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Turning Points: Stories of How Students Get Beyond Antipathy Toward an Academic Course

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Toward an Academic Course

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A thesis submitted to the faculty of
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ABSTRACT

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The purpose of this qualitative study was to examine the narratives of 10 students who began an academic course with strong negative attitudes but finished the course with strong positive attitudes. In the beginning of the course, each student exhibited one of these three tendencies: apathetic, compliant, or disillusioned; however, by the end of the course, they exhibited a transformed disposition. This study attempts to answer the question of what the turning points were for their transformation and how they made the change. The findings of this study were that regardless of individual tendencies, the ability to exercise agency was the principal turning point for these students, followed by seeing that relevance in their own lives, and taking the initiative to approach the teacher with problems. An unexpected finding was how students with a transforming tendency tend to see learning as a spiritual activity and that through faith, acknowledging others, reverence, and humility, they can change their strong negative attitudes toward a course.

Keywords: motivation, transformation, college students, agency, relevance, spirituality in education

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Chapter 1: Introduction

On most college campuses, antipathy exists toward general education classes like

freshman English, freshman math, statistics, biology, and so on. The following scenario

illustrates this antipathy:

"So what are you guys taking this semester?" asks Antonio.

"Stats 221," says Nabil.

"Math 110," laments Ling.

"I'm taking Bio 100," sighs Sofia.

"Oh, that stinks," replies Antonio.

"Yeah! I tried to get out of it but I need it for my GE credits," says Sofia. "I'll just get the

best grade I can and then try and forget the whole thing."

"Statistics is worse," responds Nabil sympathetically. "There is no way I'll pass."

"So are you going to drop the class?" asks Antonio.

"No," responds Nabil. "I'll just go through a semester of grief, fail the class, and when

it's all over I'll still hate stats."

"Actually," says Ling, "I've always had pretty good grades, but Math 110 is killing me. I

am doing all the assignments and everything, but I got a 60 on the first test and it's been going

downhill ever since."

"Why do they even have these classes? Nobody can stand them," adds Antonio. Sofia,

Ling, and Nabil nod in agreement. "Which reminds me. I'm off to American Heritage."

Sofia, Ling, and Nabil all groan. "Good luck staying awake." says Sofia. They all laugh.

Most students have expressed at one time or another similar feelings towards a particular

introductory course. Research has shown that over a third of students exhibit negative affects toward a course in school (Associated Press, 2005; Feller & Trevor, 2005)

Schau (2003) surveyed introductory statistics students who working individually came up with lists of "words and phrases that, in their views, represented introductory students' attitudes toward statistics. The group generated 92 unique words and phrases. Of these, almost 80% were negative and many of these were emotionally charged (e.g., dread, despair, crying)" (p. 19).

The University of Oklahoma conducted a study asking 370 students to indicate on a 5-point scale (ranging from "extremely important" to "not important at all") how important they felt biology was in their lives. Fifty percent of the students rated biology as somewhat unimportant to not important at all (Roger & Ford, 1997).

Although most faculty members may be aware of the strong negative attitudes that some students have toward an academic course, they may not be sure what to do about these strong negative attitudes or how to help students change their attitudes. Equally significant is that students are aware of these strong negative attitudes and do not know what to do about them, or whether they can change them. With information about how students change their own negative attitudes, educators can empower students to get beyond their antipathy. This could have an important impact on helping students become lifelong learners.

The purpose of this study is to examine the narratives of students who start out strongly disliking an academic course but end up greatly enjoying the course, in order to answer the following research question: What are the turning points that affect the students' change from antipathy (settled aversion or dislike) to affinity toward an academic course?

Chapter 2: Literature Review

The literature on students who initially have strong negative attitudes towards introductory courses reveals that the preceding scenario is far from unusual. Based on my previous experience as a teacher and as an instructional designer, which is by no means exhaustive, I have observed that these students seem to possess different tendencies. My literature review provided the following framework to categorize these tendencies:

(1) Compliant tendency. Students with this tendency take a course to comply with a university requirement, knowing that they can and will succeed. However, the attitude outcome is that they probably retain little of what they learned and experience no change in their negative feeling toward the course.

(2) Apathetic tendency. Students with this tendency take a course reluctantly, believing they will do poorly. They find no value or worth in learning the material in the course, and the attitude outcome is that they fail or barely pass the course, thus maintaining the same negative feelings toward the course.

(3) Disillusioned tendency. Students with this tendency are a cross between compliant and apathetic. They believe they are capable and can succeed in the course, as in the compliant tendency; but unlike students with the compliant tendency, disillusioned students do feel the material is worth learning. However, when the students perform poorly, the attitude outcome is that they become disillusioned and develop negative feelings towards the course, which is similar to the outcome experienced with the apathetic tendency.

In an attempt to summarize these tendencies, I developed Figure 1, entitled *Students' Motivational Tendencies Toward an Academic Course*. This figure classifies these tendencies according to high or low self-efficacy, expectancy for success, performance, and utility value.

The tendencies represented in Figure 1 are not absolute. Some students may possess more than one tendency, and the tendencies exist on a continuum.
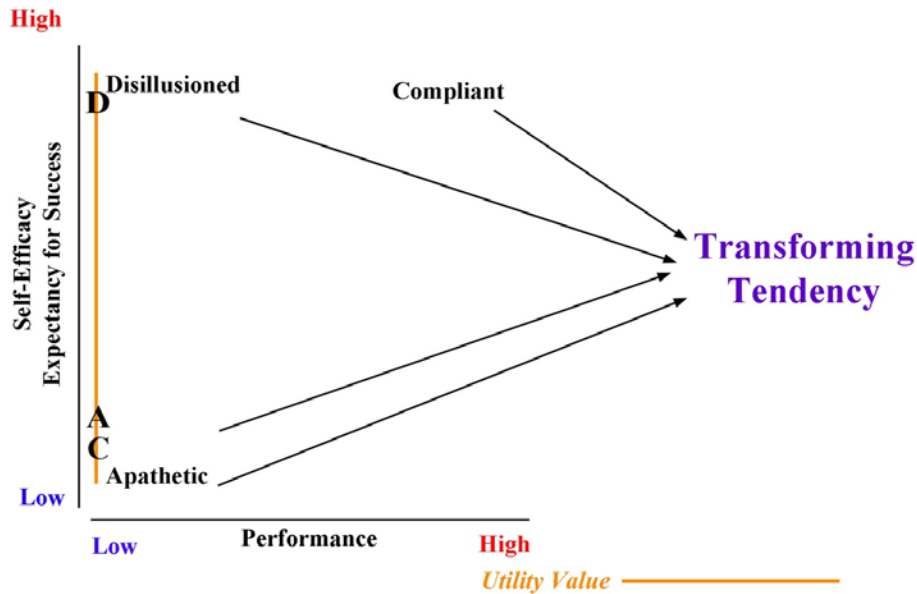
Figure 1. Students' motivational tendencies toward academic courses. Utility value toward the course is indicated by the orange vertical line, with A = apathetic, C = compliant, and D = disillusioned.

The compliant tendency is typically positive self-efficacy, high expectancy for success, and high performance, as shown in Figure 1. However, the utility value for course material is low.

The disillusioned tendency is typically positive self-efficacy and expectancy of success and negative performance, as shown in Figure 1. This results in negative utility value.

The apathetic tendency is typically negative self-efficacy and expectancy for success, low performance, and low utility value, as shown on Figure 1. Several theoretical frameworks offer support for these tendencies.

Compliant Tendency

The compliant tendency may be explained by the students' need for achievement or competency (Atkinson, 1964). They may focus on performance goals in order to gain positive judgments of their competence and to prove their ability is adequate (Ames, 1984, 1992; Dweck, 1989; Dweck & Leggett, 1988). They may have a high desire to be seen as smart and to avoid looking unintelligent. Because these students believe that they are capable of doing well and getting a good grade, they will persist in their efforts (Bandura, 1997).

Along with their belief in their ability, these students may also have seen other students with similar ability succeed in a course, so they believe that if these other students can do it, so can they. Bandura (1982) described this as "vicarious reinforcement."

Apathetic Tendency

The apathetic tendency can be explained in part by attribution theory (Weiner, 1986). There are three causal dimensions to attribution theory: locus of control, or whether the cause is internal or external to the person; stability, or whether a cause is constant or varies over time; and controllability, or whether the cause can be altered by the person's volition. Students with apathetic tendencies attribute their failure to aptitude (internal locus of control). They believe that their habitual failure will remain constant (stability) and that they are powerless to change it (controllability).

Apathetic students may believe that if they exert effort and do poorly, this confirms their low ability or aptitude (Dweck & Leggett, 1988). Low ability means loss of self-efficacy (Bandura, 1997). These same characteristics of low self-esteem, low self-efficacy, and helplessness are also found in reluctant learners (Protheroe, 2004; Sanacore, 2008).

Disillusioned Tendency

The disillusioned tendency can be explained through the prototypical example of learned helplessness (Seligman, 1975): successful students unexpectedly fail despite their efforts and then are not able to complete work that prior to the failure would have been easy for them to accomplish. Bandura (1982) wrote that students who are accustomed to success and then fail at something become despondent and tend to devaluate themselves.

Another theory that may explain the disillusioned tendency in a student is how the student tends to see intelligence (Dweck & Leggett, 1988). If students see their intelligence as fixed and unchangeable, then failure implies that they lack intelligence. Dweck (1999) found that students who are accustomed to succeeding in school are less likely to develop learned helplessness because they believe the entity view of intelligence.

Transforming Tendency

There is another tendency that I have observed, sometimes mentioned in the literature, in which students exhibit real, positive change in their attitudes toward a course. I will refer to this as the transforming tendency. These students start out much like the students with compliant tendencies, in that they reluctantly take a course that they strongly dislike in order to comply with a university requirement, which they also strongly dislike. These students also exhibit apathetic tendencies in that they do not believe or expect to perform well. However, instead of the attitude outcomes of the students with compliant or apathetic tendencies, the outcomes of students with a transforming tendency are that they exceed their expectations of success, perform well, experience positive feelings towards the course, and end up highly valuing it. This transforming experience makes them want to use the new knowledge in future pursuits, possibly making a change in career choice.

The following scenario illustrates students who develop a transforming tendency:

"I used to hate biology. However, they let us choose our research topics and that made a huge difference," says Sofia enthusiastically.

"Yeah." Nabil smiles. "They did that in our class too. By choosing, it became personal and something I could relate to. I actually understood the material."

"You know I actually enjoyed the class," Sofia says, somewhat surprised.

Nabil agrees. "When you have an experience like that it changes the way you feel about yourself. It's like, 'Okay, I can do this.' It makes you more proactive."

"What made a difference for me was the professor," adds Ling. "I could approach him and share my concerns and challenges with the course."

"That's so cool when they're into student involvement and they care about what works for us," says Sofia.

"Seriously," Ling continues. "And I walked out of there thinking, 'Hey, I can make this work.' If I choose to have a positive attitude—and work at it—I can have a really good experience."

The transforming tendency typically starts with negative self-efficacy and expectancy for success, but ends in positive performance, utility value, and affective change, which fits in the lower right quadrant of Figure 1. Even though students with compliant, disillusioned, and apathetic tendencies are described in this study, the purpose for describing these students is to show the beginning point of their attitude toward an academic course. Therefore, the focus of the study is on the students with a transforming tendency and how they moved from one of the other tendencies to a transforming tendency.

My observation of students with the transforming tendency shown in Figure 1 can be supported by four motivational theories in the literature: self-theories (Dweck, 1989); self-determination theory (Ryan & Deci, 2000); conation (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Emmons, 1986; Kane, 1985; Mischel, 1996); and spirituality (Danesh, 1994; Glider, 1997; Khavari, 1999; Kirk, 1992; McLean, 1994).

Self-theories. Self-theories (Dweck & Leggett, 1988) posit that intelligence is either fixed and unchangeable or it is malleable and changeable. When students are faced with challenges or obstacles, they will look for strategies to meet the challenges or overcome the obstacles.

Conation. *Conation* is the relationship between how awareness and emotion interact to produce proactive behavior, as opposed to reactive behavior. Huitt (1999) referred to conation as "the personal, intentional, planful, deliberate, goal-oriented, or striving component of motivation" (p. 1). It is closely associated to the idea of volition, will, and agency (Baumeister et al., 1998; Emmons, 1986; Kane, 1985; Mischel, 1996).

Spirituality. Researchers who study conation mention nothing about the moral or spiritual reasons for motivation. However, psychologists such as Maslow (1971), William James (1902), and Carl Jung (1989) have acknowledged the spiritual nature of people in their explanation of human behavior. Spirituality is a fundamental and critical development of humans (Kirk, 1992). This spiritual motivation is supported by recent studies by researchers at UCLA (HERI, 2005), the Carnegie Foundation (Carnegie Mellon University, 2007), and the Ford Foundation (n.d). Of 112,000 students and 40,000 faculty that were surveyed regarding spirituality in higher education at over 420 institutions, it was found that 74% of the students placed a high priority in cultivating spirituality within colleges and universities. Of those

students, 56% felt that faculty did not provide opportunities to discuss the meaning and purpose of life. This led one researcher to conclude "while students want support in their quests for meaning and purpose during college, few are finding it" (Pingree, 2007–2008, p. 8).

Transformative learning. One more possible explanation for the student with transforming tendencies is found in the framework of the *transformative learning theory*, which is the process of becoming changed in some meaningful way by what the student learns. Osguthorpe & Osguthorpe (2009) offer a way to look at students who show transforming tendencies, as shown in Figure 2.
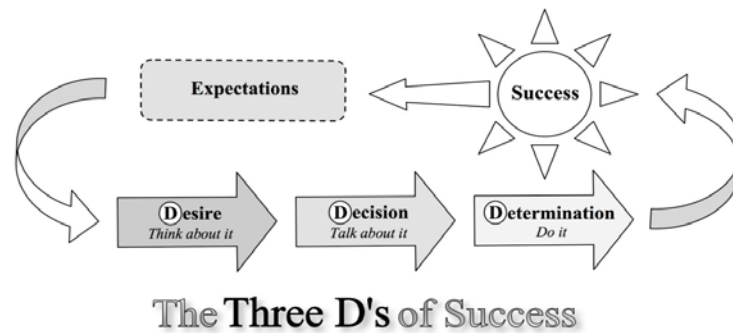
Figure 2. The Three D's of Success model, a part of the transformative learning theory. Reprinted from "Choose to Learn: Teaching for success every day," by R. T. Osguthorpe and L. S. Osguthorpe, 2009, Corwin Press, Thousand Oaks, CA.

