

Utah State University

DigitalCommons@USU

All Graduate Theses and Dissertations

Graduate Studies

8-2018

Why Do You Go to University? Outcomes Associated With Student Beliefs About the Purposes of a University Education

Mitchell C. Colver
Utah State University

Follow this and additional works at: <https://digitalcommons.usu.edu/etd>



Part of the [Education Commons](#)

Recommended Citation

Colver, Mitchell C., "Why Do You Go to University? Outcomes Associated With Student Beliefs About the Purposes of a University Education" (2018). *All Graduate Theses and Dissertations*. 7198.
<https://digitalcommons.usu.edu/etd/7198>

This Dissertation is brought to you for free and open access by the Graduate Studies at DigitalCommons@USU. It has been accepted for inclusion in All Graduate Theses and Dissertations by an authorized administrator of DigitalCommons@USU. For more information, please contact digitalcommons@usu.edu.



WHY DO YOU GO TO UNIVERSITY? OUTCOMES ASSOCIATED
WITH STUDENT BELIEFS ABOUT THE PURPOSES
OF A UNIVERSITY EDUCATION

by

Mitchell C. Colver

A dissertation submitted in partial fulfillment
of the requirements for the degree

of

DOCTOR OF PHILOSOPHY

in

Education

Approved:

Ryan Knowles, Ph.D.
Major Professor

Matthew Sanders, Ph.D.
Committee Member

Emma Maughan, Ph.D.
Committee Member

Aaron Brown, Ph.D.
Committee Member

Steven Camicia, Ph.D.
Committee Member

Mark R. McLellan, Ph.D.
Vice President for Research and
Dean of the School of Graduate Studies

UTAH STATE UNIVERSITY
Logan, Utah

2018

Copyright © Mitchell Colver 2018

All Rights Reserved

ABSTRACT

WHY DO YOU GO TO UNIVERSITY? OUTCOMES ASSOCIATED
WITH STUDENT BELIEFS ABOUT THE PURPOSES
OF A UNIVERSITY EDUCATION

by

Mitchell C. Colver, Doctor of Philosophy

Utah State University, 2018

Major Professor: Dr. Ryan Knowles
Department: Teacher Education and Leadership

Students enter the realm of higher education with a wide variety of beliefs about the purposes of attending university, which often relate to or reveal their various motivations for pursuing a post-secondary education. Research demonstrates that some student motivations align more fully with intrinsic factors, such as the love of learning or quest for excellence, while other student motivations align with extrinsic factors, such as vocational preparedness and monetary incentives (Vallerand et al., 1989). Using a Bourdieusienne lens, this study sought to place these student motivations in the larger sociocultural context and argue for greater opportunities for democratic equity in post-secondary environments. Relying on Self-Determination Theory, the study investigated

the relationship between student academic motivations and longitudinal academic performance at a four-year, research oriented university in the United States. More importantly, the study sought to determine if institutional interventions, specifically incoming student orientation and a first-year experience (FYE) course, were valuable in helping align student motivations with the central values of higher education. Using the Academic Motivation Scale for College (AMS-C) across two years, the study employed a Latent Profile Analysis (LPA) and Latent Transition Analysis (LTA) to extract several profiles or “types” of student motivation and examined developmental variability of these profiles across time. Students who shifted from a more controlled to a more autonomous motivational profile in connection with institutional intervention demonstrated the highest levels of first-year academic performance and retention. However, these results diminished during the second academic year. Implications for practice suggest the importance of providing students with a values-based intervention to enhance autonomy-oriented academic motivation and to do so in a manner that sustains this enhancement throughout the academic career.

(240 pages)

PUBLIC ABSTRACT

WHY DO YOU GO TO UNIVERSITY? OUTCOMES ASSOCIATED
WITH STUDENT BELIEFS ABOUT THE PURPOSES
OF A UNIVERSITY EDUCATION

Mitchell C. Colver

Students enter the realm of higher education with a wide variety of beliefs about the purposes of attending university. Research demonstrates that some student motivations align more fully with intrinsic factors, while other student motivations align with extrinsic factors (Vallerand et al., 1989). Relying on Self-Determination Theory, the study investigated the relationship between student academic motivations and longitudinal academic performance at a four-year, research oriented university in the United States. More importantly, the study sought to determine if institutional interventions, specifically incoming student orientation and a first-year experience (FYE) course, were valuable in helping align student motivations with the central values of higher education. Using a Latent Profile Analysis (LPA) and Latent Transition Analysis (LTA), this study examined developmental variability of motivational profiles across time. Students who shifted from a more controlled to a more autonomous motivational profile in connection with institutional intervention demonstrated the highest levels of first-year academic performance and retention. However, these results diminished during the second academic year. Implications for practice suggest the importance of providing students with a values-based intervention to enhance autonomy-oriented academic

motivation and to do so in a manner that sustains this enhancement throughout the academic career.

Keywords: academic motivation, university, latent modeling, liberal arts, student development, orientation, first-year-experience

CONTENTS

	Page
ABSTRACT	iii
PUBLIC ABSTRACT	v
LIST OF TABLES	xi
LIST OF FIGURES	xiii
CHAPTER	
I. INTRODUCTION	1
Statement of Problem	1
Purpose of Study	4
Overview of Theoretical Framework	6
Research questions.	11
II. LITERATURE REVIEW	13
Historical Context	13
Higher Education as a Field of Cultural Production	24
Motivational Acculturation: Providing a Rationale	32
Research Design	55
III. METHOD	57
Institutional Context	57
Intervention.	59
Materials	62
Data Analytic Strategy	74
Theoretical Analysis.	85
IV. RESULTS	87
LPA Model Testing	87
LPA Covariate Testing	97
LTA Model Testing	109
Associating intervention with change	110
V. DISCUSSION	125
Review of Significant Findings	125
Latent Profile Analysis	126

Latent Transition Analysis	133
General Discussion and Theoretical Analysis	137
Limitations and Suggestions for Future Research	164
Implications for Practice	167
Conclusion	181
REFERENCES.....	185
APPENDICES.....	207

LIST OF TABLES

Table		Page
3.1	<i>Test of Reliability Across Scales</i>	69
3.2	<i>Proportion of Survey Respondents Included in the Study</i>	74
3.3	<i>Variable Groupings for Regressions Predicting LPA Profile Membership at Time 1</i>	79
3.4	<i>Variable Groupings for Regressions Predicting LPA Profile Membership at Time 2</i>	80
3.5	<i>LTA Variable Groupings for FYE and New Student Orientation Interventions</i>	83
3.6	<i>LTA Variable Groupings for Academic and Retention Outcome Variables</i>	85
4.1	<i>Time 1 Fit statistics for Latent Profile Analysis Models</i>	88
4.2	<i>AMS-C Means of Latent Profiles at Time 1</i>	89
4.3	<i>Time 2 Fit statistics for Latent Profile Analysis Models</i>	93
4.4	<i>AMS-C Means of Latent Profiles at Time 2</i>	94
4.5	<i>Regression Coefficients and Odds Ratios for Time 1A LPA Covariates</i>	99
4.6	<i>Regression Coefficients and Odds Ratios for Time 1B LPA Covariates</i>	101
4.7	<i>Regression Coefficients and Odds Ratios for Time 2A LPA Covariates</i> ...	103
4.8	<i>Regression Coefficients and Odds Ratios for Time 2B LPA Covariates</i> ...	105
4.9	<i>Regression Coefficients and Odds Ratios for Time 2C LPA Covariates</i> ...	107
4.10	<i>Regression Coefficients and Odds Ratios for Time 2D LPA Covariates</i> ..	108
4.11	<i>Latent Transition Patterns from Time 1 to Time 2 with Most Likely Proportions</i>	110

4.13	<i>Transition pattern membership probabilities (row) based on Becoming A Learner Ratings (column).....</i>	112
4.14	<i>Transition pattern membership probabilities (row) based on FYE participation (column).....</i>	114
4.15	<i>Transition pattern membership probabilities (row) based on quality of FYE teacher (column).....</i>	116
4.16	<i>Transition pattern membership probabilities (row) by Teacher Quality and first-year college GPA (column)</i>	117
4.17	<i>Transition pattern membership probabilities (row) based on first-year college GPA (column)</i>	119
4.18	<i>Transition pattern membership probabilities (row) based on second-year college GPA (column)</i>	121
4.19	<i>Transition pattern membership probabilities (row) based on first-year retention (column)</i>	122
4.20	<i>Transition pattern membership probabilities (row) based on second-year retention (column)</i>	123
4.21	<i>Mean values for high school GPA and first- and second-year outcomes by Most Likely Transition Pattern</i>	124
5.1	<i>Contributions that more highly educated individuals make to society— economic, domestic, and civic.....</i>	175
3.7	<i>MNAR Regression Coefficients for Missingness at Time 2</i>	208
4.12	<i>Average latent profile probabilities for most likely latent profile pattern (row) by assigned latent profile pattern (column)</i>	209

LIST OF FIGURES

Figure		Page
1	<i>Continuum of Self-determination (Deci & Ryan, 2002, p. 16)</i>	39, 139
2	<i>Mean Factor Scores of each Latent Profile at Time 1</i>	92
3	<i>Mean Factor Scores of each Latent Profile at Time 2</i>	96

CHAPTER 1

INTRODUCTION

Overview of Research

Statement of Problem

A university education promotes benefits for both individual students and for society. For example, Georgetown University Center on Education and the Workforce recently reported that the average bachelor's degree holder earns nearly \$1 million dollars more over the course of his or her lifetime compared to those with only a high school diploma (Carnevale, Rose, & Cheah, 2011). Foregrounding this economic benefit highlights higher education as a private good, with the primary rewards being seen as the financial outcomes for the individual and contribution to the greater economy. While the monetary incentives of participating in higher education are clear, this metric is not the only lens through which to view the value of post-secondary attainment. In contrast, the value of a *liberal* education—the model of education typically associated with a bachelor's degree in the United States—is seen by proponents as a public good, crucial for its occupational relevance and also as a means to bettering whole individuals and the fabric of society (Engel, 1991). The liberal arts tradition is embodied in the concept of a *citizen scholar*, an individual both broadly educated and actively engaged in effectual citizenship that contributes to the economic, civic, and cultural vitality of society.

