, simple bivariate

correlations were run between all the variables, the results of which are reported in

Table 4.3. The postulated structural model is provided in Chapter 3.

Table 4.3: Correlations between Psychosocial Learning Environment Variables and the
Intervening and Outcome Variables (SAICE-FFS, n=267)

	Purpose	Coherence	Choice and Responsibleness	Satisfaction with Education
Student Cohesiveness	0.369**	0.297**	0.197**	0.246**
Teacher Support	0.484**	0.354**	0.306**	0.620**
Involvement	0.312**	0.216**	0.305**	0.429**
Task Orientation	0.513**	0.415**	0.260**	0.469**
Cooperation	0.395**	0.335**	0.140*	0.146*
Equity	0.405**	0.214**	0.256**	0.548**

*p<0.05 **p<.001

During the course of the data analysis evidence of differences between the two

schools required further examination of the data. To explore these differences, test

them for significance, and use these results for the positing of additional structural

equation models for the schools separately, independent sample t-tests were run, along

with the Kenny (1987, p. 284-285) test of independent regression coefficients.

Moreover, effect sizes were computed using the formula for Eta-squared suggested by

Pallant (2005, pp. 208-209). Finally, multiple regressions were computed using

interaction terms to check for additional evidence of differences between the schools.

Research Question 1: What are the relationships between students'

perceptions of their school psychosocial learning environments, and their

satisfaction with their education?

The first research question for study was explored through the testing of two

hypotheses. First, Hypothesis 1a, which addresses the relationship between the

independent variables and the mediating and dependent variables, was explored in

order to test whether student perceptions of their psychosocial learning environments

are related to their attitudes towards life and their satisfaction with their education in

their school. As can be seen in Table 4.3, all the psychosocial learning environment

variables were correlated with the three LAP-R variables, Purpose, Coherence, and

Choice and Responsibleness (Agency), as well as with Satisfaction with Education.

All correlations were found be significant (p>.001; and p>.05 for Cooperation).

Hypothesis 1b concerns the presence of a sense of Agentic Personal Meaning among

the student in these schools. The reported means for Purpose, Coherence, and Choice

and Responsibleness (Agency), were 5.15, 5.18, and 5.45, respectively. The mean for

the composite construct, Agentic Personal Meaning was 5.21. The mean for

Satisfaction with Education was 4.88. Translated into the actual responses, the score

4.0 represents "Undecided", 5.0 represents "Moderately Agree", and 6.0 represents

"Agree". Therefore the data provides evidence that students in these schools have a

sense of purpose and meaning, feel confident they can take responsibility for fulfilling

their respective life purposes, and are moderately satisfied with their education.

Research Question 2: What differences does the data reveal between SAICE and FFS?

In order to test Hypothesis 2 for the differences between the two schools, a series of tests were run, which are reported in Table 4.4. An independent sample t-test revealed that three variables were found to be statistically different between the schools: Involvement, Cooperation, and Equity. However, effect sizes for Involvement and Equity were small, while the effect size for Cooperation was

Table 4.4: Independent Sample Kenny Test and T-Test for Assessment of Independent Variable Differences between SAICE and FFS (n=267), with Effect Sizes (Eta^2): Dependent Variable = EdSat

Variable	FFS (a) n= 179			SAICE (b) n= 88			$t_{(n1+n2-4)}$	t	Eta^2
	B	SE B	β	B	SE B	β			
Student Cohesiveness	.363	.174	.159*	-.509	.247	-.223*	.206	1.394	.007
Teacher Support	.545	.162	.334**	.599	.170	.376**	.655	-1.951	.014
Task Orientation	.639	.156	.263**	.174	.225	.076	N/A	-1.794	.012
Involvement	.074	.151	.039	-.004	.188	-.002	N/A	-3.105**	.035
Cooperation	-.151	.167	-.068	.152	.167	.090	.020	5.614**	.106
Equity	.190	.116	.142	.553	.157	.387**	.002	-2.317*	.020

*p<0.05 **p<.01

moderate to high (Pallant, 2005). In order to further explore these effects, a test suggested by Kenny (1987, p. 284-285) for the comparison of two independent regression coefficients was computed. Additionally, a series of multiple regressions using interaction terms was run, with the non-significant interaction terms deleted for subsequent runs of the test. The final test provided further evidence that there are significant differences between the two schools with respect to the relationship

between Cooperation and Satisfaction with Education. The remaining learning environment variables had small effect sizes and were not found to be significant in the regressions using interaction terms. Therefore, the hypothesis for the second research question is verified by this data, except with respect to the independent variable, Cooperation.

Research Question 3: Does data support the mediating effect of Agentic Personal Meaning upon the relationships between student perceptions of the psychosocial learning environments in their schools and their self-report of satisfaction with education?

Hypothesis 3, which addresses this research question, is that the data will support the theory that relationship between student perceptions of their psychosocial learning environment and their satisfaction with education are mediated by their sense of Agentic Personal Meaning. To explore this hypothesis, multiple regressions were run on the data, and then the postulated model was tested using SEM for the aggregated data, followed by tests of each school separately. Structural Equation Modeling is an approach to testing the goodness-to-fit of data to a postulated model. As discussed above, certain conditions must exist to test for mediation in a structural model: the IV's, the MV, and the DV must all be correlated (Baron & Kenny, 1987). Moreover, Tabachnik and Fidell (2007) point out that SEM, which is based on covariances, is highly sensitive to sample size. As a rule of thumb, this means that for every covariance tested in a model, at least 10 cases are required. Therefore, for the purposes of this analysis, and given the number of cases in the data set, parsimonious models needed to be specified in order to test for goodness-to-fit, especially for the

SAICE data. Another important consideration in SEM is identification. According to

Byrne (2006) any specified model must be over-identified, which means that the

estimable parameters cannot exceed the number of data points. She provides the

formula for calculating for identification as p(p + 1)/2 (p. 32). All three models

reported in this study meet the requirement of over-identification.

The selection of variables for the aggregated analysis was determined by the

multiple regressions, which are shown in Table 4.5. After eliminating the non-

significant variables from the equation, a model with the predictors, Teacher Support,

Task Orientation, and Equity was tested. As a result, it was found that the total

variance in Satisfaction with Education explained was 47.1%, F (3, 263) = 74.869,

$p < .001$. Next, given the high Pearson correlation between Teacher Support and

Equity (.723), Equity was dropped from the model. The final regression revealed that

44.1% of the variance in Satisfaction with Education is explained by Teacher Support

and Task Orientation, F (2, 264) = 104.275, $p < .001$. These variables were then used

in the SEM analysis.

Table 4.5: Results of Multiple Regression Analyses for Prediction of One Outcome
Variable by Significant Psychosocial Learning Environment Variables – SAICE and FFS
(n-=267)

Outcome Scale	R^2	Predictor	B	SE B	β
Satisfaction with Education	.471	Teacher Support	.657	.117	.386**
		Task Orientation	.532	.129	.213**
		Equity	.289	.094	.202*
Satisfaction with Education	.441	Teacher Support	.893	.089	.525**
		Task Orientation	.571	.131	.228**

*p<0.05 **p<.01

Figure 4.1 provides the results of the SEM analysis of the aggregated data from both schools, which tests for the mediating effect of Agentic Personal Meaning upon the relationship between the independent variables, Teacher Support and Task Orientation, and the dependent variable, Satisfaction with Education. According to Byrne (2007), in order to establish goodness to fit of a model to data, the Comparative Fit Index (CFI), Normed Fit Index (NFI), and the Goodness to Fit Index (GFI) should all be greater than .90, with scores of 1.00 indicating perfect fit. The Root Mean Square Error of Approximation (RMSEA) should be below .08, and should fall between the range indicated by the 90% Confidence Interval of RMSEA. Cronbach's
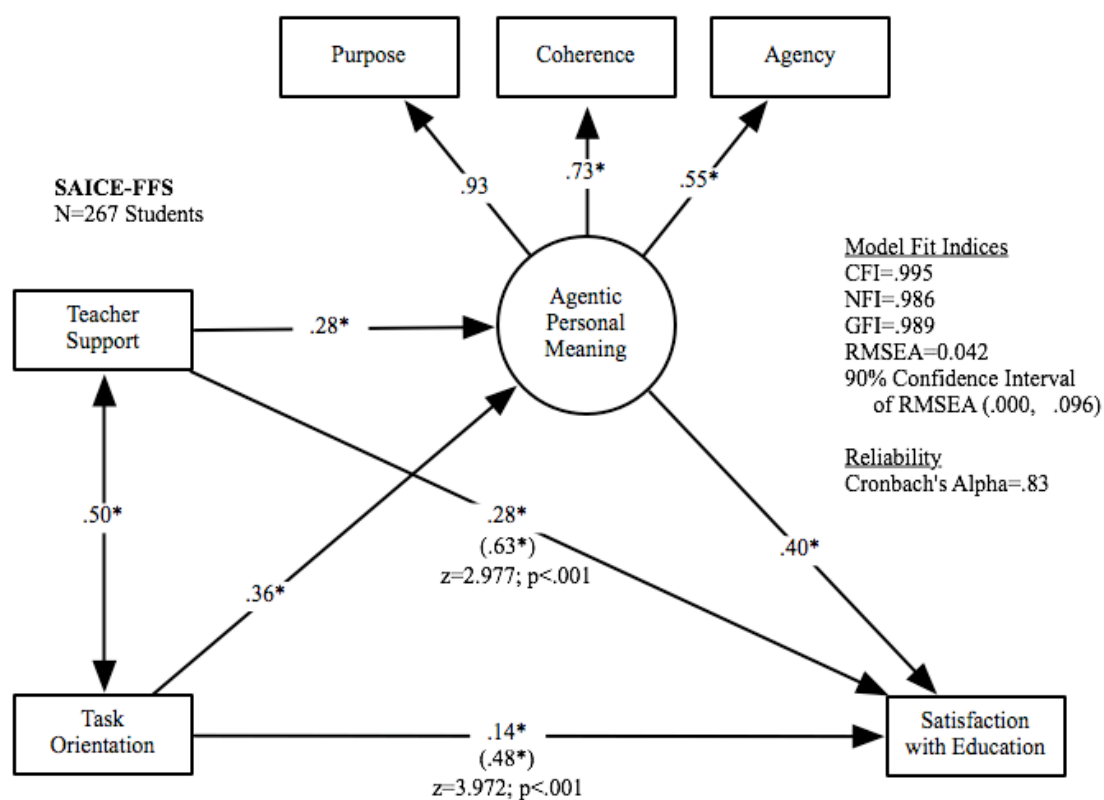
Figure 4.1: Mediating Effect of Agentic Personal Meaning upon the Relationships between Teacher Support/Task Orientation and Satisfaction with Education in SAICE and FFS.[8]

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[8] Path Coefficients in parentheses represent the direct path coefficients between the variables. The mediation Effect of Agentic Personal Meaning is indicated by z scores and p values.

Alpha should be at least .70. For this specified model, all model fit indices indicate

excellent fit of the data to the model, with the CFI = .995, the NFI = .986, the GFI =

.989, and an RMSEA of .042. Cronbach's alpha of .83 indicates strong reliability of

the model as well.

Figures for the mediating effect of Agentic Personal Meaning are shown in the

path coefficients for the mediated model, with the direct path coefficients in

parentheses. The z-scores for the decomposition effects of nonstandardized

parameters, and the probability values for the mediation effect, are also provided.

When the mediated coefficients drop to, or near, zero, it can be concluded that the
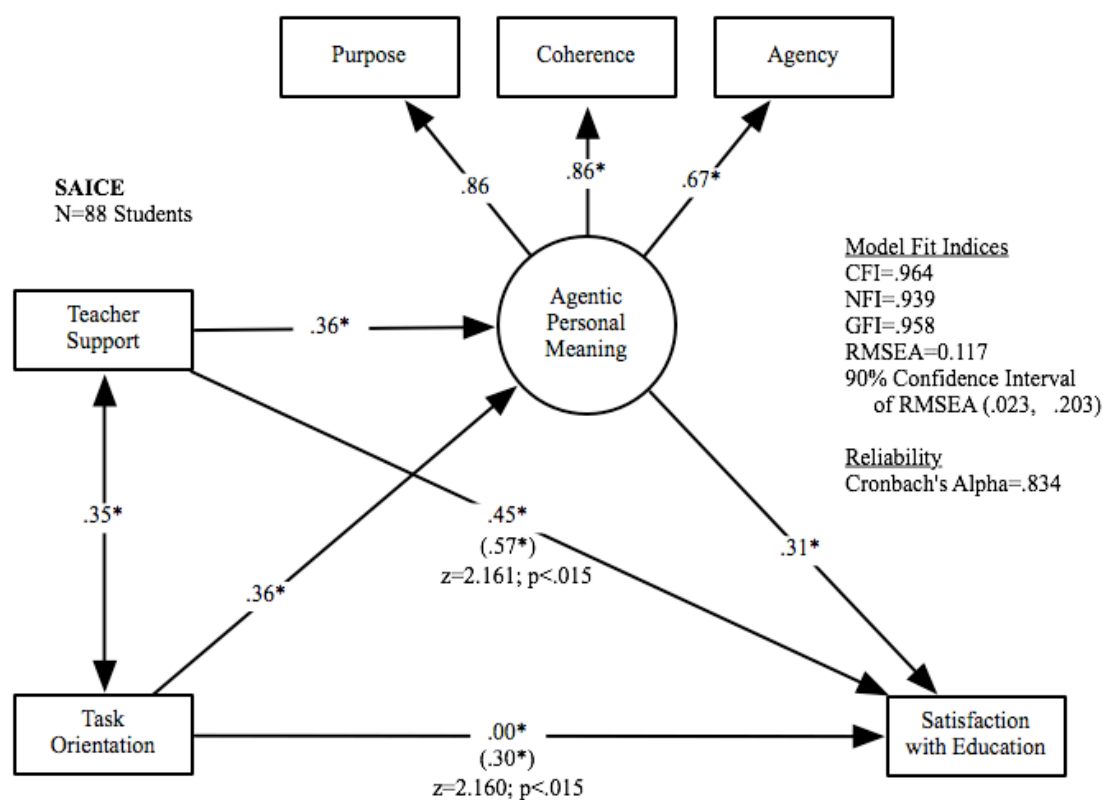
Figure 4.2: Mediating Effect of Agentic Personal Meaning upon the Relationships between Teacher Support/Task Orientation and Satisfaction with Education in SAICE.

relationship between the IV's and DV are fully mediated by the MV. In the SAICE-

FFS model it can therefore be concluded that the relationships between Teacher

Support and Task Orientation, and Satisfaction with Education are partially mediated

by Agentic Personal Meaning. The significance of the mediating effect upon both IVs

is $p < .001$, thus accepting Hypothesis 3 that a mediation effect will be found in these

schools.

Disaggregated Findings

The analysis of the disaggregated data resulted in two specified models, one

for each school. These are shown in Figure 4.2 (SAICE) and Figure 4.3 (FFS). For

SAICE the model fit indices are all greater than .90, with a high RMSEA of 0.118 that

still falls within the 90% Confidence Interval. With a mediated coefficient of .000 for
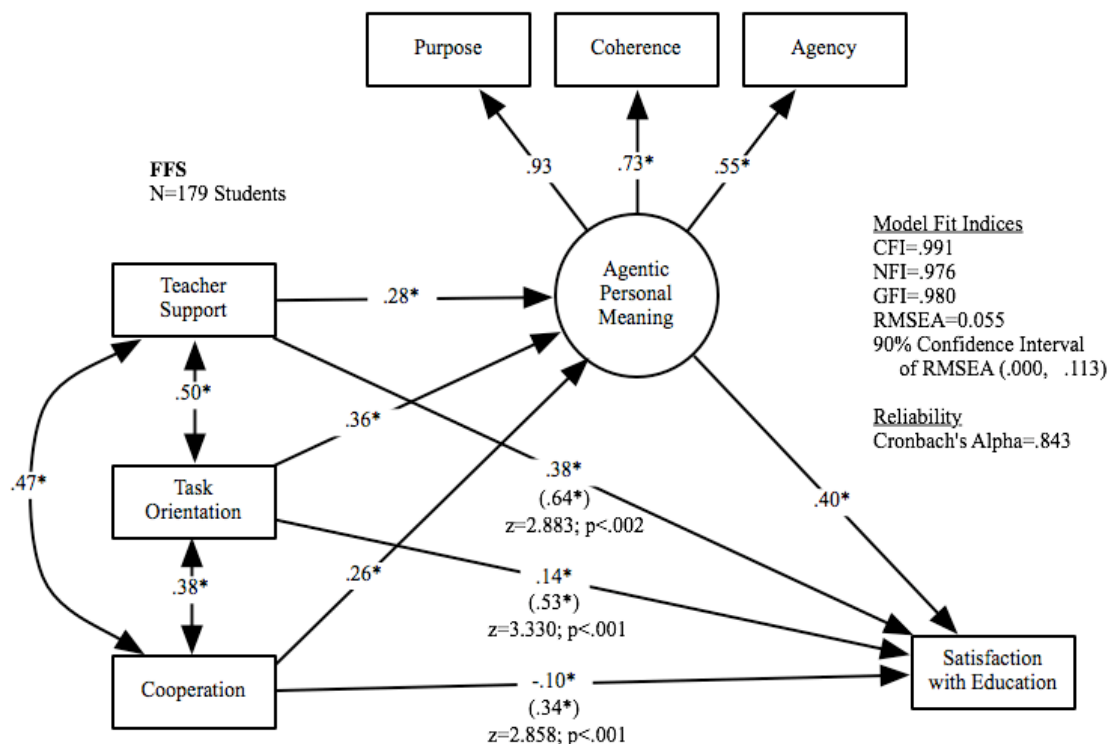
Figure 4.3: Mediating Effect of Agentic Personal Meaning upon the Relationships between
Teacher Support/Task Orientation/Cooperation and Satisfaction with Education in FFS.

Task Orientation and Satisfaction with Education, the data indicates that the relationship between these variables is fully mediated by Agentic Personal Meaning. The relationship between Teacher Support and Satisfaction is partially mediated. Both mediating effects are significant ($p < .015$).

For FFS the specified model includes an additional IV, Cooperation. The model fit indices are also all greater than .90, with a better RMSEA (0.055) than seen for SAICE, which falls within the 90% Confidence Interval. With a mediated coefficient of -.10 for Cooperation and Satisfaction with Education, the data indicates that Agentic Personal Meaning fully, and even negatively, mediates the relationship between these variables. The relationships between the remaining IV's, Teacher Support and Task Orientation, and Satisfaction are partially mediated. All mediating effects are significant ($p < .002$).

Conclusion

Given these results the hypotheses for Research Question 1 are not rejected, the hypotheses for Research Question 2 is accepted except with respect to the relationship between cooperation and satisfaction with education, and the hypothesis for Research Question 3 is accepted for both schools, as well as for the aggregated data set. Evidence suggests the psychosocial learning environment variables are related to the observed variables of Purpose, Coherence, Agency, and Satisfaction with Education. There were differences found between the schools with respect to the relationship between Cooperation and Satisfaction with Education. Moreover, there is a mediation effect of Agentic Personal Meaning for two psychosocial learning

environment variables in SAICE and for three in FFS. The implications of these

findings are discussed in Chapter 6. In the next chapter, I will present the qualitative

data obtained through the students' written responses from their survey, and from the

teacher and administrator interviews.

CHAPTER 5

Qualitative Data Results

This chapter reports the results from the qualitative phase of this study. The reporting and analysis of the data takes up each school as the unit of analysis, and is aligned with the multi-disciplinary theoretical framework of this study. This chapter therefore addresses the nature of the learning environments in the schools, the presence and development of the sense of life purpose among the students, and how educational leaders foster in their students the cognitive and motivational components of the construct for Agentic Personal Meaning.

The qualitative data for this study was collected in two phases. First, students participating in the on-line survey had the option of providing written responses to the prompt: "In what ways do you believe your school has helped, or is helping, you to find your life purpose?" This question directly addresses the qualitative research question of this study. The response rate for the written portion of the student survey is provided in Table 5.1, which shows that among the all the students who participated in the survey the written response rate was 76%.

Table 5.1: Student Participants' Written Response Rates.

School	Total Participants			Participant Written Responses	
	N	(n)	%	(n2)	(%)
SAICE	154	(88)	0.57	(45)	(0.51)
FFS	247	(179)	0.72	(159)	(0.89)
	367	(267)	0.67	(204)	(0.76)

Next, interviews of teachers and administrators were conducted during visits to

the participating Schools in January and February of 2009. A total of seven focus

group interviews, as well as three individual interviews, were conducted,

Table 5.2: Qualitative Phase Participants.

Name	Code	Subject Taught/Position	Years Teaching	Years as Student
SAICE				
Malini	F1-9/Sanskrit	Sanskrit	1	9
Prem	M3-18/English&Hist	English/History	3	18
Swaminathan	M3-12/ English&Hist	English/History/Philosophy	3	12
Anoustha	F1-16/Math	Physics/Mathematics	1	16
Sanjay	M35-0/French	French	35	0
Bhavatarini	F23-18/Physics, Math & Chemistry	Physics/Mathematics/Chemistry	23	18
Annapurna	F26-17/ French&Sanskrit	French/Sanskrit	26	17
Vivek	M40-5/Geo&EnvSci	Geography/Environmental Sciences	40	5
Subramanium	M3-18/Physics&Math	Physics/Mathematics	3	18
Devarshi	M3-18/Physics&Math	Physics/Mathematics	3	18
Arjava	M7-12/English	English	7	12
Nityanand	M38-13/ Physics&Math	Physics/Mathematics/English/ French	38	13
Krishna	M49-18/ French&English	French/English/Philosophy	49	18
Pavitra	M42-14/ Math&Science	Science/Mathematics	42	14
FFS				
Rangeet	M7/Geography	Geography	7	N/A
Laboni	F7/History	History/Political Science	7	N/A
Nilima	F13/Math	Math/Computer Science	13	N/A
Manjima	F20/History	History/Political Science	20	N/A
Dipali	F15/Chemistry	Chemistry	15	N/A
Anindita	F21/English	English	21	N/A
Kritika	F14/Biology	Biology/Environmental Sciences	14	N/A
Bandana	F14/ComputerScience	Computer Science	14	N/A
Riddhi	F7/PhysicsMath	Physics/Mathematics	7	N/A
Sarbani	F9/EconomicsMath	Economics/Mathematics	9	N/A
Lajbani	F20/Math	Math	20	N/A
Sankar	M11/Admin	Administration	7	N/A
Neera	F6/Admin	Curriculum Support	6	N/A
Khushi	F21/Admin	Administration	21	N/A
Shubhra	F8/Admin	Administration	8	N/A
Sipra	F17/Admin	Administration	17	N/A
Salmili	F15/Admin	Administration	15	N/A
Mandira	F15/Admin	Administration	15	N/A

involving a total of 32 adult participants. Table 5.2 provides the list of these

participants and their personal characteristics, including their respective gender,

subjects taught, and number of years working in the school. Additionally, because

most of the teachers in SAICE were formerly students there, the number of years

they passed as students in the school is provided. As a result of these two phases,

a total of 227 single-spaced pages of qualitative data were generated.

Coding of the Data

The qualitative data was coded using HyperResearch software. Following

the initial pass over the data numerous coded themes were generated. During

Table 5.3: Themes.

Theme		SAICE		FFS	
	Total	Students	Teachers and Administrators	Students	Teachers and Administrators
Program Components					
Co-Curricular Activities	20	--	4	5	11
Freedom and Opportunities	22	5	13	--	4
Ideals and Progress Class	9	--	--	6	3
Travel	6	--	--	--	6
Certificates of Appreciation	7	--	--	--	7
Impact of Board Exams	14	--	3	--	11
Relationship Domain					
Teacher Support	52	--	20	12	20
Community	18	--	18	--	--
Personal Development Domain					
Cooperation	5	--	--	--	5
Task Orientation	8	--	4	--	4
Cognitive Component of Meaning and Purpose					
Purpose	35	6	8	9	12
Coherence	45	15	10	14	6
Motivational Component of Meaning and Purpose					
Agency	50	11	16	15	8
Unique Story	8	--	2	--	6
Total	299	37	98	61	103

subsequent passes over the data, these coded themes were refined, and the data was reduced, until a manageable set of themes was identified. Table 5.3 lists the 13 themes, plus some unique stories, with the number of data points for each. As can be seen in Table 5.3 the data points for these 13 themes were unevenly distributed across the four distinct groups who provided data for this study. Therefore, the following section will report the qualitative data for each school generally in accordance with the outline as provided in Table 5.3. Taken together, this data addresses, broadly speaking, the qualitative question of this study: In what ways do school leaders create learning environments that foster a sense of meaning and purpose in their students' lives?