Each of the components of the Three D's of Success plays a role in transformative learning. The word *desire* is defined as "wanting to do something or be something . . . It's a thought, an aim, a determiner of personal conduct" (Osguthorpe & Osguthorpe, 2009, p. 8). It does not refer to an unfocused longing or yearning. None of the theories of motivation directly address the idea of desire as Osguthorpe and Osguthorpe define it. Atkinson (1964) addressed the idea of motive, which is a reason to want to do something or be something. However, this is not the same as wanting to do something or be something. The distinguishing difference is in the

words "Think about it," shown in Figure 2. This is similar to Mezirow's (1978) idea of becoming aware of how and why we think the way we do and how it limits us.

The word *decision* is defined as choosing to do or be something. Osguthorpe & Osguthorpe (2009) explained "when we discuss personal agency or the power to choose, we are talking about a particular kind of choice making. *Educare*, the Latin root of the word education means to 'draw out.'" In other words, the principle of decision invites teachers to encourage good choices in students. This idea of personal agency is powerful in light of the theory of attribution, which describes students as asking why they have failed or why they have succeeded, and what caused the failure or success. However, these causes—like ability, effort, lack of effort, task difficulty, luck, and mood, as suggested by Weiner (1974, 1980, 1986)—imply a deterministic mentality, which Osguthorpe and Osguthorpe (2009) caution against.

Determination in the Three D's of Success model is defined as persistently moving toward a goal. Persistence and motivation have a strong positive relationship. The stronger the motivation to learn, the more time spent in studying or learning. However, the transforming students have probably had a frustrating experience during their initial contact with a course, which may cause a tendency to avoid effort (Rollett, 1987); or they are preoccupied with what they do not know, cannot do, or should be able to understand (Kuhl, 1986).

Although students with disillusioned, compliant, apathetic, and transforming tendencies are discussed in the literature, very few studies ask these students to describe how they started out with a compliant, disillusioned, or apathetic tendency and moved to a transforming tendency.

Chapter 3: Methods

In order to find out how students who initially begin a course with strong negative attitudes make the change to tendencies of transforming, a qualitative study was conducted. Data for this qualitative study were collected primarily through student interviews. The secondary means of data collection was an attitude scale that helped to screen participants and to inform the interview questions. Interviews and attitude scales provided holistic interpretations of the data, as well as ensured credibility, transferability, dependability, and c.

The descriptive method for this study was based on the following assumptions (Merriam, 1998):

(1) The questions posed in the study are *how* and *why* questions.

(2) The process is more important than the outcomes.

(3) The context, which involves multiple variables, is more interesting than a specific, isolated variable.

(4) The discovery is more critical than confirmation. (p.19)

The goal of the methodology was to identify the turning points and the process students underwent as they transformed from antipathy to affinity toward an academic course.

Trustworthiness

Given the assumptions and the qualitative nature of the study, I used the following criteria to establishing the trustworthiness of the study (Guba & Lincoln, 1989): credibility, transferability, dependability, and confirmability. A description of each standard and how I used it to establish trustworthiness follows. .

Credibility. To establish credibility, I used the following techniques:

Triangulation of the data. I used a form of triangulation between the attitude scale and interview data. The attitude scale was used not only to screen the interviewees but also to inform the interview questions.

Member checking. After each interview, I sent a copy of the summary of the interview to the student. The student had the opportunity to state whether the summary was accurate. If the student suggested changes, the interviewer modified the document until the student was satisfied that the data were accurate.

Creation of an audit trail. I constructed an audit trail that explained how the data were collected, how the categories were derived, and how the decisions were made throughout the study.

Explanation of the researcher's bias. I clarified my assumptions and theoretical orientation.

Transferability. In addressing transferability, I incorporated the concept of a working hypothesis (Cronbach, 1975) by providing enough description so that other students could determine how closely their situation matched the study's situation. I also incorporated the concept of user generalizability—leaving the application of the study's findings to the readers to ask what is in the study that they can apply to their own lives (Firestone, 1993). I assisted the reader in finding application to their own situations by describing the typical domains that were identified from the analysis of the interviews, so the users could make comparisons with their own situations. My goal was to use the findings of this study to help students who were experiencing similar situations.

Defendability. In order to establish defendability—the consistency of the results obtained from the interviews—I used the sample techniques described under the credibility section: triangulation, audit trail, and my research bias.

Confirmability. With regards to confirmability, since an external audit was not within the scope of this study, my audit trail provided the raw data and the processes I used to consolidate them, so they can be inspected and traced to their sources (Lincoln & Guba, 1985).

Ethics

In seeking a research design that was both rigorous and ethical, I took the following steps.

Explaining purpose. In explaining the purpose of the study to participants, I emphasized the importance of their stories and the need of authenticity and candor. I communicated that there was a compelling need for faculty, students, and administration to understand how students turn themselves around in a course, and how the information provided by the participants could help the university as a whole.

Assessing risk and confidentiality. I explained to the participants that their stories might be shared with faculty and administrators, but not their identities. The interviews were recorded. The audio was transferred from an iPhone to the researcher's computer and a secure CTL server located in the Harold B. Lee Library. Transcripts of the audio interviews were stored in a locked file cabinet at CTL.

Obtaining informed consent, data access, and ownership. The participants signed an informed consent form at the beginning of each interview session (Appendix C). The forms were scanned into .pdf format and stored on a secure, password protected server at BYU.

Data Collection

The process of the data collection was two-fold. First, I identified the group I wanted to target for this study then select individuals within that group who met the criteria of the study. Second, I gathered in-depth information regarding these individuals through student interviews.

Identification of group and selection of individuals. In order to identify the group and select the individuals, I used a sampling method called intensity sampling (Patton, 1990). There are two levels of this type of sampling. The first level involves identifying a case. A case can be an individual, a group of individuals, or an occurrence. For this study, the case was a group of undergraduate students. The second level involves selecting within the group of undergraduate students those who met the following criteria:

(1) The student began an academic course with strong negative feelings toward it.

(2) The student began an academic course with low expectations for success.

(3) At the end of the semester, the student received a grade that exceeded his or her expectations.

(4) By the end of the semester, the student had developed an affinity for the course.

I was able to identify the group through the help of Dr. John Bell. In the fall of 2007, Dr. Bell invited undergraduate students who strongly disliked cellular biology to take his Honors 260 Biological Sciences Principles and Reasoning class. I was able to obtain a list of email addresses for the 50 students who were enrolled in this class. I sent an email message (Appendix D) to these 50 students identifying the criteria and asking them to respond if they met the criteria. As an attachment to the email, I sent an attitude scale that I adapted from by Dr. Richard Sudweeks (Appendix B) that asked them to rate their attitudes toward an academic course. This scale was

used to select the participants to make sure that they met the criteria of the study. Through the use of the attitude scale, I selected 10 students who most closely met the criteria.

Student interviews. In order to gather rich, deep narrative information about the students' experience, I chose interviewing as the data collection method. Patton (1990) explained the perspective that is available through interviewing:

We interview people to find out from them those things that we cannot directly observe. . . . We cannot observe feelings, thoughts, and intentions. We cannot observe behaviors that took place at some previous point in time. We cannot observe situations that preclude the presence of an observer. We cannot observe how people have organized the world. We have to ask people questions about those things. The purpose of interviewing, then, is allowing us to enter into the other person's perspective. (p. 196)

A total of 10 students participated in the interviews. Rather than conducting multiple brief interviews, I conducted one 60-minute interview (see Schuman, 1982). The structure of the interview followed a condensed three-interview design (Seidman, 2006). The interview began with semi-structured questions (see Appendix A) to establish the context for the student's experience. Then the students were asked to reconstruct the details of their negative experience with an academic course. Next, the students were asked to reflect on what the experience meant to them.

I used the modified three-interview structure because in order to be meaningful and understandable, their behavior needed to be placed in the context of their lives and the lives of those around them. Without context, it is difficult to explore the meaning of an experience (Seidman, 2006). In order to refine the interview questions, the questions were piloted with Math 110 students who met the specified criteria for this study.

While conducting interviews, I recorded notes of the interview and made an audio recording of each interview. Observations were made of the interviewee and recorded in an interview log. The results from the attitude scale were used to solicit deeper responses. The recorded interview was captured by an iPhone voice recording application, and the files were converted into an .aif audio file format. These .aif files were imported into transcription software called Transcriva and were stored on the researcher's computer. A backup file of the recorded interviews was stored on an external hard drive. I was the primary researcher who conducted the interviews and transcribed the interviews.

Data Analysis

To learn more about what students did to change their tendency toward a course, I analyzed the data in four ways: domain analysis, taxonomic analysis, componential analysis, and theme synthesis (Spradley, 1980).

Domain analysis. A domain is a collection of categories that share a certain kind of relationship. Domains are made up for a cover term (Y), which is the name of the broad category, and included terms (X), which are names for sub-categories within the broad category, and a semantic relationship which links the cover term (broad category) to the included terms (sub-categories).

First, I read through the interview data and searched for initial cover terms. I identified 18 possible cover terms: *hate a course*, *preconceived notions*, *choice*, *surprise*, *learning as a sacred act*, *whiz kids*, *barriers*, *gratitude*, *openness*, *getting beyond antipathy (bias)*, *attitude change*, and *relevance*. Some of the cover terms became included terms under other cover terms. For example, preconceived notions and whiz kids became included terms under the cover term barriers. The cover terms *spiritual metaphors* and *light* were moved under the cover term

learning as a sacred act. *Personal journey* was moved under the cover term getting beyond antipathy. Surprise was organized under the included term *awakening*. These cover terms were drawn from the actual words used by the students where possible.

In order to further keep the cover terms at a comprehensive level, I used and adapted Lincoln and Guba's (1985) guidelines as follows: Importance is denoted by (1) the number of students who mention a particular theme or idea; (2) the number of unique categories that stand out from the rest of the categories; and (3) the number of categories that "reveal areas of inquiry not otherwise recognized" or "provide a unique leverage on an otherwise common problem" (p. 95). I prepared a domain analysis worksheet (Appendix E) for each cover term.

I then read through the interview data again and identified included terms (sub-categories) that fit within the cover term (broad category) (Appendix E). For example, under the cover term attitude change, the following included terms (actual quotes) appear to fit:

Decided to have a better outlook

Taking classes I thought I would not like

Find value in everything even offensive or difficult or foreign

If I want something to change I have to be the one to change

I can do it

I need to be willing to be open

I want to learn this

If it is out there and it was in the way, I would go at it and do it.

After identifying the cover terms and included terms, I looked at the cover term and the included term to determine which of the following semantic relationships (Spradley, 1980) applied:

(1) Strict inclusion (X is a kind of Y).

(2) Spatial (X is a place in Y, X is a part of Y).

(3) Cause-effect (X is a result of Y, X is a cause of Y).

(4) Rationale (X is a reason for doing Y).

(5) Location for action (X is a place for doing Y).

(6) Function (X is used for Y).

(7) Means-end (X is a way to do Y).

(8) Sequence (X is a step or stage in Y).

(9) Attribution (X is an attribute, or characteristic, of Y).

For example, I took the included term *decided to have a better outlook* under the cover term attitude change and went through each relationship asking following questions: Is decided to have a better outlook a kind of attitude change?*;* Is decided to have a better outlook a part of or a piece of attitude change?; Is decided to have a better outlook a result of or a cause of attitude change?*,* etc., for each semantic relationship. Based on asking these questions, I identified the following relationships for the cover term attitude change and the included term decided to have a better outlook: strict inclusion (is a kind of), rationale (is a reason for doing), cause-effect (is a result of); means-end (is a way to do); and sequence (is a step in). I repeated the search for domains using the different semantic relationships, then I made a list of all domains (cover terms and included terms) for a given relationship (Appendix F).

In order to more easily read and see the information identified in Appendix F and to facilitate the next phase of analysis—taxonomic analysis—I created a spreadsheet that showed the cover terms in the left column, the relationship across the top row, and where a cover term and an included term intersected. The cell showed the included terms for that cover term and

relationship (Appendix G). The results of the domain analysis gave me a general idea of possible areas to focus my study. However, additional refinement of the data was necessary to narrow the focus.

Taxonomic analysis. In the taxonomic analysis, I selected a domain. The domains that I selected for this phase of the analysis were domains that I had the most information about and that best fit my research questions. During this analysis phase, I tried to stay true to the actual terms used by the students. However, I have shortened some of the phrases to one- or two-word phrases for convenience in working with the data.

I will continue using the example of the cover term of attitude change. I went to the cover term, attitude change and the (X is a kind of Y*)* relationship and looked for similarities in the included terms based on the relationship and grouped the included terms that were similar. For example, I grouped the included term surprise under the included term, awakening, etc. I followed this process within each domain grouping the similarities in the included terms. I also looked across domains and grouped similarities. For example, for the cover term attitude change under the semantic relationship of (is a result of), the included term *I need to be willing, to be open, to work hard, to do the work. . .* was similar to the included term under the semantic relationship (is a kind of)*,* so I moved this included term under the domain of attitude change with an (is a kind of) relationship.

As a result of this analysis, I constructed a taxonomic concept map (Appendix H) that summarizes the cover terms, included terms, and relationships, and also a taxonomic box diagram (Appendix I) that includes the actual excerpts in order to facilitate the next phase of analysis.

Componential analysis. The purpose of the componential analysis is to search for the attributes of the cover terms that make up a domain and how the cover terms are distinguished from other cover terms in a different domain in order to further distill the meaning of the taxonomy outlined in Appendix H. I posed contrasting questions, such as the following: How are two cover or included terms different? How are they similar? How are the two cover or included terms similar to or different from a third cover or included term? However, this proved to be problematic because I was not able to interview some of the students a second time. I modified this phase of the analysis, and instead of asking the contrasting questions to the students, I looked at the interview data shown in Appendix H and asked the contrasting questions. For example, the included term *self-efficacy* appears under the cover term attitude change for the semantic relationship (X is a kind of Y) and it also appears under the cover term awakening for the semantic relationship (X is a kind of Y). What is the difference between self-efficacy under attitude change and under awakening? What is the similarity? I went to Appendix I and looked at the excerpts for these two cover terms to determine differences and similarities. The included term of self-efficacy was more of a kind of awakening than an attitude change, so this included term was moved under awakening.

Thematic analysis. A thematic analysis focuses on recurring patterns that emerge from the data. These recurring patterns were best seen in the relationships among the characteristics identified in the domain analysis as well as in the nature of the research questions, which best addressed the strict inclusion (X is a kind of Y) and means-end (X is a way to Y).

Chapter 4: Results

For this section, I list the major findings from the interview data, then describe how I came to these findings by analyzing the interview data. In analyzing the data, I present the excerpts from the students on how they felt at the beginning of the course, then their feelings at the end of the course, which illustrate their awakening. Next, I describe the turning points that led to this awakening. I show how each of the turning points fit into the Componential Analysis figure (Appendix J).