What students believe about the purpose of university shapes their approach to the higher education landscape. Beliefs about the purposes of a post-secondary education,

whether economic or holistic, are the product of perspectives that undergraduate students are exposed to throughout their entire lives and through many domains. Students glean such perspectives domestically from their parents and siblings, socially from friends and neighbors, institutionally from schools and religious organizations, commercially as consumers in the market, and culturally as participants in the greater society. In the modern era, these perspectives are perhaps more diverse than ever and more readily available to students on account of rapidly expanded social interconnectivity—an interconnectivity that seems to enable isolation as frequently as it does interrelation (Kane, 2001). By the time students enter the university, each one has been exposed to multiple, often conflicting rationales as to why the prospect of post-secondary attainment may be so valuable.

The liberal tradition is one of three most commonly occurring ideals expressed in university mission statements within the United States (Morphew & Hartley, 2006). Nonetheless, as will be discussed in Chapter 2, a decades-long shift in societal perceptions about the value of higher education has resulted in economic ideology emerging as a formidable alternative to the more traditional view. Mounting evidence reveals that the motivations students report for attending university have in fact shifted from the more holistic domain of the liberal tradition to focusing more exclusively on occupational and economic considerations. Specifically, “Since 1970, the percentage of freshmen who rate ‘being very well off financially’ as an ‘essential’ or ‘very important’ goal has risen from 36.2 to 73.6 percent, while the percentage who attach similar importance to ‘acquiring a meaningful philosophy of life’ has fallen from 79 to 39.6 percent” (Bok 2006, p. 26). This shift away from acquiring a meaningful life philosophy

and towards an emphasis on financial well-being is significant, not in the least because of the stark contrast between the two motivational paradigms. An economic rationale for attending higher education is far more individualistic and utilitarian, while a rationale more closely associated with the liberal arts tradition is far more holistic and socioculturally oriented.

This shift towards university as a private good is manifest not only in the perceptions of students that attend university, but also in the ways that policy and administration influence the structure of higher education. As institutions have resorted to more market-oriented forms of governance, emphasis on viewing education as a private good has presented itself at odds with the ideal that education is of importance to both the individual *and* to society (Labaree 1997; Arum & Roksa, 2011; Zemsky, Wegner, & Massy, 2005). As this plays out in the educational policymaking process, nearly all state legislatures, using an economically grounded rationale, have reduced public funding for higher education since 1980, down an average of 40% (against the grain of this trend, Wyoming and North Dakota have both posted gains in funding; Mortenson, 2012). This financial austerity accompanies a call amongst lawmakers for a greater focus on vocationally-tethered degree programs. This view places occupational placement and earned salary as primary contenders for measuring whether institutions are achieving their educational goals (Cohen, 2016). Providing context, Moosmayer's (2012) review of a mounting body of research revealed that "behavior rooted in economic values reduces personal well-being and diminishes value for the community" (p. 156). In this way, legislators may actually be inadvertently working against the well-being of their constituents (personally and collectively), rather than on their behalf, funneling good will

for society through the narrow channel of the economy. Compounding the issue, an ever increasing amount of collective student loan debt and an epidemic of university dropouts have contributed to increased scrutiny about the value and relevance of post-secondary attainment. For example, the year 2017 saw a *majority* of young Americans adhering, for the first time in recent history, to the belief that a university degree is, on average, *not* a good return on investment (Mitchell & Belkin, 2017). Given that these trends are still emergent, a more in-depth understanding of these issues is critical to appropriately guiding the future of higher education.

Purpose of Study

This study seeks to explore academic motivations in 21st century university students and whether those motivations can be influenced to improve student outcomes, such as academic performance and retention. Not surprisingly, the core values of the liberal tradition are nicely aligned with what research shows helps students be successful. Some of these values have included holistic personal development, rigorous curriculum, cocurricular immersion, social integration, and a blend of both broad disciplinary exposure and specialized professional training. While there are many meaningful outcomes of post-secondary attainment, deep within the university gene pool is “the belief that people of whatever age who want to gain a sense of purpose and accomplishment must struggle against the intrinsic difficulties of their subject matter” (Riesman, 1980, p. 313). This ideal presents itself in contrast to a strategy of simply going through the motions of a program in search of extrinsic rewards. The extent to which student motivations align or misalign with these values is, from a theoretical perspective, likely to impact the outcomes students achieve.

Since motivation is a multifaceted construct, measured across several different factors of motivation (Deci & Ryan, 1985), research has often examined how mean scores on single factors of motivation differ amongst participants. This variable-centered approach has traditionally been more common, but has recently given way to person-centered approaches that examine how common patterns of difference exist for participants across multiple factors (Pintrich, 2000; Pastor, Barron, Miller, & Davis, 2007). As an analogy for how the person-centered approach differs from variable-centered methods, consider researching participants' liking of a salad. Instead of separately examining how much participants like tomatoes, greens, and dressing individually, the person-centered approach examines common patterns of how participants like these ingredients in combination with one another. Using the person-centered approach of latent profile modeling and latent transition analysis (see Chapter 3), this study seeks to examine how multiple factors of academic motivation blend together and associate with meaningful student outcomes. The study also seeks to determine if student motivational profiles are developmentally dynamic in response to institutional intervention. Since motivation is multifaceted across many factors, latent profile modeling can be used to understand how multiple goals work together to shape how specific outcomes are achieved. The overarching intent of this work is to shed greater light on student motivations for attending university (whether those motivations be economic or more intrinsic) and to assess the degree to which these motivations are malleable through intervention towards greater student success. As an ongoing social experiment, higher education has heretofore produced ostensibly meaningful outcomes for individuals and for societies. However, there is an increasing awareness that, in a

dynamically globalized society, institutions of higher education cannot afford to rest on their laurels (Christensen & Eyring, 2011). This reality has fostered the need for new perspectives on how universities might best constitute themselves, on behalf of their students, for a viable future.

Overview of Theoretical Framework

Beliefs about how certain activities relate to contingent outcomes are at the core of human motivation (Atkinson and Reitman, 1956). What an individual believes about the *value* of a certain activity is fundamental to their motivation to participate. For example, students enter university with a specific understanding about what attending university will ultimately accomplish. Such beliefs are gleaned from a variety of sources through an individual's lifetime but especially from the modeling and verbal persuasions that are provided to each of us by other individuals (Bandura, 1977). This transitive nature of human motivation—the fact that it can be vicariously obtained, rather than emerging exclusively from instinct—has been an important construct of what makes educational environments functional (Schunk, 1991). However, sociologists of education have suggested that this intergenerational transmission of knowledge and belief inadvertently facilitates the social reproduction of oppressive circumstances (Bourdieu, 1974; Bowles & Gintis, 1977; Apple, 1978). Prominent in this theoretical arena, the work of renowned sociologist and philosopher Pierre Bourdieu provides meaningful modes of analysis, terms, and concepts that facilitate this study's discussion of student motivation and how those motivations might be influenced towards greater outcomes.

Pierre Bourdieu (1974) posited that the human race sustain its collective well-being over time through the transmission of cultural practice from one generation to the next. Because of its cyclical nature, Bourdieu suggests, this intergenerational transmission is susceptible to problematically reproducing power relations that are optimized to benefit certain groups of individuals and not others. Utilizing complex structures of social and cultural practice, Bourdieu outlined how these groups circulate both real and symbolic forms of capital in ways that maintain advantages for the advantaged. From this theoretical perspective, Bourdieusienne theorists have worked to catalog how the structure of higher education in the United States has historically served to reproduce culturally profitable power relations for the elite (Soares, 2007; Howard & Gaztambide-Fernandez, 2010). Notwithstanding this problematic heritage of higher education, Bourdieu (1998) acknowledged that, in a practical sense and if organized properly, educational environments have the potential to achieve, at times and in places, greater democratic ideals for society. He argued that this occurs only when access to educational environments is unadulterated and universal: “We can escape... the status quo, only by working to universalize the conditions of access to universality” (Bourdieu, 1998, p. 137). To put it another way, democratic transmission of capital in educational environments requires that educators actively work to ensure that all students equitably benefit from educational participation.