The data from the student written responses and the teacher and administrator interviews from the two schools revealed several themes related to the development of meaning and purpose among the students. The themes are classified under the four broad categories: Program Components, Relationship Domain, Personal Development Domain, and Agentic Personal Meaning. In the following sections, the themes arising from the data collection process of this study are reported.

Sri Aurobindo International Centre of Education - Pondicherry

The Sri Aurobindo International Centre of Education (SAICE), the original Integral Education School founded by Mirra Alfassa in 1943, is an integral part of the Sri Aurobindo Ashram community. The school has several sections, which are listed in Table 5.4. All of the sections of the school have French names. This is because French is one of the two European languages that all students learn in

the school. From Kindergarten through the 1ˢᵗ grade level, French is the main language spoken in the classroom. Beginning in 3rd grade the students start to learn English. Thereafter, English becomes the main language in all classes, except in Math and Science where French remains the medium language of instruction for the remaining grade levels. Additionally, every student is required to study his or her respective "mother tongue" as well as Hindi and Sanskrit. The students in the school are therefore multilingual.

Table 5.4: School Sections at SAICE.

Name	Level	Ages	Years
Jardin d'Enfant	Kindergarten	3-5	3
Avenir	Primary	6-9	3
Progrès	Primary	9-12	3
En Avant vers la Perfection	Secondary	12-18	6
Cours Supérieur	College	18-21	3

The school week consists of six days, except for the physical education program, which takes place for two hours a day, seven days per week. The school year begins on December 16 of each year and ends on October 31. Typically, students will be engaged in some kind of activity in the school from early morning to early evening, with a two-hour break for lunch, and a shorter break for dinner. Many students take their meals at the school "Corner House" and often dine with their teachers there.

In this section the data obtained from the student written responses and teacher and administrator focus groups is presented. The participants used certain terms, which are defined here to provide some clarity for the reader:

Captain(s):   Physical Education leaders

EAVP:	Refers to the *En Avant vers la Perfection* section of SAICE
E-4 or EAVP 4:	*En Avant vers la Perfection*, level 4 (10th grade level) at SAICE
Higher Course:	Refers to the *Cours Supérieur* section of SAICE
Knowledge:	Refers to the *Cours Supérieur* section of SAICE
The Mother:	Mirra Alfassa, founder of SAICE
Psychic Being:	The human soul
Sadhana:	Disciplined Spiritual Practice
Samadhi:	Grave site of Sri Aurobindo and the Mother (in Pondicherry) or a sanctuary containing relics of Sri Aurobindo (in Kolkata)

Program Components

The educational program at SAICE offers a wide range of academic courses and co-curricular activities that can impact meaning and purpose among its students. According to the data provided by the participants in this study the program components are comprised of both academics and co-curricular activities, both of which are structured to allow maximum freedom of opportunities for the students. Moreover, the school does not participate in any standardized board exams.

Physical education. The Physical Education Department (PED) is one of the most important departments in the school. It not only serves students but also members of the Ashram community of all ages. It has three locations: a tennis ground, a playground with attached buildings containing a weight room and dance floor, and a track and field sports grounds, which has an attached pool for swimming and diving.   The range of sports offered by PED is extensive. The

teachers[9] listed all the sport activities, which include: track and field athletics;

field and court sports such as cricket, softball, football (soccer), basketball, and

badminton; gymnastics; wrestling, judo, and boxing; and weight-training.

Additionally, competitions are held four times a year in the four areas of track and

field, swimming and diving, gymnastics, and team sports. As Vivek, a teacher

with 40 years of teaching experience at the school, says, the objective of the PED

program is to create "balance, harmony, strength, suppleness, poise in the bodies

of our students, which is much superior in many ways to students who have not

had that opportunity to develop their body consciousness and their harmony…"

(Vivek (M40-5/Geography& EnvironmentalScience).

    Co-curricular activities. Comments from teachers and administrators

addressing co-curricular activities reveal multiple opportunities for students to "go

beyond the academics." The comments address three areas, in addition to physical

education, where students may explore the performing arts in the areas of

instrumental and vocal music, drama and dance, both classical Indian and western;

the fine arts in the areas of pottery, painting, and sculpting; the practical arts such

as carpentry and gardening. Moreover, the students have the opportunity to do

ecological work at a piece of land outside the city of Pondicherry, called Lake

Estate. The students also learn about oceanography through scuba diving and the

maintenance of the school aquarium. While most teachers named co-curricular

activities that develop meaning, Vivek shared the following:

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[9] One of the focus groups consisted of people who serve in both administrative and teaching capacities. That is, all of the participants in the interviews are teachers. Therefore, from this point forward I will refer to "teachers" rather than to "teachers and administrators."

> We have music, for instance… That includes Western music, the piano, violin, keyboard … there's Indian music with singing … most of our students do some music. … Then there's dance of various kinds, especially there's Indian dance. … Not only that, but from the child's perspective, it gives a certain self-confidence and a certain self-respect. "OK, I'm not as bright as the other child in science or math or whatever, but at least I'm very good at pottery or in singing or something." Everybody appreciates that, and knows about it. It's not regarded as something lesser or inferior to the other thing.
>
> Vivek (M40-5/Geography&EnvironmentalScience)

Freedom and opportunities. The academic program and the co-curricular activities are marked by strong sense of freedom for the students. Several students, when asked how the school helps them develop their sense of meaning and purpose, expressly described the school using the terms "free" and "freedom" even as they enjoy the benefit of guidance from the teachers. One student stated that, "one is free to do what he wants to do and has all the guidance." Another offered a similar comment: "I have my freedom here with the right amount of guidance and I think that this is what I need to find my life purpose." One student even said that, "we are completely free." Interestingly, another student expressed a philosophical view about education in this context when she said that the school, in the "actual course of my life, it has not forced upon me; but then, any system of education that does that is brainwashing, and not true education."

The teachers also spoke of the school as offering "a lot of freedom" and "a lot of choices." They said that a "Free-Progress" section of the school allows students to choose their subjects as well as their teachers. However, as Prem (M3-18/English& History) said, these choices are made within the confines of "a minimum prescribed curriculum, which includes languages, English, French, their

mother tongue, and at the same time, mathematics and science - the minimum

which is required. Beyond that, they have a choice in choosing their subjects."

Even the choice to participate in either the Free-Progress system or to remain in

the "fixed system" is left to the students. However, for those students who opt for

the fixed system there is also considerable freedom. Malini, a first-year teacher of

Sankrit who was a student at the school for nine years, said that at, "the age of

EAVP 4 level [10th grade], they will still have some required subjects, many

required subjects; but, the intensity of these subjects start to change. Somebody

does more of this and less of that. Then, once they come to Knowledge [grades

13-15] they have an absolutely empty timetable" Malini (F1-9/Sankrit).

An aspect of this freedom is related not only to choices of subject and

teachers but also of time. Students are afforded opportunities to follow and

develop their passions and special interests, and spend as much time as they like

doing so. Many students choose to do a lot of Math and Science, while others

"who are of an artistic temperament… like to spend lot of time with art and

music" Prem (M3-18/English&History).

All this freedom does not come without certain challenges, however. For

instance, several of the interviews related to freedom revealed that some students

choose to waste some time, sometimes a great deal time. In particular, one

teacher shared the following:

> And that's connected to the aim of the school so far, because when
> the student is having to make decisions, which will have
> consequences in his own life, there is a lot of introspection at this
> stage because it's not given to you on a platter. … That's another
> interesting point. When they come into E4 [10th grade] the first

time, that's around the age when they're really beginning to get more and more freedom… Sometimes we see a phenomenon, where for a few months, three to four months, there are some students who will really not do much with their time; they'll be wasting time, in other words. … They can't disturb others… You can't come to class and disturb somebody else who's studying, but you can... I don't know. There are students who just keep reading a lot of comics.

<div align="right">Swaminathan (M3-12/English&History)</div>

In the interview where this topic was discussed I sought to gain more clarity on exactly how far this principle of the school is allowed to go. The following exchange thus bears merit for a complete reporting here:

Prem (M3-18/English&History): But, it definitely makes you understand the value of time and the value of freedom, especially when you've wasted it.

Malini (F1-9/Sanskrit): Once you're committed to make use of your time, it's because you realize that you have to, not because someone said that.

Interviewer: So, there is no concern that somebody might suffer in their education?

Malini (F1-9/Sanskrit): No, but what happens is, if we see someone who is really not getting it, like a long time, one year or two years, and they're just not able to get into more than comics books, then we shift them. Then we say, "Sorry. You need to get back to the more set pattern."

Interviewer: [22:16] So, what we've been talking to up to this point was free progress, not the fixed system?

Prem (M3-18/English&History): [22:20] Yes.

Interviewer: [22:21] So, if they don't adapt to the free progress, eventually the teachers make a decision, and say, "Look you're not getting it. You need to go to the fixed system where there is a more prescribed syllabus."

Malini (F1-9/Sanskrit): Yes. There is more prescribed syllabus [in the fixed system], but even there, there is a lot of freedom; a lot of freedom.

The rationale and implications of this approach was provided by

Swaminathan:

I think this freedom is very important - freedom from social customs, traditions of the past, religious customs, religious traditions. Freedom from having to conform to some ideal of success as defined by - I don't know - entry into an engineering college or becoming a professional. Freedom from all of that baggage is very important, I think. You are really free to explore, grow, try out, or fail. In some sense, you are free to take your own path; it's not being predefined for you – "this is what you follow and this is what you get at the end of it." You explore your own path, and then you make your own discoveries. For example, in Indian schools, you have a curriculum, which is highly standardized and enforced on the student as it moves on. Now, we have some sort of a curriculum, but it is very fluid. I can easily explore domains outside that, and the teacher will happily do it.

Swaminathan (M3-12/English&History)

This approach in offering students almost complete freedom to learn, explore,

follow their interests, and even to waste time and risk failure, would seem to most

educators a radical departure from traditional education. However, the school has

in place a system whereby students are provided individual guidance. As Prem,

said:

At the same time, over the years there's been evolved a certain support system even for the students who want to do free progress. See, a student will not eventually end up wasting too much time in the Free Progress system. Each student is prescribed a guide, a teacher, who oversees his work. He's supposed to meet him on a regular basis, say once a week, once every two weeks, and discuss all his problems with the teacher.

Prem (M3-18/English&History)

The teachers explained that each teacher is assigned three to six students for

whom they serve as a guide each year. At the beginning of the school year the

students are assigned to a guide, and then they are given the freedom to change

their guide if they wish to do so. This intimate support of students serves to

address the occasional situation where a student may seek to waste too much time.

Finally, in this context, Sanjay shared the following short story about a

student:

> There was an extreme case in Free Progress long back, one child
> spent more than a year just drawing. And he was just left and was
> not scolded and said, "You're wasting your time. You shouldn't do
> this and that…" Apparently, for two, three years according to
> some, he would have been wasting his time. After that he became a
> brilliant electrical engineer.
>
> Sanjay (M35-0/French)

Later, in the next section on the Relationship Domain, we will learn how this

practice is one of many that fits in with the level of teacher support in the school

as well as in the Ashram community context.

Impact (of the lack) of board examinations. SAICE does not

participate in official board examinations. This is quite a departure from

typical schools in India. The philosophy of the school discourages surface

learning, and encourages deep learning grounded in meaning. Malini

expressed this idea, with the following:

> I think… in the way we learn here, because we don't have any
> pressure for exams and things, I think I would imagine if I had to
> give a test regularly, and if I had to learn something to be able to
> produce it well at the test, I may find a lesser means of learning that
> up or just mugging up something without knowing what it means

so that I can get the answer right in the test, so that I can move ahead. But, I haven't really learned.

Malini (F1-9/Sanskrit)

Another teacher, Prem (M3-18/English&History), pointed out that the students "know how to think rather than just having to memorize things so that they can pass an exam."

However, this philosophical opposition to standardized exams begged the question, "What happens to a student when he leaves the school without having taken a board exam? Are they not barred from entering college?" Swaminathan gave an answer to these queries:

> What we find is that most students want to talk about an initial period of a culture shock - two to three months, sometimes more, sometimes less. They find themselves, firstly, as far as academic merit goes, they're regularly going to very good schools and colleges outside. … For many colleges, it's not a problem. A lot of them will say, "You can sit for an entrance exam."[10]

Swaminathan (M3-12/English&History)

To conclude this section on the Program components of SAICE, it is evident that the school offers a wide range of activities, in a program that is strongly student-centered in that tremendous responsibility is placed on individual students to discover their talents and gifts and to take up responsibility for their own learning. Also, the school offers a unique educational opportunity to its students, which is highly unusual in the context of the Indian educational system.

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[10] Whereas the research design of this study did not include the obtaining of data on the lives of former students of the school, there is a great deal of anecdotal evidence that suggests that many, if not most, ex-students of SAICE do indeed gain admission to universities in India, France, the United States, and other countries. For example, my own daughter-in-law, an ex-student of SAICE, is a 4.0 GPA community college student who recently transferred to San Diego State University to study Finance.

However, the story of SAICE is heretofore incomplete. In the following section, I report the data pertaining to teacher support and the community context in which it is provided to the students.

Relationship Domain

In the quantitative phase of this study, one of two of the Psychosocial Learning Environment variables that had a relationship with Student Satisfaction mediated by Agentic Personal Meaning was Teacher Support (the other being Task Orientation, discussed in the next section). In this section, the nature and kinds of individual teacher support given to the students is reported, as well as how the community as a whole provides students with a support structure that goes well-beyond that which is found in more traditional educational settings.

Teacher support. The interviews related to Teacher Support revealed a number of themes that pertain to the development of meaning and purpose among students. These were: class size and teacher-student ratio; teacher-student relationships; support for self-discovery; and the maintenance of an atmosphere of trust that builds courage among the students.

The teachers provided several comments about how the low teacher-student ratios on both the classroom and school levels allow them to support the individual needs of the students for meaning. As a school, when all teachers are considered, the ratio of teachers to students is about 1:3. In the classroom, the ratio can be as low as 1:1 and as high as 1:15. The low ratios allow teachers to create a truly student-centered environment. One teacher in particular discussed

how this impacts the ability of the teachers to ensure that all provide each student

the academic support he or she needs:

> Because the batches are so small - on average a class would have eight students - I would say even from a practical point of view in correcting assignments, the teacher would perhaps do it with much greater detail if he had a small number of notebooks to correct. Otherwise it becomes a mechanical process and one is perhaps just focusing on the final result rather than the process of acquiring the results.
>
> <div align="right">Subramanium (M3-18/Physics&Math)</div>

Additionally, the class size also allows Subramanium to ensure that each student is

engaged in the learning process:

> So, particularly the child feels he needs to respond if a question is asked. There's a certain kind of pressure; that he has to participate. He cannot remain passive. … So there is a lot of responsibility on the student to participate. Now the teacher cannot immediately notice a student who is not participating, but it's easy to notice in a class of eight students.
>
> <div align="right">Subramanium (M3-18/Physics&Math)</div>

Another teacher spoke of how the low numbers in her class allows her to

restructure her instruction for each group, depending on what she determines their

needs to be:

> It is very student-centered. Even, for example, in my classes, the way I take a particular class is never pre-defined in an absolute sense. It's not like: Class No. 1: these are my notes, Class No. 2: these are my notes. Each year that I have is different, because the class sizes are small - seven or eight of them. I know these people. I know them as individuals; I have some idea of their capacities, let's say mental capacities or abilities. I have to constantly keep that in mind, and fit the course to their needs.
>
> <div align="right">Malini (F1-9/Sanskrit)</div>

While the class sizes allows teachers to get to know their students

extremely well, the school also offers many other opportunities for teacher-student

relationships to blossom. In fact, according to the teachers, their close

relationships with the students extend beyond being merely teachers. The teachers

dine with the students, and participate in sports with them, so "that they share a lot

of other time with teachers outside of school. Often enough, during the meals,

they're sitting with their teachers. Often enough, they're together in sports. So, that

gives them a lot of occasion to know one another even outside school" Prem (M3-

18/English& History). Sports, in particular, offer teachers and students a powerful

way to build their relationships. Unlike most schools, where teachers are only

with their students during limited class time, the teachers in SAICE work to be

true role models in areas beyond inspiring academic success. As Bhavatarini said:

> The other thing I feel is... in the schools nearly all over the world
> you have the teacher who is in the classroom for a particular
> amount of time. And that's that. The child and the teacher have just
> that much contact. Here, say for example, I am with them in school
> and again I'm with them for physical education. I'm on their teams
> playing volleyball or basketball or something like that. So, it's more
> than a [typical] teacher's relationship. It becomes like they are all
> trying to live the ideal together. And it's not like a mask I can put
> on in front of the students just during school hours. … I have to be
> what I tell them to be. I mean… throughout the day they are seeing
> me everywhere. They know me really very well. So then I feel I
> have to sort of live that ideal so that I can pass it on… or I can set
> in some way a small example. Because if I tell them don't be angry,
> and as a basketball coach I lose a game, and I start screaming at
> others, I know it won't do.
>
> Bhavatarini (F23-18/Physics,Math&Chemistry)

Malini spoke of how this also helps teachers be more than mere teachers. They

get to be with the students more as equals or as friends:

> One thing is that the teacher-student relationship, especially with
> the older classes, is not as clearly defined. Because what happens
> is sometimes, in school, there's a teacher relationship between

teachers and students, but in sports, they're playing together and sometimes the student is a captain of the teacher in a team. … So there's so much else, and so maybe… in some other class you're learning something together. But there's so much of this kind of mixture that you become more like friends than teacher and student. … I think our sports participation contributes a lot to that.

Malini (F1-9/Sanskrit)

Subramanium spoke, not only of sports, but also of excursions such as camping trips. For him, the interactions between teachers and students become much more natural and spontaneous, and the nature of the interactions change, depending upon the activity they are engaged in:

I think the mode changes very naturally, when you're on a sports team you're different and when you're in school you're again different. Even when you are going camping with them - that's when you're interacting very differently from what you would do in school. It all happens very spontaneously.

Subramanium (M3-18/Physics&Math)

The teachers emphasized that in their relationships with their students they encourage each one find and "live up" to his or her "inner truth." This is related to the ideas of self-discovery and self-knowledge that are central to the Integral Education philosophy of the school, which translate into open interpersonal relationships and specific practices in the school. This is, in part, due to the fact that teachers are free of certain pressures that teachers in other educational institutions experience, which allow them to deeply appreciate each student for who he or she is. As Vivek said:

So it becomes strange but the relationship and the motivation [in other schools] is not towards helping the child to grow and discover himself, but just to be able to pass the exam and achieve success in the normal sense of the word… here we recognize that each child is

special and so long as that child lives up to his own inner truth, we are happy to encourage him…

> Vivek (M40-5/Geography&EnvironmentalScience)

An important principle of the school philosophy is that the students should not be fearful and should be taught to have the courage to always speak the truth. Therefore, the teachers in the school build strong and reliable relationships grounded in trust with the students. They are tasked with applying this in all interactions with the students. As Vivek (M40-5/ Geography& EnvironmentalScience) says, the teachers are, "To love the children, not to scold them or to be angry with them." According to Bhavatarini (F23-18/Physics,Math&Chemistry) the students are encouraged to take risks in being courageous enough to speak their truth: "Especially if they are trying out something then we tell them, why don't you tell us the truth? They know that if they tell us the truth, even if the truth is not [admirable]…" To which Annapurna (F26-17/French&Sanskrit) added, "aha, but then the teachers appreciate them for the fact that they were truthful enough to… courageous enough to come up with the truth." An important and practical way this is done is avoid punishments in the school. According to one teacher:

> There is never any punishment; no child is ever punished. So the student has confidence that he can speak out, even if his speaking out may lead to some kind of a problem with a particular teacher. But the student is trained to generally speak out, because if he has a problem with one teacher, there are other teachers who will support him. So there is more honesty in relationships.

> Malini (F1-9/Sanskrit)

Community. These deep teacher-student relationships take place in a much larger context than the school or in the Physical Education Department. SAICE is an integral part of the Sri Aurobindo Ashram community that is dedicated to the evolution of consciousness in humanity and the ideal of human unity. It's aims are to provide a field of action for the practice of a living spiritual philosophy in which each person is given the opportunity to find one's unique and special aim in life. As such, the ideals of the Ashram community permeate the atmosphere in which the students and teachers live, study, play, and support one another. Indeed, in many ways the community models the principle that it takes a village to raise a child.

Three themes related to community arose from the data. First, there is the shared vision and philosophy of life of the community. This means that, second, the teachers all approach teaching from the point of view of spiritual aspirants whose work with the children is considered something sacred, an integral part of their spiritual lives. This leads, third, to a sharing of living experiences for teachers and students in terms of a variety of community activities that go beyond academic, co-curricular, and sports activities in the school.

The shared vision of the Ashram community helps to create an atmosphere that impacts meaning and purpose in the lives of students. Many of the teachers discussed this aspect of their lives, but Vivek, perhaps, best stated the idea of what it means to be in a community and how it can support students:

> I think there's a sense of family. Most of the children come from
> families that are devoted or interested in this particular philosophy
> of life. And the whole atmosphere here is of a shared ideal … a

belief in a powerful presence… There is the example that the teachers send because they aspire to lead these lives of spirituality in their teaching in the school, as well as in their daily lives. They try to live this ideal. That communicates itself. There is so much psychologically inside in ancient religions and philosophies about the power of a single desire to affect others. And we have formulated it as a living community, collectively aspiring. I think it becomes a force... It becomes positive force. We talk about peer pressure, for instance. It's not pressure in a negative sense. In this case it becomes a positive living, pulsating image. That sure communicates itself to the children and students.

Vivek (M40-5/Geography&EnvironmentalScience)

However, such living does not come without challenges. Being in such a community means that the students have the opportunity to learn how to live with others. According to Prem (M3-18/English&History), "there's constant occasion for them [the students] to work together so that they can achieve some sort of harmony." Swaminathan elaborated more on this when he shared that,

it doesn't necessarily mean that we all like each other, you know, everybody likes each other and we're the best of friends. I think we learn to live with our differences because there's an age when you go through a stage where each one's individuality comes out - somebody is dominating, somebody is more being dominated, somebody has traits of character that you don't get along with. I think we have a stage where the students sort of go through that, and especially by the time they reach the Higher Course [grades 13-15], they know that people are different than they are. They manage together. … They have to achieve some sort of group harmony; otherwise it's uncomfortable here in small groups.

Swaminathan (M3-12/English&History)

The sense of belonging to a community with a shared ideal is carried with the students beyond their years at school, for many return in their later years to participate in the life of the community. Some settle down there and remain a part of the Ashram, and those who don't visit often. This is because, as Swaminathan

(M3-12/English&History) says, "the student is not just somebody who comes to school and he goes and sits. He's part of the community… [among] people who are here are committed towards a certain purpose - a common idea, like aim, united by the philosophy of the founders of our school and of our ashram." And so they return, and participate in the school in some way by teaching, coaching, or joining cultural activities. Many apply for their own children to go to school there. As Prem (M3-18/English&History) said, "It is some thing like a focal point of their lives. Some of them, of course, have their physical houses here, but many don't. This is still their house. This is like home for them."