The results of the analysis revealed the following characteristics as turning points in the students' tendency toward transforming: awakening, choice, relevance, approaching the teacher, becoming educated, faith, acknowledging others, reverence, humility, and learning as a sacred act.

The relationships between these turning points helped to form the following themes:

(1) Seeing that relevance matters. It is a way for students to get beyond antipathy and is a catalyst for an awakening to new possibilities, interests, self-directedness, desire to learn, and self-confidence (efficacy).

(2) Appealing to a students' desire to become educated is a way to relevance.

(3) Exercising choice permitted the students to increase their power to overcome antipathy, which leads to a desire to learn, self-efficacy, new abilities and capabilities, and self-directedness.

(4) Approaching the teacher was a turning point and helped the students to get beyond antipathy.

(5) Exercising faith in a high power's capability to help them appears to be critical to overcoming antipathy and leads to learning as a sacred act.

(6) Learning as a sacred act is the awakening.

(7) Acknowledging others, reverence, and humility are fundamental in the students' awakening toward learning as a sacred act.

Before Awakening

Of the 10 students who were interviewed in this study, three of the students exhibited compliant tendencies, three students exhibited apathetic tendencies, and four students exhibited disillusioned tendencies. Figure 3 shows the real first name of each student where they fell on the Students' Motivational Tendencies toward an Academic Course diagram. By placing the students on the Students' Motivational Tendencies toward an Academic Course diagram, I am not trying to plot an exact tendency since the strength and intensity of each tendency can vacillate along the continuum. This figure is merely to help facilitate the identification of the student passages in this section with their initial tendency.
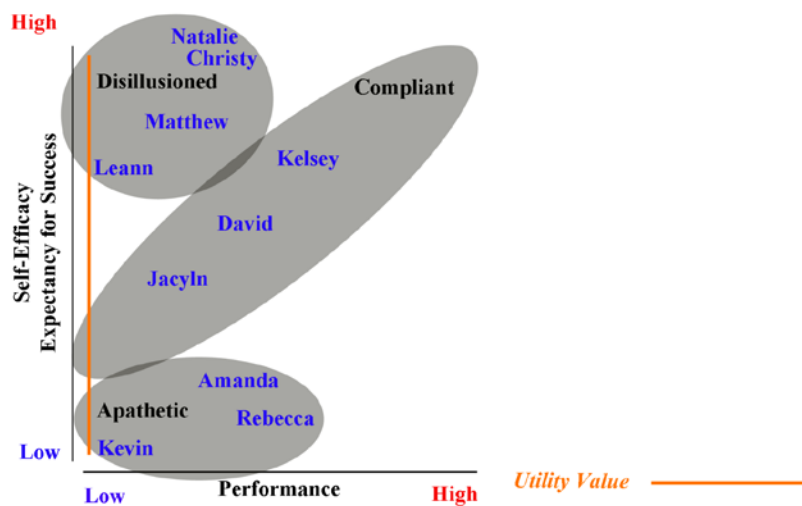

Figure 3. Participants mapped on the Students' Motivational Tendencies toward an Academic Course diagram, according to their initial feelings about the value of the course and their ability to perform.

The following passages show the strength of participants' antipathy at the beginning of the course:

Jacyln: I found as many ways to get out of biology as I could. I completely avoided biology at all costs (Compliant tendency).

Kelsey: I am never really going to do anything with this, but I have to take it, so I have to get through this. Get good grades so I can get to what I really am going to study. This is more of an obstacle that I just have to get over so I can do what I really love and do what I am good at (Compliant tendency).

Kevin: I remember walking into class and thinking, "There is no way I am going to be able to do that. I don't even know why I am here. I'm an idiot. I should not be in this class." So I think it is just like the first day and . . . I just remember thinking I have no idea what I am doing in this class and I am not going to get a good grade (Apathetic tendency).

Matthew: You know I am naturally good at math, and so I have always taken it. How could I have understood it in high school and then come here and have it be so abstract and completely something incoherent? I told myself, "You know there are so many other classes, I am not going to take it." Of course, my mom told me, "If you don't take it, it is going to make you look bad. You have to finish." I took Cal. [calculus] and got a C my freshman year (Disillusioned tendency).

Christy: Because I was always in English, music, and the non-math side, Stats. never even entered my radar and then I just heard a lot of negative feedback. That

was one thing. Even from mathematicians, they said they dreaded stats. They

would say, "It is hard. You will hate it. You will need help and it is very hard for

math people to do well in it. A lot of mathematicians struggle in it." Just constant

negative feedback. The anxiety and reality that I had to take this class in a few

weeks—the anxiety was just building and the first day of class was fear

(Disillusioned tendency).

The Awakening

So how did students move from their initial tendencies of compliance, antipathy, and

disillusionment towards a transforming tendency? The students shared the following ideas.

Jacyln (compliant tendency) told how discovering that she had the skills to do the

work allowed her to become more interested in the subject matter:

As I went through class, I started noticing skills that I had . . . I never had a clue

that I had those capabilities . . . As I started seeing these things, all of sudden at

the end of the course Dr. Higley would point out, "You have all this." . . . All of a

sudden I found that I really enjoyed it. It just absolutely fascinated me. . . . For the

first time in my life I felt like I was really good at science. All of a sudden it

slowly started coming to me that I could study this. Then I actually would really

enjoy putting most of my time and effort into studying these things. . . . I never

saw myself doing research. There wasn't any expectation for me to be . . . a

researcher . . . a scientist. And it was something that I never really grasped that I

actually could become this kind of person, that I actually did have those

capabilities and . . . all of a sudden I caught that vision of not only that I could do

it, but I wanted to do it . . . I was just intrinsically curious. I really want to know

more about this and I didn't realize I wanted to learn more until I got in the class.

Notice how surprised Jacyln was when she realized she had the capabilities to succeed in

the class. This awakened her belief that she could do it (self-efficacy) and, more important, she

wanted to learn it (desire to learn).

Kevin (apathetic tendency) expressed these new feelings toward Statistics:

Stats helped me to go on to try economics, which was a class that I was always

interested in taking, but I knew it was math intensive as well and it gave me the

confidence to enroll. . . . And both of those classes [statistics and economics]

moved me to take a biology class. I had the self-confidence to try courses outside

of my realm of expertise.

Notice how Kevin has the self-confidence to take courses he had previously not

attempted. He wanted to risk more and try courses outside of his comfort zone.

By the end of her experience, Christy (disillusioned tendency) echoes the same feelings

as Kevin and Jaclyn about new abilities and surprise:

I feel like I have more confidence. I have gained more confidence in knowing that

I can learn something that I previously thought was uncharted territory and even

territory I didn't want to go into. I feel like my sense of possibilities has increased

somehow. I think that is the biggest explanation [of the change]; it is the most

truthful one. Just a new discovery we can be interested in things that we

previously thought were not within our realm of interest. I think that is an

important thing.

Figure 4. Fruits of Awakening diagram, showing the development in students' feelings about their abilities and the course material.

Notice in Figure 4 how the process of "awakening" is evidenced by "surprise" that the student can do something he or she did not think possible, how this awakening showed them they had "abilities and interests" they had never seen in themselves before. They became more self-directed as a result of this self-awareness, and their "self-efficacy" increased.

Turning Points

What caused the awakening in these students? What were the turning points for each of them in getting beyond their initial tendencies and feelings for a course and moving to an affinity for it? The following passages suggest that the following characteristics contributed to their change:

Seeing that relevance matters.

Becoming educated is a way to relevance.

Exercising choice.

Approaching the teacher.

Learning as a sacred act.

Exercising faith.

Acknowledging others, reverence, and humility.

All of these characteristics are discussed in this section. However, four emerged as recurring characteristics of the awakening the students experienced (Figure 5).
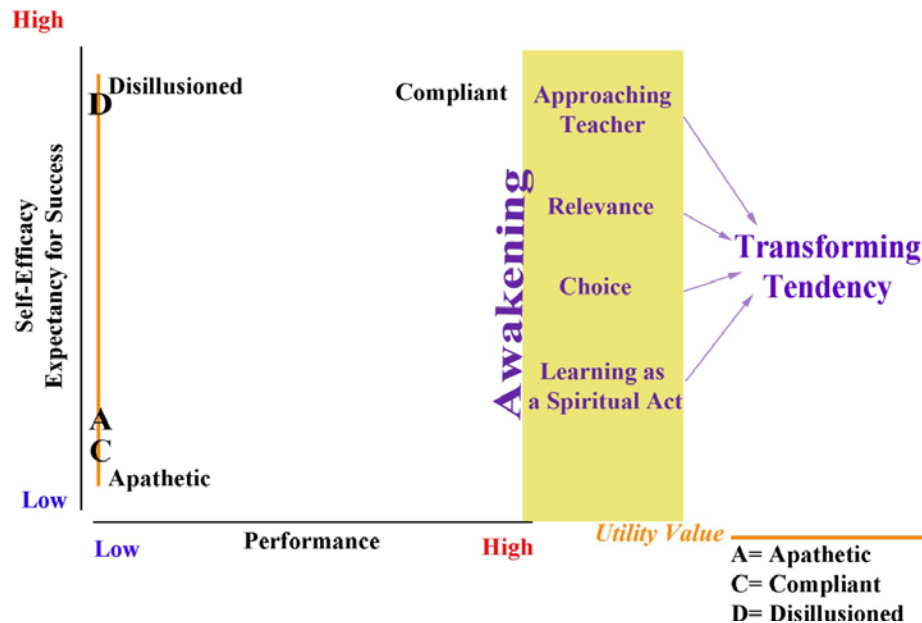
Figure 5. Top four recurring turning points experienced by the students.

Seeing that relevance matters. Five out of the 10 students mentioned that relevance matters and appears to be instrumental in the awakening process, as shown in Figure 6.

Matthew said,

It was like one of the experiences where you realize what you have done and then

I kind of reflected back to where I was beforehand and I was really surprised at

my understanding of the course. Because I just didn't think that I would

understand at such a basic level. Didn't realize it was going to be such a

predominant course that I needed to know, so I decided I would go ahead and take the course.

Matthew's saying that he "didn't realize it was such a predominant course that I needed to know," suggests how relevance led to his resulting surprise. This is shown when he said, "I was really surprised at my understanding of the course."

In the following passage, Rebecca clearly tells how instrumental relevance was to her awakening:

The first time I got to think about what biology really means to me. To know that biology can still be a part of my everyday life was a huge awakening. It was probably the biggest thing that I gained from that class.

Here Christy gives as an explanation on how she changed her feelings towards math. Notice how relevance opened up her awareness:

I just thought "WOW!" I just felt immediately like my perspective had just totally expanded. It really applied to all areas of our lives. That is the newest thing. I just never realized that math is something everybody should know to some degree because it just raises your level of awareness in every area of your life.
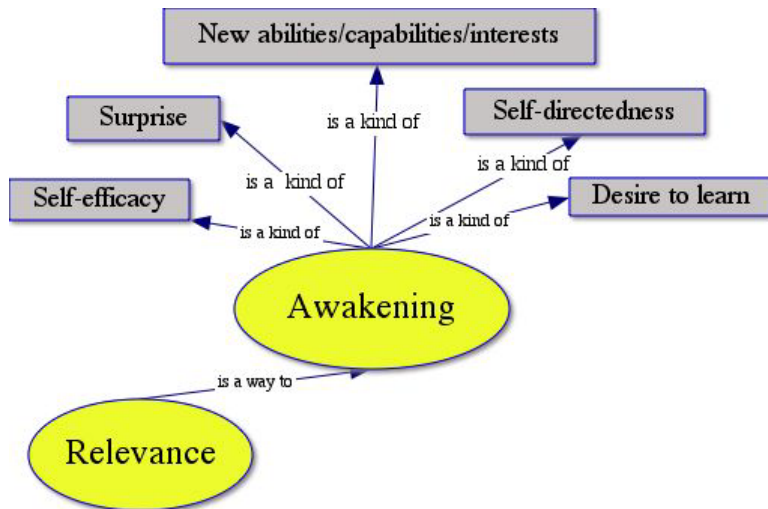
Figure 6. Seeing that relevance matters in awakening.

Becoming educated is a way to relevance. Five out of 10 students in this study mentioned how appealing to their desire to be an educated person was a way to relevance (Figure 7).

Kelsey suggests this idea:

Biology would make me a more educated person. It made me kind of open my perspective, not just to science, but to really give all of the classes a chance and to see that being here at BYU is such an opportunity to learn all that I can. To prepare me for this life and the next.

Not only did the idea of being educated open up Kelsey's perspective towards the course, but it also opened up other opportunities to learn.

Rebecca reinforces Kelsey's experience:

Once I got into this class, it was more like "Okay, do you want to gain an education and really learn about this?" What is more important to me, this time having fun and maybe not spending as much time on this or gaining a real

education, being an educated and intelligent person? And that [desire to become

an educated an intelligent person] outweighed it.
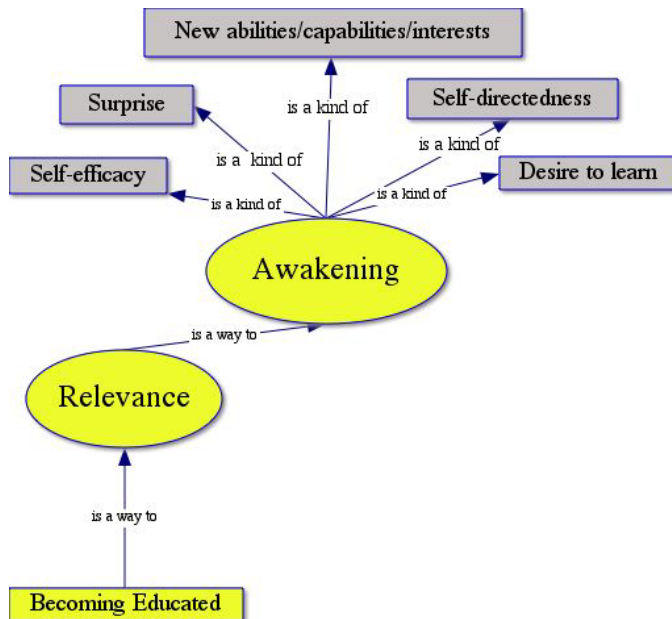
Figure 7. Appealing to a students' desire to become educated is a way to relevance.

Exercising choice. Underlying all of the characteristics in the change process is the ability of the student to choose (Figure 8). All 10 of the students mentioned choice as a turning point.