Bourdieu (1993) conceived of educational environments as ‘fields of cultural production’ that allow participants the opportunity to apply existing capital (economic, cultural, social, etc.) in ways that extract from the field more valuable and varied forms of capital. Comparing the field of cultural production to a field of athletic competition,

Bourdieu suggested that ‘players’ who understand more fully the rules and rhythm of the game are likely to extract capital at more advantageous rates of exchange than less equipped peers. Bourdieu (1984) employed the term *doxa* to describe this rhythm of the game, an unspoken order “which goes without saying and therefore usually goes unsaid” (p. 425). *Doxa* constitute the “set of core values and discourses which a field articulates as its fundamental principles and which tend to be viewed as inherently true and necessary” (Webb, Schirato, & Danaher, 2002, p. xi). From this theoretical perspective, students arrive to institutions of higher education from extremely varied life conditions and are therefore likely to benefit from university in remarkably different ways based on their individual familiarity with the prevalent *doxa*. A failure to grasp the core values would therefore theoretically result in a disadvantaged position. Seeking to balance this disparity through clarifying the core values of the university might therefore be a worthwhile undertaking in attempting to achieve greater equity within the higher education enterprise.

Notwithstanding the strong currents of market ideology discussed earlier in this chapter, university students report a strong desire for having the university actively facilitate and shape students’ emerging values: “According to a recent survey of more than 112,000 undergraduates, two-thirds of all freshmen consider it ‘essential’ or ‘very important’ that university help develop their personal values. At this stage in their lives, students are often seeking to determine their identities—what they stand for, how they want to live their lives, what experiences hold great meaning” (Bok, 2006, p. 38). Meaningfully, the motivational research of Deci, Eghrari, Patrick, and Leone (1994) revealed that providing individuals with a values-based rationale of why a particular

activity meaningful can be an important aspect of helping them to be successful. This is especially true when the activity is inherently challenging. These authors found this to be important for “activities that are useful for effective functioning in the social world but are not inherently interesting and thus not intrinsically motivated” (p. 120), such as post-secondary attainment. Specifically, their research showed that “a rationale that is personally meaningful to the target person can aid him or her in understanding why self-regulation of the activity would have personal utility” (p. 124). Providing such a rationale might therefore be an important function of the university, particularly at the beginning of each student’s collegiate experience.

Not surprisingly, universities typically offer incoming student orientation and first-year experience (FYE) programs geared towards familiarizing students with the campus, policies, procedures, resources, and opportunities for social engagement. However, these programs, which tend to be composed of a blend of information and social immersion, typically do not attempt or prioritize conveying to students the core values of post-secondary attainment. Instead, they tend to prioritize institutional connection, campus resources, and the development of academic skills (Young & Hopp, 2014). Similarly, in the 29-page document that articulates the core competencies of the Association for Orientation, Transition, and Retention in Higher Education (NODA, 2016), there is no mention of students’ values and beliefs or content regarding the importance of conveying to students the “why” or purpose of a post-secondary experience. Instead, these programs tend to be practically and socially oriented, rather than motivationally or philosophically oriented, which may be cause for concern.

In the absence of a sensible rationale for the rigor and breadth of a liberal education as it relates to outcomes for the self and society, university students might be inclined to fall back on prevalent academic acculturation that emphasizes the individualistic, occupational, and economic outcomes of post-secondary attainment. As explained by Arum and Roksa (2011), “Many students come to college not only poorly prepared by prior schooling for highly demanding academic tasks that ideally lie in front of them, but—more troubling still—they enter college with attitudes, norms, values, and behaviors that are often at odds with academic commitment” (p. 3). For example, Copeland and Levesque-Bristol (2011) found that students who did not understand the value of general education requirements experienced a much more stressful learning climate than students who could articulate the value of such courses. Running parallel to this reality, when students, for whatever reason, demonstrate exclusive interest in educational experiences that provide them with explicit professionally applicable knowledge, they simultaneously alienate themselves from coursework that aims to educate students more broadly for dynamic participation in society. Indeed, research has repeatedly shown that preoccupation with financial well-being *negatively* impacts psychological well-being and prosocial conscientiousness (Park, Ward, & Naragon-Gainey, 2017; Kasser, 2002; Kasser & Ryan, 1993, 1996). From a Bourdieusienne perspective, misalignment with the core values of higher education could result in less advantageous positioning and a diminishment in the quality of the associated outcomes. Stated in the reverse, it could be hypothesized that greater alignment with the core values of higher education would result in more efficacious positioning within an institution and higher quality outcomes.

Research questions. The purpose of this study was to investigate the latent nature of students' own perspectives on the benefits of pursuing a university education, as they align or misalign with the core values of the liberal arts tradition. Additionally, using person-centered techniques of latent modeling (Pastor, Barron, Miller, & Davis, 2007), the study examined transitional aspects of these motivational perspectives as they related to university interventions that sought to develop student awareness of these core values. The study also explored the extent to which the alignment between student motivations and core institutional values meaningfully covaried with academic performance outcomes, including academic self-efficacy, psychosocial well-being, course performance, and persistence from year to year.

To address the complexity of the fact that student motivations can vary greatly across multiple goal types (Pintrich, 2000; Pastor, Barron, Miller, & Davis, 2007), the study employed latent profile modeling and latent transition analysis. This technique categorizes multifaceted student motivations into several different profiles or “types” that each serve to epitomize a *dominant system of beliefs* amongst students about the purposes of a university education. Moreover, this analytical approach has the capacity to determine if these dominant systems of belief remain stable over time at the group level and if, at the person level, they dynamically change in response to institutional intervention. Additionally, the technique associates the motivational profiles that emerge with various academic outcomes to determine if meaningful differences occur across the various belief systems. The major research questions are as follows:

1. What profiles or “types” of student motivations emerge using the person-centered approach of Latent Profile Analysis (LPA)?

2. What characteristics and outcomes are associated with each latent profile, as measured in terms of academic self-efficacy, psychosocial well-being, course performance, and persistence from year to year?
3. Are these student motivational profiles developmentally stable or dynamic across time?
4. What university interventions are associated with observed motivational transitions?
5. What outcomes are associated with transitions that occur between profiles?

The following chapters discuss a research study that occurred between 2014 and 2018 at Utah State University. Chapter 2 grounds this work in the historical context of higher education in the United States, exploring how sociocultural trends interrelate with the nature of student motivations. Concepts specific to the work of Bourdieu (1993) are adopted for the purposes of defining a theoretical analysis, and the nature of motivation itself is examined using self-determination theory (Deci & Ryan, 1985). Chapter 3 explores the various data analytic strategies employed, with the person-centered approach of latent transition analysis taking center stage. Chapters 4 and 5 outline the results of the study, articulate general findings, and develop implications for practice. Several appendices are included for technical specificity.

CHAPTER 2

LITERATURE REVIEW

Background and Impetus

Historical Context

An era of increased access through federal involvement. Within the United States, opportunities for post-secondary attainment are now more available than ever, especially when compared to an earlier age when only a narrow band of American society attended university. In 1940, before the United States entered World War II, less than 5% of the population held a bachelor's degree (Bok, 2006) and only 15% of adults aged 18-21 were enrolled in university (Hollinshead, 1952). In each decade that followed, collegiate access in the United States was dramatically expanded through a variety of programs, laws, and policies. A few landmark examples include 1944's G.I. Bill; 1954's *Brown v Board*; the 1964 Civil Rights Act; Title IV of the 1965 Higher Education Act; and Title IX of 1972's Education Amendments Act. From 1947 to 1997, largely as a result of these policies, enrollment at colleges and universities ballooned to six times the earlier size, growing from 2,338,226 to 14,345,416, a trend that has continued into the present millennium (Kinzie et al., 2004).

As the university-going population expanded, perceptions regarding the value of a university education also shifted, not only in the minds of the students attending, but also in the way that message was shared with prospective students. For example, as captured by Jacobs (2004), those in the Baby Boomer generation were encouraged to pursue

higher education in order to escape the snare of industrial employment and the sting of poverty, a message intimated to them by their parents and others from the so-called Greatest Generation—those who lived through both the indigence of the Great Depression and the harrowing trials of World War II. For these students, university was seen not only as a way to improve oneself by receiving a broad education, but as a means to secure a stable career and promising future. However, a documented shift occurred with the passage of Eisenhower’s National Defense Education Act in 1958, a law that implemented, for the first time, federal student loans as a core element of federal involvement in education. The emergence of federal student aid signaled “a priority- or agenda-based philosophy... aimed at ensuring economic vitality and national security through financial aid policy” (Fuller, 2014, p. 52). The program not only expanded access to higher education on the grounds that post-secondary attainment was a critical aspect of national security, but also dramatically shifted the conversation regarding the fundamental purposes of obtaining a university education—a shift that centered on market-based motivations (Adamson, 2009; Fuller, 2014).