This sense of belonging to a larger community that is dedicated to an ideal of human unity and self-perfection clearly influences how the teachers live and work with the students. For example, all the teachers in the school are unpaid members of the Ashram. One may ask how this is, and Swamainathan, again, provides an answer:

> And when you say, how do we do it? It's the atmosphere, in the sense that the teachers who are in the school are all coming to the school with a different commitment. They're not here because they are earning their salaries by teaching. They are all volunteers. There is not a single paid faculty. Either they have the means themselves, they have earned it over the years through whatever other ways, or I think mostly the ashram supports it: food, shelter, medical care. Whatever is their need, basically, is provided by the ashram. So they're all volunteers, and that gives a different orientation. You're not thinking about promotions. There's no idea of you being promoted after so many years. Your whole approach to teaching is that you're doing it as… sadhana; as a means of spiritual progress. … Sadhana is a means of one's own inner growth and progress. … And then teaching becomes a means of doing that. And also, broadly, as a contribution to the society, to the community you're living in.... each one in the community contributes to the community and there is a group of people who

help out in the school. That's part of their contribution to the community.

<div align="center">Swaminathan (M3-12/English&History)</div>

Part of the belief system of the community is that there should be no forcing of the spiritual philosophy of the Ashram upon the students. This goes back to the sense of freedom that is fostered for the students so that they learn and grow according to their own "inner truth" and find their purpose in life. In this context, Prem explained how this plays out in the school:

> But, there is one important point, and that is, I don't think we actively talk about our belief systems in the class. We don't, in the sense that we don't really... It's bound to be there in the atmosphere because the ashram is next door. You have the photographs of Mother and Sri Aurobindo on the wall. Every now and then you might refer to them in some context, and their philosophy, their perception or something. But, I don't think we make an active effort to tell them this is the truth. There is no sense of... There's no missionary purpose.
>
> <div align="right">Prem (M3-18/English&History)</div>

He then followed up with an example of this by sharing a vignette about one of his students:

> I have had a student in my class who was very proud of saying that he was an atheist. Who said, "I don't believe in anything that is spiritual. For me, this is all humbug." He took great pleasure in telling this to teachers in the classroom. He was not thrown out of the school; he was not chastised. … He just, just got some smiles, some big teethy smiles out of it… That was it.
>
> <div align="right">Prem (M3-18/English&History)</div>

Living in such a community offers students and teachers alike many opportunities to do more than the academic, co-curricular, or sports activities previously discussed. The community is made up of many departments that serve the material, cultural, and medical needs of its members. Students can and do help

out in many of these departments. For instance, there is a dairy farm, a bakery,

construction and furniture building departments, the Ashram Press, and a nursing

home where they can care for the elderly. There are also a number of production

units for such activities as weaving, batik, and embroidery.   There is a

reforestation project at Lake Estate. Cultural activities are held regularly,

including drama, dance, music, all of which students can participate in as

performers. There are special days during the year, known as Darshans, when

hundreds and sometimes thousands of visitors come to the Ashram to visit the

Samadhi and the living quarters of Sri Aurobindo and the Mother. During these

events many students help out with organization and crowd control. One teacher

summed up the richness of the community atmosphere and the special opportunity

students have to be a part of it:

> Maybe you could say they feel that actually the school is going to be part of something wider other than the ashram life, wider than the sphere defined… School opens to something larger. The individual will be actually participating in this life everywhere. They are part of something. We also interact with the larger ashram community where there's so many other activities going on, so we get to see their work as artists, musicians, or dancers, or whatever. We have visiting artists, musicians, lecturers, and these children have the opportunity to connect with them. So much is representing many different activities and unique points of view…
>
> Sanjay (M35-0/French)

The sharing of meals in the school dining hall, Corner House, also

provides teachers and students with opportunities to connect in the community

context. There many things can be discussed and students can be counseled about

some of the challenges they deal with in their lives. As one teacher reported,

"There we discuss many times some non academic issues also; habits of daily life. For example, if we see a student not eating properly we can engage that. So even small things can be discussed" Arjava (M7-12/English). Mentoring is facilitated there in ways it cannot be in the classroom setting, according to Malini (F1-9/Sanskrit), "Which is what you cannot do it in class. And then your subject would suffer a lot." And again, Subramanium shares,

> We talk about this simple thing of eating together. At that time we discuss issues, which are generally not academics. And you would typically have discussions where students discuss their problems with other students or with other teachers. What sort of attitude they should take and all? … And you can't get it to an individual at that level in the classes. You can do so much more easily over the table.
>
> Subramanium (M3-18/Physics&Math)

The community in which the school is situated thus provides students with many social contexts in which to seek out and discover meaning and purpose in their lives. They are afforded the opportunity to learn from inspired teachers who believe that their own life purpose has a spiritual foundation and that their work with their students is an integral part of their spiritual practice. The students receive intimate care and concern from their teachers, as well as from members of the larger Ashram community. Indeed, the community creates a strong sense of family among the students and teachers, even to the point that sometimes the teachers are "much more family to more students than parents to some extent" Prem (M3-18/English&History).

Personal Development Domain

The Personal Development variables measured and tested in the quantitative phase of this study were Task Orientation, Involvement, and Cooperation. However, Task Orientation was the only one among these variables that was included in the SEM analysis for SAICE. Therefore, the comments of SAICE teachers regarding this variable are reported here.

Task orientation. Task Orientation was the variable classified under Moos' Personal Development Domain that was found to have a significant relationship with Student Satisfaction that was mediated by Agentic Personal Meaning. Task Orientation received the highest mean score among all the Learning Environment variables measured. During the interviews, the teachers were asked to comment on the result of the student survey for this variable.

Initially, the teachers expressed some surprise that Task Orientation received the highest score from the student survey. Some felt that maybe the students were collectively over-reporting and that the score should have been lower. Malini (F1-9/Sanskrit), for instance, stated, "I think students are being [laughter] less than honest." The teachers then discussed how this might be explained. Some comments from the teachers revealed that given the small class-size, students have greater responsibility to participate. For example, Subramanium (M3-18/Physics&Math) felt that the students "cannot remain passive. … There is a lot of responsibility on the student to participate. Now [in a large class] a teacher cannot immediately notice a student who is not participating,

but it's easy to notice in a class of eight students." Bhavatarini attributed the high

Task Orientation score to the fact that the students are busy all the time:

> I'm just wondering about their day-to-day routine, whether the time has an effect. Because throughout the day, they get up in the morning at 7:45, they're in school till 11:30, they go back by 1:30, they're back in school till 4:00 and then at 4:30 they have physical education till 7:00. They have dancing classes some nights… and if you take the whole routine with the time that remains, perhaps... even if they work a little, they feel they have done a lot.

> Bhavatarini (F23-18/Physics,Math&Chemistry)

Several teachers believed that the Free Progress system, in which students are free

to study what they want, might explain it. Malini, in particular, felt that the

> thing about task orientation is that in the free system you are doing what you want to do. So obviously you would like to complete whatever you are doing because you are interested in it. Whereas in the fixed system… you might have to do things, which are not so… interesting.
> Malini (F1-9/Sanskrit)

Annapurna (F26-17/French&Sanskrit) felt that the students were thinking about

all the homework they do and said that her "students, whenever I give them

homework, most of them, over the years, do their homework regularly."

The high score for Task Orientation from the student survey can thus be

explained by the amount of time the students spend in school (about 10 hours a

day, six days per week) or the by the level of commitment and involvement

required of them in school. Moreover, as has been shown already, the number of

activities the students have to choose from and the community support they are

given is extensive, so it may be possible that the students perceive that they are

literally "on-task" most of the time.

Agentic Personal Meaning

The mediating variable for the quantitative analysis of this study was

Agentic Personal Meaning (APM). This construct consisted of three components.

The first component, Purpose, is a sense of direction from the past, in the present,

and toward the future. Purpose provides thrust and direction to one's life. The

next component of APM is Coherence, which is sense of order and reason for

existence, a sense of personal identity, and greater social consciousness. Finally,

the third component of APM is Choice and Responsibleness, which is being

referred to here as Agency. In this study, Agency refers to the degree to which a

person perceives to have personal control in directing his or her life, and accepts

responsibility for choices made in life. In the following section, data provided by

the study participants related to these three components of APM are reported.

Purpose. The student written responses and teacher interviews on Purpose

were focused on themes related to character, self-awareness and "inner progress",

and the sense that there is an existential aim in life, or global purpose, that is there

to be discovered. What form Purpose can take varies from person to person,

depending upon their nature and interests, and education is viewed as the means

whereby one exercises one's freedom to discover it.

The students written responses focused on character building, the joy of

learning, and preparation to find life purpose. One student stated that, "The

education and the atmosphere plus the assistance I receive from teachers in

Knowledge [grades 13-15] are clearly preparing for my quest to find the purpose

of my life." Another said the school "has given me a character" and has

"introduced me to many aims to achieve in life." One student focused on self-awareness and an existential purpose when she said that the school "has made me aware of many of my weak points both inward and outward and helped me to overcome them on my own" and "it has convinced me that life is not just about education, salary and family… it definitely has a much bigger purpose." One student said that the "school has taught me to be an independent learner, to learn for the joy of learning." Finally, a student expressed a spiritual view: "There is only on purpose why we are studying in this school. It's just to open our hearts; find the divine within us."

The comments from the teachers in SAICE were consistent with those of the students. The aim of the Ashram community to support individuals and the collective to find purpose and become conscious permeates the school, even though there is no "missionary purpose" or emphasis on a one-size-fits-all approach to how to develop a higher consciousness. The role of the school and its teachers is to show students how to do this for themselves, through a deeply personal journey. Prem offered a number of comments, which highlighted this idea, particularly with regards to how it is actually a core value in a way of life that is modeled for the students:

> That innermost core, that spiritual spark, that divine sense of the psychic being [the human soul] is somewhere there in the back of our minds, even if we're not always sure how do we actually teach it. I don't think we come to our classes actively thinking about how do we get them to realize the psychic being. But that sense is there that ultimately you help the student to know himself, and that itself is important. … There is very clearly a sense of perfection…

Moving towards perfection… It's more a way of life. A way of looking at yourself and the world, of progress, of perfection…

Prem (M3-18/English&History)

Swaminathan pointed out that what the school does is prepare students for a life-long quest for meaning and purpose. He even admits that perhaps finding purpose is something that often occurs after students have left the school:

I think that it's a process, which begins here, but culminates sometimes even much later, after they have finished their education here. I don't know whether we could say that they finish the school and all 325 students have a strong sense of purpose. But, there is a sense that there is something more to life than just the usual ordinary human ground, and there's a sense that it's a mystery to be understood and explored. And maybe, if there is something that we could give them at all, it is the tools and the means for them to continue exploring. … I don't think it will be honest to say that when students finish, they know the ultimate aim of life… But there is a strong sense that "I am looking, I am seeking and I know where to find the answers one day."

Swaminathan (M3-12/English&History)

Malini spoke of how the school provides freedom for students to cultivate a joy of learning. Creating life-long learners with a sense of purpose is really about fostering a disposition to learn and find joy in it. She also said that every student knows of Mirra Alfassa's essay in which she says that an "aimless life is always a miserable life."

I feel it's the freedom and the lack of [a diploma]. You don't get a degree or you don't get an external thing to show that this is the result of your learning. It's simply the joy, the skill that you have acquired, or the joy that you have learned something. With these two things together, they take you towards the right attitude. … I think it's the ideas of the Mother that they're constantly exposed to that will foster a sense of purpose. … I think every child is aware

of this quotation from the Mother. I will say it in French: "Un vie sans but, et un vie sans joie." An aimless life is a miserable life.

Malini (F1-9/Sanskrit)

For the teachers at SAICE, finding purpose takes on a much greater meaning, one that has implications for all of us who are interested in creating effective learning environments. What is important to them is that education can have the greatest impact on the world if each student is allowed to grow from within, is encouraged and supported in developing their "inner growth" rather than simply being prepared to "fit into society." The belief system of the school and it's teachers is that for society to change, for humanity to be able to deal with all of the pressing challenges and difficulties it faces today, the individual must first be able to be true to himself, and for that to happen a new system of education is required. Perhaps no teacher conveyed this idea more powerfully than Vivek:

> In fact, education really needs to be revamped or reoriented to take into account the personal and all around growth of the child, rather than give too much importance to qualifications, which fit him into society, or making him a productive member of the economy. That's the direction we need even if we are going to solve a lot of problems of the human race, of the planet. We need people who are true to themselves, to their inner self, and have the chance to explore, to develop that. Unfortunately, a lot of schools don't even have the idea of what this is… At least here, all the children should understand that there is something else, whereas most schools, the education is as if you are into some type of routine development. It's understood that the aim of life is to become productive, to become successful, to make a living, etc. We forget that the true aim of our lives is actually an inner growth, of which the basis may be material and economic and cultural, but it's something that helps us to grow beyond that. I think the true aim of all civilization is really to encourage that - the entire growth.

Vivek (M40-5/Geography&EnvironmentalScience)

Coherence. Coherence received the greatest number of comments from the students' written responses. Many students expressed the idea that they have a coherent sense of meaning and that the school plays an important role in giving them a reason for existence, a greater social consciousness, and a sense of order and directionality in life. One student said that the

> school has widened my views of life - there is no black and white in life, there are many shades in between. This realization has helped me find my life purpose - the world is not a hopeless and a helpless place, nor am I in any way hopeless and helpless, it is therefore my aim to help myself and the world.

Several students expressed a sense of coherence for meaning in life that leads to the cultivation of an inner growth that informs and uplifts one's outer life. As one student expressed this, her "school has not only academically helped me progress but inwardly too" … "An inner growth is what will flourish one's outer life – I strongly believe in this." One student said that the school "has made me aware of who I am." Another stated that her education at the school,

> has given me a deeper understanding of what life is all about, and how it should be led ideally. The purpose of life is still in me as an idea… To be part of the stream of life in the world outside our quiet boundaries and THEN fulfilling that ideal purpose of life would be where we'd feel the challenge.

Finally, in the following lengthy response a student summarizes very well what she believes to be the core value SAICE represents and models in order to impart it to students:

> The ethos of our system of education insists, unlike most institutions in the outside world, on learning not as a goal or an end in itself - satisfactory as an intermediate achievement towards betterment in life and society - but as a means of integral self-improvement, a preparation, in Ashram parlance, for the advent of

the future humanity. In this capacity, the modus operandi of the system, with its constant insistence on the master ideas of the Ashram, effectively convey to its students the importance of education - the integral way - and its role in life. In conclusion, my school has significantly impressed upon me, these ideals of education and has correspondingly molded my mind to meet the word with a lofty set of principles as well as a pragmatic life philosophy.

Teachers, too, refer to these ideals as forming the basis of coherence for meaning in the lives of their students. As Nityanand (M38-13/MathSciencePhysics) put it, "There is something psychological that develops, so spontaneously… because of the common ideal that we are following..." Several teachers spoke of this ideal in which education takes on a greater existential meaning than mere worldly success, one that even exceeds the idea of a greater social consciousness. For example, Swaminathan discusses how this presents a challenge for the teachers:

> I think that if our aim was something simple, like we want to develop students who want to help humanity or who want to have, let's say, a social consciousness, as you put it, I think we could easily do that much more easily than what we are trying to do. Because what we are ultimately saying is that by the time the students finish the Higher Course… If they are a little aware, they would realize that what we are saying is, "You have to ultimately find your deepest self, you have to change your consciousness, you have to evolve into something better." So, it's really a demand to the human personality and nature. I don't think at this stage you can expect large numbers of people saying, "Yes, we are ready for that." So, even out of a group of ten, if there are three or four who have achieved something of this, I think it's huge… It may not show as a statistically significant number, but I think in terms of change it means something solid.
>
> Swaminathan (M3-12/English&History)

This emphasis on finding one's inner truth or deepest self, can lead to personal

mastery, from which one can lead a life filled with meaning and purpose. Again,

Prem offers the following:

> Perhaps, among the most important thing is to help the student to
> be the master of himself, and to find something in himself. That's
> really the most important thing perhaps; to help the student find
> something in himself or herself; the best part that will be able to
> take the lead in his or her life. … It is really the individual who is
> somewhere at ease with his self or her self, who has an equal
> meaning and purpose in life, who is looking for something in the
> world, who is striving to perfect himself or herself. I think an
> individual like that coming out of the school gives us much more
> satisfaction than seeing an intelligent student, say, getting into the
> best university. That makes us happy too, we know that our
> academic role is strong, but the other one is so much more
> meaningful for us.
>
> <div align="right">Prem (M3-18/English&History)</div>

How, then, is this done? How do the school leaders create a learning

environment that facilitates these aims?   According to Malini (F1-9/Sanskrit), it is

everything that the school does: "I believe the school can help them if they are

facing problems and I am happy looking for meaning... Here, they have the means

where they can find meaning." Swaminathan (M3-12/English&History) adds,

"We have a whole structure and framework, which can help them with meaning.

Relationship with teachers, all of that." Sanjay (M35-0/French) attributes this to

"the atmosphere, the presence that is not easy to quantify, but I think it is there,

and it is the most important thing in my case." Two teachers spoke of the

orientation of the teachers toward a new ideal, and of the atmosphere they carry

around them by the very fact that they have themselves have found their purpose:

> Bhavatarini (F23-18/Physics,Math&Chemistry): I feel the teachers
> themselves are not… they are not earning their salaries by teaching.

We ourselves have decided to live this sort of life. So somewhere in the background, not the background, the foreground, we try to get this idea across to the students that it's not just academic brilliance we want. There's much more to education than just getting a high percentage of points, being brilliant or something like that. Because we ourselves, it is not just a philosophy, it's like, we stayed back here just for that, so somewhere I feel we manage to live that sort of life in full sincerity…

Vivek (M40-5/Geography&EnvironmentalScience): What she's trying to say is that it's the power of the example and the vibrations of the consciousness that we as teachers carry, and that also is part of the atmosphere of the place. It's not just a mental ideal that's proposed and sought to be implemented, but something much more dynamic. It's a spiritual consciousness…

In fact, collectively speaking, the teachers are essentially saying that it is all these

things that create in students a sense of coherence for meaning. The philosophical

and psychological principles supporting inner-growth, the living example and

influence of the teachers and the very consciousness and vibrations they carry

with them, the formal structure of the school and its Physical Education

Department, as well as the Ashram community's many departments. Vivek, who

consistently provided so many wonderful comments during his interview, summed

it all up very well when he said:

That's why the education itself is called Integral Education. Some way or another we all accept that that's the idea and it's not just confined to the academic, the physical education, or the cultural spheres. It's a combination of all these which give the best opportunity to the child to grow from within and aspire to something higher than they have reached…

Vivek (M40-5/Geography&EnvironmentalScience)

Agency. In the literature review for this study I pointed out that it is

possible for a person to have a sense of purpose and a coherence for meaning that

has the potential to support and uplift their lives. However, these are not enough.

For without Agency, or the ability to confidently make choices and take

responsibility for one's self, the manifestation of one's purpose is compromised.

To complete the story on SAICE with regard to how it fosters meaning and

purpose in the lives of students, this section reports what the students and teachers

share about Agency.

The written responses from students related to Agency revealed three

specific aspects of Agency that the school has helped them to develop. These

were the making of good choices and decisions, the ability to think for themselves,

and a sense of confidence. One student said that, "After completing my education

here I believe I will be a level-headed guy and I'll make wise and informed

decisions."   Another reported that "the system of education is free and it has

helped me make choices, and in order to make choices I had to think about the

things which I think are important in my life…" One student said that the respect

of the teachers helped him: "My school has never imposed any ideas on me. It has

taught me to think for myself and make my own choices. My views, even when

they are different from a teacher's, have always been respected." Along these

lines another student gives credit to her teachers for allowing her to be an

independent thinker:

> I think my school is helping me because it gives me a chance to
> think for myself and not act like a total robot like in many outside
> schools. It gives us all a chance to express what we really feel and
> give our opinion on what we think is right or wrong, which helps
> us because in the future we will have to make our own decisions.
> And most of all I think the way they teach us and guide us is the
> right way, and will help us one day.

Students expressed a belief that they are being prepared to make the right choices in their lives. Several students said that "my self-confidence has boosted me up…" and "I feel more confident now than ever before… there is a certain kind of joy studying here…" and the school "has taught me to be disciplined, which is most important, courageous and helpful to others."

How does the school foster Agency in its students? The teachers provided many answers to this question. Generally, they said is it because they strive to cultivate in students a "wideness of mind" or "broadmindedness, and a certain strength of character." One teacher said that the students are encouraged to be free of social convention, and yet "not to be disrespectful of social conventions, but free of them."

Choice, or the ability to make good choices, is an important aspect of Agency. It allows one to value all that one does. Even progress in one area of learning can have a beneficial effect on other areas of learning. Moreover, students must be free to make their own choices, free of pressure from parents and teachers. According to Nityanand,

> We value everything equally… every opportunity for giving you choices, you know? We choose, choose constantly. And that helps them to choose in life, what they want to do. Not just a subject, or a musical instrument that they want to learn, but what they want to do or become in life. And, to say once again, you choose. Don't do what your parents want you to do. Don't do what the captain or teachers want you to do. But do what you want to do. … It is your choice.
>
> Nityanand (M38-13/MathSciencePhysics)

Annapurna expanded on how the ability for students to choose can impact them in

powerful ways, particularly when they have so much support from their teachers:

> Actually, I would say the truth of this is, one, if the child is talented and has a good capacity of learning from various subjects, then it helps him grow more global and helps in his all around development. So a child who is, say, good at music and also good at art, the other subjects actually enrich him. And then it also goes the other way around. If the child doesn't find his own worth in a particular field, then he has something to choose from. Because he might try something and he might, say, fail - what he would call failing - or he might just feel that it's not working out. But then, precisely because we have such a variety of subjects, somewhere he'll find something where he's really good. And actually, this part is very important… Many feel the most important thing to give to a child is love. And I agree with that, because the relationship between the teacher and the student might dwindle, or it may just pass, but the confidence he will have gained in his own ability, that remains with him. And, in fact, that's what helps him become someone. And then, if you have your own sense of worth, you can do something for others, for humanity or whatever, because… you feel that you are somebody and you represent someone. And then your own contribution can be a lot more confident.

> Annapurna (F26-17/French&Sanskrit)

This idea was further expressed by Prem (M3-18/English&History): "That's one

of the aims. The idea is that the teacher is not there to mold the student in a certain

way, but to help him find the means to promote, in a way that he finds best,

himself." Malini (F1-9/Sanskrit) adds, "There are many occasions for

introspection, say, because the students get the choice, the chance to choose their

own subjects. So, they keep asking themselves what they want, what they like. At

that early age, they get a chance to really decide for themselves."

What qualities does this fostering of Agency in students allow them to

develop? Annapurna (F26-17/French&Sanskrit) believes they learn to do "quality

work" and have a strong "commitment" to what they do. Sanjay (M35-0/French)

and Vivek (M40-5/Geography& EnvironmentalScience) said they develop

"straightforwardness" because,

> they are rarely threatened with scoldings or beatings or anything like that, almost never. So we encourage them to be simple, straightforward, instantaneous, and usually they are that way. They don't have much to hide because they know that they will be appreciated more for being straightforward.
>
> Vivek (M40-5/Geography&EnvironmentalScience)

They also learn to be self-reflective, which is an important part of "being

conscious." This self-awareness is a quality that the environment draws forth

from the students. According to Malini, this means students learn to recognize the

"motives of their actions, their reactions."

> I think that automatically the children who are brought up here tend to look back on why they react when they are in a situation. For instance, some problem they have with a friend; they rage and shout, but after the event is over they have a certain tendency to look back on the thing and analyze why they reacted… This habit of analysis is automatically cultivated.
>
> Malini (F1-9/Sanskrit)

Finally, the school strives to inculcate in students a sense of responsibility, an

important aspect of Agency. Devarshi shared that for each student,

> you have to realize that ultimately you are responsible for your own life and you can't blame it on someone else. There might be circumstances where others might seem to control you but ultimately you are responsible for yourself. Also, teachers often ask the students to reflect on why they're doing something. What is it that is guiding them and motivating them? So that definitely brings in that sense of responsibility…
>
> Devarshi (M3-18/Physics&Math)

Ultimately, what everything that has been discussed thus far leads to is an understanding of how one should learn to live one's life. The program of education in SAICE, with its emphasis on an Integral Education, is specifically designed to help students figure it out for themselves, but with proper and effective guidance from teachers. I will conclude this section with the wisdom of Vivek who, once again, provides an excellent summary of what the school means to students:

> It's maybe, in a sense, a result of the human qualities that they have developed here, because when you have certain qualities developed, they stand you in good stead. Let us say, if somebody has passed an exam by just remembering things, but has not truly understood, or is not truly interested in, that subject, it's going to be very different from somebody who may not have a mental memory of so many facts or information but is much more deeply into that subject and is able, whenever needed, to tackle all the problems or challenges involved in any situation. … Our emphasis is on how to face life, how to deal with problems, how to face oneself, how to be with others. We talk about interpersonal relationships, intrapersonal analysis, and so on. And so all these are encouraged and developed here, and will sustain probably much more than in an ordinary school or in the long run in society.