Amanda says,

[It was] me. It was a conscious decision I think. It had to have been or I could

have sat in that class and despised stats. I think that there were kids in there too

that still didn't like stats. I think it had to be a decision that I needed to make. It

has changed my belief in myself that I can be more proactive about my learning.

Rebecca supports the ability for a student to choose:

I think that the difference was before stats. I was making a choice between doing funner things, like doing a subject that I enjoyed or being with my friends or family and do my homework.

David said,

Starting out I understand that a lot had to do with me and things that I did, and not totally the course, or what was presented and even the teacher herself. There was sometimes when I chose not to go to class or to a certain lab. I think that we have the capabilities and the ability to do it, but it's our choice to turn that on or off. By our own frustrations we turn it off, by our rejection we turn it off.

Exercising choice is not only a way to get beyond antipathy but it also frees up the students to see new options that they did not even know they had. Christy points out how choice allows us to have a conversation; engaging in this conversation can unexpectedly surprise us with new abilities and capabilities we did not know we had, a desire to learn, the belief that we can learn, and the directedness we need in order to control the outcomes of our feelings:

If we think we are not interested in that or cannot think about a particular thing or that is just not part of my makeup, we also cut off a lot of conversation—I think not only with other people but also with ourselves. We cut off our thinking.
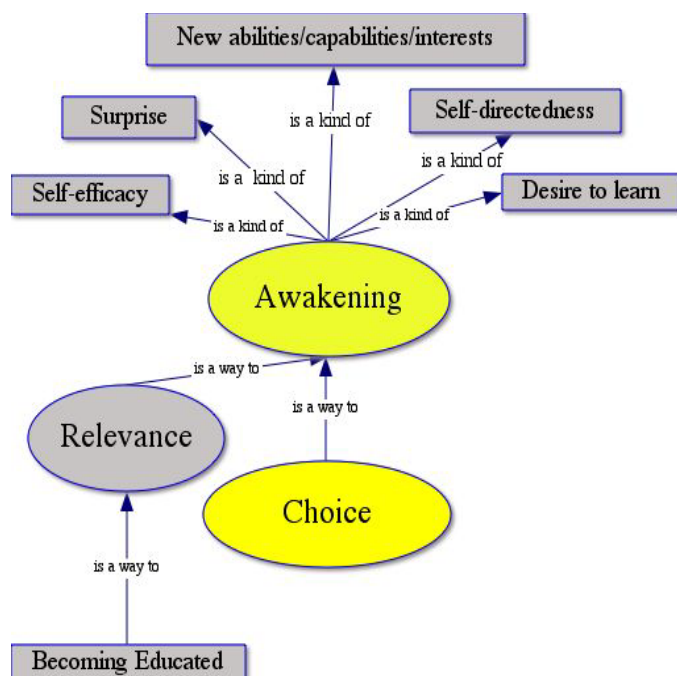
Figure 8. Exercising choice increases the power to overcome antipathy and opens access to awakening.

Approaching the teacher. Many students will not talk to their professors. They feel that the professors do not want to be bothered with them or they are too intimidated to approach the professors. However, three of the 10 students said that the turning point for them was when they went to talk to the professor. David said,

> [I] went to the teacher herself and sat down in her office for a while and [I] laid out my problems a little bit, which was really kind of the turning point of what helped me. I needed to take initiative to go in and talk to my teacher. If I wanted something to change, I have to be the one to change . . . so I took the initiative.

Natalie shared how approaching the teacher helped her:

She [the teacher] sat down with me and she worked through some of the sections

and explaining to me what they were saying and what they meant and . . . It sort

of flipped a switch for me.

Kevin mentioned the same turning point for him:

I could tell that she [teacher] cared and that I could approach her. Just came down

to breaking paradigms about what I understand, about what I can comprehend,

and then I will just go and talk to the professor.

Figure 9 illustrates how approaching the teacher fits into the process of awakening.
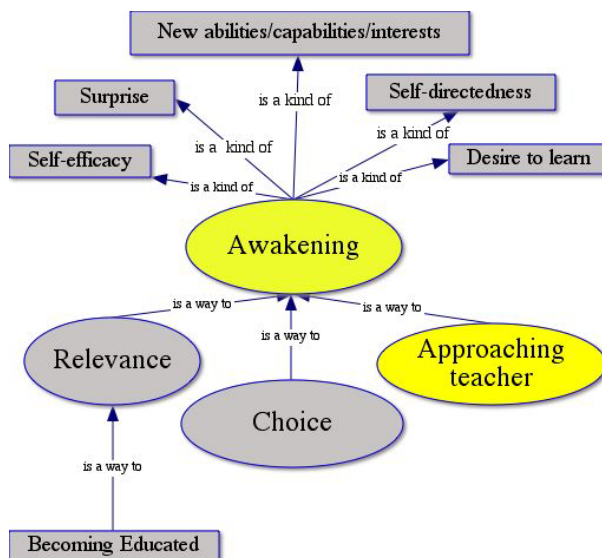
Figure 9. Approaching the teacher helps students to get beyond antipathy about a course.

Learning as a sacred act. Besides the surprise of new abilities and capabilities, self-

directedness, desire to learn, and self-efficacy as kinds of awakenings, six of the 10 students

mentioned another type of awakening—seeing the learning of secular things as a sacred act. Rebecca mentioned,

> [The] connection between God and science and it kind of proves that God does
> exist. I was like, it is so cool and it is so true. In order to make the world, God
> used these principles of science and his own laws of mathematics and science. I
> guess it helped me to appreciate that more.

Natalie expressed that "my understanding of the gospel and my understanding of academic information are just melting together and becoming intertwined. There is no such thing as secular knowledge."

Figure 10 shows that awakening leads to learning as not merely a secular activity but as a spiritual activity.
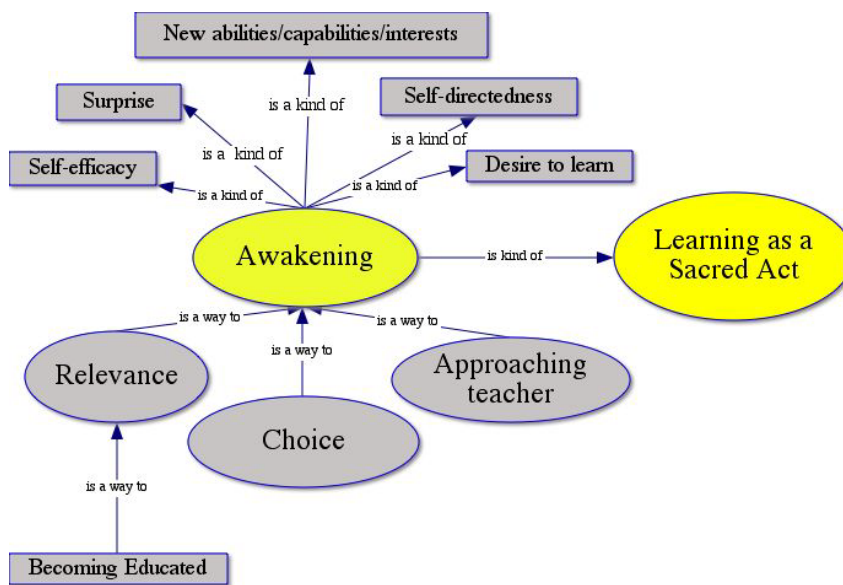
Figure 10. Learning as a sacred act is an awakening.

Exercising faith. Part of seeing learning as a spiritual activity is exercising faith. Of the 10 students interviewed, four described how faith relates to learning as a spiritual activity. David related,

> All humankind should make learning a spiritual adventure also. We should. I mean it is by faith that we learn anything. It is the Spirit that truly teaches us anything. I think students can create their own climate by coming at it with the right attitude or having that knowledge or understanding that learning is what your spirit is doing.

Natalie affirms,

I guess that the experience you are being assigned to have is going to be worthwhile. That is what mortality is. We have been assigned mortality and we chose the assignment. We have to trust that it will be worthwhile, just the willingness to make that effort and exercise a little academic faith. We have to exercise that faith that there is something to be learned—that there is something to be gained through our experience.

Figure 11 shows that the role that faith plays in the process of getting beyond antipathy is important to the sacred act of learning.
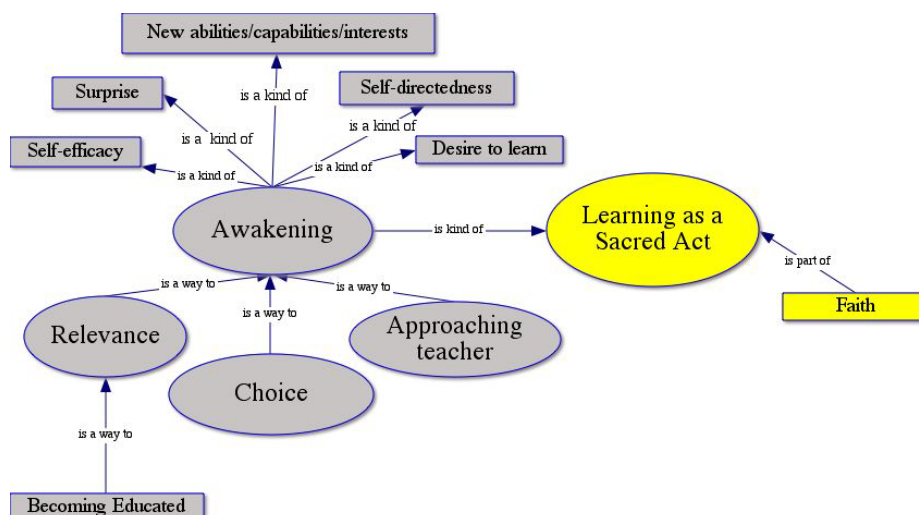
Figure 11. Exercising faith is part of the process of learning as a sacred act.

Acknowledging others, reverence, and humility. Along with faith as a part of learning as a sacred act, there were other characteristics that helped two of the 10 students change their strong negative feelings towards a course into strong positive feelings towards a course. These characteristics were the ability to acknowledge others, have reverence for learning, and have humility or the ability to be teachable. Natalie describes acknowledging others:

I think in some ways it can best be explained by something that Emmanuel

Levinas talks about, which is the idea of "the other." I think it was difficult for me

to acknowledge and validate the ideas of these "others" as I saw them as being so

different from who I am or from my experiences to that point. But as I became

more willing to acknowledge "the other" these "other ideas" these "other

thoughts" . . . I have been able to transcend that initial frustration that I might

have felt and it was kind of blocking me. [However] I really can learn something

from everyone and everything, and the more enriched my life is, the more I do

learn and do gain.

In this passage, Natalie talks about the ability to "transcend" the initial frustration or get beyond her negative feelings and how her not acknowledging others blocked her from learning. Natalie does not describe how having high self-efficacy helped her to learn more and achieve more; she explains how acknowledging others (not herself) helped her to learn more and achieve more.

Natalie also describes the role of reverence in the change process by paraphrasing the poem "Aurora Leigh" by Elizabeth Barrett Browning:

> She [Elizabeth Barrett Browning] is talking about being able to appreciate things and have the ability to understand them, 'all the world is crammed with the beauty and every common bush afire with God, but only those who see it, take off their shoes.' I began to feel that way about the course—that every concept was crammed with beauty so it became of a goal for me personally to take off my shoes and be able to appreciate the course more and by extension to appreciate any idea that was hard for me to grasp or really internalize initially. I think that we need to go back to Levinas and acknowledging the other and trying to appreciate what that person has to offer and really coming to know what that person values. And humility isn't just a religious experience.

Natalie suggests that maybe the change process can be found in students' ability to be able to appreciate and reverence the world around them and maybe not necessarily in their ability to believe they can do well in a course. It is possible that the ability to be teachable by others has as much to do with that change in feelings as the ability to believe that they can do well on their own (Figure 12).
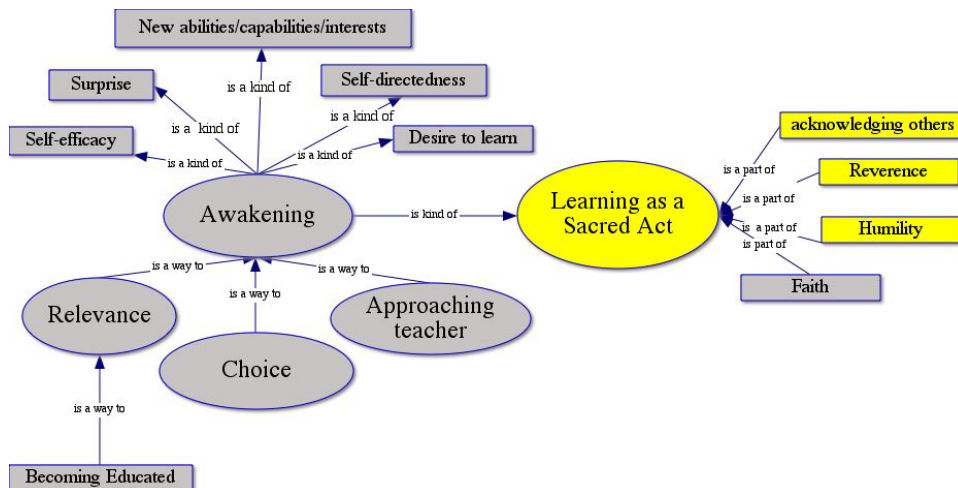
Figure 12. Acknowledging others, reverence, and humility are part of the awakening of learning as a sacred act.

Another theme that came out strongly in this study, but was not directly addressed, was the metaphor of light. All the students interviewed used metaphors about vision and light when explaining their change process. The students mentioned something like, "all of a sudden I caught the vision . . . like a light bulb went off in my mind. A switch flipped for me and I saw things in a new light." Further inquiry into the role of metaphors of light in the change process would be a subject for future study.

Chapter 5: Discussion and Conclusion

With the findings shown, I will reflect on what the findings of this study mean in the context of the incoming tendencies of compliance, disillusionment, and apathy and current motivational theories and how the findings contribute to the outgoing tendency of transformation. I further discuss the implications for faculty and students, make a recommendation for further studies, and offer a conclusion.

Reflections on Student Tendencies

Although the compliant, disillusioned, and apathetic tendencies of the students before starting a course are explained in the current motivational theories of self-efficacy, attribution, and expectancy-value, the transforming tendency of the students by the end of the course is not directly addressed in these theories. In this section, I will discuss what the findings are showing in the context of current motivational theories, and what the findings are telling us outside of these theories about how students overcome their initial tendencies.