For the first time in the nation’s history, the value of a university education could easily be measured (using the yardstick of federally subsidized grants and loans) as a dollar-for-dollar investment in individual human capital and the nation’s economic strength. As revealed in the work of Slaughter and Leslie (1997), policy memos from this period highlight that this early federal involvement in the higher education enterprise was motivated by a view of the student as a consumer rather than a public beneficiary. From this ideological perspective, as explained by Labaree (1997), “the value of education is not intrinsic but extrinsic. The primary aim is to exchange one’s education for something

more substantial—namely a job, which will provide the holder with a comfortable standard of living, financial security, social power, and cultural prestige” (p. 31). In the 21st century, Covaleskie (2010) has argued that the idea that education is key to both individual and national *economic* success has become an “article of faith” within United States educational policy. Covaleskie explains that “public schools are supported because the public believes the *economy* benefits when large numbers of an age cohort go to school for many years” (2010, p. 83; emphasis added). In keeping with this insight, the expansion of federal aid has matched pace with expanding collegiate enrollments, growing from \$575 million in 1958 to more than \$35 billion in 1994 (Duffy & Goldberg, 1998). Last year, the federal student aid program exceeded \$125 billion (U.S. Department of Education, 2016).

A market-driven educational landscape. The dramatic expansion of affordable access to post-secondary attainment was matched by an impressive increase in the count of operating institutions throughout the nation, growing from 1,851 in 1949 to 4,070 in 1999 (Kinzie et al., 2004). This growth created dynamics of supply and demand that had not existed before and that began to challenge colleges and universities to compete with one another for new enrollments. Even with a fully established federal financial aid program in place, universities discovered that periodic imbalance in student enrollments created by the wider market meant that revenue trends could also fluctuate wildly. For example, when enrollments during the 1970s plateaued, as they had done in the ‘50s, the climate of deflated demand seriously threatened the operational viability of many strong institutions (Pfnister & Finkelstein, 1984). As a defense mechanism, schools became increasingly willing to turn to market-oriented practices of governance, with each

institution working “to establish a position in the market that would allow it to draw students, generate a comfortable surplus, and maintain this situation over time” (Labaree, 2017, p. 7). While such efforts are designed to mitigate competition, an inadvertent side-effect that emerged was an upward spiral of competition, something Zemsky, Wegner, and Massy (2005) refer to as the “admissions arms race.”

As an ever-expanding and enthusiastic university-going culture emerged, it was fueled and sustained by a booming *growth industry* within institutions of higher education, the vast majority of which increasingly turned to corporate-style marketing to entice prospective students (Duffy & Goldberg, 1998). According to Heller (2016), this era was characterized by the “commodification and marketization of those spheres of social life that were previously outside the logic of profitmaking” (p. 172). During this period, the emergence of for-profit colleges and universities fueled competition and even paved the way for traditional colleges and universities to adopt more market-oriented practices. As explained by Kelly (2001), as the number and size of for-profit institutions increased, state policymakers began “calling upon public institutions to be more responsive to their clients... to adopt more student-oriented policies and services and respond quickly to the needs of employers for well-prepared workers” (p.10). From 1988 to 1999, the United States saw 266% growth in the number of for-profit institutions offering four-year degrees (Kelly, 2001). As this market-centered vision of higher education took root, universities relied more and more heavily on marketing and consulting firms to position each institution as an attractive product amongst rapidly expanding “market.” These efforts not only helped institutions cope with periodic

climates of adverse enrollment, but served to empower students to step into a role of the consumer.

By highlighting specific institutional characteristics thought to be in demand, each institution worked to position themselves as having greater benefits and fewer costs (Paulsen, 1990). Such market-oriented recruiting practices were first codified in Kotler and Fox's (1985) *Strategic Marketing for Educational Institutions*, a text that uses business-sense to legitimize the discourse of students as customers. As a side effect of this movement, institutions have turned "into instruments preoccupied chiefly with helping the economy grow" (Bok, 2006, p. 6). As one manifestation of this movement, Kinzie et al. (2004) explain, common narratives about the value of a university education were progressively shaped by marketing tactics "so aggressive that the schools no longer accurately represented themselves to prospective students" (p. 42), a trend that influenced the perceptions of both student and parents alike.

As the conversation shifted away from the central ideals of a liberal arts experience, the importance of focusing on the extrinsic value of the credential increased. As is explained by Arum & Roksa (2011), "A market-based logic of education encourages students to focus on its instrumental value—that is, as a credential—and to ignore its academic meaning and moral character" (p. 16). Such a view encourages students to be more concerned with the credential itself than with the characteristics the credential is supposed to represent. "The essence of this marketplace behavior in schools is captured by a question that echoes through American classrooms: 'Will this be on the test?' Under the...pursuit of social mobility, whatever is not on the test is not worth learning, and whatever is on the test need be learned only in the superficial manner that is

required to achieve a passing grade” (Labaree, 1997, p. 46). This concern amongst students of getting the greatest personal reward for the least personal effort run parallel to the desire to be fast-tracked into professionally-relevant courses rather than being required to take more general courses designed to foster critical thinking, citizenship, moral reasoning, and an appreciation for the humanities. Universities are increasingly “filled with students for whom the college is rarely a place for intellectual activity, but rather a way station en route to medical school, law school, or professional work.... These students are passive in the sense of not taking control of their own educations apart from calculations of what will best serve their vocational interests” (Riesman, 1980; pp. 312-313). In stark contrast, the values of a liberal philosophy of education, so central to university mission statements, are far more holistic in scope.

The escalating marginalization of the liberal arts tradition. As was explained by Carnoy, Froumin, Loyalka, and Tilak (2014), “Because higher education serves both public and private interests, its conception and financing is contested politically... [and is] subject to various political forces” (p. 360). Regarding forces that uphold the public interest, the core of the liberal arts tradition is the belief that universities educate the whole student, with trajectory towards many different outcomes and preparedness for success in many arenas, not exclusively occupational. Prime amongst these broader aims is the realization that a democracy can only function properly when those participating in the body politic possess a certain level of acumen for rational public debate—and that this participation is not only a right, but also an obligation (Oestereicher, 1991). To achieve this ideal, suggests Derek Bok (1986), now president emeritus of Harvard, an education must seek to accomplish a great deal:

Undergraduates should acquire an ample store of knowledge, both in depth, by concentrating in a particular field, and in breadth, by devoting attention to several different disciplines. They should gain an ability to communicate with precision and style, a basic competence in quantitative skills, a familiarity with at least one foreign language, and a capacity to think clearly and critically. Students should also become acquainted with the important methods of inquiry and thought by which we acquire knowledge and understanding of nature, society, and ourselves. They should develop an awareness of other cultures with their different values, traditions, and institutions. By having the chance to explore many opportunities, they should acquire lasting intellectual and cultural interests, gain in self-knowledge, and ultimately be able to make sound choices about their future lives and careers. Through working and living with a wide variety of fellow students, they should achieve greater social maturity and acquire a tolerance of human diversity. Last but not least, they should enjoy their college years or at least look back on them later as a time when their interests and enthusiasm were engaged in a particularly memorable way. (pp. 54-55)

Though not a short list, these ideal elements should be familiar to any university student as matching the requirements of earning a typical modern bachelor's degree. These components are manifest in both the general education and major requirements that are designed to work together "sufficiently to make the individual an autonomous thinking citizen" (Botstein, 1991, p. 107). This goal is theoretically beneficial to the individual student, but the participation of any holistically developed citizen in the public sphere is also a valuable product to society.

Within higher education, the move away from the liberal arts tradition and towards an educational philosophy of efficiency is perhaps not altogether unexpected. In his seminal critique of capitalism, Marx (1867) argued that it is the fate of all social enterprise in capitalist societies to be commandeered for the purposes of market-efficiency. This shift towards market utility, which can often be subtle, occurs when "the market abstracts social products from their original context and particular function, reifies

this abstraction by converting it to a generic commodity, and makes it comparable to all other commodities by assigning it a monetary value” (Labaree, 1997, p. 45). In contrast, the original context for public involvement in the sphere of education was perhaps best stated by Horace Mann (1855), who argued that “at all times and in all places... the culture and edification of the whole people” needed to be a central focus of educational policy (p. 162). Nonetheless, this ideal seems increasingly cowed by the market. As Diane Ravitch once lamented, “American higher education has remade itself into a vast job-training program in which the liberal arts are no longer central” (Hersh, 1997; pp. 27-28). Instead, we see an increasingly corporatized climate of higher education in which even faculty, staff, and central administrators are compromised (Brown, 2016). For example, as explained by Miyoshi (2000), “The role of the administrators in the university thus has to be elevated to a new height. No longer expected to be a mere intellectual or even an educational leader... most administrative recruits have at least some managerial experience, and presidents and provosts are no longer embarrassed to be called the CEOs of universities” (p. 673). In such climates, it is no surprise that institutional values have swung so heavily towards education as a private, rather than public, good.