<div style="text-align:center">Vivek (M40-5/Geography&EnvironmentalScience)</div>

<div style="text-align:center">The Future Foundation School - Kolkata</div>

Joya Mitter founded the Future Foundation School, located in the suburban sprawl of the city of Kolkata, in 1981. The school is a part of the Sri Aurobindo Institute of Culture (SAIoC), which offers a wide variety of activities for individuals to participate in and to learn about the spiritual philosophy of Sri Aurobindo and Mirra Alfassa. A meditation room, often referred to as "the Samadhi," where relics of Sri Aurobindo are kept, represents the dynamic center

of the SAIoC. The Institute also maintains an art gallery, a health and healing unit, a research center, a museum, and the Arun Nursery School for children aged 3-5 years.

Program Components

FFS offers a range of educational opportunities that can impact meaning among its students. Many of these opportunities are offered through numerous co-curricular activities that take place on the regular school days, during an extra Saturday School program, and at evening cultural classes. These offerings include such programs as music, drama, environmental activities, social service, sports, several clubs, an Ideals and Progress class, Appreciation Cards, and Travel.

Clubs, sports, and the learning pageant. When asked how the school helps them to develop a sense of meaning and purpose several students mentioned these activities. As one student put it, "My school allows me to expand my view to a realm that is as important as normal day-to-day studies - namely co-curricular activities, in which I have never had the chance to participate in before, in my earlier school." Other students tied these courses to the cultivation of their talents and personal goals. One student stated that, "My school has helped me with education, co-curricular activities, and finding out other talents in me and also my life's goal..." Another student mentioned how the school appreciates her talents: "My school is helping me to bring out my talents by appreciating them and involving me in different activities like sports, music, etc." Among the students, this focus on co-curricular activities appears to be as important as academics.

Teachers and administrators, too, emphasized that co-curricular activities offer many ways to open doors to students that extend beyond academics. Dipali (F15/Chemistry) pointed out that "the main principle of the school is the overall development of the child. I think that in addition to the academic part, we also put a lot of stress on the co-curricular activities." For Kritika (F14/Biology), the "clubs are actually, you know, meant for holistic development, as I should say. And it also focuses on the skills. There are so many skills that can be developed through club activities, and the student enjoy the clubs at the same time." Some of the skills that the teachers specifically mentioned are leadership, community and service, social responsibility, problem solving, and ecological activism.

An important part of these activities are the four clubs offered to the students, each of which has a specific focus that can impact meaning and purpose among students. Rangeet provided a summary of what the four clubs are all about:

> In our school, we have four clubs. So one is a nature club that develops concern for the environment. The other one is interact club, which deals with social issues and social problems, reaching out to people who are not so fortunate or privileged. We have a literary club that caters to the skills of expression, giving vent to ideas in words. And we have a cultural club that once again trains up people in appreciating differences of culture. So, these clubs go a long way in strengthening the value base of the students in our school.
>
> Rangeet (M7/Geography)

Students have the option of participating in any of these clubs, depending upon their own interests and personal goals. According to the principal, Sankar, the school has

an excellent Nature Club, which has done pioneering work on environmental awareness in India. It's one of the best school nature clubs in the country. They have done a lot of work; they were the first school children to do water harvesting, including water tables, in this part of the country. They are doing compost work, paper recycling, working with saving endangered species of animal, and more.

<div style="text-align: right">Sankar (M11/Admin)</div>

Students in the Interact Club, which is associated with Rotary International, work with people who are less fortunate than they are or who are suffering in some way. They visit, and offer service to, old-folks homes, oncology patients in hospitals, and schools in Kolkata's slums that serve impoverished children and build adult literacy programs. The Literary Club focuses on the development of writing, presentation, and facilitation skills among its members. This club also supports poetic inspiration and provides opportunities for student to share their poems and other written compositions. Finally, the Cultural Club builds cultural awareness in the school by hosting a variety of cultural programs and art exhibits, develops in students the skills of artistic expression through classical Indian music and dance, and helps students appreciate cultural differences in the country and in the world.

During Saturday School the students can participate in many other activities. These include: Western vocal music, creative dance, instrumental music, public speaking, photography, clay modeling, and more. Moreover, there is a daily sports program, as well as a Learning Pageant that is held every six months. The Learning Pageant is a student display of their learning that is attended by parents and other community members. Exemplary projects are then displayed in the halls of the school and remain there for some time.

Ideals and progress class. The students, teachers, and administrators cited

another co-curricular activity, the Ideals and Progress (IP) class, as being

especially helpful to students in finding their life purpose. As one student put it,

as a result of participating in the IP class, "I have no problem understanding my

life purpose." Another student stated that the "subject IP has helped me a lot to

understand what is life and has made me strong in many ways and has helped me

make important decisions in life." When asked to explain why the students

reported through their survey that they have a sense of personal meaning and life

purpose, one teacher remarked that,

> In my opinion, perhaps this is because of the emphasis that we have
> on value education. This is something that we, once again, very
> consciously follow… we have an IP class, an Ideals and Progress
> class, which deals with value education, per se.
>
> Rangeet (M7/Geography)

The curriculum for the IP class is composed of readings from the works of Sri

Aurobindo and Mirra Alfassa, who inspired and articulated the Integral Education

philosophy of the school, as well as other activities designed to help students

develop an awareness of themselves as individuals with purpose and meaning. A

follow-up email from the school's coordinator for the class reported the following:

> The Ideals and Progress classes are held for all, classes I to XII,
> once every week. The duration of the period is 45 minutes. We
> have prescribed books written by the Mother or Sri Aurobindo
> from Class III onwards, keeping the understanding level of the
> children in mind. Through these books they come to know about
> the Mother and Sri Aurobindo. We also try to help them to imbibe
> good values through the stories written by them and others. These
> classes also help them to voice their opinions on issues, which can
> be as diverse as the environment, necessity of having festivals or
> relationships depending on their age group. Once, I remember, over

2 weeks class VI had a very lively and interesting discussion on the twenty-20 cricket match where the main focus became patriotism or the lack of it! Teachers have tried using music, as an instrument of building and improving concentration, in these classes with very interesting results. Once when a monsoon raga was played, 70 children had come up with 70 different drawings, the only common thing being the extensive use of blue colour without even knowing the theme of the music. These classes help us to know the children better. Even the shy ones contribute in the discussions. The discussions help them to think and encourage them to ask questions. We make a humble effort, through these classes, to facilitate the spiritual development, to encourage and inculcate a sense of beauty and discipline.

The following books have been prescribed:

Class III -	*Ideal Child*
Classes IV & V -	*Tales of All Times*
Classes VI & VII -	*Sri Aurobindo and the Story of His Life* and *The Mother on Herself*
Classes VIII & XI, XII -	*Sri Aurobindo and His Ashram*
Class IX -	*Light for Students*
Class X -	*Call to the Youth Of India*

Sipra (F17/Admin)

This class is especially important in that it represents a core value that forms one of the central tenants of the Integral Education philosophy, namely, the essential process of "becoming conscious." As we will see in the sections below on the Cognitive and Motivational Component of Meaning and Purpose, the educational aim of helping students develop self and global awareness that this class specifically addresses represents a core value in the school.

Travel. Travel is an important component of the school program that the school leaders believe can impact the sense of purpose among the students. The exposure to other places, organizations, and the very act of traveling in groups, all

provide the opportunity for students to consider where life might take them. Through their education beginning with grade 7, with the exception of grades 10 and 12 when the students prepare for and take board examinations, the students travel to several places where they are exposed to a variety of communities and participate in activities that have the potential to foster meaning. In grade 7 the students go to the intentional community and village, Ushagram, where they spend two days learning about how to live in an intentional community. In grade 8, the students spend three or four days at the famous Shanthiniketan, a school founded by the renowned Bengali poet, Rabindranath Tagore. Ninth graders go on an extended 10-day excursion to Pondicherry, where they spend time at the Sri Aurobindo Ashram and its school, the Sri Aurobindo International Centre of Education (the other school that is the subject of this study). Finally, the students travel to Nainital, a well-known hill station of India, during their 11th grade year, where they hike and enjoy the peace and serenity of nature.

As one may expect these outings are some of the most highly anticipated components of the school program. Teachers, as well as students, all look forward to these journeys since they provide many students with opportunities they may not enjoy otherwise. Anindita (F21/English) succinctly highlighted the impact of one of these excursions on students when she spoke of the ninth grade visit to Pondicherry: "Every year we take class nine to Pondicherry. And after coming back, we observe a sea change in them."

Appreciation cards. One specific practice in FFS that was hailed by teachers and administrators as an important way they address the affective needs

of the students is the handing out of appreciation cards. This recognition of a

student by a teacher is said to be a valuable tool to celebrate the gifts that students

bring to the school. Any teacher who recognizes a quality in an individual student

that warrants celebration can hand out an appreciation card at anytime. The

school principal, Sankar, provided the rationale for this practice:

> We try to find a way to give a certificate of merit to every student.
> … could be for coming to school on time, it could be just you
> know… something… we invent things… on participating well in
> class... playing something well... you name it. So they know that
> academics or academic results are only one part of what the school
> is looking at, because it respects and recognizes so many kinds of
> accomplishments that they might have. So, I guess, that almost
> gives them a sense of equity. That if somebody is weak in math
> then he's good in English; if he's weak in academics, he's good in
> sports; if he's weak in both then he's good in some co-curricular
> activity; if not anything, at least he's coming to school on time.

<div align="right">Sankar (M11/Admin)</div>

As students collect appreciation cards, they feel supported for their efforts in

school. These efforts are further recognized during monthly assemblies in which

students receive awards for each set of 15 cards they have accumulated. The

teachers and the school administration maintain meticulous records, so that they

can ensure that every student is recognized for something. This practice is

conducted in lieu of student rankings for academic achievement, which is a

common feature of report cards in most schools in India.

Impact of board examinations. An important requirement in FFS, like

most other Indian schools, is that the students must pass board examinations. The

non-governmental Council for Indian School Certificate Examinations administers

the board examination for all students in grades 10 and 12. FFS is one of 1,600

Indian schools served by this council. Because these examinations determine

qualifications of each student for his or her future educational and career

advancement, these exams have a huge impact on the learning environment of

FFS.

This social reality of the Indian educational system often creates a tension

for all the school's stakeholders, who must find ways to reconcile the ideals of the

school with the need to provide a strong academic program that will help students

to successfully move on towards higher education. As one teacher put it, they are

"time-bound" and are thus hindered…

> a little bit, definitely in trying out new methods of learning or
> teaching, whatever. If you consider enjoyment to be a parameter in
> learning, then that level of enjoyment would definitely be there
> more in classes that are not constrained by the board criteria… In
> our country, unless and until you do well in a public examination,
> somehow your social acceptance is not there. This is unfortunate,
> but it prevails. It still is there.
>
> Dipali (F15/Chemistry)

This reality of the Indian system of education, and its impact on all the

stakeholders associated with the school, is something that cannot be ignored.

Indeed, the following conversation between two administrators merits full

reporting as it illustrates how the school leaders have basically reconciled

themselves to this reality:

> Shubhra (F8/Admin): In senior sections, to some extent, especially
> in class XI and XII, where they are thinking of their career, it's not
> only students who are thinking. So, they're forced to think by their
> family members, parents mainly… we find students who used to
> enjoy other activities, extra curricular activities, they withdraw.
> They are forced to withdraw, because their families are forcing
> them to take part more and more in studies and other exams,

competitive exams. So by the time they come to class XII, they are forced to change… the focus shifts.

Salmili (F15/Admin): Yes, the focus shifts.

Shubhra (F8/Admin): And they are feeling helpless, but they can't do anything about it. We also, sometimes we feel… at least myself, when they come to me, sometimes I don't have a proper answer. How can I say, "OK, go for this work, not math", when I know that the next day they have an important exam? I can't do that myself, because I won't help them in the college admission. Therein lies the problem with senior students.

Salmili (F15/Admin): If we could provide them with college education right up to university, it will help...

Shubhra (F8/Admin): You cannot blame the parents also; you really cannot blame them.

Even as the school is reconciled to this reality, it does provide a means to help students cope with it. During examination time, the tension can become quite strong. One way the school tries to counter this is to give the students time to calm themselves down through listening to music, concentration, and by giving them blessings in the form of flower packets sent from the Sri Aurobindo Ashram in Pondicherry. This approach is seen as a positive and meaningful way to deal with the stress brought on by the board exams:

> What struck me today, another really nice factor of this school is when children appear for the board exams everybody's tensed: the parents are more tensed, teachers have their hearts right here in the throat, everything throbbing with the home center children coming in. On the first day they are taken to the Samadhi. They sit there, concentration music is played, Mother's blessing is given to every child, and everybody calms down with full concentration. When they walk into the testing hall they are about themselves, ready to face anything, including the boards.
>
> Dipali (F15/Chemistry)

Overall, these program components are specifically designed to offer a holistic educational experience to the students in the school and to help them explore and appreciate themselves and the world around them. In doing so, students are given the opportunity to seek inspiration through constructive and meaningful activities, develop a sense of personal and social responsibility, self-efficacy and agency, and build skills that exceed those that are fostered in learning environments that focus primarily on academic achievement. Moreover, these co-curricular activities allow students to find joy in their endeavors, and to learn how to discover and create meaning in their own lives. However, the tension between these aims and the social reality of the Indian educational system that depends upon high-stakes board examinations is a factor that the students, teachers, administrators, and parents have to cope with.

Relationship Domain

In the qualitative SEM results, Teacher Support was the variable classified under Moos' Relationship Domain that was found to be meditated by Agentic Personal Meaning. Therefore, data from the student written responses and the teacher and administrator interviews related to this variable are reported here.

Teacher support. This variable received the greatest number of comments by the teachers and administrators, and by the students. Most students characterize teacher support in various terms related to trust, bonding, and an openness of teachers to paying attention to affective as well as academic needs. Moreover, the students often expressed gratitude for the support their teachers give them, particularly with regard to academic and emotional support. The

students spoke of a bonding between the students and teachers grounded in an

atmosphere where students feel comfortable asking questions and sharing their

feelings. It is interesting to note that most of these comments reflect teacher

support with regards to meeting the affective needs of students. Academic support

is not specifically mentioned, except perhaps with regards to teachers being open

to student inquiry; that is, allowing students to ask questions.

One idea that students, as well as teachers and administrators, conveyed is

that the school has a familial atmosphere in which students can freely approach

teachers with their problems and concerns. As the principal of the school said,

> It's very informal. It's almost like family, a family where you can
> express yourself very freely without being always scolded. I guess,
> in India you still have an environment, which is hierarchal, but
> whereas here teachers are sometimes friends. There is a particular
> teacher, [Rangeet]. He almost looks like a student. He brings his
> teacher's desk so close to the student, some times you get lost. Is
> he a student or a teacher? It is very comfortable, very familial kind
> of context in which the school functions.
>
> Sankar (M11/Admin)

A student corroborated this when she wrote,

> My school has always helped and guided me in my education. Our
> teachers are extremely friendly and it's a SECOND HOME in the
> real terms. The education is excellent and our queries are always
> attended to. There are friendly discussions and seminars in our
> class, which help us to understand ourselves better.

Dipali, also stressed this aspect of teacher support at the school, but added that the

students take care of her as well:

> We call it the second home and we mean it. Here the children come
> and cry on our shoulder, we cry back if we can't solve the problem.
> Like, you know, I tell you, in a circle when we are sitting together
> when I can't solve the problem, I get it to the children, and all of
> them are thinking together because they know I am in trouble if I

can't find the answer. They try to help, and they come up with these solutions, which is really good. I often pretend that, you know, I am the very weak one with so many of them across the table. They have to take care of me.

<div align="right">Dipali (F15/Chemistry)</div>

Student trust in their teachers was a theme related to teacher support that was repeatedly mentioned by teachers and their students. One student reported that the "teacher-student relationship in my school helps in being more comfortable with them in asking queries…" Another remarked that, "we always feel free to approach the teachers if we have any problem." Still another stated that her "teachers always take special care of me." One of the administrators characterized the environment of the school as being "informal" in which teachers play a much larger role in the lives of students than merely as academic instructors,

It is a very informal atmosphere, and the children find no problem in regarding teachers as friends… They are for a shoulder to cry on, listen to their family problems. Whenever there is something they need to discuss, which they cannot discuss at home, they will come and freely speak to their teachers. They are their friend, philosopher, and guide.

<div align="right">Salmili (F15/Admin)</div>

The teacher of history, Laboni, mentioned what she called, "Focal Time", in which she is able to be with the students in an environment of trust and safety:

We are all sitting together, usually in the Hall of Light, where we all sit in a circle and try to solve each other's problem, where I am a part of the students. I'm not a teacher. I'm not a facilitator. I am one of them, always ready to listen to them.

<div align="right">Laboni (F7/History)</div>

Riddhi also emphasized how the teachers go about creating an environment that is high in student trust:

I think, over the years, they have seen that we are more friends than teachers. We are here to help them and not to criticize them, because we do not discriminate. Each child is taken as an individual with his or her own problems and this they have understood over a period of time. So, they know that if they come and tell us something, we're not going to mock at them or make fun of them. We are always very patient when dealing with these children. We have no corporal punishment. So, that's the kind of trust that they have.

Riddhi (F7/Physics&Math)

When asked to explain this, several of the teachers and administrators cited the small school environment and the relatively small class size compared to other schools. Often schools in India will have a student teacher ratio of up to 1 to 80, whereas at FFS it is 1 to 40. According to the school principal, Sankar, the ratio means "that teachers, presumably, would get more time relating to their students and also discussing things among themselves." The school itself, moreover, is comparatively small, with about 1000 students from Kindergarten to 12th grade. Again, Riddhi states:

Maximum, we have forty students. So, that means that we can pay our attention to the individual child. They are very close to us… In other schools, students are known by their roll numbers. In many of the schools, the teachers don't even know the names of the students… I am teaching from 7th till like the 12th standard. So, my relationship starts from seven, and so by the time they reach eight or nine, there is a very close relationship. We start from an early age. By the time, they reach ten or twelve, it's a very close friendship. Any time they are welcome to come to us.

Riddhi (F7/Physics&Math)

When it comes to school discipline, the teachers stressed that they do not use corporal punishment or force students to do drill and kill academic work as a means to impose discipline. Instead, students are either counseled by teachers or

administrators, or sent to counselors when they misbehave. As the Math teacher, Laboni, says,

> No punishments. We go for counseling. We take the students to the counselors. We have two counselors. Even if they're naughty the students will be counseled. We never give them any punishment. Which, I detest. If the punishment ever counts for imposition, [laughs] I obviously never give impositions. We never give them, say, 100 questions - sums especially sums – as in some schools I have seen. "You do 100 problems and then come. That's your punishment." Oh, they love mathematics, why do you want to treat it as a punishment?
>
> <div align="right">Laboni (F20/Math)</div>

However, this learning environment of trust and familial relationships is not without it's challenges, for sometimes too much familiarity can lead to what may be considered by a teacher to be disrespect. According to Laboni,

> We are more informal with the students. That is why the discipline area is a bit weak over here, I would say. Because teachers give them so much support, at times there is that limit that is being crossed, so then they become very informal with the teacher. That is why I would say discipline is not under control… You have to keep a limit. You have to have arms length with them. Then they know that they have to also respect the presence of a teacher… If we become too friendly then that becomes difficult for the group to understand and it should not be that way… and joking… you know, doesn't look nice in the class.
>
> <div align="right">Laboni (F20/Math)</div>

To conclude this section I would like to share the following quote from a student in which she outlines all the ways in which the support of her teachers have affected her. It is clear from this student that she feels the teachers have provided her with many opportunities to discover meaning in her own life:

> I joined this school in class one. Frankly, I would not have been what I am today without the help and support I have received from this institution and I will forever be indebted to them. The vast opportunities they have provided me with, the way they have

supported me throughout, recognized my talents, and helped me nurture them… I wonder where I would have been today if they had not guided me. They have boosted my confidence… encouraged me to participate, shake off my fears, and go up on stage… In the process I have discovered myself… they have been able to spot my potential…

Personal Development Domain

In the qualitative SEM results, Task Orientation and Cooperation were the variables classified under Moos' Personal Development Domain that were found in the SEM results to be meditated by Agentic Personal Meaning. Therefore, data from the student written responses and the teacher and administrator interviews related to these variables are reported here.

Task orientation. In the student survey, Task Orientation had the highest mean among all the learning environment variables (4.13 on a scale of 1-5, equal to "Almost Always"). Essentially the students were reporting that they are good students who understand what is expected of them in school and are almost always on task. However, Laboni expressed the view that the students "are not very focused; we have to motivate, guide them a lot." She states that the score of 4.13 is too high, and that she would expect the score to be closer to 3.0. According to Bandana (F14/ComputerScience), "when it comes to assessment they become little more serious than when they are normally…" However, as Kritika pointed out assessments go on all the time:

> We have continuous assessment as well as board tests. The continuous assessments cover about 50 marks throughout a term, and board tests a hundred marks per subject. So, at the end of each term, their assessment is a total number of 150 per subject.
>
> (Kritika, F14/Biology)

Given the continuous assessment and all the activities the students are involved

in, it may be that the students are justified to feel that they are very much on-task

at the school.

Cooperation. The teachers emphasized that they are creating a

noncompetitive environment. They stated that competition is minimized in the

school, and that the students have many opportunities to cooperate with one

another. These opportunities occur in the classroom, in clubs, and in Saturday

school.

One reason cited for the sense of cooperation in the school is that the

report cards issued at the end of each term do not include rankings. Rankings are

a common feature in Indian schools, but not in FFS, according to several

teachers.

Manjima (F20/History) cites the cooperative nature of the clubs, in which

"we consciously ensure that there is greater cooperation among students, both

within and beyond the club, in order to complete specific projects" (Manjima,

F20/History). She adds that the cooperation in the clubs carries over into other

areas in which "cooperation is transcended beyond specific project avenues…"

Additionally, Neera, who provides curricular support to the teachers, stated that

the school has been doing a lot of cooperative learning in the school, so that the

students "have got accustomed to working together and cooperating with each

other, they consciously do that in their projects and themes, etc" (Neera,

F6/Admin).

Agentic Personal Meaning

The mediating variable for the quantitative analysis of this study was Agentic Personal Meaning. This construct consists of three components. The first component, Purpose, is a sense of direction from the past, in the present, and toward the future. Purpose provides thrust and direction to one's life. The next component of APM is Coherence, which is sense of order and reason for existence, a sense of personal identity, and greater social consciousness. Finally, the third component of APM is Choice and Responsibleness, which is being referred to here as Agency. In this study Agency refers to the degree to which a person perceives to have personal control in directing his or her life and accepts responsibility for choices made in life. In the following section, data provided by the study participants related to these three components of APM are reported.

Purpose. As can be seen from the following comments, for some of these students purpose is considered to be same as one's choice of career path. For others, it is a general sense of serving a higher aim. For their teachers, the choice of career is not as important as the underlying values or principal aim in life that the choice is based on.