Compliance or personal agency. In explaining the feelings of the student with compliant tendencies before the change, self-theory would say that students were probably driven by performance goals that would prove their ability and adequacy. However, performance goals can create a helpless response pattern, where individuals will avoid challenges and attribute their failure to personal inadequacy (Dweck & Leggett, 1988). Yet students with compliant tendencies, though they are driven by their need to perform well and look smart, responded in a mastery-oriented pattern by taking challenges and finding strategies to solve the problems. What goals drove these students? They chose to respond in ways that would lead to mastery of the topic being taught, to look for strategies, and to find solutions rather than giving up. David mentioned a strategy for attacking a course: taking each course for what it is and looking at what

was available to him. Amanda said that she explored ways to broker her way of studying and find ways in which unknown concepts relate to information that she already knew.

Attribution theorists assert that these students, before the change, would attribute their failure to lack of ability that was unchangeable and uncontrollable. However, David and Amanda offered no attributions for failure. If there were attributions that explain their change, the attributions focused on controllable, internal factors, such as their taking initiative in approaching the teacher (controllable); choosing to be governed by their need to be educated (internal); and choosing the directions of their learning. In Osguthorpe & Osguthorpe's words, they were "choosing to learn" (2009, p. 4). Notice also that self-efficacy change was the result of their ability to choose, not in their ability to accomplish the goal. The students were making a choice. They had to define what their needs, strengths, and weaknesses were and evaluate what they wanted. When they employed this strategy, it helped them to change their belief in themselves and empowered them to be more proactive in their learning.

Expectancy-value theory (Atkinson, 1964) suggests that before the change David would need to both value the activity and expect to succeed in it in order to perform well in the course. Both value and expectancy would need to be present. However, David did not initially value the course even though he expected to succeed, and he still performed well. Valuing the course did not seem to have anything to do with his success. It was his exercising of choice that added the value to the course and made the material worthwhile to learn.

In general, for students with compliant tendencies, although the students focus on performance over mastery, their choice of performance does not change their negative feelings towards the course. These students perform but they do not learn to like the course. They choose

to comply, believe they can do it and succeed, but do not change their feelings about the course they are studying.

In summary, even though the students in this study with a compliant tendency had a high efficacy and high expectancy for success that influenced their dispositions, self-efficacy and expectancy for success did not determine how they valued the course or their feelings toward the course. What determined the value and their disposition toward the course, as well as their self-efficacy, was their own decision to look for ways to learn and take initiative and to get help from the teacher. These students showed that the real hinge on which transformation turns is personal agency.

Disillusionment or redefinition of intelligence. Regarding the students with a disillusioned tendency before the change, they had a mindset that their intelligence was fixed, uncontrollable, and unalterable. This mindset facilitated their focus on performance goals, which created a helpless response pattern of avoiding challenges and risks. To them, failure was seen as a setback, and making an effort was undesirable (Dweck, 1975; Seligman, 1975; Dweck & Leggett, 1988). However, in order for them to move to a transforming tendency, they had to adjust their mindset to see their intelligence as malleable and fluid. This allowed them to focus on learning goals, which are concerned with increasing competence not on appearing competent. Natalie focused on increasing her competence by practicing on problems that she missed on tests. She found that she could work the problems through farther each time she did them. For example, if a problem had 15 steps, she could get the first seven or eight steps right, versus getting the first three or four right at the beginning.

In summary, for students with a disillusioned tendency to experience a transforming tendency or awakening, they needed to rethink what it means to be intelligent—that it is not an

innate trait. Natalie changed her performance by her hard work, positive attitude, and how she chose to see her own intelligence.

Apathy or Relevance. For students with apathetic tendencies, the feelings of failure that they experienced before the change could be explained through attribution theory and learned helplessness. Factors like ability, luck, task difficulty, or mood, are permanent and unchanging. However, these factors were not even mentioned after the change happened. Actually, in order for the change to occur, students had to let go of these attributions as well as their focus on grades and achievement. Kevin mentioned that he did not have to look at courses through preconceived notions. He could see the value of learning the material instead of getting the grade. He had to have "the right definition of success, and that's not an A." For him, it just came to the fact that he had to "kiss the grade goodbye."

Self-efficacy purports students will avoid tasks that they are not good at. However, after the change, Kevin actually embraced tasks he would have previously avoided because he was able to choose his learning and he was able to see that the course was personal to him.

The change experienced by Kevin is also supported by the research on the reluctant learner that states, "transforming reluctant learners into inspired learners requires that they are given opportunities to make learning choices that are relevant to their lives" (Sanacore, 2008). Cotts (1994) supports the idea of choice and relevance as factors in successful change in that "relevance of a learning task to the student provides the framework within which the student acts."

Bandura (1982) says that if a person persists, he or she will have high self-efficacy. However, the apathetic student sees high effort as a sign of low self-efficacy (Weiner, 1980, 1986). When faced with failure, these students exhibit negative self-talk, negative affect, and

impaired performance because they view intelligence as fixed. Their failures are attributed to low ability that they cannot control or overcome, which supports Weiner's (1980) attribution theory. They focus on their ability and lack of adequacy. Therefore, they avoid challenges and their performance deteriorates (Dweck & Leggett, 1988). These students choose to stop trying. These same reasons are also observed in "reluctant students" (Gordon, 1997; Sanacore, 2008). Self-efficacy also states that in order to make choices, students have to possess a belief that they can achieve the goal; in other words, self-efficacy determines what people choose to do (Bandura, 1982). However, it appears that what Kevin chose to do determined his belief in his ability to achieve a goal. He said, "I think that we all have the ability to do it, but is our choice to turn that on or off."

In summary, students with an apathetic tendency overcome their negative feelings by letting go of preconceptions of success and intelligence. They were able to see the relevance of their learning through exercising agency in what and how they learned, which had more to do with determining their self-efficacy.

Transformation. As mentioned earlier, what we see in the transforming student is occurring before self-efficacy, attributions, or expectancies and it is happening in a relatively short period of time (within a semester). Attributions, efficaciousness, and expectancies do not contribute to the positive change in the student with transforming tendencies, so if these theories do not offer an explanation for the move to positive transformation, what does?

Self-determination theory offers a possible explanation. It focuses on choices people make with their own volition without external influences. Students need to determine their own behavior, including being able to see their action as a result of their choices without external influence. A recent study based on self-determination theory (Jang, 2008) explained why an

externally provided rationale for doing an uninteresting task could often help motivate students. One hundred thirty-six undergraduate students worked on a short, uninteresting, but important assignment. Students who were told before the assignment why the task was important and how it was relevant to them showed greater interest and determination in completing the assignment. The Jang study supports the findings in this study that students can get beyond their antipathy, particularly for courses they don't find interesting or enjoyable, by being able to see how the course relates to them personally and how it is meaningful to their lives.

The attributes that some researchers say cause success or failure, such as ability, luck, task difficulty, effort, and so on (Weiner, 1986) were not mentioned by students in this study as characteristics of their successful change. Getting beyond their antipathy for the course was accomplished by making choices over what they learned, approaching the teacher when there were challenges, having the instructor make the course personal to them, and wanting to becoming educated. They did not get beyond their antipathy by attributing causes, possessing self-efficacious beliefs, or even expecting success or valuing the course. Regardless of their tendency, all the students shared the same turning point in their transformation: exercising choice.

Although further study is needed to confirm the following observations, students with compliant and apathetic tendencies shared the desire to be educated. Approaching the teacher was a turning point that was shared by students with compliant and disillusioned tendencies. Students with disillusioned and apathetic tendencies mentioned that relevance was important to their transformation.

Regarding the theme of learning as a sacred act, these students did not need to believe in their capability to achieve a goal, but they needed to believe in a higher power's capability to

help them achieve a goal. They did not need to find the course material worthwhile, but they needed to find the experience of learning worthwhile. They did not have to expect success, but they needed to expect difficulty and that there was something to be gained by the process of going through the difficulty.

Implications for faculty and students

Because students are aware of their negative feelings but do not always know what to do about them, the implications for students are the following:

(1) Students need to approach their professors and discuss their learning difficulties and challenges instead of relying on their own understanding.

(2) Students need to accept that there are concepts they are may not understand and it is okay to be lost—that is what a teacher is there for, to help mentor them.

(3) Students may want to rethink how they define what success is and what it means to be intelligent because this seems to affect how they feel about a course.

(4) Students could offer suggestions to the instructor on how they want to learn the material.

(5) Students who can see learning as a sacred act and believe in a higher power's capability to help them appear to improve their performance and affect their feelings positively towards a course.

Even though faculty members are aware of the strong negative feelings that students have toward their courses, they may not be always sure what to do or how to help their students. The implications for teachers include the following:

(1) Appeal to the student's self-interest in wanting to become educated instead of wanting to get a good grade.

(2) Develop strategies of relevance in their teaching so that the course becomes personal to the students by finding ways to connect to what the students love and value, and then connect the students' values to whatever information the teacher is presenting.

(3) Give the students choices on what they learn and ways that they can learn.

Recommendation for further study

One recommendation for future research would be to confirm if students with disillusioned tendencies share not only the same characteristics but also the same change processes, or if they differ in their processes from students with the other two tendencies. The same would apply for students with apathetic tendencies and compliant tendencies. Another recommendation would be to design, implement, and evaluate an instructional intervention that would connect to the students' self-interests and personal values and that would allow the students to choose what they learn and how they learn within the subject content.

Conclusion

This study investigated the change that took place in 10 students who began a semester-long course with feelings of aversion toward the course or subject material and who experienced a transformation of attitude. For all of the students interviewed, at some point during the semester their aversion was turned to interest and a feeling that the course content was important to learn. In other words, the students were no longer compliant, disillusioned, or apathetic learners, but had made a choice to engage with the material in a way that was meaningful to them. Among several themes that emerged during the interviews, of particular interest were:

(1) Relevance and approaching the teacher helped the students to get beyond antipathy and acted as a catalyst for an awakening to new possibilities, interests, self-directedness, desire to learn, and self-confidence.

(2) By exercising choice in their learning and in their own attitude, the students increased their power to overcome antipathy and opened themselves up to new abilities and capabilities and a desire to learn.

(3) Exercising faith in a higher power's capability to help them, acknowledging others, and being teachable were fundamental to overcoming antipathy and awakening them toward seeing learning as a sacred act.

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Appendix A—Interview Questions

1. Tell me as much as you can about your past experiences with learning up to this point.

2. Tell about your informal experiences with learning in your family.

3. Tell me about your experiences with learning with your friends.

4. Tell me about your experiences with learning in your school.

5. How did you come to dislike (hate) (the subject or course)?

6. Tell me about the first time you remember disliking (hating) (the subject or course)?

7. Reconstruct a specific negative experience (a semester) you had in (the subject or course) from the time the experience started until it was finished.

8. Describe what happened your first week, second week, first month, etc.

9. Given what you have said about your background before you took (the subject or course) and given what you have said about your experience with (the subject or course) now, how do you explain the change you have made in (the subject or course)?

10. What sense does it make to you?

11. How and when did the change become obvious to you?

12. What made that change possible?

13. What do you believe about the experience?

14. Given what you have reconstructed in these interviews, where do you see yourself going and/or doing in the future?

Appendix B—Academic Subject Attitude Scale *

How strong were your feelings about SCIENCE generally and about Honors 260-
Biological Science Principles and Reasoning specifically before you took the course?
Choose one of the MODIFIERS: "Extremely," "Quite," "Sort of," "Slightly," or "Not At All"
that best describes how strongly you feel for each of the ADJECTIVES printed in the capital
letters in the left column. (For example, circle the letter under the modifier that shows how
enjoyable science was to you. Then circle the letter under the modifier that shows how important
you think science was. Then decide how confusing it was and so forth)

	MODIFIERS				
ADJECTIVES	Extremely	Quite	Sort of	Slightly	Not at all
Enjoyable	A	B	C	D	E
Important	A	B	C	D	E
Confusing	A	B	C	D	E
Exciting	A	B	C	D	E
Frustrating	A	B	C	D	E
Helpful in Other School Subjects	A	B	C	D	E
Easy to Learn	A	B	C	D	E
Discouraging	A	B	C	D	E
Understandable	A	B	C	D	E
Boring	A	B	C	D	E
Useful Outside of School	A	B	C	D	E
Difficult	A	B	C	D	E
Waste of Time	A	B	C	D	E
Worth Knowing	A	B	C	D	E

* Used by permission from Dr. Richard Sudweeks, Brigham Young University, Instructional

Pyschology and Technology

Appendix C—Informed Consent to be a Research Subject

Introduction

   This research study is being conducted Brigham Young University to learn more about how students turn their negative feeling toward, performance in, and expectations toward a subject around to a positive feeling, expectation, and performance. You were selected to participate because you have shown a positive change in feeling, performance and expectation in at least one subject over your college experience at BYU.

Procedures

   You will be interviewed about the process you went through to change your feelings about, expectations toward, and performance in a subject. You will be invited to participate in no more than three separate interviews lasting approximately 60 minutes. Your interviewer is Cheryl Morse. She will be conducting the interviews, analyzing the data, and reporting the results to the Center for Teaching and Learning as well as to her graduate committee. The data collected from the interviews will be kept for 5 years on secure servers at the Center for Teaching and Learning at Brigham Young University.

Risks/Discomforts

   The risks in participating in this interview are minimal. There is a possibility that you may feel some discomfort in sharing your personal experiences about challenges faced prior to realizing the positive change in feeling, expectation, and performance in a subject.

Benefits

   Your answers will help faculty, other students, and administrators at BYU identify factors that lead to positive change in a subject. This information will serve as a resource to faculty, students, and various learning institutions and centers on campus.

Confidentiality

   All information gleaned from the interviews will be stored in a database on the Center For Teaching and Learning's password protected secure server. The information will be used to improve teaching and learning at BYU. The data collected will be stored for 5 years so that it can be used to inform teaching and learning practices as well as inform future research. I also give the researcher consent to use my interview transcript in instructional interventions created by the Center for Teaching and Learning, presentations to faculty, and new student orientations. Where possible, your name will be kept absolutely confidential and will have no impact whatsoever on your academic performance.

Compensation

   You will not be compensated monetarily for your participation for doing an interview.

Participation

Participation in this research study is voluntary. You may choose to withdraw at anytime or refuse to participate in the interview without jeopardy to your enrollment or standing with BYU. Your comments as well as your name will be kept confidential and will not affect your academic performance. You may also be asked to participate in a follow-up interviews if additional information is needed.

Questions about the Research

If you have questions regarding this study, you may contact Cheryl Morse at (801) 921-9251 or cheryl_morse@byu.edu.

Questions about your Rights as Research Participants

If you have questions regarding your rights as a participant in research projects, you may contact Dr. Christopher Dromey, Chair of the Institutional Review Board for Human Subjects, 133 TLRB, Brigham Young University, Provo, UT 84602; phone, (801) 422-6461; email: dromey@byu.edu.