Writing in 1990, Paulsen explained that as the market-view of education became more prevalent and institutions began to cater to students-as-consumers, institutions may have inadvertently “responded to a buyer’s market by changing their college mission... in an effort to accommodate the demands of the student consumer for more vocationally-orientated coursework... [These] activities were at first surprising and, in some ways, disappointing for many postsecondary educators” (1990, p. 6). While students should

have been able to leverage the market to their own advantage to increase institutional quality, the outcome actually produced an unintuitive downshift in institutional quality across the nation. As documented in the work of Riesman (1980): “The fact the institutions were so hard up for students often led their faculty and administrations to offer students a mediocre education... [making] curricular decisions based more on what they thought would get students to enroll, and stay enrolled, than on what their students needed to learn” (p. xv). As was explained by Zemsky, Wegner, and Massy (2005), universities are increasingly resigned to engaging in market-based administrative practices despite the fact that those practices erode the liberal arts tradition: “The question... is not whether the escalating importance of markets is detrimental to the academy, but whether anything can be done about it” (p.52). Unfortunately, many voices have increasingly answered this question with doubt (Ellsberg, 2011; Boles, 2012; Blumenstyk, 2014; Selingo, 2013).

An era of public scrutiny. Running parallel to this departure from the core values of the liberal tradition, institutions faced, perhaps for the first time, a crisis of unmet performance expectations and increasing public scrutiny. “By the early 1990s, the progress the United States had made in increasing college participation had come to a virtual halt. For most of the 1990s, the United States ranked last amongst 14 nations in raising college participation rates, with almost no increase during the decade” (Callan, 2006). As a solution to stagnant admissions trends, many institutions even actively sought to expand and maintain enrollments by admitting many less qualified students (Duffy & Goldberg, 1998). What’s more, an increasing number of these students—especially minority students and those from other marginalized backgrounds—were leaving higher

education without credentials. In many cases those leaving represented even a higher percentage than those completing degrees (Tinto, 1987). With scores of students dropping out of post-secondary institutions and America's educational reputation slipping in the international rankings, many critics have questioned the purpose and value of a post-secondary education, emboldened by an increasing number of unfavorable headlines. These waters are muddied by the mounting student loan debt (now in excess of \$1.3 trillion; Mitchell & Belkin, 2017), which post-secondary drop-outs and graduates alike have difficulty paying back. As explained by Arum & Roksa (2011), "The increased debt burden could potentially... lead students to become distracted from their coursework by [focusing on] the importance of paid employment... deepening consumerist orientations within higher education" (p. 16). From this standpoint, the very existence of this debt shifts student focus towards more monetary rather than personal measures of the value of higher education.

In the 21st century, a wide and lively debate has emerged regarding whether or not higher education is even worth the investment. A sampling of recent book titles reveals how little confidence critics have in the traditional university experience: *The Education of Millionaires: Everything You Don't Learn in College about How to be Successful* (2011); *Better than College: How to Build a Successful Life without a Four-year Degree* (2012); *College (Un)Bound: The Future of Higher Education and What It Means for Students* (2013); *American Higher Education in Crisis* (2014). As was argued by higher education critic Michael Ellsberg (2011), "Some of the smartest, most successful people in the country didn't finish college. None of them learned their most critical skills in an institution of higher education." And in some ways, Ellsberg may not be wrong; a 25-

year study conducted by Stanley (2000) revealed that the average post-secondary GPA of the 700 millionaires surveyed was a modest 2.9, rather than the valedictorian GPAs that one might expect.

The last several years have seen increasing critical commentary from many public figureheads, politicians, and journalists, each taking an opportunity to disparage the liberal arts in favor of more practical professional training. Even Barack Obama once quipped “But I promise you, folks can make a lot more, potentially, with skilled manufacturing or the trades than they might with an art history degree.” While many analysts were quick to step in and point out that this characterization was, on average, an erroneous one, the implicit message could not have been clearer: in the 21st century, a liberal education does not occupy a preeminent and unquestioned position in society’s ranking of post-secondary importance. In fact, a recent Wall Street Journal/NBC News survey (Mitchell & Belkin, 2017) has revealed unprecedented public skepticism regarding the value of higher education, a shift that varies drastically from even just four years ago. The poll revealed that, for the first time in American history, only a plurality of adult Americans (49%) believe that earning a four-year degree is valuable. This is in stark contrast to previous generations, where this opinion was always held by a sound majority. Within the college-going age group, the numbers are even more concerning: “*Among Americans 18 to 34 years old, skeptics outnumber believers 57% to 39%, almost a mirror image from four years earlier*” (Mitchell & Belkin, 2017). With billions of dollars being invested in higher education annually and slipping global educational performance, there are key questions that need to be asked and answered in an effort to

more fully understand how these shifts in student beliefs relate to student motivations and desirable outcomes within the halls of higher education.

Higher Education as a Field of Cultural Production

What students believe about the purposes of a university education is gleaned from a lifetime of participation in complex social structures and systems. Accordingly, examining these issues from the theoretical perspective of structuralism may be useful. As defined by Webb, Schirato, and Danaher (2002), structuralism is “a body of theory and system of analysis which... is basically the view that the social world is organized according to structures—rules, systems, and forms—and that these make meaning possible” (p. xv). From this perspective, education as a social structure has the capacity to accomplish many different, contrasting outcomes: “[Higher education] serves private interests by enhancing the capacity of individuals to gain economic and social benefits. It also has public value because more highly educated individuals are likely to increase others’ productivity and to embrace the fundamental tenets of a tolerant democratic society, which benefits all citizens” (Carnoy, Froumin, Loyalka, & Tilak, 2014, p. 360). Indeed, the market-view of education represents one structure (or system of interpretation) that society exposes to prospective university students. If adopted, this view contributes to students’ beliefs, values, and motivations regarding higher education. In contrast, the liberal arts tradition is another influential structure that students might adopt, in turn shaping their beliefs, values, and motivations down a different path. Each of these structures functions by employing rules, systems, and forms towards specific aims—on the one hand, of securing the public and individual good and, on the other, of securing private advantage.

Polar ideals for education: A structuralist interpretation. As one example of how these culturally different structures of interpretation might play out in the classroom, consider the variability that can exist between faculty and student perceptions of education:

An initial source of difficulty resides in the divergent ways in which professors and students regard the role of a university and the proper domain of undergraduate education... To [professors], knowledge is not a means to other ends; it is an end itself... Most students, on the other hand... tend to look upon knowledge and ideas less as ends in themselves and more as a means toward accomplishing other goals, such as... achieving success in their career. (Bok, 2006, p. 35)

Pierre Bourdieu (1993) described such differing positions as a relationship of “polar individuals” (p. 46), or opposites, within any given social field (such as higher education). At one pole, the *autonomous pole*, stands those figures who are endemic to the field itself, who orbit closest to the practical center, and who may even bear vestiges of authority—those who maintain its traditional practices, or *doxa*, often for intrinsic reasons. In higher education, these individuals represent the liberal arts tradition. At the other pole, the *heteronomous pole*, stands those figures who exist at the periphery of the field and who may not fully understand the more nuanced aspects of this *doxa* and the practices central to it. These individuals may therefore resort to external, socially-relevant lenses through which to view the value of the field, rather than appealing to the *doxa* (rules and values) operating at the core of the field. In higher education, at the *heteronomous pole* “we might find questions about student fees and loans, the cost value of particular subjects, disciplines or even schools, and so on” (Webb, Schirato, & Danaher, 2002, p. 108).

Bourdieu (1993) explains that the *autonomous pole* and *heteronomous pole* are forces that each give rise to and help define the other, always in a delicate dance of imbalance. For this reason, it is important to note that institutions may be filled with a variety of agents that operate in polar opposition to one another. Indeed, though part of the same organization, these individuals may not even interact with one another on a regular basis: “Perfectly illustrating the distinction between relations of interaction and the structural relations which constitute a field, the polar individuals may never meet, may even ignore each other systematically, to the extent of refusing each other membership of the same class” (Bourdieu, 1993, p. 46). Without some kind of philosophical guidance and meaning making originating from the *autonomous pole* of a field, individuals within any organization are predisposed to resort to more external, extrinsic practices, grounded in the discourses of the larger society. These external concerns, often focused on market-relevance, are introduced into the field through the *heteronomous pole*, which arises from inevitable interface with all other social fields—economic, religious, political, etc.