That the sense of purpose is tied to decisions around career among students is indicated by the data. For example, several students cited "career counseling" sessions as being helpful in developing their sense of purpose. According to one student, these sessions take place for classes in grades 10 and 12. Another stated that these sessions, "help us to make the right choice." Manjima (F20/History) mentioned that these career sessions "go on and on" thus indicating their

importance in the school. However, the teachers also stressed that the choice of career is a subset, or outcome, of a deeper sense of purpose. The following discussion between Dipali and Manjima merits full reporting since it specifically addresses this core value in the school:

> Dipali (F15/Chemistry): Here, I am not talking actually about professional career. Aim in life goes far beyond.
>
> Manjima (F20/History): That transcends professional career, but sometimes for some people; see for example, I wish to become a doctor…
>
> Dipali (F15/Chemistry): And how to serve and make other happy through it.
>
> Manjima (F20/History): I do wish to become a doctor because that is summarizing my aim in that.
>
> Interviewer: So, then you would make a clear distinction between the deeper purpose that underlies a clear choice and the career choice itself?
>
> Dipali (F15/Chemistry): Yes, it's definite. Making them conscious also. To become a doctor, become an engineer, what is the end? To what end purpose? You are happy with the work you are doing; you are making others happy? Serving? OK. You are enriching society and getting back from society? If you finish off with that, we don't get back anything from there, and we have nothing to give. Aimless life…

I would like to note here Dipali's reference to making students conscious, as well as the phrase, "aimless life", which refers to the quote of Mirra Alfassa, I cited in Chapter 2. The emphasis is not only on the choice of career, but more importantly on the underlying core value, or purpose, informing and supporting that choice. This aim is a critical intention in the school's approach to education.

Along these lines many students emphasized the values of the school and the teachers in helping them with finding meaning and purpose, some in very explicit terms. For example, a student said that, "my school has very high spiritual and moral principles from Sri Aurobindo's and the Mother's teachings which moulds the way I look at life. I now know my purpose of life and what I need to do to achieve it." Another said that his "school has encouraged me to find the real motive behind our lives. It has also helped me to determine my aim in life." Another student mentioned his "strong" sense of personal identity, and attributed this to the fact that the "teachers have always guided me in finding the purpose of my life…" Finally, in this lengthy quote, a student is speaking of the inspiration and experiences the school provides her:

> My school has taught me a lot in terms of life… I believe it in many ways has actually inspired me a lot… I have come to know a lot of things from this school… it has given me a lot of experiences, some good some bad, from which I have learnt a lot… it has helped me to find a purpose… My school is one of the most important parts of my life because it has helped me to be what I am today, and it will always be responsible for what I will be after some years or so… The way it has helped me to find a purpose was by introducing to me a lot of new faces, a lot of experiences…

The teachers and administrators, too, discussed at length the importance of meaning and purpose in their work with students. For Dipali, it's all about finding one's happiness in one's life and work:

> I tried to convey this to others, you know, because small children as they are and we as parents are always telling them to study, do well, get marks. I often ask them this question, "What do you think is your aim in life?" And we have come to one conclusion… that our aim is to live a happy life. Whatever we are doing, take satisfaction out of it, be happy, and make others happy. So, whether we are a cobbler or a doctor or a teacher, that doesn't matter. OK, a

> cobbler can be valued equally… He is actually a patriotic person. He is working for the nation. But, if I become a scientist, and I use my knowledge to hurt people, kill people, then what am I doing? I am making so many people unhappy around me. So, always, there is this aim; what is my aim…?
>
> Dipali (F15/Chemistry)

This emphasis on personal happiness or contentment, of service, of finding an aim that is existential, that is dedicated to something greater than oneself, is a theme that came up repeatedly among these teachers and administrators.

This is applied in practice in the approach to teaching and learning, particularly when it comes to experiential or hands-on learning. And this is explicitly related to purpose, as Manjima (F20/History) said, "As long as they are in the school, whatever they are doing must be taken as an experience of learning. Be it school activity, be it academic activity, co-curricular activity, club work. So, that sense of learning, that sense of purpose is always there." Laboni, another History teacher, spoke of taking her class to the Ganga River to experience directly; "feel it", as she said, the pollution that is regularly dumped into that most revered of Indian rivers. For Laboni, this emphasis on providing students with direct experience, as opposed to book learning, is what it means to her to be a teacher:

> Experiences. Hands-on experience is always being provided to them. When we are teaching history, for example, since I am a history teacher, we try to make the things so interesting for them. Because for me, when I was in school, it was a very boring subject where we had to learn about some king, some queen. What they did, or what they did not do. For the very first time, as a teacher, I began to take interest in the subject because I was telling them not what one person did, but what humanity did together. I remember in Classics, which I always do when I initiate them from six onwards… they all work like detectives. Because historians have to

be detectives, detecting clues, drawing conclusions from them, and immediately the entire thing transforms… It is no longer a book that is important. They learn. Doing is learning. I believe in it, and my children also, therefore, love the subject.

Laboni (F7/History)

Here we see the deep connection between meaning and purpose, meaningful learning that is experiential, and how these not only help students develop a love of learning and of their subjects, but also help a teacher appreciate her own purpose in being a teacher.   However, lest we are given the impression that things are absolutely perfect in this school, one teacher offered a caveat to say that more needs to be done in this respect:

We have a long way to go. We are making our efforts, but I think we need to communicate with the children what their purpose is in school and in their life. They should probably be a little more proactive, trying to find out the meaning of life, and more about deeper education; not only students, even teachers.

Riddhi (F7/Physics&Math)

Nevertheless, the effort is being made, as Anindita said,

We try to inculcate values through whatever we are teaching, through any subject. It can be any subject, and we try to teach them that textbooks are not the only things. You have to correlate it with the real life. And there is a purpose in life. This we try to inculcate constantly, and they reciprocate also.

Anindita (F21/English)

The data provided by the students, teachers, and administrators provide ample evidence that the development of purpose in students and even in teachers is an important value the school stands for. Indeed, the school and its staff appear to have embraced this core value and translated it into specific practices in

teaching that impact student learning. While the sense of purpose is important, so is Coherence, as will be shown next.

Coherence. In the previous section we have seen how the development of purpose can support one's sense of personal identity. The sense of personal identity, of order and a reason for existence, and of a greater social consciousness is what is referred to in this study as Coherence.

This broad cognitive component of meaning received the second greatest number of comments among all the themes for these students. Many students spoke of Coherence in their written responses. For example, one student said that the school "has helped me to look beyond the 'me-myself-and-I' circle… thus making me aware of… selfless joy." Another stated, "that we are in this world to give it our best gift." One student spoke of how she has "gained a lot of knowledge about life itself. My school has given me the true education about the principles by following which I can prosper in life." Another student said that the school helps her to "become more conscious as a human being."

Yet another student stated that his school has helped him to "realize my true identity as an individual…" In this quote, a student is relating how the school has acted as a guardian in her life and has helped her to cultivate her sense of self:

> My school has always been there by my side, as guardian. It has been throughout my 11 years' stay in this school. The school has helped me in building my own personal identity and in finding who I am. The school has also helped me to work for the world, and spare some moments to think and act about the millions throughout the world who are a lot underprivileged than myself. As a whole my school has played, or is still playing, in building up the integrity and social character of myself.

Notice how she also emphasizes how her school has helped her to develop a sense of social consciousness, a sense of personal responsibility for larger social concerns. Indeed, she is essentially saying that her school has helped her to develop an existential sense of meaning in life, one that transcends the personal self and can have consequences for the world beyond the self.

The teachers offered a number of comments to explain how the school environment develops in students the sense of Coherence for meaning. For instance, Laboni, mentions how the environment fosters a sense of order for students when she said, "Even the school ambiance is such that students should have the aesthetic sense, cleanliness. I think most of the school students have understood by themselves." She also spoke of "a zeal of empathy" that comes from "interactive learning, which is for the society, especially for the underprivileged children."

The teachers also addressed how the school fosters Coherence among the students. One way is through the Integral Education principle of "becoming conscious" that is expressly integrated in the spiritual discourse between teachers and students. And this is something that, according to Kritika, she does not see among the children she knows who attend other schools:

> I don't think we find children in other schools asking such questions because we have our relatives, we have nephews and nieces. They normally don't come up with these types of questions our children ask. Because they have this environment where they are getting a feedback, and they are probably... this trigger point is there, which makes them think. Words like being 'conscious.' So, they will ask you, "What is 'being conscious?'" They ask about the

soul. They're asking about soul, because we talk to them about this soul. So, these are words that they are familiar with, you know.

Kritika (F14/Biology)

This ideal of becoming conscious forms the bedrock of the Integral Education philosophy the school follows and, as we have seen, this theme comes up repeatedly in the comments provided by the participants in this study.

We have already seen how many of the program components can help students discover meaning in their lives. However, the spiritual atmosphere of the school plays an important part as well. Earlier a teacher mentioned that students go to the "Samadhi" where they can concentrate, and receive flower packet blessings to help them calm down before taking board exams. The Samadhi spoken of is a center attached to the school in which physical remains of the spiritual teacher, Sri Aurobindo, are interred. Here, as in the tradition of the Catholic Church, such remains are called "relics", which signifies the physical presence of the spiritual master. The school principal, Sankar, shared the significance of the Samadhi in the school environment, and how it, along with the IP class, can support the students in developing a sense of coherence for meaning:

> We have Sri Aurobindo's relics here in the… school. If you stroll into that place any time of the day during school hours, immediately after or before that you see a number of students who go there. They not only go to pray for doing well in exams, they also go because they are probably trying to connect with life's larger purpose. And I guess that is also supported by the Ideals and Progress curriculum that they have.
>
> Sankar (M11/Admin)

Additionally, various programs support this sense of meaning, according to Sankar. Such programs as the celebration of Sri Aurobindo's birthday on August

15 (which also happens to be India's Independence Day), as well as other Indian festivals (called, "pujas"), provide social avenues for all stakeholders in the school to experience meaning in their lives.

An important outcome of all this is that former students often return to the school for these celebrations. They come back, as Sankar said, to reconnect "to their own life purpose, growing further and further in their own life, and yet reaching back to their roots. For many of them this place represents their roots." When they return, the former students share what they are doing in their lives with their teachers. As Riddhi said,

> A few ex-students have come back and told us that they have joined NGOs, where they are working for communities, doing social work, and they are enjoying doing that. And they are also sensitizing immediate neighbors regarding environmental issues, social issues…
>
> Riddhi (F7/Physics&Math)

Indeed, this is perhaps one of the important outcomes of the school's learning environment, for the data suggests that its students have developed a sense of meaning and purpose they are acting upon, both at school while being students, and also later in life as they move out into the world. However, in the theoretical framework for this study, purpose and coherence for meaning are only two parts of the mediating variable, Agentic Personal Meaning. Next we turn to the motivational component, Agency.

Agency. The third component of Agentic Personal Meaning is Choice and Responsibleness, which is being referred to here as Agency. In this study Agency refers to the degree to which a person perceives to have personal control in

directing his or her life and accepts responsibility for choices made in life. The following comments indicate that among these students the sense of Agency is an important quality that the school has helped them to develop. This broad motivational component of meaning received the greatest number of comments among all the themes for these students.

An important aspect of Agency is the sense of personal responsibility. A number of students specifically said that the school has helped them become more responsible. One student summed up all the components of Agentic Personal Meaning, including agency when she said, "My school has given me a sense of purpose, a sense of responsibility and has made me understand the true meaning of life." Another student stated the she personally feels that the school "has given me confidence, determination, and a purpose in life." Another student acknowledged that he is ready to confront life challenges and that the school "has shaped my character in such a way that I will be able to thrive and succeed in this competitive and harsh world in my future." One student cited the education and values she received from being at the school: "My school has indeed helped me to find the purpose of my being. The faculty has greatly helped me to gain self-confidence and has imparted both academic and value based knowledge." Other students referred to the improvement of "my confidence level" or how the school "showed me how to believe in myself." Another student flatly stated: "I have gained much knowledge from my school and I believe I am going to succeed in my life."

The teachers also discussed how they foster in students this sense of agency. One teacher emphasized that the school seeks to help students become independent even as they learn how to accept interdependence in the social sphere. This was attributed, in part, to the various work the students do with the clubs, as well as the experiences they enjoyed through their travels. As the History teacher, Manjima said,

> We are always emphasizing self-dependence and interdependence. And somehow there is no conflict between these two ideas. I can be… independent, but I can also respect the fact that… there are certain things I have to do myself. But without the harmonious relationship with others around me, I won't survive. I mean it is this harmonious relationship that gets maximum emphasis… this sense of interdependence and social responsibility… There is definitely a greater sense of responsibility in our students. It develops. Somehow it develops, the sense of responsibility, the sense of belonging…
>
> Manjima (F20/History)

While the teachers and students credit the school with fostering agency in the students, Sarbani (F9/EconomicsMath) believes this is also a trend all over India:

> I am talking of the present generation. I find they are more courageous. I mean they can speak out their mind, more than we did. So, it's a general trend that's here as well, but I believe that it's a general trend that's there. So, where we sort of hesitated, these children, the modern generation kids, they don't.
>
> Sarbani (F9/Economics&Math)

To conclude this section, it is evident from the data that the school has fostered all the components of Agentic Personal Meaning for the students. Not only does the school philosophy call for the fostering of meaning and purpose in the lives of students, but the teachers and administrators also seem to have internalized this ideal in their own thoughts and actions. It appears that at FFS the

aim of Integral Education to address the academic and affective needs of learners

is respected and strived for. Evidence from the students suggests that they are

expressly aware of the school's efforts to foster in them a sense of life purpose and

coherence for meaning, as well as the confidence they will need make choices and

take responsibility for continuing their search for meaning, and then manifesting

in their lives the values and actions that will help them fulfill themselves as

conscious individuals.

Unique Stories

I will conclude this section on FFS with five stories the teachers told about

their students. One of these stories was shared by three separate focus groups,

indicating that it has become a part of the institutional memory of the school. All

of these stories are about how students demonstrated courage, conviction, social

responsibility and action, or dealt with the stress of taking exams.

The young man with cerebral palsy. The following story is a composite

from statements by the FFS teachers, Kritika (F14/Biology), Anindita

(F21/English), Bandana (F14/ComputerScience), and Riddhi (F7/PhysicsMath).

> When you are talking of courage, I think we should mention X as
> an example, an ex-student of our school. He was physically
> challenged. He was suffering from cerebral palsy. But, he never
> gave up. His writing was such that we had a lot of difficulty. But,
> we tried to give him as much support as we could. And he has
> passed out with flying colors, and he is absolutely wheelchair-
> bound, presently, but he has not given up. He is doing his…
> Master's in business or in computers.
>
> There was a lot of suffering for the last two years. He was
> almost… he had to get enough of that. He is teaching children. It
> had come out in the newspapers also. That it was because of the

school's support that he's able to continue. It was shown on the television.

He was very sound at the academics also, very sound. He would use four sheets of paper to write, because when he wrote he would tear through the first and second sheet and then the teachers would rate it, and give him all the time that he needed to complete the work. But he never gave up. He was always smiling.

And he keeps coming back to school… on his wheelchair.

Fighting against female infanticide. Rani (F7/Physics&Math) shared this

vignette about her daughter:

My child has joined the NSS, National Service Scheme. That came from here only. Any good cause she would start writing a poster, or doing a chart, then posting it on the local college campus. So, definitely, I am 100% sure that that came from the ideas and values inculcated here… College students never go for this, but she is always the first one to address any social issue. From where will it come? All of a sudden, it will not come. It started from here only. I am 100% sure. Otherwise, how can I put that into the child? She is automatically creating posters, or something, for a good cause.

Female infanticide: she was very strongly raising the voice against that. I think, somewhere she has read where Sri Aurobindo or the Mother was referring to, I don't know, the importance of a female child. So, then she said, "Mama, I have read about this, the female child, how important is she to the society." So, she raised her voice against female infanticide. In India, that is a great issue now. So, I was really happy… Then she came up with some quotations of the Mother and Sri Aurobindo where Savitri is the ultimate thing. So, she found some quotations from Savitri, where Sri Aurobindo has spoken about women or the girl child. So my daughter asked, "Why they are destroying the girl child? Sri Aurobindo has spoken very highly of the girl child. Why do people want to destroy her?"

Providing support during a time of stress.

I can tell you what happened. It was a geography exam, final exam. The students were called one by one by their visiting examiner. She was from another school, a new teacher to them. The rest of the students were waiting. They were very tense about

how to go on their examination and how to get the marks, so they looked very tense.

Two of them came out. They just sat in front of me and just came to say that they were scared. "We are tense." So they share. Even the small things they came to share. And they looked at my table, full of papers and said, "Ma'am, you are very busy. We understand. But, we wanted to talk." And I said, "It is OK. So come and sit."

So, they just sat there and shared their feelings, and after five minutes of talking, not of geography or anything else, and they felt better. I told them, "You will do well." So they left happy. This kind of freeness and sharing is always happening. Every moment it happens.

<div align="right">Sipra (F17/Admin)</div>

"I never realized we should think for ourselves."

We had one child at that time whose mother was a Muslim from Bangladesh, and he talked about the kind of discrimination he faced. A speaker who came and did a workshop with the students told me later that he was astonished at how articulate our children were, how they were thinking, and so on. And various questions were raised. This is where in terms of identity, particularly ethnic and religious identities, that the teaching of history makes such a difference, because certain mindsets get fluctuated.

So this old question came up about Muslims, and so on. And one of the children said, "But you know the man in our book says this." So then there was a discussion led by this man who asked the students about this. Do we accept what books say, shall we not question what books say? And, I remember, I have such a clear recollection of one of the girls getting up to say "I never realized we should think for ourselves about these things." They were thinking but still the written word is often taken as a received wisdom and knowledge that has to be accepted.

And so I often tell our history teachers in particular, that you know apart from everything else you are teaching attitudes. So never forget that and I must say our history teachers are doing really a good job.

I hope we are nurturing it sufficiently, but we have long way to go still in cultivating that questioning attitude, because our culture doesn't encourage questioning elders.

<div align="right">Neera (F6/Admin)</div>

A young girl speaking out for the trees. Participants in three different interviews related this story. This version was shared by Neera (F6/Admin):

I think many of our teachers try very hard to give them that sense of meaning. I will tell you a story. This happened about three years ago. And I think it was a girl who was then in class five. You know, we have our Durga Puja celebrations here. As you know it's our biggest festival… Durga Puja in Calcutta. And we have these disciples that come to visit the temples, and so on.

On the 10th day of the puja, the idols are taken in procession to be immersed in the river. They are taken on trucks. They are so big that they can't sometimes go through the streets. Over the years we now have thousands of these little pujas happening all over the city. Almost every neighborhood has one. People have started creating these puja committees. And they started the hacking of trees. They hack away at the low branches of trees in order to make room for the goddess to go.

And this little girl came out of her home one day and found that during her local neighborhood puja the boys – there are always young boys who are put up to doing this by the puja committees - were cutting the trees. And she created such a hinder. I think that she and her mother were going for shopping and she refused to bhajan (sing). She began crying and said, "How can you do this? You are not supposed to do this to trees!" She created such a scene that those boys promised not to do it any more. They also promised to plant more trees. She couldn't have gotten the courage to do that from anywhere, except here in this school.

<div align="center">Conclusion</div>

In this chapter I reported the results of the qualitative phase of this study. The comments and discussions reported here represent the views and perceptions of the participants in the study with regards to the psychosocial learning environments of their respective schools, and their sense of Purpose, Coherence

for meaning, and Agency. The qualitative data revealed that in these schools the students experience a great deal of teacher support in environments embedded in a larger community context. The members of these communities share an existential aim in which the development of consciousness of the self and the world is paramount. To achieve this aim, students are afforded many opportunities through a wide range of co-curricular activities. These extensive offerings to students make them feel they are often focused on their learning tasks. Students expressed satisfaction with their education, frequently referring to the support of their teachers, as well as describing their respective schools as second homes. In the next chapter I will discuss the implications of the data reported in this and the previous chapter.

CHAPTER 6

Discussion and Conclusions

This chapter provides a summary of this study, followed by a discussion of the findings related to each of the research questions. Additionally, the findings are discussed in light of previous research. Implications for practice are suggested in light of the findings, and a program for a future research agenda is proposed.

Summary of the Study

Overview of the Problem

With the national drop out rate in the United States at about 40%, and in California at about 25%, there is clearly a crisis in education today. While it is certainly the case that the public school system in the United States has to deal with a myriad of problems arising from social and economic disparities in the country, educators still have to find ways to create learning environments that help students to cope with the challenges they will face in their future. One important way this can happen is for educators to consider whether or not they are offering students learning environments that address not only the cognitive and academic domains of learning, but the personal and affective domains of being as well.

The problem addressed through this study, therefore, was to identify ways that school leaders make schools and learning environments more interesting, meaningful, and engaging so that students will not only stay in school and succeed, but also develop a sense of personal meaning and life purpose that will serve them throughout their lives. Elevating student quality of life and other global indicators of human functioning as important areas of inquiry in educational research is now an imperative

that cannot be ignored. Studying to what extent and how schools foster meaning and purpose in the lives of students can help educators identify ways to restore a healthy balance in schools, not only for students but for teachers as well. The importance of meaning in human development has been seen to be relevant across the span of life, including adolescence and young adulthood (Damon, 2008; Fry, 1998; Reker & Wong, 1998). Schools, and the environments and experiences they provide, can play an essential role in helping adolescent students become life-long learners who lead productive, value-added lives. This task is perhaps the most important challenge for educators who want to bring about change in our schools by reaching all students.

Purpose Statement and Research Questions

The purpose of the present study was to analyze the psychosocial learning environments in two Indian schools founded or inspired by progressive thinkers and to learn how those environments contribute to students' sense of meaning and purpose, personal agency, and satisfaction with their education in their schools. Three quantitative research questions and several hypotheses guided the study.

1. What are the relationships between students' perceptions of their school psychosocial learning environments, and their global satisfaction with life and satisfaction with their education, as mediated by their sense of personal meaning, life purpose, and personal agency?

Hypothesis 1a: The learning environment variables are related to the observed variables of purpose, coherence, personal agency, and satisfaction with education and life.

Hypothesis 1b: In these schools there is evidence supporting the

presence of Agentic Personal Meaning and satisfaction with education and life.

2. What differences does the data reveal between SAICE and FFS?

Hypothesis 2: There are no differences between the two schools with respect to the relationships between the variables.

3. Does data support the mediating effect of Agentic Personal Meaning upon the relationships between student perceptions of the psychosocial learning environments in their schools and their self-report of satisfaction with education?

Hypothesis 3: There is evidence that Agentic Personal Meaning mediates the relationship between psychosocial learning environments and student satisfaction with education in these schools.

The qualitative research question for the study was:

1. In what ways do school leaders create learning environments that foster a sense of meaning and purpose in their students' lives?

Review of the Methodology

As detailed in Chapter 3, this study was a Mixed-Methods Sequential Explanatory Design (Creswell & Plano Clark, 2006), consisting of two distinct phases in the participating schools. The variables studied have been extensively investigated in past research in three theoretically grounded fields of study: Learning Environment Research (LER), Existential Meaning Research (EMR), and Positive Psychology Research (PPR). A composite survey was administered to students that included

variables from the "What is Happening in Class?" Questionnaire (WIHIC; Fraser, Fisher & McRobbie, 1996), the Life Attitude Profile-Revised (LAP-R; Reker, 1992), and a contextualized modified derivative of the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffen, 1985) that I called the Satisfaction With Education Scale (SWES). Results of the multiple regression and SEM tests using the student data were reported in Chapter 4.

Next, the qualitative phase of the study addressed the qualitative research question through focus group interviews with teachers and administrators in each school.   Transcribed interview data was coded using HyperResearch software. The purpose of the qualitative phase was to build upon the first phase by giving teachers and administrators the opportunity to provide deeper insights pertaining to the qualitative research question in light of the quantitative data. Additionally, to make for a more robust analysis in the qualitative phase of the study, students were provided at the end of their on-line survey the opportunity to provide written responses to three questions that asked them to share what they understand their life purpose to be and explain how their school is helping them to discover their purpose. The qualitative results of the study were reported in Chapter 5.

Summary of Findings

The findings arising from the study are presented here. While each of the two participating schools represented a unit of analysis, these findings are discussed here in the aggregate, except in one instance where a unique finding in one of the schools was discovered.

Research Question 1: What are the relationships between students' perceptions of their school psychosocial learning environments, and their global satisfaction with life and satisfaction with their education, as mediated by their sense of personal meaning, life purpose, and personal agency?