I have read, understood, and received a copy of the above consent and desire of my own free will to participate in this study.

Signature:_____Date:_____

Appendix D—Email to Students

Dear Student:

The Center for Teaching and Learning at BYU is conducting a research study on how university students change their attitudes, expectations, and feelings towards any academic subject within a semester. If you have ever (1) had strong negative feelings and attitudes towards a subject and (2) low expectations for success in a course, then (3) by the end of the semester you developed a love for the subject, then we would love to hear about your experience.

If you answer yes to all of the above criteria, and you would be willing to share your story in a interview, please reply to this e-mail and include your contact information and a good time to contact you.

If these criteria do not apply to you but you know someone who does meet the criteria, please forward this e-mail to them.

Sincerely,

Cheryl Morse
Principal Researcher
Center for Teaching and Learning
Brigham Young University

Appendix E—Domain Analysis Worksheet

Table E1. Cover term: Attitude Change

Included Terms:	Relationship:
Decided to have a better outlook	Is a result of, is a kind of
Taking classes I thought I wouldn't like	Is a result of
Find value in everything even offensive or difficult or foreign	Is a way to Is a step
Take off your shoes	Is a kind of
If I want something to change I have to be the one to change	Is a kind of
I can do it	Is a kind of
I need to be willing, to be open, to work hard, to do the work it takes so I understand	Is a result of
Willingness	Is a kind of
Openness	Is a kind of, is a step
Don't compare worldly success to your own value	Is a way to
I want to learn this	Is a kind of
If it is out there and it was in the way, I would go at it and do it	Is a kind of
Getting beyond hate	Is a step
Teaching methodologies	Is a step
Relevance	Is a way to
Personal journey	Is result of
Learning as a sacred act	Is a result of, is a way to
Surprise	Is a kind of
Awakening	Is a kind of, is a result of, is a step in
Gratitude	Is a kind of, is a way to

Table E2. Cover term: Hate a Course

Included Terms:	Relationship:
Having to switch my brain over from an established method	Is a reason for
Requiring a reconsideration of prior held thoughts and beliefs	Is a reason for Is a cause of
Not good enough in subject to figure it out	Is a reason for Is a part of
The textbook	Is a reason for
Using resources that average people don't use	Is a cause of
Lack of comfort	Is a cause of
Not knowing how to respond or what to say	Is reason for Is a part of
Start to think you don't have the skills or the ability for things that are less interesting to you	Is a part of Is a reason for
Tests were outrageously difficult	Is a reason for
Teacher intimidation	Is a cause of
Not going to class, being late, not going to labs	Is a result of
More had to be done for me and wasn't being done for me	Is used for, is a cause of
Don't measure up	Is a reason for
Avoidance	Is a result of
Grades don't reflect my work	Is a cause of
Don't comprehend, not grasping concepts	Is a cause of

Non-proactive part of the class - no hands-on	Is a reason for
Not catered towards non-subject matter people	Is a cause for
Barriers	Is a part of, is a cause, is a reason
Attitude change	Is a result of

Table E3. Cover term: Preconceived notions

Included Terms:	Relationship:
I am just a girl	Is a kind of
It's not cool or it is cool	Is a kind of
Traditional . . .	Is a kind of
Overestimating the scope of the subject	Is a kind of
The subject is only containedwithin a classroom	Is a kind of
It's inbred in me to dislike . . .	Is a kind of
It's only for nerdy, smart, quiet types	Is a kind of
Assumed some subject were male subjects	Is a kind of
Coming naturally to you means you love studying it	Is a kind of
My brain doesn't work that way	Is a kind of
Grad school is only for people who are super top of class, who naturally everything just comes to them, good at everything	Is a kind of
I am not a fit for . . .	Is a kind of
If I have to work hard, I am not smart	Is a kind of
Natural ability is synonymous with liking something	Is a kind of
You are either born with it or you are not	Is a kind of

Table E4. Cover term: Becoming a thinking, educated, informed person

Included Terms:	Relationship:
Constantly seeks knowledge, knowing it will enrich and benefit and increase understanding of the world	Is an attribute
Knowing background of things	Is an attribute
Not being tied to formulas	Is a part of
Concerned about how things connect	Is a part of
Not taking things at face value	Is a part of
Know what things mean	Is a part of
Part of consciousness	Is a part of
Internalizes information	Is a part of
Ability to learn things outside of their specialty or area of interest	Is an attribute
Natural curiosity	Is an attribute
Willing mind and heart	Is an attribute
Obedience to teachings or principles	Is an attribute
Be a disciple	Is an attribute
Break down barriers	Is an attribute
Being able to have intelligent conversation	Is an attribute
Understand a lot of subjects and understand others more easily	Is an attribute
Understand both sides of an issue	Is an attribute
Defend your own opinion	Is an attribute
Not necessarily someone who gets good grades	Is an attribute
Pushes/motivates themselves to work hard	Is an attribute
Sees value of learning the material instead of getting the grade	Is an attribute
Make connections between subject	Is an attribute

Holistic	Is an attribute
Well-rounded	Is an attribute
Getting beyond	Is a part of
Learning as a sacred act	Is a part of, is an attribute
Personal journey	Is a part of
Gratitude	Is a part of, is an attribute
Light	Is an attribute

Table E5. Cover term: Methodology or teaching strategies

Included Terms:	Relationship:
Give a pattern on how to study the material	Is a way to
Teacher believes in students. Expectation wasn't voiced but you could feel that from him	Is a way to
Connect to students' values	Is a way to Is a kind of Is a step in
Connect to prior knowledge	Is a way to Is a kind of Is a step
Evaluate why I am learning and how it benefits me	Is a step in
Making it personal/make it matter to me	Is a way
Don't just use the textbook	Is a step
Allow students to choose curriculum/pick topics/design the syllabus	Is a way to
Expose student to available resources that connect to every level of their lives other than the textbook/Internet	Is a way
Questioning	Is a way or is a step
Adaptability/change format to meet students needs	Is a kind of or is a step
Give feedback	Is a kind or is a step
Students should be able to see progress throughout the semester instead of at the end of the semester	Is a step
Focus on people and meet their needs. Find out what people need.	Is a step
Student involvement	Is a step
Create a climate where students can gain a testimony of the subject	Is a way to
Allow students to see how the teacher learned the subject. Teacher becomes the student of what they are teaching. Teacher acts like they are on the journey of learning.	Is a way to
Teach the subject as if the students are not majors in the subject	Is a way to
Hands-on activities	Is a step in
Discuss things. Sit and talk it through in my own words.	Is a way to
Teacher designs the class—not driven by textbook	Is a way to
Passion	Is a step in
Don't focus on grades	Is a way to
Relevance	Is a kind of, is a way
Learning as a sacred act	Is a way to

Table E6. Cover term: Open-ness (Open, Openmindedness)

Included Terms:	Relationship:
Willingness to adjust mindset or frame of reference	Is a kind of
Willingness to listen and find value	Is a kind of
Willingness to admit you are wrong	Is a kind of
Taking classes I thought I wouldn't like	Is a result of

Letting go of whatever you think	Is a kind of
Acknowledging the other	Is a step in
Clarify standards and values	Is a step in
Be a disciple of the subject	Is a way to
Willingness to do what it takes	Is a kind of
Understand why subjects are important	Is a result of
Not saying I am not good at this	Is a step
To give all classes a chance	Is a kind of
More aware or increased awareness	Is a kind of
Understand there are things out there you are not going to like but there are ways to learn them	Is a kind of
Gratitude	Is a kind of
Relevance	Is a way to

Table E7. Cover term: Choice or Agency

Included Terms:	Relationship:
Being able to choose general topics that are simpler to understand	Is a kind of
Choices forces learning. I had to figure out what I would practice freedom in.	Is a result
Voting on subject topics	Is a kind of
Decided to have a better outlook	Is a kind of
Being able to express themselves	Is a result of
Having background knowledge	Is used for
A lot had to do with me and things that I did	Is a kind of
Having fun versus being educated	Is a kind of
I decided to change. I decided to learn.	Is a kind of
I can be proactive	Is a kind of
Preconceived notions of subject	Is a kind of
Openness	Is a kind of
Gratitude	Is a kind of

Table E8. Cover term: Getting Beyond the Hate

Included Terms:	Relationship:
Define what my needs are	Is a way to
Evaluate what my strengths and weaknesses are	Is a way to
God loves me no matter what	Is a way to
Push yourself	Is a way to
Appeal to the students' self-interest	Is a way to
Appeal to the idea of being an educated person	Is a way to
Have a good mentor	Is a way to
Understand how to be a good student	Is a way to
Realize it is okay to be lost	Is a part of
Grades are not the only things. Kissing the grade goodbye.	Is a step in
Be involved – interact	Is a way to
Finding out the exact help you need	Is a way
Friends help out – taking classes with friends	Is a way to
Desire	Is a way to
Motivation	Is a way to
Look for something you can relate to	Is a way to
Step back first; think what is it about the subject you like	Is a way to
Interested in a subject for the subject's sake, not what it is going to get me	Is a way to

Balance your load	Is a way to
Make time to think	Is a way to
Don't get frustrated	Is a way to
Find another way to learn about it	Is a way to
Practice	Is a way to
Understand how subject fits into your life, your experience, see how it really applies to life	Is a way to
Cast net wider . . . look at bigger picture	Is a way to
Take off your shoes	Is a way to
Understand varieties of human expression	Is a way to
Willingness to adjust your frame of reference or state of mind	Is a way to
Ask people you trust to explain (approach the professor)	Is a way to
Work through it line by line	Is a way to
Don't contain passion for learning to a classroom	Is a way to
Keep trying things you don't have a genuine interest it	Is a way to
Do whatever is required. Go above and beyond.	Is a way to
Willingness to cast aside negative experiences	Is a way to
Develop a reverence	Is a way to
Don't compartmentalize secular knowledge from spiritual knowledge	Is a way to
Exercise academic faith. We exercise faith in our mortal experience and we have assignments same as classes. We chose mortality, we choose our classes and there are assignments in both.	Is a way to
Take initiative	Is a way to
Stick to what it is no matter what habits may come in the way or outside hindrance	Is a way to
Clean slate attitude; attitude change	Is a way to, is a step
Becoming a disciple of the discipline that I am learning	Is a way to
Letting go of "I am not good at this"	Is a way to
Openness	Is a way to, is a step
Awakening	Is a step
Teaching methodologies	Is a way to, is a step
Gratitude	Is a part of, is a way
Relevance	Is a part of, is a way to
Learning as a sacred act	Is a part of, is a way to

Table E9. Cover term: Surprise

Included Terms:	Relationship:
All of a sudden, I felt like I was really good at science	Is a kind of
I have the abilities and capabilities	Is a kind of
I would really enjoy putting most of my time and effort into studying these things	Is a kind of
I never imagined myself doing research	Is a kind of

Table E10. Cover term: Whiz kids

Included Terms:	Relationship:
Don't care about personal hygiene or appearance	Is an attribute
Weird	Is an attribute
Awkward	Is an attribute
Care about weird things that don't have a purpose	Is an attribute
Not cool	Is an attribute
Don't socially connect	Is an attribute

Smart	Is an attribute
Quiet	Is an attribute
Don't have to work hard	Is an attribute

Table E11. Cover term: Barriers

Included Terms:	Relationship:
Grading on the curve	Is a part of
It is not okay to feel lost	Is a kind of
Lean on own abilities and capabilities	Is a kind of
The teacher – unapproachable	Is a kind of
Our parents' opinions and perceptions	Is a kind of
System not built for whole person	Is a part of
Subject is too abstract	Is a kind of
No way to figure it out	Is a kind of
Don't like it, can't do it	Is a kind of
Fear	Is part of, is a cause Is a kind of
Negative messages from others	Is a kind of, is a cause Is a part of
Preconceived notions of the subject	Is a kind of
Whiz kids	Is part of
Previous negative experiences	Is a part of
Established ways of thinking	Is a part of, is a kind of
Frustration	Is a kind of Is a part of, is a cause
Turning off willingness to listen	Is a kind of, is a part of
My brain doesn't work that way. It's not part of my makeup.	Is a kind of
Driven by competition and grades	Is kind of
Bad expectations, bad ideas, bad thoughts (negative emotions)	Is a kind of
Don't measure up, not Olympic material	Is a kind of
I don't know how to use my brain in that way	Is a reason for
Rejection	Is a reason for
Afraid to ask for help. Don't approach the professor. Also, not comfortable with things or people they don't know.	Is a kind of
You are only made for certain things	Is a kind of
Judging based on performance	Is a part of the Is a kind of
Keep Spirit out in the learning process	Is a kind of; is a part of
The subject = obstacle I have to get over so I can do what I love	Is part of
Negative self-talk – things we say to ourselves	Is a kind of
Teaching method	Is a kind of

Table E12. Cover term: Awakening (flip a switch, light bulb went off)

Included Terms:	Relationship:
I can learn and hear other people's opinion without it threatening my belief systems	Is a kind of
Exposure to experiences that change you – can't go back	Is a step in
Ah! I understand these cool concepts I never cared about	Is a kind of
Realizing or accepting you like something you don't think you liked	Is a result of, is a kind of
Re-evaluating everything	Is a cause, is a step
Transcend set bounds	Is a part of

Knowing that I really can work through things	Is a kind of
Don't have to rely totally on the book	Is a kind of
Grading on the curve – seeing final grade based on the curve	Is a kind of
Surprise – I do know this stuff – looking back on past tests and assignments	Is a kind of
Don't waste time dealing with or worrying about preconceived notions. I don't have to look at it with preconceived notions.	Is a kind of
I think I can – I can do this	Is a kind of
New light – attitude change	Is a kind of
Realizing that I can be an educated person from this class. Turned me on to be motivated.	Is a kind of
Motivation – I wanted to learn this	Is a kind of
Realized there are two sides of an issue	Is a kind of
I caught the vision that not only could I do it but I wanted to do it	Is a kind of
Openness	Is a kind of, is a step
Attitude change	Is a step in, is a kind of

Table E13. Cover term: Relevance

Included Terms:	Relationship:
Relate to personal experiences/ make it personal/understand how things fit into my life	Is a way to
Active, living role in the world	Is a kind of
Everydayness	Is an attribute of Is a kind of
Part of my consciousness	Is a result of
Appeal to my self-interest	Is a way to
Translates into my life as being useful	Is a part of
My opinions matter	Is a part of
Applicability	Is a part of, is a kind of
Make sense as to why it matters to me	Is a kind of
Be able to use this education instead of just taking the final	Is a kind of
Meaningful	Is a kind of
Useful	Is a kind of
Attitude change	Is a result of
Awakening	Is a result of