By its very nature, the *heteronomous pole*, which arises from and in conversation with the greater society, tends to fill any territory in the field unclaimed or undefended by those at the *autonomous pole*. Thus, individuals who are new to a field may attempt to operate in that field using cultural strategies and practices that would be more relevant in an external setting: “Although it is easy to exaggerate the proportion of students who in any epoch enjoyed ‘learning for its own sake,’ both women and men today are involuntary captives, needing a credential to go on to post-baccalaureate training and doing the necessary work grimly and anxiously rather than with any sense of pleasure in

learning” (Riesman, 1980, p. 90). In other words, not understanding the discourses originating from the *autonomous pole* of higher education might cause students to inadvertently view post-secondary attainment solely as a means to increase wages (like an investment). This conception might alienate them not only from the liberal arts tradition but also from the associated practices, skills, and benefits that the institution was founded to convey. The transmission of these core practices, skills, and benefits of any social field is an idea central to the work of Bourdieu.

The field of cultural production. Bourdieu (1974) emphasized that social institutions exist to maintain and reproduce the human condition through the transmission of what he called *cultural capital*. As explained by Nash (1990), “Social groups are understood to possess bundles of real and symbolic resources and to pursue active strategies to facilitate the intergenerational transmission of physical and symbolic property” (p. 432). From this view, the value of cultural capital (which exists in both tangible and intangible forms) is “the potential capacity to produce profits” for the person that possesses it and for those it is transferred to (Bourdieu, 1986, p. 241). For example, when a more advantageous cultural strategy is passed from a parent to a child or from an educator to a student, the ability of the recipient to function and to thrive in that culture is improved. In contrast, when a deficient or debilitating cultural strategy is passed on, the ability of the recipient to function and to thrive in that culture is injured. In recognizing the existence of capital in multiple real and symbolic forms, Bourdieu offered a counter-narrative to economic theory, especially in capitalist societies, which tends to reduce “the universe of exchanges [of capital] to mercantile exchange, which is objectively and subjectively oriented toward the maximization of profit,” a discourse that Bourdieu

(1986) rejects (pp. 241-242). Instead, Bourdieu posits a theory of capital that attempts to highlight that some of the most important and treasured features of the human experience cannot be ascribed monetary value or even be quantified (despite attempts of the markets to do so).

In the 1993 book *The Field of Cultural Production*, Bourdieu expanded this theory of cultural capital by describing how structures, like educational institutions, allow individuals to leverage previously acquired capital to yield even more capital from the environment. Using the analogy of an agricultural field of production, Bourdieu explained that social structures, such as universities, exist to provide participants with opportunities to acquire multiple forms of cultural capital at various rates of exchange. Like a field of wheat being harvested, certain tools and practices allow the possessor to extract benefit from the field at more advantageous rates of exchange compared to others in the field who possess less sophisticated tools and strategies. In particular, Bourdieu suggested that those operating closest to the *autonomous pole* of a field are likely to possess the most sophisticated tools and enjoy the most advantageous rates of exchange as a result of understanding and adopting the appropriate *doxa*.

The application of this theory to educational environments emerged from Bourdieu's (1986) personal experiences in attempting to understand "the unequal scholastic achievement of children originating from the different social classes," which Bourdieu believed could not be solely attributable, as many would suggest, to the "natural aptitudes" of the students (p. 243). Rather, Bourdieu believed that the "scholastic yield from educational action depends on the cultural capital previously invested [in the student] by the family" (p. 243). For example, many kindergarteners who come from

privileged homes may learn to read before they even start school, while others, from disadvantaged homes, must learn along the way. For this reason, Bourdieu was, for the most part, critical of educational systems, as he believed they typically serve to reproduce unequitable and undemocratic class structures. In other words, fields of cultural production are typically *not* egalitarian. Instead, individuals who enter the field with less capital are, by the nature of their sociocultural standing, less likely to enjoy advantageous rates of exchange and may be more likely to rely on discourses of interpretation that are less than ideal and which originate from other domains—at the *heteronomous pole*.

Seeking more democratic equity in higher education. As Bourdieu's theory applies to the realm of higher education, many theorists have documented how universities in the United States have generally served to transfer cultural capital to the children of a wealthy, isolated elite (Soares, 2007; Howard & Gaztambide-Fernandez, 2010). As Labaree (1997) explains, "According to [this] perspective, schools exist primarily to provide the members of the upper classes with a mechanism for passing their social advantage along to their children, and schools accomplish this by sorting students according to their social origins rather than individual merit" (p. 92). However, the dramatic expansion of access to higher education that began in 1944 increased the breadth of individuals that were able to attend university, including individuals from a wide variety of social classes, races, ethnicities, socio-economic statuses, and across both sexes. Given that these individuals arrive to university with various and sundry denominations of cultural capital, those whose capital represents the greatest alignment with the *autonomous pole* of the field may be best poised to extract capital from the field and at the most advantageous rates of exchange. Thus, any attempt to universalize higher

education creates a secondary problem that must also be examined and addressed: equal access does not automatically produce equal benefits.

An analogy Bourdieu (1998) used to explain the particular advantage of some individuals to extract more capital from certain fields than other individuals is that of an athlete on the field of competition. Compared to an athlete less aligned with the rules and rhythm of a specific game, a well-prepared athlete has a “feel for the game... While the bad player is off tempo, always too early or too late, the good player is the one who anticipates, who is ahead of the game” (p. 80). In higher education, this notion has been captured in the idea of a ‘first-generation college student,’ one who is attending a post-secondary institution without the benefit of prior cultural knowledge—acquired vicariously through a parent or grandparent in the domestic setting—of what is expected. “Since schools expect but do not teach these cultural competencies, children from less advantaged families are left to fend for themselves, and in the process they typically reproduce their class location” (Arum & Roksa, 2011, p. 37). In contrast, a ‘continuing-generation college student’ is one that possesses skills and cultural knowledge that the educational system rewards. This can mean that privileged students also yield the greatest benefits and academic outcomes. Other, less-privileged students may not only fail to benefit from educational environments, but may also culturally clash with those who oversee the educational environments, not recognizing their own dominated position within the field. Because of this, Bourdieu (2000) believed that the dominated classes often possess “resigned or fatalistic dispositions which lead members of the dominated classes to put up with objective conditions that would be judged intolerable or revolting by agents otherwise disposed” (p. 217). In this way, the dominated are theoretically less

likely to resist such unequitable power relations, inadvertently empowering the advantaged to reproduce dominating power relations.

Notwithstanding Bourdieu's skepticism about educational structures, he also acknowledged that, in a practical sense, if organized properly, educational environments have the potential to achieve, at times and in places, greater democratic ideals for society. Arguing this interpretation of Bourdieu, authors Webb, Schirato, and Danaher (2002) suggest that the academy "has the potential to... empathize with the circumstances experienced by other dominated groups, while at the same time having access to literacies and positions of power that can assist these dominated groups" (p. 139). The question is how educational institutions can work to ensure a more democratic transmission of capital, fulfilling what Horrace Mann (1848) captured in describing education as "the great equalizer of the conditions of man, the balance wheel of the social machinery." In other words, how can the opportunity of expanded access be enhanced through added features that help incoming students align with the central values and expectations of higher education?

Educators that seek to help the dominated classes rise above the strong current of social reproduction may benefit from considering the notion that, as Apple (2004) once suggested, education is both a political and ethical act. In keeping with this view and the theories of Bourdieu (1993), educators need not shy away from the reality that a majority of what occurs in educational environments necessarily serves to convey the central beliefs and values of the educators to the students in a normative manner (Eisner, 2002). All educational activities inadvertently convey various values and practices that are perceived by educators, working from a variety of epistemologies, as having the greatest

potential to improve the human condition. Indeed, “According to one large-scale study of undergraduates in the early 1950s, ‘the main overall effect of higher education upon student values is to bring about general acceptance of a body of standards and attitudes characteristic of college-bred men and women... There is more homogeneity and greater consistence of values among students at the end of their four years than when they begin’” (Bok, 2006, p. 22). As such, while educators cannot avoid having such a normative influence on student beliefs and motivations, one way or another, they can ensure that they work ethically to convey values in an intentional, reflexively interrogative manner. From this theoretical standpoint, there might be value in attempting to ensure that all students, especially those who are less privileged, have early access to the practices, skills, and benefits originating at the *autonomous pole* of higher education. In the absence of such efforts to level the playing field, students may be inevitably confined, as Bourdieu suggests, to the *heteronomous* discourses that are dominant in society and which may not yield advantageous positioning for students.

Motivational Acculturation: Providing a Rationale

A substantial body of research about what helps students thrive in academic environments points to certain kinds of motivation as central to student success. Indeed, the *doxa* of higher education seem to include the ethic that when students are motivated to academically succeed, nothing can stand in their way. However, there may also be a false impression that healthy and functional motivations happen “naturally.” On the contrary, a sizeable body of research demonstrates that healthy motivations are actually modeled, taught, and conveyed, not unlike a belief system (Deci, Eghrari, Patrick, & Leone, 1994; Jang, 2008). As such, any attempt to achieve greater democratic equality in

higher education may benefit from an examination of how motivations develop, grow, and ultimately support academic success.