This question was explored using simple bivariate correlation analysis and scale statistics. Significant, positive, relationships were found between all six independent (psychosocial learning environment) variables, the mediating variable (Agentic Personal Meaning), and the dependent variable (Satisfaction with Education). These findings suggest that the two hypotheses for this question are not to be rejected. First, the learning environment variables were found to be statistically and significantly correlated with the observed variables of Purpose, Coherence, Agency, and Satisfaction with Education. Second, in these schools there is evidence supporting the presence of Agentic Personal Meaning among students as well as their satisfaction with their education in their respective schools.

Research Question 2: What differences does the data reveal between SAICE and FFS?

This question was addressed through the testing of the data using independent sample t-tests, the Kenny test of independent regression coefficients, and multiple regression using interaction terms. Whereas the first test revealed significant differences between the schools involving three of the learning environment variables, the effect sizes for Involvement and Equity were small, while the effect size for Cooperation was moderate to high. Further analysis of these effect sizes using the Kenny test revealed that Cooperation was the only variable in which a significant

difference between the schools was found. Further supporting evidence for this finding was obtained by running multiple regressions on the data using interactive terms. Therefore, the hypothesis that there would be no differences between the schools is accepted, except with respect to relationship between Cooperation and Satisfaction with Education. As a result of this finding, Cooperation was dropped from the subsequent SEM tests of the aggregated data that were run to explore Research Question 3. Further implications of this finding are discussed in the section below on the qualitative phase of the study.

Research Question 3: Does data support the mediating effect of Agentic Personal Meaning upon the relationships between student perceptions of the psychosocial learning environments in their schools and their self-report of satisfaction with education?

This question was explored through Structural Equation Modeling. Due to the relatively small number of participants in this study the postulated model was revised to create testable parsimonious models using SEM analysis. Selection of independent variables to include the revised models was determined by multiple regression analyses that identified those with the greatest effects.

In both schools, the learning environment variables, Teacher Support and Task Orientation, were found to have significantly correlated relationships with student Satisfaction with Education that were mediated by Agentic Personal Meaning. Moreover, various tests for the goodness-to-fit of the data to the revised postulated models for these schools were found to be significant. Similar findings were provided in the analysis of the aggregates data from both schools. The data obtained through

this study therefore provides evidence that in these schools the presence of the construct Agentic Personal Meaning (comprised of Purpose, Coherence for meaning, and Agency) among these students mediates the relationship between their perception of their learning environments and their satisfaction with their education.

The test on the aggregated and disaggregated data sets revealed that the mediating effect of APM upon the Teacher Support-Satisfaction relationship was partial. That is, other factors not identified in this study can help to explain this relationship. The mediating effect of APM upon the Task Orientation-Satisfaction relationship was also found to be partial in the aggregated data and the data from FFS. Additionally, the data from FFS revealed that the relationship between Satisfaction and a third learning environment variable, Cooperation, was significantly, but negatively, mediated by APM. A theory to account for this negative mediating effect is discussed below. Finally, in SAICE APM fully mediated the relationship between Task Orientation and Satisfaction, which indicates that where students have a strong sense of purpose they are likely to be focused on learning tasks and to experience satisfaction in doing so. While relationships that are fully mediated are rare occurrence in Social Science research (Baron & Kenny, 1986), this finding is perhaps not surprising given that people who have a sense of purpose and meaning who are focused on learning that serves that purpose will be likely to derive satisfaction in their studies.

These findings offer support to the theory that educators need to address meaning and purpose development among their students if they want them to derive greater satisfaction in their learning by ensuring that their orientation to tasks are

relevant and meaningful, and that teachers take a greater interest in not only their academic achievement but also their subjective well-being.

Research Question 4: In what ways do school leaders create learning environments that foster a sense of meaning and purpose in their students' lives?

Both schools were founded upon the Integral Education philosophy of Sri Aurobindo and Mirra Alfassa. Whereas Mirra Alfassa herself founded SAICE, FFS was founded by one of her followers, Joya Mitter. As previously discussed in Chapter 2, a key goal of Integral Education is to awaken in students a sense of life purpose or, as in the parlance of this approach to education, their "aim in life." To achieve this aim, both schools emphasized that they create learning environments that are community-based, cultivate trusting and meaningful teacher-student relationships, offer a wide range of co-curricular activities that students are allowed to freely choose, and emphasize the value of "becoming conscious" among their students. The qualitative data from teacher and administrator focus group and individual interviews, as well as from the students' written responses from the student on-line survey, provided ample evidence of these ways in which the school leaders create learning environments that fosters meaning and purpose in students' lives.

First, study participants at both schools provided evidence that supports the idea that it takes a community to raise and educate a child. This is particularly so for SAICE that is embedded in a larger community context, and is yet still true for FFS, which strives to be itself a second home for its students and staff. Creating a sense of community is supported by a shared vision that gives the community a larger purpose and a shared aim. In the case of both schools, this shared purpose is that each person,

the student and the teacher, must be afforded the opportunity to find their true self, one which arises from rich inner and outer life experiences that are grounded in the material, social, cultural, intellectual, and spiritual domains. Perhaps unique to these communities is the idea that life in general has an existential aim that envisions the evolution of humanity towards greater and greater degrees of truth, goodness, and beauty. The belief system of these communities is that this evolution of consciousness will save humanity from self-destruction and ultimately lead to a flowering of perfection in all spheres of human life everywhere.

For the students in the schools that represent this philosophy of life, the relationships with their teachers takes on a quality that exceeds what may be normally found in traditional schools, for the teachers do much more than impart academic knowledge. They form strong bonds in and outside the classroom, on the playing field, over meals, and interact in ways that in the traditional student and teacher roles are sometimes obscured. In SAICE, teachers may find that they are players on a basketball team that is captained by a student, or they may play in a game that is refereed by a student. In FFS, some teachers will provide a shoulder for students to cry on and even take solace from the students themselves. The relationships between students and teachers are more akin to those that are found in close-knit but extended family structures: as siblings, uncles, aunts, nephews, nieces, and as parents and children. Teachers in both schools seek out and even invent ways to show appreciation for the positive qualities and attainments of their students. In FFS, appreciation for students comes in the form of cards given to them by the teachers, with rewards given monthly to students who have accumulated a sufficient number of

appreciation cards. In both schools, the sense of trust arises from an environment where open and honest relationships are fostered. Students are explicitly encouraged to always speak their truth, and are never punished whenever they tell the truth. This leads to the development of courage in these students, who must not only learn to express themselves, but also to eventually face all of the challenges posed by life. In all these interactions, the aura of meaning and purpose pervades the atmosphere, sometimes explicitly, sometimes implicitly, but always at the forefront of the educational opportunities provided by these schools.

These opportunities are intended to allow and encourage students to discover for themselves, from within, and through a myriad of experiential explorations, their life purpose. The freedom to explore, experience, risk failure, and seek out avenues for creative expression is a keynote of the educational philosophy and practice of both of these schools. The practical ways this occurs is through the extensive co-curricular activities provided at both schools, and through the Ideals and Progress courses at FFS. Each student is allowed freedom to explore themselves and the world around them in ways that may be lacking in academics-driven school environments. Through the arts, social service, sports and athletics, travel, ecological activism, and literary and scientific pursuits, the aim of discovering and fulfilling one's aim in life is fostered continually. Given the scope and variety of their daily activities it is perhaps not surprising that at both schools the highest mean score from the student survey was for Task Orientation.

The teachers in SAICE, in particular, are themselves seekers on a spiritual path, the practice of which they call by the Sanskrit term, *sadhana*. These teachers are

resident members of the Sri Aurobindo Ashram community, are not paid, but are provided for the meeting of their needs. Their dedication to their students therefore takes on a special quality. That is, they regard their teaching as a part of their own spiritual practice. They do not seek professional promotions, but rather focus on their own individual development as human beings on a spiritual path, which includes their role as teachers. For these people, their spiritual life and their life as teachers are merged into a coherent set of principles and practices that has a powerful potential to influence by example how their students find meaning and purpose in their own lives.

An important difference between the schools is the fact that FFS participates in board examinations, while SAICE does not. The interviews related to board exams at FFS revealed that the examination regime is seen as a necessity imposed by the Indian educational system with which the teachers and students must cope, and do so with certain feelings of resignation. This finding provides a possible explanation for the result of the SEM analysis in which APM had a negative effect on the relationship between cooperation and satisfaction. That is, if having a strong sense of Agentic Personal Meaning leads to a negative correlation between Cooperation and Satisfaction with Education, then it may be that the stress of board exams for assessing individual academic achievement may make students feel that cooperation with other students in their school will not help them to obtain high scores on the exams. People who are focused on individual academic attainment may consider cooperation with others to be an imposition upon them and/or a distraction from their preparation for high stakes testing. In India, this reality may be more pronounced since board exams are essentially about qualifying students for admission to higher educational programs.

Unlike standardized tests in the United States that are employed as accountability mechanisms to assess the effectiveness of schools, in India the board exams have huge implications for the students themselves. Essentially, when they take the board examinations, each student is in competition with every other student in the state, and even the entire country, for the limited seats in the country's top universities. Given the high stakes impact of board exams on the individual students, along with the commensurate pressure from parents and teachers to perform well, it is highly likely that the students in FFS who have a sense of Agentic Personal Meaning see cooperation as a hindrance to their satisfaction with their education.

The struggle of FFS in reconciling its philosophical education orientation towards meaning and meaningful learning in tension with the social and practical pressure on students to perform well on official board examinations highlights the perennial dichotomy between the freedom of the individual and the needs of the predominant social system. This particular finding suggests that excessive stress on academic achievement measured by high-stakes standardized exams may have a negative impact on learning by sapping the joy of learning from the environment and by imposing external standards in the assessment of learning that may be better served by measuring student achievement in areas where students show a natural inclination, commitment, and promise.

Interestingly, while this is the case in FFS, there is no sense among the teachers at SAICE that the board exams are necessary. They have found that their students can sit for entrance exams after completing their education in SAICE. For the teachers in this school, the philosophical imperative of giving each student the

maximum freedom to find his or her "deepest self" and to "become master of his self" trumps the social norm of the country that confers public honors, and top university admission, upon the highest achievers on board exams. Indeed, a core understanding of the Integral Education philosophy is that the development of self-knowledge and self-awareness leads to self-mastery over the competing emotional and psychological demands that nature imposes on the human being, thus allowing the individual to tap into his or her most creative and productive avenues of expression, learning, and work. This view elevates self-discovery and self-mastery to the level of primary and ultimate concern, with the resulting academic, social, and cultural achievements being valuable by-products of such human development.

<div align="center">Findings in Light of Past Research</div>

A number of important conclusions arising from this study can be enumerated here. These conclusions not only arise from this study, but also find support in past research in the fields of Learning Environment Research, Humanistic and Existential Psychology, and Positive Youth Development.

Learning environment research

Consistent with previous Learning Environment Research, this study has provided further evidence that the psychosocial learning environment variables measured using the WIHIC are correlated with student affective, cognitive, and motivational outcomes (Allen & Fraser, 2007; Fraser, 1998b; Fraser & Fisher, 1982; Henderson, Fisher & Fraser, 2000; Rentoul & Fraser, 1978; Trickett, 1978; Trickett & Moos, 1974; Shavelson & Seidel, 2006; Walberg & Anderson, 1968). All of the psychosocial learning environment variables were found to have significant

relationships with the cognitive components of APM (Purpose and Coherence), the

motivational component of APM (Agency), and the affective variable, Satisfaction

with Education. This line of research has been important particularly because creating

learning environments is precisely what leaders in education do.

Second, while such terms were not found in the interviews conducted for this

study, the data reflects the critical-constructivist orientation that represents an

important theoretical foundation for LER. The relationships between meaning and

meaning making, self-knowledge, and the express aim of drawing forth from within

each student his or her highest potential that were found in these schools can be

understood in light of Taylor, Dawson and Fraser's (1995) description of the critical

constructivist orientation:

> Critical theory draws to our attention the ways in which the social environment constrains the teacher and students to act in accordance with political agenda whose interests can be antithetical to good meaning-making and ethical social interactions. Whereas constructivism entails an *instrumentalist ethic* – knowledge is valued because it works, or is viable – critical theory challenges us to adopt a *discourse ethic* that values (self-) knowledge for its potential to enable us to communicate openly and richly, thereby realizing the full potential of our species' most distinctive attribute. (p. 2)

The close relationships between and among teachers and students in these schools

offer countless opportunities for such a discourse ethic to be put into practice. Indeed,

the evidence suggests that in these schools, teachers and students are on a more equal

footing and collaborate as co-learners in a co-creative learning process. This is

facilitated, in part, by the variety of settings in which they interact. We have seen that

the teachers in these schools engage the students in conversations about ultimate and

situational concerns, both explicitly and implicitly, and do so in many contexts that include and extend beyond the classroom setting.

Third, the emphasis on self-awareness in these schools provides practical support for Bandura's ideas around human agency. That is, for Bandura (2006), self-reflectiveness, which refers to the process whereby people engage their metacognitive abilities to examine their functionings, thoughts, and actions, is one of four properties of human agency (the others being, intentionality, forethought, and self-reactiveness). Self-knowledge and self-awareness are both intrinsic qualities of self-reflectiveness, and represent core values that are fostered in students in the participating schools. This is actually the same as the Humanistic value of "becoming conscious" that is a part of the Integral Education philosophy. As Mirra Alfassa (1984) advises her students and teachers in her essay, *The Science of Living* (quoted in Chapter 3 of this dissertation), in order to be true to one's self and act with agency,

> the first step is to become conscious of yourself, of the different parts of your being and their respective activities. You must learn to distinguish these different parts one from another, so that you may become clearly aware of the origin of the movements that occur in you, the many impulses, reactions and conflicting wills that drive you to action. It is an assiduous study, which demands much perseverance and sincerity. For man's nature, especially his mental nature has a spontaneous tendency to give a favourable explanation for everything he thinks, feels, says and does. It is only by observing these movements with great care, by bringing them, as it were, before the tribunal of our highest ideal, with a sincere will to submit to its judgment, that we can hope to form in ourselves a discernment that never errs. For if we truly want to progress and acquire the capacity of knowing the truth of our being, that is to say, what we are truly created for, what we can call our mission upon earth, then we must, in a very regular and constant manner, reject from us or eliminate in us whatever contradicts the truth of our existence, whatever is opposed to it. In this

way, little by little, all the parts, all the elements of our being can be organised into a homogeneous whole around our psychic centre (pp. 2-3).

It is also important to note in this context that the evidence from this study provides further support for Bandura's (2006) distinction between the "potentialist" and "determinist" views of human nature. Determinists support a conservative orientation toward society that sees human nature as behaviorally fixed. The potentialists see human nature as being malleable and therefore open to change via a social co-evolution process, which is activated and practiced as a result of the creative power of human agency. Bandura argues that past research evidence supports the potentialist view since one of the most important aspects of human nature is its ability to adapt and change. The approach to education in these schools embraces the idea that humanity is participating in a process of evolution in which greater degrees of consciousness manifests in humanity, individually and collectively, over time.

These ideas have important implications for education. In light of these findings, it is critical that students are afforded the opportunity to take greater responsibility for their own education. The command and control orientation of the deterministic worldview needs to give way to the more creative application of agentic action so as to foster greater growth potential in learners. To the extent that learners become intrinsically motivated, self-disciplined, and highly conscious agents, they will be able to more effectively participate in the co-evolutionary processes that are now, perhaps for the first time in human history, operating on a global scale.

Finally, the schools participating in this study are very much in alignment with the aims of LER as stated by Moos: "It is in these endeavors that we adhere most

closely to the founding vision of our field: Active participation in the process of social construction with the goal of enhancing personal relationships, task fulfillment, and social change" (Moos, 2003, p. 10). As I explained in Chapter 3, Moos' work was grounded in a social-ecology theoretical orientation. This field of research explores how human beings interact with, adapt to, and seek to actively change, their environment. In his seminal work in the field, Bronfenbrenner (1979) posits that the optimal conditions for learning and development rest in the interpersonal relationship with authority figures that encourage the learners to take greater responsibility for their learning. Long-term nurturing relationships between children and youth and familiar adults, in particular, is seen as one of the key components that promotes positive human development. The evidence from this study clearly suggests that such relationships between teachers and students frequently occur in these schools.

Existential meaning research

The extensive findings arising from Existential Meaning Research that have indicated that the search for and attainment of meaning supports the healing process of people suffering from a variety of life-challenges has now been extended, for the first time, into the area of educational research. The data from this study supports the findings of Fry (1998), indicating that young people report intrinsic desires for self-knowledge, personal meaning systems with embedded life purposes, as well as self-management, self-efficacy, and self-esteem. According to Fry,

> … not only are most adolescents intellectually and emotionally ready to explore the personal meanings of their life, but they are also ready to explore their actions or strivings in the context of a futuristic perspective, or in the context of a connectedness to a larger populace. In this sense, therefore, although the development of personal meaning

and wisdom is a lifelong evolutionary process, the potential for both personal meaning and wisdom is remarkably evident during adolescence (pp. 92-93).

Several quotes from the students and the teachers in this study demonstrate that students do indeed have the capacity to engage in self-reflection upon these themes, and that in doing so they have developed, or are in the process of developing, a certain directionality in life that is uplifted and supported by their sense of meaning and purpose.

An important concept guiding this study was Reker and Wong's (1988) Personal Meaning System (PMS), which integrates cognitive and motivational components of meaning and purpose. That is, as I said in Chapter 3, it is not enough for a person to have a sense of purpose and corresponding coherence for meaning. Those with a sense of purpose and meaning also need to be motivated to exercise personal responsibility and make choices that serve their purpose. But even then, the cognitive and motivational components of the PMS are not sufficient. That is, a comprehensive Personal Meaning System would include purpose, meaning, agency, and an affective component, satisfaction or fulfillment. Evidence from this study indicates that the participating schools foster in students the components of Agentic Personal Meaning, as well as satisfaction with their education, which seems to indicate that for these students, the Personal Meaning System is broadly well-developed.

Additionally, Reker and Wong's (1988) reconciling of the dichotomy between the ontological and phenomenological views of existential meaning provides greater understanding of the learning environments in these schools. That is, these schools expressly provide learning environments that integrate specific educational activities

"into a larger and higher purpose, as expressed through philosophical understanding and spiritual connectedness, from which meaning can be discovered" (Reker, 2000, p. 41). As sources of meaning, these schools offer opportunities for students to discover global meaning through a reflection on the givens of life, as well as create situational meaning by making choices, acting, and relating with others. While this study was not designed to explore how the schools act as sources of different types of meaning, there are a number of specific ways that these schools serve as sources of meaning that can be classified in Reker's (1996) *Taxonomy of Sources of Meaning in Life* (see, Appendix E). That is, evidence from the data indicates that these schools offer opportunities for creative activities, personal relationships, personal achievements, personal growth, social activism, service to others, enduring values and ideals, spiritual practice, traditions and culture, humanistic concerns, and relationships with nature.

Next, a key concept stemming from Existential and Humanistic Psychology is the idea of what Frankl (1962) called, the *will to meaning*. Much of what these schools do is foster in students the disposition to seek out and find meaning in their lives, and to see their lives as part of a greater stream of consciousness that can impact the world. Speaking of Logotherapy, the school of psychotherapy inspired by Frankl, Reker (1994), wrote:

> The highest goal of most traditional therapies is the achievement of a fully integrated person, but they do little to moving the individual to a higher level of awareness. Logotherapy focuses on conscious experiences, accesses higher levels of consciousness, and is holistic by awakening the analytic and the creative sides of the brain (p, 54).

As previously discussed, this focus on self-awareness and the development of higher consciousness is an integral part of the educational paradigm for these schools. As was shown in Chapter 4, many students and teachers shared that the goal of "becoming conscious" is regarded as being as essential as the goal of academic achievement, perhaps even more so. These schools posit the development and evolution of consciousness as being an important component in the process of developing self-mastery, which shares a reciprocal relationship with the will to meaning.

Finally, the theory that meaning impacts human functioning and healthy human development has been supported by this study, which has posited Agentic Personal Meaning as an important mediator in the relationship between psychosocial learning environments and students' sense of subjective well-being as expressed by their satisfaction with their education. This finding was supported by both the quantitative and qualitative phases of this study.

Positive psychology and positive youth development

Research in the fields of Positive Psychology and Positive Youth Development can assist in understanding the role of subjective well-being and identity development in these schools. As Csikszenmihalyi (2000) pointed out, the "field of positive psychology at the subjective level is about valued subjective experiences: well-being, contentment, and satisfaction (in the past); hope and optimism (for the future); and flow and happiness (in the present)" (p. 5). The experiences of students in these schools reflect this orientation by offering extensive teacher support, freedom to explore gifts and talents, and by instilling in students a strong sense that the aim of life

is to find joy in work and service that "is at once meaningful to the self and of consequence to the world beyond the self" (Damon, Menon & Bronk, 2003, p. 121). Additionally, evidence from this study corroborates findings in these areas of research that have found that a sense of purpose is an important developmental asset that promotes identity development (Benson et al., 2006; Damon, 1995, 2008; Larson, 2000; Hamilton & Hamilton, 2004). This study extends the study of life satisfaction, which has been found to be correlated with numerous personality and emotion variables (Pavot and Diener, 2008), into the field of education by finding that satisfaction with education is correlated with variables studied by learning environment researchers.

Finally, evidence from this study illustrates that in these schools an important aspect of the teacher student relationships is that the teachers often engage the students in conversations about meaning and purpose. Several teachers shared that they often ask students to consider why one chooses a profession or engages in certain activities. This finding is in substantial contrast to the experiences of Damon (2008), who wrote in the forward of this book, *The Path to Purpose: Helping our Children Find their Calling in Life*, the following:

> If you visit a typical classroom and listen to what the teacher enjoins students to do, you will hear mostly a host of study assignments, exam instruction, and lots of drill and practice. If you listen for the teacher's reasons *why* the students should perform these tasks, you will hear a host of narrow, instrumental goals, such as doing well in the class, getting good grades and avoiding failure, or perhaps – if the students are lucky – the value of learning a specific skill for its own sake. But rarely (if ever) will you hear the teacher discuss with students broader purposes that any of these goals might lead to. Why do people read or write poetry? Why do scientists split genes? Why, indeed, did I myself work hard to become a teacher? Incredibly, in my years as a scholar of youth

> development and education, I have never seen a single instance of a teacher sharing with students the reason why he or she went into the teaching profession. … How can we expect that young people will find meaning in what they are doing if we so rarely draw their attention to the personal meaning and purpose of what we work at in our daily lives? (pp. xiii-xiv)

It is encouraging to find that at least in SAICE and FFS, this concern of Damon is being addressed in both theory and practice. In these schools, not only do the teachers engage students in these conversations, they also impart to their students that there are indeed larger ultimate concerns in life that are meaningful and that life purpose is something that they are in school to discover and create not only for themselves but for others in their lives as well.

Implications for theory

This study extends the theoretical implications of the role of meaning and purpose in the context of education. Human beings are by nature meaning makers. There is, moreover, ample evidence from the fields of Existential Meaning Research and Positive Psychology indicate that human beings with a strong sense of purpose, supported by a worldview that life is inherently meaningful, are better able to cope with the shocks and blows of life and lead healthy and productive lives. The application of theories on meaning and purpose in the field of education research can thus inform our understanding of how to effect needed changes in schools.

The mediating construct employed in the SEM analysis for this study, Agentic Personal Meaning, consists of three critical components that support the development of a comprehensive personal meaning system (Reker & Wong, 1988): purpose, coherence for meaning, and choice and responsibleness (agency). As I discussed in

Chapter 2, while past theorists tended to collapse meaning and purpose into a single construct (Frankl, 1962), others emphasize the distinction between the two with regards to developmental role of intentionality in human functioning (Reker & Wong, 1988; Damon, Menon, & Bronk, 2003; and Yalom, 1980). That is, while meaning is essentially a global orientation related to the value of one's personal identity with regards to self and others, purpose provides direction at various stages in life that assists one in navigating the challenges that life presents. The ability to confidently make choices and take personal responsibility for one's choices facilitates one's creative endeavors in the pursuit of self-actualization and self-transcendence. For students, these ideas have the potential to not only spark in them the urge to seek and find their place in the world and in society, but to do so with the view of participating in the creation of a new society.