Table E14. Cover term: Light

Included Terms:	Relationship:
Goodness	Is a kind of, is an attribute of
Desire to succeed	Is a kind of, is an attribute of
I can do it	Is a kind of, is an attribute of
I really can work through things.	Is a kind of, is an attribute of
Knowing I can handle	Is a kind of, is an attribute of
Seeing the beauty of something	Is a kind of, is an attribute of
WOW, this matters to me	Is a result of
It is not wanting to held down or negative	Is a kind of, is an attribute of
Positiveness	Is a kind of, is an attribute of
This is going to be good	Is a kind of, is an attribute of
Excitement	Is a kind of, is an attribute of
Spiritual metaphors	Is a kind of
Becoming an educated person	Is a kind of
Learning as a sacred act	Is an attribute of

Gratitude	Is an attribute of

Table E15. Cover term: Spirituality (Learning as a sacred act)

Included Terms:	Relationship:
Grateful for what I do know and believe; gratitude	Is a part of, is a way
More aware of details	Is an attribute, is a part, is a step
Strengthened testimony	Is a result of
Clarify personal standards and values	Is a step
Interested in how things connect	Is a part of, is a result, is a step
Taking off your shoes	Is a part of
Appreciate ideas that are hard to grasp	Is a way to
Acknowledge and validate the ideas of others	Is a part of
Acknowledge importance or relevance	Is a part of
Develop a reverence for the subject	Is a part of
Association between light, knowledge and truth. The Spirit working and moving in us.	Is a part of
Humility is not a religious experience; change of heart	Is a part of
More I learn, the stronger my testimony	Is a result of, is a cause
Find their testimony in academic things	Is a part of
Academic faith	Is a way
Helping my character	Is result of
Being a disciple	Is a result of
Realizing God uses these principles. These are His laws.	Is a result of, is part of
Losing ourselves in a topic we don't like	Is a step in
Get outside of yourselves	Is a step in
Learning is a spiritual adventure	Is a kind of
Learning is what your spirit is doing	Is part of, is a kind of
Process of obtaining and sharing a testimony is the same as the process of learning and teaching	Is a part of
Gratitude	Is an attribute
Light	Is an attribute
Getting beyond hate	Is a way to, is a step
Openness	Is a way to, is a step
Attitude change	Is a result, is a step
Awakening	Is a result of, is a step

Table E16. Cover term: Spiritual metaphors

Included Terms:	Relationship:
Nourishing the small seed (Alma)	Is a kind of
Change of heart	Is a kind of
Losing ourselves – given so much of myself that I love it	Is a kind of
Discipleship	Is a kind of
Parable of talents	Is a kind of
Analogy of our mortal experience and our college experience	Is a kind of
Process of obtaining and sharing a testimony is the same as the process of learning and teaching a subject	Is a kind of
Light	Is a kind of

Table E17. Cover term: Personal Journey or Process

Included Terms:	Relationship:
They talk about what they learn	Is a result, is a step, is a part of
Take classes I wouldn't normally take	Is a result, is a part of
Major or minor in a subject they normally wouldn't	Is a result of
Discovering information for themselves	Is a part of, is a step
Testimonies of gospel change	Is a result of
Being able to say the right answer to a question in my mind	Is a result of
Learning is a spiritual adventure	Is a part of
Asking questions means I care	Is a part of
Gave me a wider perspective	Is a part of
I liked studying	Is a part of
I liked answering questions	Is a part of
I liked being involved	Is a part of
Seeing progress in my work	Is a result of
Enthusiasm and excitement for the subject	Is a result of
Realizing they were informed and can have an opinion	Is a result of
I hope to be a life-long learner	Is a result of
Wanted to know more – willing to use free time to pursue it	Is a step in
Looking at myself more as a student and seeing how I learn	Is a step in
I am not limited in my resources even in a subject I don't like	Is a result of
All subjects are interconnected	Is a part of
Learning is not separate subjects	Is a part of
I can learn something that previously I thought was unchartered territory	Is a result of
Success breeds success	Is a part of, is a result of
Awakening	Is a step in
Openness	Is a step
Attitude change	Is a step
Learning as a sacred act	Is a part of, a step
Becoming an educated person	Is a part of
Getting beyond hate	Is a part of, is a step

Table E18. Cover term: Gratitude/Appreciation

Included Terms:	Relationship:
Taking off your shoes	Is a kind of, is a way to, is a characteristic of
Casting net wider	Is a way to, is a part of
Opened my mind	Is a kind of, is a way to, is a part of
Good perspective of where this would take me	Is a kind of
Realization that it is fascinating	Is a cause of
Realizing its universality	Is a way to
Recognizing value	Is a way to
Understand more the reason why they love it and what drives them to do it	Is a way to
Openness	Is a way
Learning as a sacred act	Is a way, is an attribute

Appendix F—List of all identified domains for a given relationship

including the included terms

X is a kind of Y (strict inclusion)

Kinds of attitude changes
If I want something to change I have to be the one to change
I can do it
Decided to have a better outlook
Willingness
Openness
I want to learn this
If it is out there and it was in the way I would go at it and do it
Surprise
Awakening
Appreciation for new awareness

Kinds of preconceived notions
I am just a girl
It's not cool
Overestimating the scope of the subject
The subject is only contentable within a classroom
It's inbreed in me to dislike
It's only for nerdy. Smart, and quiet types
Some subjects are male subjects
Coming naturally to you means you love studying it.
My brain doesn't work that way
Grad school is only for people who are super top of class
I am not a fit for . . .
If I have to work hard, I am not smart
Naturally ability is synonymous with liking something
You are either born with it or you are not

Kinds of teaching methods
Adaptability/change format to meet student needs
Give feedback
Connect to students' value
Connect to prior knowledge
Relevance

Kinds of openness
Willingness to adjust mindset or frame of reference
Willingness to listen and find value
Willingness to admit you are wrong
Letting go of whatever you think

Willingness to do what it takes
To give all classes a chance
Increased awareness
Gratitude

Kinds of choice
Being able to choose topics that are simpler to understand
Voting on subject topics
Decided to have a better outlook
A lot had to do with me and things I did
Having fun vs. becoming educated
I decided to change. I decided to learn.
Proactive
Preconceived notions of subject
Openness
Gratitude

Kinds of surprise
All of a sudden, I felt like I was really good at science
I have the abilities and capabilities
I would really enjoy putting most of my time and effort into studying these things
I never imagined myself doing research

Kinds of barriers
It's not okay to feel lost
Lean on your own abilities and capabilities
Unapproachable teacher
Our parents' opinions and perceptions
Subject too abstract
No way to figure it out
Don't like it, can't do it
Fear
Negative messages from others
Perceived notions
Whiz kids
Previous negative experiences
Established ways of thinking
Frustration
Turning off willingness to listen
My brain doesn't work that way. It's not part of my makeup.
Driven by competition and grades
Bad expectations, bad ideas, bad thoughts (negative emotions)
Don't measure up, not Olympic material
Afraid to ask for help.
Don't approach the professor.
Also, not comfortable with things or people they don't know

You are only made for certain things
Judging based on performance
Keep Spirit out in the learning process
The subject – obstacle I have to get over so I can do what I love
Negative self-talk – things we say to ourselves
Teaching method

Kinds of awakenings
I can learn and hear other people's opinion without it threatening my belief systems
Ah! I understand these cool concepts I never cared about
Realizing or accepting you like something you don't think you liked
Knowing that I really can work through things
Don't have to rely totally on the book
Grading on the curve – seeing final grade based on the curve
Surprise – I do know this stuff – looking back on past tests and assignments
Don't waste time dealing with or worrying about preconceived notions.
I don't have to look at it with preconceived notions.
I think I can; I can do this
New light – attitude change
Realizing that I can be an educated person from this class. Turned me on to be motivated.
Motivation – I wanted to learn this
Realized there are two sides of an issue
I caught the vision that not only could I do it but I wanted to do it
Openness
Attitude change

Kinds of relevance
Active, living role in the world
Everydayness
Applicability
Make sense as to why it matters to me
Be able to use this education instead of just taking the final
Meaningful
Useful

Kinds of light
Goodness
Desire to succeed
I can do it
I really can work through things
Knowing I can handle
Seeing the beauty of something
It is not wanting to be held down or negative
Positiveness
This is going to be good
Excitement

Spiritual metaphors
Becoming an educated person

Kinds of spiritual metaphors
Nourishing the small seed (Alma)
Change of heart
Losing ourselves – given so much of myself that I love it
Discipleship
Parable of talents
Analogy of our mortal experience and our college experience
Process of obtaining and sharing a testimony is the same as the process of learning and teaching a subject
Light

Kinds of gratitude/appreciation
Taking off your shoes
Opened my mind
Good perspective of where this would take me

X is a place in or is part of Y (Spatial)

Parts of hating a subject
Not good enough in subject to figure it out
Not knowing how to respond or what to say
Start to think you don't have the skills or the ability for things that are less interesting to you
Barriers

Parts of becoming a educated person
Not being tied to formulas
Concerned about how things connect
Not taking things at face value
Know what things mean
Part of consciousness
Internalizes information
Getting beyond
Learning as a sacred act
Personal journey
Appreciation for new awareness

Part of getting beyond hate
Realize it is okay to be lost
Appreciation for new awareness
Relevance
Learning as a sacred act

Parts of barriers
Grading on the curve
Fear
Negative messages from others
Whiz kids
Established ways of thinking
Frustration
Turning off willingness to listen
Judging based on performance
Keep Spirit out in the learning process
The subject – obstacles I have to get over so I can do what I love

Parts of relevance
Translates into my life as being useful
My opinions matter
Applicability

Parts of learning as sacred act
Grateful for what I do know and believe; gratitude
More aware of details
Acknowledge and validate the ideas of others
Acknowledge importance or relevance
Develop a reverence for the subject
Association between light, knowledge and truth. The Spirit working and moving in us.
Humility is not a religious experience; change of heart
Find their testimony in academic things
Realizing God uses these principles. These are His laws.
Process of obtaining and sharing a testimony is the same as the process of learning and teaching

Parts of personal journey
Learning as a sacred act
Becoming an educated person
Getting beyond hate
Success breeds success
All subjects are interconnected
Learning is not separate subjects
Learning is a spiritual adventure
Asking questions means I care
Gave me a wider perspective
I liked studying
I liked answering questions
I liked being involved
Discovering information for themselves
They talk about what they learn

Take classes I wouldn't normally take

<u>Parts of gratitude/appreciation</u>
Casting net wider
Opened my mind

X is a result of or is a cause of Y (cause-effect)

<u>Causes of hating a subject</u>
Using resources that average people don't use
Lack of comfort
Teacher intimidation
Requiring a reconsideration of prior held thoughts and beliefs
More had to be done for me and wasn't being done for me
Grades don't reflect my work
Don't comprehend, not grasping concepts
Not catered towards non-subject matter people
Barriers

<u>Results of attitude change</u>
Decided to have a better outlook
Taking classes I thought I wouldn't like
I need to be willing, to be open, to work hard, to do the work it takes so I understand
Learning as a Sacred Act
Awakening

<u>Causes of barriers</u>
Fear
Negative messages from others
Frustration

<u>Results of awakening</u>
Re-evaluating everything

<u>Results of relevance</u>
Attitude change
Awakening

<u>Results of learning as a sacred act</u>
Strengthened testimony
Interested in how things connect
More I learn, the stronger my testimony
Realizing God uses these principles. These are His laws.
Being a disciple
Helping my character
Attitude

Awakening

<u>Causes of learning as a sacred act</u>
More I learn, the stronger my testimony

<u>Results of personal journey</u>
They talk about what they learn
Take classes I wouldn't normally take
Discovering information for themselves
Testimonies of gospel change
Being able to say the right answer to a question in my mind
Seeing progress in my work
Enthusiasm and excitement for the subject
Realizing they were informed and can have an opinion
I hope to be a life-long learner
I am not limited in my resources even in a subject I don't like
Success breeds success

X is a reason for doing Y (Rationale)

<u>Reasons for hating a subject</u>
Having to switch my brain over from an established method
Requiring a reconsideration of prior held thoughts and beliefs
Not good enough in subject to figure it out
The textbook
Not knowing how to respond or what to say
Start to think you don't have the skills or the ability for things that are less interesting to you
Tests were outrageously difficult
Not going to class, being late, not going to labs
non-proactive part of the class - no hands-on
Barriers

<u>Reasons for barriers</u>
I don't know how to use my brain in that way
Rejection

X is used for Y (Function)

<u>Uses for hating a subject</u>
More had to be done for me and wasn't being done for me

<u>Uses for agency</u>
Having background knowledge

X is a way to do Y (Means-end)

Ways to do attitude change
Find value in everything even offensive or difficult or foreign
Don't compare worldly success to your own value
Relevance
Learning as a sacred act
Gratitude

Ways to teaching methodologies
Give a pattern on how to study the material
Teacher believes in students. Expectation wasn't voiced but you could feel that from him.
Connect to students' values
Connect to prior knowledge
Making it personal/make it matter to me
Allow students to choose curriculum/pick topics/design the syllabus
Expose student to available resources that connect to every level of their lives other than the textbook/Internet
Questioning
Allow students to see how the teacher learned the subject. Teacher becomes the student of what they are teaching. Teacher acts like they are on the journey of learning.
Teach the subject as if the students are not majors in the subject
Discuss things. Sit and talk it through in my own words.
Teacher designs the class—not driven by textbook
Don't focus on grades
Relevance
Learning as a sacred act
Create a climate where students can gain a testimony of the subject

Ways to openness
Be a disciple of the subject
Relevance

Ways to getting beyond hate
Define what my needs are
Evaluate what my strengths and weaknesses are
God loves me no matter what
Push yourself
Appeal to the students' self-interest
Appeal to the idea of being an educated person
Have a good mentor
Understand how to be a good student
Be involved – interact
Finding out the exact help you need
Friends help out – taking classes with friends
Desire
Motivation

Look for something you can relate to
Step back first; think what is it about the subject you like
Interested in a subject for the subject's sake not what it is going to get me
Balance your load
Make time to think
Don't get frustrated
Find another way to learn about it
Practice
Understand how subject fits into your life, your experience, see how it really applies to life
Cast net wider . . . look at bigger picture
Take off your shoes
Understand varieties of human expression
Willingness to adjust your frame of reference or state of mind
Ask people you trust to explain (approach the professor)
Work through it line by line
Don't contain passion for learning to a classroom
Keep trying things you don't have a genuine interest it
Do whatever is required. Go above and beyond
Willingness to cast aside negative experiences
Develop a reverence
Don't compartmentalize secular knowledge from spiritual knowledge
Exercise academic faith. We exercise faith in our mortal experience and we have assignments same as classes. We chose mortality, we choose our classes and there are assignments in both.
Take initiative
Stick to what it is no matter what habits may come in the way or outside hindrance
Clean slate attitude; attitude change
Becoming a disciple of the discipline that I am learning
Letting go of "I am not good at this"
Openness
Teaching methodologies
Gratitude
Relevance
Learning as a sacred act