Belief as the foundation of motivation. Motivation occurs when there is *belief* that a contingency exists and that through some effort (being resourced or constrained by the environment or by relationships) one is capable of achieving the contingent outcome. Put another way, using the expectancy-value model of motivation first introduced by Atkinson and Reitman (1956), motivation is broadly conceived as a dynamic interplay between two equally important elements: 1) what an individual believes about the quality of incentives associated with success, and 2) what she or he believes about the likelihood of achieving that success. The fact that individuals exist in a world of many possible rewards and subsequently must discriminate between the desirability of the available alternatives suggests that perception and belief are central aspects of motivation.

Fundamental to the work of renowned motivational researchers Deci & Ryan (2000) is their recognition that motivation is not merely a question of amount (one person is highly motivated, while another is not), but more importantly a question of the nature and focus of the motivation:

As an example, a student can be highly motivated to do homework out of curiosity and interest or, alternatively, because he or she wants to procure the approval of a teacher or parent. A student could be motivated to learn a new set of skills because he or she understands their potential utility or value or because learning the skills will yield a good grade and the privileges a good grade affords. In these examples the amount of motivation does not necessarily vary, but the nature and focus of the motivation being evidenced certainly does. (pp. 54-55)

In their seminal paper on this topic, Deci & Ryan (1985) classify two major types of motivation, *intrinsic and extrinsic*, which are distinguishable from one another based on

the beliefs and values driving the core motivation of any particular activity. Intrinsic motivation “refers to doing something because it is inherently interesting or enjoyable, and extrinsic motivation... refers to doing something because it leads to a separable outcome” (Deci & Ryan, 2000, p. 55). These authors’ research has repeatedly demonstrated that activities that are engaged in for intrinsic reasons tend to be higher quality experiences and provoke more effective performance from individual participants.

In the context of higher education, research has shown that students have vastly different reasons for pursuing university-level coursework—reasons which are grounded in beliefs about what rewards post-secondary attainment will yield. Many students value extrinsic motivators for pursuing higher education, such as degree attainment, career placement, and salary. For example, according to Carnevale, Rose, and Cheah (2011), the monetary incentives for receiving a bachelor’s degree average out to nearly a million dollars more in earnings over the course of a lifetime compared to those who only complete some or no university-level coursework. Other students value intrinsic factors like love of learning, the acquisition of knowledge, and the pursuit of excellence (Scott & Sloan, 1991).

The structure of student motivations. Given that both intrinsic and extrinsic motivators are commonly traded reasons for attending university, Vallerand, Blais, Briere, and Pelletier (1989) took the important step of conducting student interviews in an effort to classify the core reasons that drive students’ choice to attend university. This initial inquiry was structured around the earlier work of Vallerand and Blais (1987), as well as the motivational theories of Deci & Ryan (1985). Deci and Ryan originally proposed Self-Determination Theory (SDT) as a way of distinguishing “between different

types of motivation based on the different reasons or goals that give rise to an action” (Ryan & Deci, 2000a, p. 54). Within this theoretical framework, Ryan and Deci also posit a state of *amotivation*, where an individual does not perceive a relationship between their own actions and any meaningful outcome. The results produced by Vallerand et al. (1989), which have subsequently been validated in numerous studies, revealed a plethora of reasons that students were choosing to pursue enrollment in higher education—some reasons personal, some monetary, and some psychosocial. Vallerand et al. used confirmatory factor analysis to demonstrate the latent nature of the factors within the proposed model of academic motivation. The authors codified these results into a 28-item survey, the Academic Motivation Scale for College (AMS-C), which was later shown to have a high degree of both concurrent and construct validity (Vallerand et al., 1993). The AMS-C organizes student motivations across the three theoretical domains of SDT: intrinsic, extrinsic, and amotivation.

Intrinsic motivation (IM) refers to voluntarily doing an activity for inherent pleasure, interest, or satisfaction, such as taking a walk in a park to enjoy the weather. Within the AMS-C, intrinsic motivation is broken down into three separate factors: motivation *to know*, motivation *toward accomplishment*, and motivation *to experience stimulation*. Motivation *to know* is assessed using questions that address a student’s love of learning for its own sake, especially as related to the student’s interests. For example, “I attend college because I experience pleasure and satisfaction while learning new things.” Motivation *to know* has been associated with both dispositional mindfulness and emotional maturity in previous research (Sukhsarwala, Kacker, & Mukundan, 2015). Motivation *towards accomplishment* is assessed using questions that address students’

satisfaction in overcoming the challenges associated with rigorous learning. For example, “I attend college for the satisfaction I feel when I am in the process of accomplishing difficult academic activities.” In this way, motivation towards accomplishment is closely related to core elements of Dweck’s (2006) mindset, in which academic success is achieved through the appreciation of the reality that failure and rigor are necessary and important elements of the learning process. Motivation *to experience stimulation* is assessed using questions that address students’ desire to be deeply immersed in the learning process, whether through verbal or literary engagement. For example, “I attend college for the intense feelings I experience when I am communicating my own ideas to others.” Taken together, these three facets of motivation build together to represent students’ intrinsic interests in the university experience.

Extrinsic motivation (EM) involves engaging in an activity or behavior in order to receive a reward external to the activity or behavior itself, such as working in a coal mine in order to receive a wage. Like intrinsic motivation, extrinsic motivation is also broken down into three separate factors: *identified* motivation, *introjected* motivation, and *externally regulated* motivation. *Identified* motivation is assessed on the AMS-C using questions that address students’ goals for occupational placement and success, while simultaneously emphasizing the student’s own agency. Each question references some aspect of the occupational domain using words like career, job market, or worker competence while simultaneously emphasizing the individual’s interests or choices. For example, “I attend college because eventually it will enable me to enter the job market in a field that I like.” *Introjected* motivation is assessed using questions that address students’ interest in proving themselves in university coursework for the validation

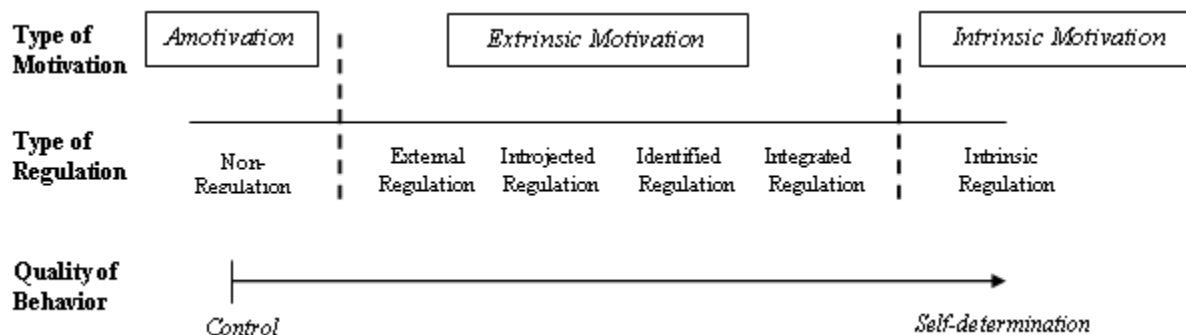
achievement provides. For example, “I attend college because of the fact that when I succeed in college I feel important.” *Externally regulated* motivation is assessed using questions that address the most extrinsic rewards associated with university education: a lucrative salary and prestigious employment. These items are the most utilitarian and pragmatic on the questionnaire and included items such as “I attend college because with only a high-school degree I would not find a high-paying job later on.” Along with the items associated with *identified* motivation, these *externally regulated* motivation items are the most closely aligned with the market-view of education.

Finally, unlike intrinsic and extrinsic motivation, the factor amotivation is not broken down into any subfacets. Amotivation is characterized by possessing a lack of meaning for a given activity or behavior, including the inability to see any intrinsic or extrinsic benefit to the activity, such as when a student who reacts negatively to an educational environment drops out. For example, Pisarik (2009) found that “individuals who experienced greater levels of intrinsic motivation to attend college were more likely to experience lower levels of exhaustion and cynicism, and higher levels of professional efficacy. Conversely, those individuals who experienced greater-levels of amotivation were more likely to experience higher levels of exhaustion and cynicism, and lower levels of professional efficacy” (p. 1238). Accordingly, amotivated individuals are usually resigned to going through the motions of a particular activity in a moderate state of disillusionment or ambivalence. Within the AMS-C, amotivation is assessed using questions that are surprisingly apathetic and even somewhat nihilistic. For example, “I can’t see why I go to college and, frankly, I couldn’t care less.” Amotivation is an ancillary element of Deci & Ryan’s (1985) SDT, with the primary components of the

theory focusing on interplay between the three facets of intrinsic motivation and the three facets of extrinsic motivation. Taken as a whole, the seven factor model of the AMS-C has been repeatedly validated at the post-secondary level (Guay, Morin, Litalien, Valois, & Vallerand, 2015; Cokley, Bernard, Cunningham, & Motoike, 2001; Fairchild, Horst, Finney, & Barron, 2005).