When educators seek to promote meaning and purpose in the lives of students through freedom of opportunities, choice, and personal responsibility, rather then subsuming their needs to the command and control structures of the industrial worldview, students will be more likely to seek out avenues of creative endeavors that serve a wider existential aim in life. In doing so, they are more likely to access and realize their potential to become co-creators within an evolving world grounded in social justice, rather than remain mere consumers of goods and services in a harsh and competitive world that is rapidly moving toward unsustainabilty.

Conclusions

While the findings of this study may not be generalized across all levels and types of education, several conclusions can be now be offered that may be of

particular interest to educators working in small private schools, or in small charter schools that have relatively greater freedom to create and implement innovative and progressive approaches to education. The question of how educational leaders create learning environments that fosters in students a sense of meaning and purpose can be answered this way. In order to provide students the maximum opportunity to find their aim in life, school leaders create learning environment marked by high degrees of teacher support for students that extends beyond the traditionally fragmented role that teachers play in the lives of their students. This means that effective school leaders find ways to encourage teachers to have more time with students beyond the short 50-minute classroom interactions. School leaders meet the holistic or integral needs of their students by lowering the student-teacher ratio in the classroom and in the school, building strong interpersonal relationships, offering a wide range of learning activities that are meaningful and relevant to student interests, encouraging students to become the masters of themselves by breaking free of social and cultural constraints imposed by the larger social sphere, supporting all sincere attempts of students to find their inner truth, and inspiring students to awaken to new possibilities before humanity that heretofore may have been widely seen as impossibilities. Essentially, students of today deserve to be supported in becoming creators of new systems, new processes, and new ways of being in a dynamically changing world, rather than be fearful actors, or mere victims, in a world that sometimes seems to be spiraling out of control.

Given the rapidly changing nature of the world, this last point is critical, for the world is literally being remade in every moment. Today's educators cannot know what kind of world their students will live and work in during the extent of their lives,

so to educate students for the world of the past or present may be a futile endeavor. Instead, students need to be educated in such a way that they are able to find their rightful place in an ever-changing, dynamic world. This means teaching them how to learn, how to find the knowledge they need when they need it, how to use that knowledge to create and co-create, and how to participate in the complexity of life by first establishing a basis for knowing and understanding themselves, their capacities, interests, and core personal values. Such aims can be met by providing a more comprehensive, holistic, or, as in these schools, an Integral Education that includes the widest possible avenues for all students to explore themselves and the world around them through co-curricular activities, service, travel, interpersonal relationships, and intrapersonal practices; all with the influence and example of inspired teachers. Effective teachers who foster meaning and purpose work to awaken and inspire in students a concrete awareness that they can shape their lives according to their deepest aims and work to transform the world rather than merely adapt to it. It is clear that the world needs "hero-warriors" to effect the changes humanity must make if the human race is to avoid becoming, like so many species before it, an evolutionary dead-end. Environments in which students' relationships with inspired teachers, who are ready and willing to have deep interpersonal relationships with their students, can blossom will have the potential to demonstrate to students what it means to be life-long learners, and instill in them a love of learning, and an appreciation for innovation and creativity.

These teacher-student relationships are facilitated when they occur within a larger community context in which Humanistic values of freedom and responsibility

carry equal weight and form the basis for a deep exploration and conversation about what is perhaps the highest value yet articulated by human beings, the value of human unity in diversity. Indeed, to the extent an individual finds and manifests her truest, deepest, purpose and meaning in life, she will be better able to serve her community, and when the community offers avenues for self-awareness, self-culture, and knowledge of the world, it will provide the reciprocal support to the individual that will allow her to give the best of herself back to the community. In SAICE, this value is wonderfully expressed by "The Students' Prayer" that reads:

> Make of us the hero warriors we aspire to become. May we fight successfully the great battle of the future that is to be born against the past that seeks to endure; so that the new things may manifest and we be ready to receive them. (Alfassa, 1953)

Two important components of SAICE are its Physical Education Department, in which all students are supported in developing character, sportsmanship, and physical health, and its "Free Progress" section in which students are given freedom to choose their subjects and teachers, provided they exercise that freedom responsibly. By providing a rigorous and methodical physical education that builds character and health, and by making them ultimately responsible for their own learning, these education programs have the potential to awaken in students a strong moral purpose, a love of learning, and help them to find and hone their interests so that they can eventually make a meaningful contribution to the lives of their families, communities, and the world.

Finally, the importance of the findings of this study and their links to educational leadership can be understood in the light of the critical-constructivist

approach to learning and leading. As discussed in Chapter 2, the integration of the discourse ethic, which is called forth in critical theory, with the instrumentalist ethic of constructivist theory has significant implications for the fostering of meaning through self-knowledge, critical thinking, and interpersonal relationships among and between co-learners (Taylor, Dawson and Fraser, 1995). An essential aspect of this orientation lies in the normative function of innovation in the learning environment that is grounded in deep interpersonal relationships in which students and adults are co-learners in a learner-centered learning environment (McCombs & Miller, 2009). Such relationships can be most effectively supported within communities of learners in which leadership is a "shared reciprocal process among the adults in the school" where "the school functions as a community that is self-motivating and that views the growth of its members as fundamental" (Lambert, et al. 2002, p. 14). Communities in which such learning environments flourish serve to facilitate the articulation of a shared vision and purpose for the organization as a whole, as well as the making of meaning and the fostering of self-development of its individual members.

An important task for school leaders, therefore, is to introduce innovation in schools that facilitate the evolution of schooling beyond the industrial paradigm. The impersonal and bureaucratic relationships within educational systems of the past century need to give way to a more inclusive relationship among stakeholders, in which "leaders and followers develop mutual purposes, not goals" (Rost, 1993, p. 103). This means that educational leaders on all levels need to engage their followers in a conversation about what it means to be an educator, what is or ought to be the chief aim of education, and explore ways for everyone involved in the teaching and

learning profession to engage in deep thinking about their own life purposes as educators. Such an explicit orientation towards meaning can assist educators in grounding their work with each other and with students in a strong sense that education is an essential avenue for effecting change at the individual and collective levels. Indeed, if education is to serve the emergent needs of our rapidly changing global, national, and local systems and societies, the very purpose of educational leadership must be to facilitate changes in leading and learning that will align with the inevitable transformation that individuals, systems, and societies will experience. The result could be the emergence of a society grounded in creativity rather than the pervasive unsustainable consumerism that has been and continues to be so prevalent today. It would involve people discovering and offering the best of that which they have to offer to their communities.

Shifting from the fragmented industrial model towards greater degrees of integration, freedom, and co-creation is, therefore, a central aim of the critical-constructivist leadership paradigm. It sets forth as an essential value the effecting of real and enduring changes, often in the face of antiquated worldviews based in traditional utilitarian and management-oriented paradigms. In his definition of leadership[11], Rost (1993) emphasizes that the change sought by leaders and followers much be real and transformative, for change "is the most distinguishing element of leadership" (p. 115). Evidence from this study suggests that this intention to effect change, to consciously evolve as individuals and as a community, is an essential

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[11] "Leadership is an influence relationship among leaders and followers who intend real changes that reflect their mutual purposes" (Rost, 1993, p. 102).

principle and shared purpose that guides the leading and learning that occurs in the Sri Aurobindo International Centre for Education and the Future Foundation School.

Suggestions for a Future Research Agenda

This study has contributed to the literature in the field of educational research by providing findings that suggest that educational leaders need to focus on affective needs of learners, particularly with respect to the development of personal meaning and life purpose. A great deal of research in the several fields that the interdisciplinary design of this study was based upon have established meaning and purpose as important human qualities that facilitate healthy human functioning among people facing a wide range of life-challenges. This study extended these lines of research into the field of educational research and has established that in the schools studied, Agentic Personal Meaning plays an important mediating role in the relationship between psychosocial learning environments and student satisfaction.

There were three important limitations to this study that calls for further research if these findings are to be built upon and extended to areas of focus that will form the basis of more generalized findings. First, this study was limited to two schools that are dedicated to a particular spiritual philosophy that envisions the transformation of humanity through an evolution of consciousness. These schools therefore represent a rather unique approach to the education of children and youth, one in which helping students discover their aim in life is an explicit educational goal. As such, the results of this study of these participating schools may not be able to be generalized to other schools grounded in other educational philosophies or purposes. Thus, it would be helpful to conduct similar studies in other educational settings.

Such settings could include both private and public schools; inner-city, suburban, and rural schools; schools representing a wide variety of educational philosophies and aims; schools with high performing and low performing students; and schools located in many countries. Second, an important limitation of this study is that the number of participating students was comparatively small. This fact led to the methodological necessity of testing parsimonious structural models that were limited to no more than three independent variables. Given the need for a greater number of data points for the testing of more complex structural models involving more variables, future research needs to be conducted that involves many more students, at least into the thousands. Finally, as matter of practicality, the methodology design of this study sought to avoid the necessity of obtaining parent permission for student participation by focusing on an outcome variable (Satisfaction with Education) that could be measured while respecting the confidentiality and anonymity of the students. Future studies need to also explore models with other outcome variables, such as academic achievement, that will necessitate a higher bar for the protection of the rights of participants, which would not require confidentiality and anonymity but would require the difficult task of obtaining parental consent.

As a researcher, I look forward to being able to extend this research of the role of meaning and purpose in education into these larger spheres. If the findings from this study can be validated in research involving much larger numbers of participants, in a variety of settings, and in many countries, then it will be possible to determine whether or not the importance of developing meaning and purpose in students is not

only a local concern, but a universal one that calls for a reexamination of the core values and aims of education everywhere.

<center>Implications of the Study for Praxis</center>

While this study was limited to two private schools in India, I believe it does provide some critical insights into the study of educational theory and practice. During the course of my journey in researching this dissertation I was struck by the fact that most research in education today essentially assumes the system. Given the emphasis of reform efforts in the United States on the technical and organizational aspects of education, this is not perhaps surprising in and of itself. But what does surprise me is that there seems to be a dissonance between the research emphases of researchers in the fields of Humanistic Psychology, Existential Meaning Research, Positive Psychology, and Positive Youth Development and that of the larger educational research community. As I demonstrated in the literature review for this study, there is a great deal of knowledge out there on what it means to be a human being. This knowledge has not been sufficiently accessed and translated into practice by educators. I believe that if educators and policy-makers were to embrace this knowledge we would potentially see a huge reduction in the consequences of the system that fails a third of its students. It appears to me that most research in education is focused on dealing with the effects of the educational system itself, rather than engaging in a critical discourse about the aims of education, and a concomitant reexamination of the assumptions underpinning that system. I cannot help but wonder where the needs of our youth for subjective well-being, identity development, and existential meaning fell off the tracks in educational research.

This attachment to the system is symptomatic of a society that is obsessed with limited ideas of what constitutes success and failure, and socializes young people into a worldview that confounds ultimate and ephemeral concerns. Damon (2008) addresses this point by arguing that society all too often focuses on short term concerns grounded in the fears arising from social competition in a rapidly changing world:

> In place of asking the ultimate questions, we have been distracting the attention of our young toward short-term concerns of competition, self-promotion, status, and material gain. We may believe that attention to such concerns is in their best interest; but in the end we will always find that single-minded attention to such concerns can promote nothing more than ambivalence, disengagement, and cynicism. Still, rather than encouraging our young to pursue the interests that motivate and inspire them, we try to substitute our own concerns and goals for them. We turn a deaf ear to their pursuit of meaning – their own attempt to answer the big questions – and try to bring them back to our fearful concerns. It is a futile attempt (pp. 109-110).

The evidence from this study suggests that in SAICE and FFS, an expressly intentional focus on self-awareness and the exploration of ultimate concerns is taking place for their students. Students and teachers regularly engage in a critical discourse about the ultimate ontological meaning of life, and how the attention to such concerns can be translated into a self-created life purpose for each individual that is based on a set of phenomenologically-grounded life experiences.

Another important implication for praxis is related to the fact that little research in education takes into consideration the views of students and how their experiences in schools affects their subjective well-being. That is, comparatively speaking, relatively little research in education is based on data collected from students, the most important stakeholders in education. Indeed, one reason I was

drawn to the field of Learning Environment Research was the fact that a high

percentage of the studies in the field involved the analysis of student perceptions of

their schools. It is, moreover, interesting to note that the only study I found that

addresses these issues related to promoting healthy human functioning in the context

of education was conducted by school psychologists (Suldo, Shaffer & Riley, 2008).

It would seem, then, that adults all too often discount the importance of subjective

well-being among youth in favor of prevalent ideas about success and failure, and

therefore rarely take into account the insights and wisdom that young people can bring

to the table.

The implications for praxis raised by this study are therefore concerned with

some of the most basic of educational practices, in schools and throughout our society.

Are schools too big to address the individual needs of all students? Are teachers

carrying a load with too many students on their role sheets, thus making it impossible

for them to provide the kind of support that was found in the participating schools in

this study? Is the aim to prepare all students for higher education a reasonable one? Is

curriculum too fragmented, thus leading to learning experiences that are excessively

compartmentalized? Are there not ways to introduce spirituality and spiritual practice

in schools without imposing religiosity upon students? How can schools become

community centers that open their doors during all hours and provide social services to

segments of the population who are subjected to social injustice and economic

inequalities? How can assessment of the performance of schools be based upon the

development of each student's unique gifts and talents, rather than on a one-size-fits-

all norm-referenced standardized testing regime? What would happen if the United

States were to regard the education of all its citizens to be a question of national

security, thus demanding expenditures and investment on a par of those enjoyed by the

military? What if all countries were to also arrive at such an understanding? Finally,

how can we as educators work to co-create a society that values creativity, co-creation,

the arts, spirituality, subjective well-being, quality of life, and social justice, rather

than giving greater weight to the promotion of material consumption and the

increasing of the Gross National Product?

I pose these questions simply to highlight that education today is at the

forefront of humanity's fight for survival. For failure to get this right will have the

potential to create conditions where civilization as we know it becomes irreversibly

unsustainable. The refusal of policy-makers and the citizenry to recognize the

unsustainable nature of our current economic, political, and educational systems is

staggering. I believe that there is one answer to this dilemma. And that answer lies in

the cultivation of a change of consciousness in humanity, a change that begins with the

education of our children, and continues into adulthood as a process of life-long

learning that unleashes the full potential of each and all. I would like to close this

section by quoting again a teacher of SAICE who sums up the issue extremely well:

> In fact, education really needs to be revamped or reoriented to take into
> account the personal and all around growth of the child, rather than
> give too much importance to qualifications, which fit him into society,
> or making him a productive member of the economy. That's the
> direction we need even if we are going to solve a lot of problems of the
> human race, of the planet. We need people who are true to themselves,
> to their inner self, and have the chance to explore, to develop that.
> Unfortunately, a lot of schools don't even have the idea of what this
> is… We forget that the true aim of our lives is actually an inner growth,
> of which the basis may be material and economic and cultural, but it's
> something that helps us to grow beyond that. I think the true aim of all

civilization is really to encourage that - the entire growth.

Vivek (M40-5/Geography&EnvironmentalScience)

Insights of the Researcher

The experience of researching and conducting this study has been an extremely rewarding one for me. My intention has always been to take what I have learned from this experience and to apply it into my own work as a school founder and principal. There is much arising from this study that I believe will inform my practice as an educator, researcher, writer, and teacher. Interestingly, however, one very important thing I discovered about myself as a result of this process is that I truly enjoy the processes of disciplined inquiry.

Figure 1. A Model of the Relationship Between Environmental and Personal Variables and Student Stability and Change*

*Moos (1979, p. 5)

Student Stability and Change
(values and interests, aspiration level, mood and health)

Efforts at Adaptation and Coping

Activation or Arousal

Cognitive Appraisal

Environmental System
(physical setting, organizational factors, human aggregate, social climate)

Personal System
(sociodemographic variables, expectations, personality factors, coping skills)
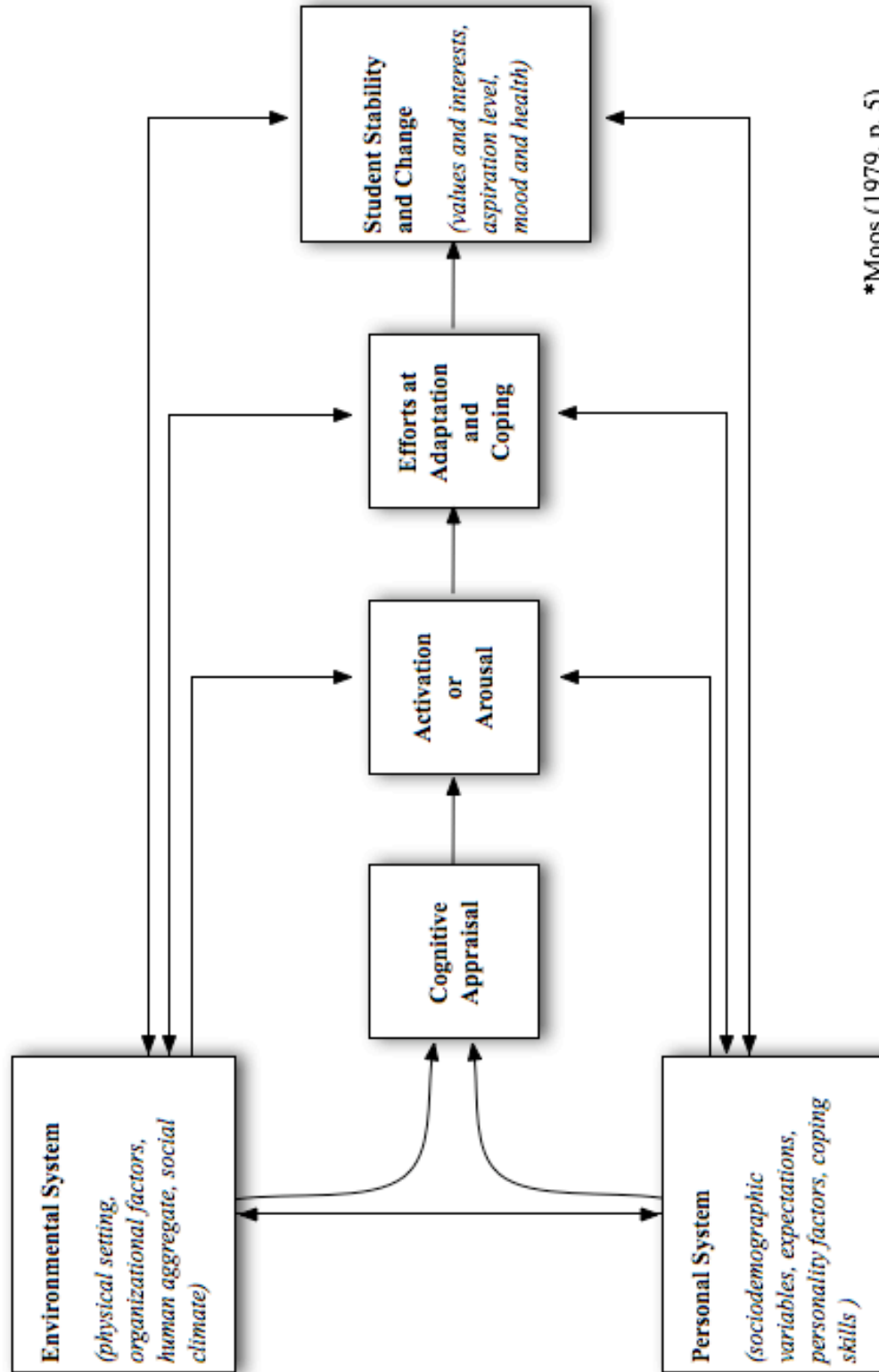
APPENDIX B

Three Domains of Social Climate Dimensions*

Type of Setting	Domain		
	Relationship	*Personal Growth*	*System Maintenance and Change*
Educational Setting			
University student living groups	Empowerment Emotional support	Independence Traditional social orientation Competition Academic achievement Intellectuality	Order and organiza- tion Student influence Innovation
Junior or senior high school classrooms	Involvement Affiliation Teacher support	Task orientation Competition	Order and organiza- tion Rule clarity Teacher control Innovation
Primary Setting			
Family	Cohesion Expressiveness Conflict	Independence Achievement orientation Intellectual-cultural orientation Moral-religious Emphasis	Organization Control
Work milieu	Involvement Peer cohesion Staff support	Autonomy Task orientation Work pressure	Clarity Control Innovation Physical comfort
Treatment Setting	Involvement Support Spontaneity Conflict	Autonomy Practical orientation Personal problem orientations Anger and aggression	Order and organiza- tion Clarity Control (resident influence) Physical comfort

*Moos (1979, p. 15)

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APPENDIX C

Overview of instruments with dimensions classified
within Moos' Social Climate Domains*

Instrument	Level	Items per scale	Scales classified according to Moos's scheme		
			Relationship dimensions	Personal development dimensions	System maintenance and change dimensions
Learning Environment Inventory (LEI)	Secondary	7	Cohesiveness Friction Favouritism Cliqueness Satisfaction Apathy	Speed Difficulty Competitiveness	Diversity Formality Material environment Goal direction Disorganisation Democracy
Classroom Environment Scale (CES)	Secondary	10	Involvement Affiliation Teacher support	Task orientation Competition	Order and organisation Rule clarity Teacher control Innovation
Individualised Classroom Environment Questionnaire (ICEQ)	Secondary	10	Personalisation Participation	Independence Investigation	Differentiation
Questionnaire on Teacher Interaction (QTI)	Secondary/ Primary	8–10	Helpful/friendly Understanding Dissatisfied Admonishing		Leadership Student responsibility and freedom Uncertain Strict
Science Laboratory Environment Inventory (SLEI)	Upper Secondary/ Higher education	7	Student cohesiveness	Open-Endedness Integration	Rule clarity Material environment
Construcitivist Learning Environment Survey (CLES)	Secondary	7	Personal relevance Uncertainty	Critical voice Shared control	Student negotiation
What Is Happening In This Classroom (WIHIC)	Secondary	8	Student cohesiveness Teacher support Involvement	Investigation Task orientation Cooperation	Equity

*Fraser (1998, p. 10)

APPENDIX D

Selected Scales of the Life Attitude Profile – Revised (LAP-R; Reker, 1992)

Scored using a 7-point Likert format: 1 = Strongly Disagree; 2 = Disagree; = Slightly Disagree; 4 = Neither Agree nor Disagree; 5 = Slightly Agree; 6 = Agree; 7 = Strongly Agree.

Purpose: Refers to having life goals, have a mission in life, having a sense of direction from the past, in the present, and toward the future. Implicit in purpose is the notion of worthwhileness and what is of central importance in a person's life. Purpose provides thrust and direction to one's life.

1. My past achievements have given my life meaning and purpose.
2. In my life I have very clear goals and aims.
3. I have discovered a satisfying life purpose.
4. Basically, I am living the kind of life I want to live.
5. I know where my life is going in the future.
6. In achieving life's goals, I have felt completely fulfilled.
7. I have a mission in life that gives me a sense of direction.
8. My life is running over with exciting good things.

Coherence: Refers to having a logically integrated and consistent analytical and intuitive understanding of self, other, and life in general. Implicit in coherence is a sense of order and reason for existence, a sense of personal identity, and greater social consciousness.

9. The meaning of life is evident in the world around us.
10. I have been aware of an all powerful and consuming purpose towards which my life has been directed.
11. I have a philosophy of life that gives my existence significance.
12. In thinking of my life, I see a reason for my being here.
13. I have a framework that allows me to understand or make sense of my life.
14. I have a sense that parts of my life fit together into a unified pattern.
15. I have a clear understanding of the ultimate meaning of life.
16. My personal existence is orderly and coherent.

Choice/Responsibleness (Personal Agency): Refers to the perception of freedom to make all life choices, the exercise of personal responsibility, personal decision-making, and internal control of life events. It is an operational index of the degree to which a person perceives to have personal agency in directing his or her life.