Ways to relevance
Relate to personal experiences/ make it personal/understand how things fit into my life
Appeal to my self-interest

Ways to learning as a sacred act
Grateful for what I do know and believe; gratitude
Appreciate ideas that are hard to grasp
Academic faith
Getting Beyond Hate
Openness

<u>Ways to gratitude/appreciation</u>
Taking off your shoes
Casting net wider
Opened my mind
Realizing its universality
Recognizing value
Understand more the reason why they love it and what drive them to do it
Openness
Learning as a sacred act

X is a step or stage in Y (Sequence)

<u>Steps in attitude change</u>
Find value in everything even offensive or difficult or foreign
Don't' compare worldly success to your own value
Relevance
Learning as a Sacred Act
Gratitude

<u>Steps in teaching methodologies</u>
Connect to students values
Connect to prior knowledge
Making it personal/make it matter to me
Don't just use the textbook
Questioning
Adaptability/change format to meet students needs
Give feedback
Students should be able to see progress throughout the semester instead of at the end of the semester
Focus on people and meet their needs. Find out what people need.
Student involvement
Hands-on activities
Passion

<u>Steps in openness</u>
Acknowledging the other
Clarify standards and values
Not saying I am not good at this

<u>Steps in getting beyond the hate</u>
Grades are not the only things. Kissing the grade goodbye
Clean slate attitude. Attitude change
Openness
Awakening
Teaching methodologies

Steps in awakening
Exposure to experiences that change you – can't go back
Re-evaluating everything
Openness
Attitude change

Steps in learning as a sacred act
More aware of details
Clarify personal standards and values
Interested in how things connect
Losing ourselves in a topic we don't like
Get outside of yourselves
Getting beyond hate
Openness
Attitude change
Awakening

Steps in personal journey
They talk about what they learn
Discovering information for themselves
Wanted to know more – willing to use free time to pursue it
Looking at myself more as a student and seeing how I learn
Awakening
Openness
Attitude Change
Learning as a sacred act
Getting Beyond Hate

X is an attribute or characteristic of Y (Attribution)

Attributes of becoming a educated person
Constantly seeks knowledge; knowing it will enrich and benefit and increase
understanding of the world
Knowing background of things
Ability to learn things outside of their specialty or area of interest
Natural curiosity
Willing mind and heart
Obedience to teachings or principles
Be a disciple
Break down barriers
Being able to have intelligent conversation
Understand a lot of subjects and understand others more easily
Understand both sides of an issue
Defend your own opinion
Not necessarily someone who gets good grades

Pushes/motivates themselves to work hard
Sees value of learning the material instead of getting the grade
Make connections between subject
Holistic
Well-rounded
Learning as a sacred act
Gratitude
Light

Attributes of whiz kids
Don't care about personal hygiene or appearance
Weird
Awkward
Care about weird things that don't have a purpose
Not cool
Don't socially connect
Smart
Quiet
Don't have to work hard

Attributes of light
Goodness
Desire to succeed
I can do it
I really can work through things.
Knowing I can handle
Seeing the beauty of something
It is not wanting to held down or negative
Positiveness
This is going to be good
Excitement
Learning as a sacred act
Gratitude

Attributes of learning as a sacred act
More aware of details
Gratitude
Light

Attributes of gratitude
Taking off your shoes

	Semantic Relationships					
Cover terms (Y)	Is a kind of Y	Is a place in or is a part of Y	Is a result of Y or Is a cause of Y	Is a way to do Y	Is a step in Y or Is a stage in Y	Is an attribute or characteristics of Y
Attitude change	If I want something to change I have to be the one to change I can do it Decided to have a better outlook Willingness Openness I want to learn this If it is out there and it was in the way I would go at it and do it Surprise Awakening Appreciation for new awareness		Results of Attitude Change Decided to have a better outlook Taking classes I thought I wouldn't like I need to be willing, to be open, to work hard, to do the work it takes so I understand Learning as a Sacred Act Awakening	Find value in everything even offensive or difficult or foreign Don't' compare worldly success to your own value Relevance Learning as a Sacred Act Gratitude	Find value in everything even offensive or difficult or foreign Don't' compare worldly success to your own value Relevance Learning as a Sacred Act Gratitude	
Spirituality (learning as a sacred act)		Grateful for what I do know and believe Gratitude More aware of details Acknowledge and validate the ideas of others Acknowledge importance or relevance Develop a reverence for the subject Association between light, knowledge and truth. The Spirit working and moving in us. Humility is not a	Results of Learning as a Sacred Act Strengthened testimony Interested in how things connect More I learn, the stronger my testimony Realizing God uses these principles. These are his laws Being a disciple Helping my character Attitude Awakening	Grateful for what I do know and believe Gratitude Appreciate ideas that are hard to grasp Academic faith Getting Beyond Hate Openness	More aware of details Clarify personal standards and values Interested in how things connect Losing ourselves in a topic we don't like Get outside of yourselves Getting Beyond Hate Openness Attitude Change Awakening	More aware of details Gratitude Light

		religious experience; change of heart Find their testimony in academic things Realizing God uses these principles. These are his laws Process of obtaining and sharing a testimony is the same as the process of learning and teaching			
Personal Journey		Learning as a sacred act Becoming an educated person Getting Beyond Hate Success breeds success All subjects are interconnected Learning is not separate subjects Learning is a spiritual adventure Asking questions means I care Gave me a wider perspective I liked studying I liked answering questions I liked being involved Discovering information for	They talk about what they learn Take classes I wouldn't normally take Discovering information for themselves Testimonies of gospel change Being able to say the right answer to a question in my mind Seeing progress in my work Enthusiasm and excitement for the subject Realizing they were informed and can have an opinion I hope to be a life-long learner		They talk about what they learn Discovering information for themselves Wanted to know more – willing to use free time to pursue it Looking at myself more as a student and seeing how I learn Awakening Openness Attitude Change Learning as a sacred act Getting Beyond Hate	

		themselves They talk about what they learn Take classes I wouldn't normally take	I am not limited in my resources even in a subject I don't like Success breeds success			
Appreciation for new awareness	Taking off your shoes Opened my mind Good perspective of where this would take me	Casting net wider Opened my mind		Taking off your shoes Casting net wider Opened my mind Realizing its universality Recognizing value Understand more the reason why they love it and what drive them to do it Openness Learning as a sacred act		
Awakening to new possibilities	I can learn and hear other people's opinion without it threatening my belief systems Ah! I understand these cool concepts I never cared about Realizing or accepting you like something you don't think you liked Knowing that I really can work through things Don't have to rely totally on the book		Re-evaluating everything		Exposure to experiences that change you – can't go back Re-evaluating everything Openness Attitude change	

	Grading on the curve- seeing final grade based on the curve Surprise – I do know this stuff – looking back on past tests and assignments Don't waste time dealing with or worrying about preconceived notions. I don't have to look at it with preconceived notions I think I can (I can do this New light – attitude change Realizing that I can be an educated person from this class. Turned me on to be motivated Motivation – I wanted to learn this Realized there are two sides of an issue I caught the vision that not only could I do it but I wanted to do it Openness Attitude change					
Getting beyond negative bias		Realize it is okay to be lost Appreciation for new awareness Relevance Learning as a sacred act		Define what my needs are Evaluate what my strengths and weaknesses are God loves me no matter what Push yourself Appeal to the	Grades are not the only things. Kissing the grade goodbye Clean slate attitude. Attitude change Openness Awakening Teaching methodologies	

| | | | | students' self-interest
Appeal to the idea of being an educated person
Have a good mentor
Understand how to be a good student
Be involved – interact
Finding out the exact help you need
Friends help out – taking classes with friends
Desire
Motivation
Look for something you can relate to
Step back first; think what is it about the subject you like
Interested in a subject for the sbuject's sake not what it is going to get me
Balance your load
Make time to think
Don't get frustrated
Find another way to learn about it | | |

				Practice		
				Understand how subject fits into your life, your experience, see how it really applies to life		
				Cast net wider. . . look at bigger picture		
				Take off your shoes		
				Understand varieties of human expression		
				Willingness to adjust your frame of reference or state of mind		
				Ask people you trust to explain. (approach the professor)		
				Work through it line by line		
				Don't contain passion for learning to a classroom		
				Keep trying things you don't have a genuine interest it		
				Do whatever is required. Go above and beyond		
				Willingness to		

				cast aside negative experiences Develop a reverence Don't compartmentalize secular knowledge from spiritual knowledge Exercise academic faith. We exercise faith in our mortal experience and we have assignments same as classes. We chose mortality, we choose our classes and there are assignments in both Take initiative Stick to what it is no matter what habits may come in the way or outside hindrance Clean slate attitude. Attitude change Becoming a disciple of the discipline that I am learning Letting go of "I		

				am not good at this." Openness Teaching methodologies Gratitude Relevance Learning as a sacred act		
Agency (Choice)	Being able to choose topics that are simplier to understand Voting on subject topics Decided to have a better outlook A lot had to do with me and things I did Having fun vs becoming educated I decided to change. I decided to learn Proactive Preconceived notions of subject Openness Gratitude					
Openness	Willingness to adjust mindset or frame of reference Willingness to listen and find value Willingness to admit you are wrong Letting go of whatever you think Willingness to do what it takes			Be a disciple of the subject Relevance	Acknowledging the other Clarify standards and values Not saying I am not good at this	

	To give all classes a chance Increased awareness Gratitude				
Make it Personal (relevance)	Active, living role in the world Everydayness Applicability Make sense as to why it matters to me Be able to use this education instead of just taking the final Meaningful Useful	Translates into my life as being useful My opinions matter Applicability	Results of Relevance Attitude change Awakening	Relate to personal experiences/ make it personal/underst and how things fit into my life Appeal to my self-interest	
Light	Goodness Desire to succeed I can do it I really can work through things. Knowing I can handle Seeing the beauty of something It is not wanting to held down or negative Positiveness This is going to be good Excitement Spiritual metaphors Becoming an educated person				Goodness Desire to succeed I can do it I really can work through things. Knowing I can handle Seeing the beauty of something It is not wanting to held down or negative Positiveness This is going to be good Excitement Learning as a sacred act Gratitude
Becoming a person		Not being tied to formulas Concerned about how things connect Not taking things at face value Know what things				Constantly seeks knowledge knowing it will enrich and benefit and increase understanding of the world Knowing background of

		mean Part of consciousness Internalizes information Getting Beyond Learning as a sacred act Personal Journey Appreciation for new awareness				things Ability to learn thinkgs outside of their specialty or area of interest Natural curiosity Willing mind and heart Obedience to teachings or principles Be a disciple Break down barriers Being able to have intelligent conversation Understand a lot of subjects and understand others more easily Understand both sides of an issue Defend your own opinion Nto necessarily someone who gets good grades Pushes/motivates themselves to work hard Sees value of learning the material instead of getting the grade Make connections between subject Holistic Well-rounded Learning as a sacred act Gratitude Light

Appendix H Taxonomic Concept Map

Attitude Change
- Kinds of
  - Self-change
  - Appreciation
  - Self-efficacy
  - Willingness
  - Openness
  - Determination
  - Decision
- Results of
  - Awakening
  - Learning as a Sacred Act
  - Risk Taking
  - Desire to Learn
  - Desire to be educated
- Causes of
- Approaches
  - Find value
  - Don't compare
  - Relevance
  - Choice

Appreciation
- Kinds of
  - Good perspective
- Part of
  - Seek broader understanding
- Approaches
  - Uses prior knowledge
  - Seek broader understanding
  - Realize universality and value
  - Understand reasons and motives
  - Learning as a Sacred Act

Choice
- Kinds of
  - Determine difficulty
  - Voting on topics
  - Personal responsibility
  - Desire to learn and change
  - Proactive
  - Openness
  - Appreciation

Awakening
- Kinds of
  - New interests and likes
  - Not threatened by others
  - Self-efficacy
  - access to unlimited resources
  - Surprise of new knowledge
  - Freedom from preconceptions
  - Becoming educated
  - Desire to learn
  - Openness
  - Attitude Change
  - New abilities and capabilities
  - Enjoyment of Studying
- Steps to
  - Have experience
  - Attitude Change
  - Openness

Openness
- Kinds of
  - Attitude Change
  - Willingness
    - Admit error
    - Adjust mindset
    - Listen and find value
    - Do what takes
  - Letting go of preconceptions
- Results of
  - Increased awareness
  - Discipleship
  - Relevance
- Approaches to
- Steps to
  - Acknowledge others
  - Value clarification
  - No negativity

Relevance
- Kinds of
  - everydayness
  - Meaningful
  - Personal
  - Useful

Getting Beyond Bias
- Parts
  - Relevance
  - Appreciation
  - Learning as a Sacred Act
  - Okay to be list or not understand
- Approaches to
  - Define needs
  - Evaluate strengths and weaknesses
  - Relationship with God
  - Idea of being educated
  - Understand how to be good student
  - Friends
  - Desire
  - Motivation
  - Use prior knowledge
  - Genuine interest
  - Balance your load
  - Avoid frustration
  - Look for alternative
  - Practice
  - Seek broader picture
  - Approach professor
  - Work
  - Persistence
  - Don't compartmentalize
  - Faith
  - Initiative
  - Clean slate attitude
  - Discipleship
  - Letting go of negative
  - Openness
  - Appreciation
  - Relevance
  - Learning as a Sacred Act

Learning as a sacred act
- Kinds of
  - Nourishing the seed
  - Change of Heart
  - Losing ourselves
  - Discipleship
  - Parable of talents
  - Mortal experience:college experience
  - Testimony process:teaching and learning process
- Parts of
  - Appreciation
  - Increased awareness
  - Acknowledge others
  - Acknowledge subject's importance
  - Spirit in us
  - Reverence
  - Change of Heart
  - Humility
  - Secular same as spiritual
- Results of
  - Curiosity
  - Strengthened testimony
  - Secular same as spiritual
  - Character-building
  - Discipleship
- Approaches to
  - Gratitude
  - Appreciate difficult ideas
  - Faith
  - Getting Beyond Bias
  - Openness
  - Attitude Change
  - Losing ourselves
  - Value clarification
  - Curiosity
- Attributes
  - Appreciation
  - Light
  - Openness

Appendix I—Componential Analysis