17. I regard the opportunity to direct my life as very important.
18. My accomplishments in life are largely determined by my own efforts.
19. I determine what happens in my life.
20. Concerning my freedom to make my own choice, I believe I am absolutely free to make all life choices.
21. It is possible for me to live my life in terms of what I want to do.
22. My life is in my hands and I am in control of it.
23. When it comes to important life matters, I make my own decisions.
24. I accept personal responsibility for the choices I have made in my life.

Taxonomy of Sources of Meaning in Life (Reker, 1996)

Taxonomy of Sources of Meaning in Life

_____

1.	Leisure activities	10.	Enduring values/ideals
2.	Meeting basic needs	11.	Traditions and culture
3.	Creative activities	12.	Leaving a legacy
4.	Personal relationships	13.	Financial security
5.	Personal achievements	14.	Humanistic concerns
6.	Personal growth	15.	Hedonistic activities
7.	Religious activities	16.	Material possessions
8.	Societal/political causes	17.	Relationship with nature
9.	Service to others		

_____

Factor Scores. The total score on the SOMP-R can be further divided to yield four factor scores (the four factors were identified through a principal components factor analysis of the initial 13-item SOMP): Self-Transcendence (Items 4, 7, 9, 10, 17), Collectivism (Items 8, 11, 12, 14), Individualism (1, 3, 5, 6), and Self-Preoccupation (Items 2, 13, 15, 16). Self-Preoccupation refers to sources that meet and satisfy the immediate needs of the respondent. Individualism refers to sources that focus on self-improvement, self-development, self-growth, and the realisation of one's potential. Collectivism refers to sources that focus on the betterment of the group, on areas that involve service to others and dedication to a larger societal or political cause. Self-Transcendence refers to sources that transcend the self and that encompass cosmic meaning or ultimate meaning. Factor scores can be calculated by summing the ratings of items pertaining to each factor and dividing by the number of items.

APPENDIX F

Information Sheets and Informed Consent Forms

California State University
SAN MARCOS

INFORMATION SHEET

Prapanna Smith, a researcher/graduate student at California State University San Marcos is conducting a study on student perceptions of their school learning environment and their attitudes towards life. You are invited to participate in this study because you are a student in a unique school that embraces an innovative approach to education.

This study has two objectives:
1. To better understand the relationships between your experiences in school and your attitudes and beliefs about your own life.
2. To learn about the ways that your school helps you prepare for life.

Participation in this study will involve taking an on-line survey from any computer with internet access. It should take about 30 minutes to complete. Please understand that there are no right or wrong answers to the questions.

It is completely optional for you to do the survey. You are in no way required to take it. Even if you start taking the survey you may opt out at anytime by simply clicking on the "Exit this survey" link at the top of any page. The survey can be accessed from any computer via the Internet at the following link:

http://www.integralelementary.com/research.html

Some students may feel uncomfortable providing honest responses to some of the questions. **Rest assured that the survey is completely confidential. This means that it will be impossible for me or anyone else to figure out who you are or to determine which responses you provided.** The actual responses to the survey will be accessed only by me and will remain in my sole possession. I will, however, share the final study analysis with your teachers and school administrators.

Participation is voluntary. You do not have to participate in this study if you do not want to. If you choose not to participate, it will not impact your status as a student in your school in any way.

You should know that the Cal State San Marcos Institutional Review Board (IRB) may inspect study records as part of its auditing program, but these reviews only focus on the researchers and the study, not on your responses or involvement. The IRB is a committee that reviews research studies to make sure that they are safe and that the rights of the participants are protected.

If you have any questions about your rights as a research participant, you may contact our Institutional Review Board at 1-760-750-4029. If you have questions about this research please contact either my faculty advisor, Dr. Jennifer Jeffries, at 1-760-750-8510 or me via phone or email. If you would like a copy of the final study when it is completed, please let me know via email, and I will make it available to you.

Prapanna Smith
prapanna@integraleducation.org
1-858-204-2096

Rev. 10/23/08 PS

Cal State San Marcos
Institutional Review Board
10/24/08   10/23/09
Approval Date   Expiration Date

IRB Chair Signature
Human Subjects Committee

Survey Introduction and Informed Consent

This survey is designed to explore opinions and feelings about your experiences in school and about attitudes toward life among members of your school community.

It is completely optional for you to do this survey and you are in no way required to take it. You are free to opt out of the survey at anytime by simply clicking on the "Exit this survey" link at the top of any page.

This survey is completely confidential. This means that it will be impossible for anyone to figure out who you are or to determine which responses were provided by you. After all your classmates have taken the survey, the responses will be analyzed and the results will be shared with your teachers and school administrators during follow-up interview sessions with the researcher.

This survey should take you about 30 minutes to complete. Please understand that there are no right or wrong answers to these questions. All that is requested of you is to read each question carefully and answer each one as accuratetly and truthfully as you can.

Please note that to complete the survey all multiple choice questions must be answered. The three essay questions at the end of the survey are optional.

If you understand the terms discussed in the above, and give your consent to participate in this activity, please click on the link below and continue with the survey.

Thank you.

9%

Next >>

California State University
SAN MARCOS

INFORMATION SHEET

Prapanna Smith, a researcher/graduate student at California State University San Marcos is conducting a study on how schools create learning environments that impact students' attitudes towards life. You are invited to participate in this study because you are a teacher or administrator in a unique school that embraces an innovative approach to education.

This study has two objectives:
1. To better understand the relationships between your experiences in school and your students' attitudes and beliefs about their lives.
2. To learn about the ways that your school helps your students prepare for life.

Participation in this study will involve taking an on-line written response questionnaire. It should take about 15 minutes to complete. Please understand that there are no right or wrong answers to the questions.

Following your response to the questionnaire you may be invited to participate in a follow-up focus group interview process. The conversational style interview will take approximately one-and-a-half to two hours and, with your permission, will be audio and/or videotaped. The interviews will take place in a private conference room located in your school campus. Focus group participants will be selected so that a balanced mix of grade/standard level and subject area teachers are involved. Participants will be notified by email whether they are to be invited to participate in the interview or not.. Participants invited for the interview may choose whether to participate and may drop out at any time after they have agreed to participate.

It is completely optional for you to complete the questionnaire. You are in no way required to take it. Even if you start taking the questionnaire you may opt out at anytime by simply clicking on the "Exit this survey" link at the top of any page. All incomplete questionnaires will be deleted. The questionnaire can be accessed from any computer via the Internet at the following link:

http://www.IntegralElementary.com/questionnaire.html

Some teachers and administrators may feel uncomfortable providing honest responses to some of the questions on the questionnaire. **Rest assured that your responses to the questionnaire will be held in strict confidence.** The actual responses to the questionnaire will be accessed only by the researcher, and his faculty advisor, and the contents will remain in the researcher's sole possession. The analysis and reporting of the results will not identify participants by name.

There may be a direct benefit to participant teachers and administrators from the schools studied in that review of the final dissertation findings may help them to gain insights into how they are helping to inspire their students to achieve great things in their lives.

Participation is voluntary. You do not have to participate in this study if you do not want to. If you choose not to participate, it will not impact your status as an employee in your school in any way.

Rev. 01/22/09 PS

You should know that the Cal State San Marcos Institutional Review Board (IRB) may inspect study records as part of its auditing program, but these reviews only focus on the researchers and the study, not on your responses or involvement. The IRB is a committee that reviews research studies to make sure that they are safe and that the rights of the participants are protected.

If you have any questions about your rights as a research participant, you may contact our Institutional Review Board at 1-760-750-4029. If you have questions about this research please contact either my faculty advisor, Dr. Jennifer Jeffries, at 1-760-750-8510 or me via phone or email. A digital copy of the final study will be made available to your school and to all study participants upon its completion.

Prapanna Smith
prapanna@integraleducation.org
1-858-204-2096

CONSENT TO PARTICIPATE IN RESEARCH

Invitation to Participate

Prapanna Smith, a researcher/graduate student at California State University San Marcos is conducting a study on how schools create learning environments that impact students' attitudes towards life. You are invited to participate in this study because you are a teacher or administrator in a unique school that embraces an innovative approach to education.

Purpose

This study has two objectives:
1. To better understand the relationships between your experiences in school and your students' attitudes and beliefs about their lives.
2. To learn about the ways that your school helps you prepare for life.

Description of Procedures

If you agree to participate, you will be interviewed either individually or in groups. The conversational style interview will take approximately one and a half to two hours and, with your permission, will be audio and/or videotaped. The interviews will take place in a private conference room located in your school campus.

Risks and Inconveniences

There are some potential risk in the participants in this study. Some teachers may feel threatened or intimidated if participating in focus group interviews if administrators are present. Administrators may likewise feel they cannot speak freely if teachers are present. Therefore, focus groups will not involve teacher and administrator participants, except where school organization and size necessitates otherwise.

Your interview and contact data will be kept confidential and will remain in the researcher's sole possession. The main risk to confidentiality is that if the researcher's computer is lost or stolen there is the potential that unauthorized individuals may access the data. To protect against this possiblity the researcher's computer will remain in this possession at all times or under lock and key, and at all times be password protected.

For transcription of audio data the researcher will only use a company or companies who specialize in transcription services. Only the audio recordings will be provided to transcribers. The researcher will use the video recordings to check the transcriptions for accuracy.

If the length of the interview is inconvenient for you, you may terminate your participation in the interview at any time without any consequence to you.

Benefits

This study will shed light on how schools can foster a deeper sense of life purpose and personal meaning in student's lives. There may be a direct benefit to participant teachers and

administrators in the schools studied in that review of the final dissertation findings may help them to gain insights into how they are helping to inspire their students to achieve great things in their lives. A digital copy of the final study will be made available to your school and to all study participants upon its completion.

Confidentiality

Interview tapes will be placed in a secure place such a locked cabinet or password-protected computer. Only the researcher, his advisor, and a reputable transcription service company will have access to the information you provide. The analysis and reporting of the results will not identify participants by name. Call contact information, such as email addresses, will be kept in a safe, password-protected computer. There will be no follow-up interview sessions, but you may be contacted in the future via email.

You should know that the Cal State San Marcos Institutional Review Board (IRB) may inspect study records as part of its auditing program, but these reviews only focus on the researchers and the study, not on your responses or involvement. The IRB is a committee that reviews research studies to make sure that they are safe and that the rights of the participants are protected.

Voluntary Participation

Participation is voluntary. You do not have to participate in this study if you do not want to. If you agree to be in this study, but later change your mind, you may withdraw at any time. There are no consequences of any kind if you decide you do not want to participate. Your employee standing will not be affected if you choose not to participate.

Questions

If you have any questions about this study I will be happy to answer them now. If you have any questions in the future about your rights as a research participant, you may contact our Institutional Review Board at 1-760-750-4029. If you have questions about this research please contact either my faculty advisor, Dr. Jennifer Jeffries, at 1-760-750-8510 or me via phone or email A digital copy of the final study will be made available to your school and to all study participants upon its completion.

☐ I agree to participate in this research study.
☐ I agree to be videotaped and/or audiotaped.

_____   _____

Participant's Name   Date

_____

Participant's Signature

_____

Prapanna Smith
1-858-204-2096
Prapanna61@att.net

APPENDIX G

What is Happening in This Class (WIHIC) Questionnaire
(Modified Form for Small Schools)

Scored using a 5-point Likert format: 1 = Almost Never; 2 = Seldom; 3 = Sometimes;
4 = Often; and 5 = Almost Always.

Student cohesiveness -
The extent to which students know, help and are supportive of one another.

 1. I make friendships among students in this school.
 2. I know other students in this school.
 3. I am friendly with students in this school.
 4. Students in the school are my friends.
 5. I work well with other students.
 6. I help other students who are having trouble with their work.
 7. Students in this school like me.
 8. In this school, I get help from other students.

Teacher support -
The extent to which the teachers help, befriends, trusts and are interested in students.

1. The teachers take a personal interest in me.
2. The teachers go out of their way to help me.
3. The teachers consider my feelings.
4. The teachers help me when I have trouble with the work.
5. The teachers talk with me.
6. The teachers are interested in my problems.
7. The teachers move about the classes to talk with me.
8. The teachers' questions help me to understand.

Involvement -
The extent to which students have attentive interest, participate in discussions, do additional work and
enjoy the class.

1. I discuss ideas in my classes.
2. I give my opinions during class discussions.
3. The teachers ask me questions.
4. My ideas and suggestions are used during school and classroom discussions.
5. I ask the teachers questions.
6. I explain my ideas to other students.
7. Students discuss with me how to go about solving problems.
8. I am asked to explain how I solve problems.

Task orientation -
The extent to which it is important to students to stay on-task and complete school work.

1. Getting a certain amount of work done is important to me.
2. I do as much as I set out to do.
3. I know the goals for my classes and for the school.
4. I am ready to start classes on time.
5. I know what I am trying to accomplish in my classes.

6. I pay attention during my classes.
7. I try to understand the work in my classes.
8. I know how much work I have to do.

Co-operation -
The extent to which students co-operate rather than compete with one another on learning tasks.

1. I cooperate with other students when doing assignment work.
2. I share my books and resources with other students when doing assignments.
3. When I work in groups in this school, there is teamwork.
4. I work with other students on projects in this school.
5. I learn from other students in this school.
6. I work with other students in this school.
7. I cooperate with other students on school and class activities.
8. Students work with me to achieve school and class goals.

Equity -
The extent to which students feel their teachers treat them equally.

1. The teachers give as much attention to my questions as to other students' questions.
2. I get the same amount of help from the teachers, as do other students.
3. I have the same amount of say in this school as other students.
4. I am treated the same as other students in this school.
5. I receive the same encouragement from the teachers as other students do.
6. I get the same opportunity to contribute to class and school discussions as other students.
7. My work receives as much praise as other students' work.
8. I get the same opportunity to answer questions as other students.

APPENDIX H

Items for the Satisfaction With Life Scale (SWLS) and
the Satisfaction with Education Scale (SWES)

Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, and Griffen, 1985**)***

1. In most ways my life is close to my ideal.
2. The conditions of my life are excellent.
3. I am satisfied with my life.
4. So far I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

Satisfaction With Education Scale (SWLE; Researcher's modified version of the SWLS)

1. In most ways my education in my school is close to my ideal.
2. The conditions of my education are excellent.
3. I am satisfied with my education in my school.
4. So far I have gotten the important things I want in my education.
5. If I could change my education in my school, I would change almost nothing.

*The SWLS is in the public domain; no permission is required to use it. See page 172 of:
Pavot, W. & Diener, E. (1993). Review of the Satisfaction with Life Scale. *Psychological Assessment, 5*(2), 164-172.

Both scales are scored using a 7-point Likert format:

1 = Strongly Disagree
2 = Disagree
3 = Slightly Disagree
4 = Neither Agree nor Disagree
5 = Slightly Agree
6 = Agree
7 = Strongly Agree

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APPENDIX I

Focus Group Interview Protocol and Questions

Focus group interviews involving at least one group of 5 to 6 teachers and administrators at each school will be conducted using the following protocol and interview questions.

Phase 1: Participants will receive an Information Flier and then take a written response questionnaire via Survey Monkey.

Phase 2: Initial questions on Survey Monkey questionnaire:

1. Name:
2. Email Address:
3. Are you a teacher or school administrator?
4. How many years have you been working at your school?
5. If you are teacher, what standard/grade level(s) do you teach?
6. If you are a teacher, what subject(s) do you teach?
7. If you are an administrator, what are your primary responsibilities?
8. What do you understand to be the core philosophy and guiding principles of your school?
9. Do these principles support the idea that each student has a life purpose to fulfill?
10. How effective do you believe your school has been in effectively applying these principles in the school program?
11. What aspects of the school organization reflect and support these principles?
12. What aspects of the school program reflect and support these principles?
13. Are there any institutional, social, or other contexts that facilitate or impede the school's efforts to implement these principles in practice? If so, please explain.

Phase 3: Based upon responses to the on-line written response questionnaire invitees for focus group participation will be purposively selected. Those who agree to participate in focus groups will be asked to sign an Informed Consent form. At the beginning of the focus groups sessions, results from the student survey will be shared with the group via a PowerPoint presentation.

Interview Questions:

1. Given these results, how can we explain them?
   - What do the results of the student data regarding their learning environment tell you?
   - What do the results of the student data regarding their sense of life purpose tell you?
   - What do the results of the student data regarding their satisfaction with their education tell you?

2. In what specific ways do you, as teachers and school leaders, foster a sense of meaning and purpose in the lives of your students.

Time Frame:

Introduction: 10 minutes
Question 1:   40 minutes
Question 2:   40 Minutes

APPENDIX J

Methodology Appendix

Table A.1: Factor Analysis of WIHIC Variables

Rotated Component Matrix[a]

	Commu-nalities	Component (%Variance Explained)					
		1 (29.51)	2 (8.79)	3 (5.30)	4 (4.761)	5 (3.81)	6 (3.10)
145 EQ5 - I get same encouragement as other students.	.802	0.803					
144 EQ4 - I am treated the same as other students.	.732	0.797					
146 EQ6 - I get same opportunities to contribute as other students.	.720	0.792					
147 EQ7 - My work gets as much praise as others' work.	.705	0.788					
148 EQ8 - I get same opportunity to answer questions.	.691	0.778					
141 EQ1 - Teachers give same attention to me as with others.	.706	0.769					
142 EQ2 - I get the same amount of help as other students.	.711	0.756					
143 EQ3 - I have the same amount of say as other students.	.685	0.742					
136 CP4 - I work with other students on projects.	.714		0.795				
138 CP6 - I work with other students.	.694		0.771				
139 CP7 - I cooperate with other students on class activities.	.615		0.726				
133 CP1 - I cooperate with other students on assignments.	.649.		0.677				
140 CP8 - Students work with me to achieve class/school goals.	.639		0.647				
134 CP2 - I share books and resources with other students.	.683		0.569				
137 CP5 - I learn from other students.	.498		0.560				
135 CP3 - There is teamwork in groups I work with.	.588		0.497				
118 IN2 - I give my opinion during class discussions.	.778			0.766			
117 IN1 - I discuss my ideas in class.	.681			0.656			
121 IN5 - I ask teachers questions.	.637			0.655			
122 IN6 - I explain my ideas to other students.	.670			0.603			
120 IN4 - My ideas are used in class and school discussions.	.670	0.415		0.591			
124 IN8 - I am asked to explain how I solve problems.	.531			0.493			
123 IN7 - Students discuss with me how to solve problems.	.706			0.466			
119 IN3 - The teachers ask me questions.	.690	0.540		0.474			
130 TO6 - I pay attention in my classes.	.778				0.671		
126 TO2 - I do as much as I set out to do.	.553				0.633		
127 TO3 - I know the goals for my classes and school.	.752				0.612		
132 TO8 - I know how much work I have to do.	.459				0.596		
128 TO4 - I am ready to start classes on time.	.622				0.593		
131 TO7 - I try to understand the work in my classes.	.744				0.577		
129 TO5 - I know what I am trying to accomplish in school.	.630				0.520		

Item							
125 TO1 - Getting work done important to me.	.652				0.438		
103 SC3 - I am friendly with students in this school.	.608					0.705	
104 SC4 - Students in school are my friends.	.707					0.689	
101 SC1 - I make friendships among students.	.651					0.685	
107 SC7 - Students in school like me.	.641					0.534	
102 SC2 - I know other students in this school.	.647					0.462	
105 SC5 - I work well with other students.	.576		0.455			0.396	
108 SC8 - I get help from other students.	.550					0.368	
106 SC6 - I help other students having trouble with work.	.416		0.493			0.394	
114 TS6 - Teachers are interested in my problems.	.715	0.409					0.673
110 TS2 - Teachers go out of their way to help me.	.716	0.421					0.630
115 TS7 - Teachers move about the classes to talk to me.	.583						0.594
109 TS1 - Teachers take a personal interest in me	.592	0.407					0.509
111 TS3 - Teachers consider my feelings.	.664	0.483					0.494
112 TS4 - Teachers help me when I have trouble with work.	.626	0.545					0.498
113 TS5 - Teachers talk to me.	.645	0.562					0.396
116 TS8 - Teachers' questions help me to understand.	.544	0.470					0.292

Table A.2: Factor Analysis of LAP-R Variables

Rotated Component Matrix[a]

	Commun-alities	Component (%Variance Explained)		
		1 (33.90)	2 (10.57)	3 (6.13)
214 CO6 - Parts of life fit a unified pattern.	,594	.728		
213 CO5 - Framework to make sense of life.	.621	.705		
212 CO4 - Reason for being here.	.520	.660		
211 CO3 - Has philosophy that gives significance to life.	.542	.639		
209 CO1 - Meaning in life is evident.	.426	.628		
215 CO7 - Understanding of ultimate meaning of life.	.475	.611		
216 CO8 - Existence is orderly and coherent.	.546	.578		
210 CO2 - Aware of powerful consuming purpose.	.568	.465		.538
222 CR6 - Life in own hands.	.672		.789	
223 CR7 - Makes own decisions.	.622		.777	
220 CR4 - Free to make all life choices.	.653		.760	
221 CR5 - Possible to live life in own terms.	.607		.732	
219 CR3 - Determines what happens in life.	.448		.590	
224 CR8 - Accepts personal responsibility.	.417		.580	
217 CR1 - Opportunity to direct life important.	.441	.472	.187	
218 CR2 - Accomplishments by own effort.	.552		.424	.431
202 PU2 - Clear goals and aims.	.701			.812
207 PU7 - Mission in life gives direction.	.682			.772
205 PU5 - Know where life is going in future.	.532			.573
203 PU3 - Discovered purpose.	.594	.450		.566
201 PU1 - Past achievements	.382			.518
206 PU6 - Have felt completely fulfilled	.617			.513
208 PU8 - Life running over with good things.	.524	.614		.063
204 PU4 - Living kind of life I want to live.	.631	.471		.141

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Table A.3: Factor Analysis of LAP-R Variables

Rotated Component Matrix[a]

	Commun-alities	Component (%Variance Explained)	
		1 (33.90)	2 (10.57)
213 CO5 - Framework to make sense of life.	.594	.734	
203 PU3 - Discovered purpose.	.621	.703	
210 CO2 - Aware of powerful consuming purpose.	.520	.698	
207 PU7 - Mission in life gives direction.	.542	.697	
211 CO3 - Have philosophy that gives significance to life.	.426	.693	
216 CO8 - Existence is orderly and coherent.	.475	.665	
202 PU2 - Clear goals and aims.	.546	.642	
212 CO4 - Reason for being here.	.568	.640	
214 CO6 - Parts of life fit a unified pattern.	.672	.637	
215 CO7 - Understanding of ultimate meaning of life.	.622	.594	
205 PU5 - Know where life is going in future.	.653	.578	
206 PU6 - Have felt completely fulfilled	.448	.550	
201 PU1 - Past achievements	.417	.503	
208 PU8 - Life running over with good things.	.352	.471	
209 CO1 - Meaning in life is evident.	.552	.443	
204 PU4 - Living kind of life I want to live.	.524	.412	
222 CR6 - Life in own hands.	.701		.796
220 CR4 - Free to make all life choices.	.682		.785
223 CR7 - Makes own decisions.	.532		.777
221 CR5 - Possible to live life in own terms.	.594		.756
219 CR3 - Determines what happens in life.	.382		.606
224 CR8 - Accepts personal responsibility.	.617		.576
218 CR2 - Accomplishments by own effort.	.197		.391
217 CR1 - Opportunity to direct life important.	.607	.564	.235

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Table A.4: Factor Analysis of Satisfaction Variables

Rotated Component Matrix^a

	Communalities	Component (%Variance Explained)	
		1 (52.92)	2 (14.93)
302 SE2 - Conditions of education are excellent.	.763	0.856	
303 SE3 - Satisfied with education.	.798	0.845	
301 SE1 - Education close to ideal	.727	0.843	
304 SE4 - Gotten important things from Education.	.683	0.746	
305 SE5 - Would change almost nothing of education.	.636	0.716	
403 SL3 - Satisfied with life.	.792		0.880
402 SL2 - Conditions of life are excellent.	.707		0.788
404 SL4 - Gotten important things from life.	.651		0.788
401 SL1 - Life close to ideal.	.572		0.663
405 SL5 - Would change almost nothing in life.	.455		0.633

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

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