Conflicting priorities: Control-orientation vs. autonomy-orientation. Deci & Ryan (2002) organize amotivation, extrinsic motivation, and intrinsic motivation along a continuum of self-determination. This continuum places amotivation at the less-self-determined end of the continuum (called control-orientation) and intrinsic motivation at the more-self-determined end of the continuum (called autonomy-orientation). The various forms of extrinsic motivation (*externally regulated*, *introjected*, and *identified*) line up along the center of this continuum, theoretically corresponding to greater association or lesser association with self-determination (see Figure 1). For example, EM identified aligns more fully with autonomy-orientation, while EM introjected and EM external regulation align more fully with control-orientation. *Integrated* regulation also appears on the SDT continuum, but is not a form of motivation assessed on the AMS-C. *Integrated* regulation is a form of highly-autonomous extrinsic motivation theorized by Deci & Ryan (2002), but excluded from AMS-C and therefore not discussed in this study.

Figure 1. Continuum of Self-determination (Deci & Ryan, 2002, p. 16)



This continuum helps to clarify that the issue of motivation is *not* dichotomous, but *polar*, with possibilities for many positionalities along a spectral continuum (Gagné & Deci, 2005). Furthermore, as was shown in the work of Miller (2007), this theoretical continuum of motivation, leading from amotivation on the one end to self-determined motivation on the other, is psychometrically well-supported, especially when examining motivations in academic domains. For example, Sahile (2014) found that three factors of motivation on the self-determine end of the spectrum were significantly correlated with academic achievement (IM to know, IM toward accomplishments, and EM identified), while EM introjected and EM external regulation were not. In this same study, amotivation showed a significantly negative correlation with academic achievement. This is not surprising, as numerous research studies have demonstrated similar positive outcomes of possessing greater autonomy-orientation in the workplace, for both employees and managers (Deci, Connell, & Ryan, 1989; Richer, Blanchard, & Vallerand, 2002; Lam & Gurland, 2008).

Organizing student motivations across this spectrum of more-self-determined (autonomy-orientation) and less-self-determined (control-orientation) gives new voice to an age-old disagreement about the core purposes of university education. From the days of Cicero in 80 B.C., a perennial tension has existed between whether students are best served by receiving both a broad education *and* professional training (something Cicero argued developed each individuals' *humanitas*), or if students are more efficiently served through the reception of professional training only (*exercitatio*). Cicero believed that achieving both was required to produce a citizen scholar, while achieving only professional training produced ill-prepared citizens. One of the most obvious ways that this disagreement plays out is in the discussion of whether or not a general education (the liberal education, in practice) is even a necessary component of the post-secondary experience.

On the one side, detractors from the liberal arts tradition argue that the courses that make up each students *major* program are sufficient for producing graduates prepared to begin careers (Labaree, 1997). General education courses, on the whole, are therefore seen as superfluous and costly additions to what could be an efficient, streamlined process of vocational training. On the other side of this argument are those that believe that a general education should be comingled with the professional training that occurs in a student's major, and that both should be pursued for intrinsic and extrinsic value (Sanders, 2012). This school of thought believes this model is, as Cicero so famously argued, necessary for producing citizens. Such citizens are defined as individuals not merely trained to operate in a single profession (a less-self-determined outcome), but who are well equipped to contribute generally to society and to "criticize,

refute, raise questions, and... argue on both sides of every question” (Wolfe, p. 462). For these individuals, “the question has always been *how* an institution mixed the academic with the vocational, not *whether* it did so” (Bok, 2006, p. 26; emphasis in original). The preferred method in this tradition is to prioritize a broad, general education over narrow professional training in order that graduates can contribute to society through more than just the economic domain—socially, culturally, civically, environmentally, and domestically—a method more theoretically associated with autonomy-orientation.

In contrast, with increasingly consumerist views of education, many students arrive to university favoring a more expedient path through post-secondary academics, which tends to be wholly extrinsic in design. As explained in the work of Jacobs (2004), “Today's youngsters have had it drummed into their heads that a post-secondary education is the key to a good job. . . . [It] is no longer considered as an investment that society makes in the next generation; it is seen as an investment that students make in themselves... in doing the minimum work required to get by and get out” (pp. 156, 165). Unfortunately, those who are motivated by extrinsic factors may not realize that their gambit of academic-effort-for-direct-economic-reward may ultimately lead to a less-self-determined (more controlled) state of existence. For example, Richer, Blanchard, and Vallerand (2002) found that, in the workplace, lower levels of self-determination were correlated with lower levels of work satisfaction and higher levels of emotional exhaustion, both of which predicted intentions to leave the current job. Similarly, the work of Kasser & Ryan (1993) demonstrated that having financial aspirations as the central or primary motivator for attending university is “associated with less self-actualization, less vitality, more depression, and more anxiety” (p. 420). This desire for

occupational and economic vitality through participation in efficient educational environments is understandable but a “preoccupation with financial success may come at a cost to psychological well-being... for those whose self-worth is strongly staked on achieving financial success” (Park, Ward, & Naragon-Gainey, 2017, p. 17). Indeed, Kasser (2002) presented evidence that motivations grounded in financial aspiration negatively impact personal well-being and increase antisocial thinking, all at the expense of community-oriented values.

The Roots of Autonomy- and Control-Orientation: From K12 to University and Beyond. Realizing the significant advantages to possessing an autonomy-orientation in many different domains of life, Deci, Vallerand, Pelletier, and Ryan (1991) argued that educational settings are prime environments for fostering autonomy-orientation. Within their work, they cite multiple studies that all demonstrated that intentionally fostering students’ autonomy-orientation is not only possible, but coincides with numerous benefits:

Some teachers are oriented toward supporting students' autonomy whereas others are oriented toward controlling students' behavior. Of course, teachers' orientations influence the general classroom climate, and... students in classrooms with autonomy-supportive teachers displayed more intrinsic motivation, perceived competence, and self-esteem than did students in classrooms with controlling teachers. In another study... students who perceived their teacher to be autonomy supportive reported higher levels of intrinsic motivation, perceived competence, and self-esteem than did students who perceived their teachers to be controlling... Students' perceptions of the autonomy supportiveness of the teachers were positively associated with the self-determined forms of motivation... and their perceptions of the teachers' controllingness were positively associated with the non-self-determined forms of motivation... Finally, in a study by deCharms (1976), some teachers were taught to be more autonomy supportive, and this resulted in enhanced intrinsic motivation and increased achievement in their inner-

city students compared with the students of teachers who had not received the training. (p. 337)

Throughout all of these studies, supporting students' autonomy-orientation was at the core of academic well-being. In contrast, environments that emphasized control-orientation had disastrous academic outcomes for students. More concerning is that control in K12 educational environments is often exercised in the name of efficiency, productivity, and accountability.

Indeed, as documented by Au (2011), the K12 environment many incoming undergraduate students are accustomed to is characterized by the factory-efficiency paradigm of Taylorism, a philosophy that has increasingly emphasized rote memorization, programitized learning, and multiple-choice assessments in exchange for the preparation perceived as necessary to effectively enter the market. Within this paradigm, mastering these elements of the K12 learning environment is just one stop on the greater educational conveyer belt, which by necessity also diverts students (as products on an assembly line) through university on the way to a high paying salary. The cultural impacts of Taylorism, argues Au (2010), lead to a fetishized view of educational attainment as solely achieving economic gain and social mobility. With this more extrinsically motivated control-orientation to schoolwork in mind, university students often reveal their lack of academic self-determination "by the level of effort they are prepared to make; by their responsiveness to what interests them and their indifference or even disappearance when they are bored, as they so often claim to be—an outcome that students almost never feel reflects on themselves, but only on the teacher or the subject matter" (Riesman, 1980, p. 278). Although this commodification of higher education can be demonstrated through many different modes of analysis, the shift from more

autonomy-oriented to more control-oriented motivations amongst students is perhaps most evident in their own voices. As reported by Bok (2006), students' prioritization of being very well off financially has risen from 36.2% to 73.6% since 1970. By focusing on the external outcome of a university education, students are not only orienting to their academics in a less-self-determined manner, but may simultaneously be practicing to continue living with the mode of control-orientation in later professional environments as well.

At the core of this clash between autonomy-orientation and control-orientation lies, on the one hand, a view of the post-secondary credential as “badge of merit” to be achieved “at a minimum academic cost, to gain the highest grade with a minimum amount of learning” (Labaree, 1997, p. 259)—a view held by those who are more extrinsically motivated. On the other hand, students who are more intrinsically motivated believe that “one must struggle against obstacles in order to develop one’s capacities fully” (Riesman, 1980, p. 313), which is why motivation towards accomplishment in the face of adversity is on the intrinsic end of the SDT spectrum. More intrinsically motivated students have been shown in the research of Dweck (2007) to welcome a challenge and thrive in academic settings as a result of their willingness to endure failure on the path to success. Intrinsic motivation is associated with a positive appraisal of rigor, a desire for personal growth, an appreciation for failure, a commitment to excellence, and internal locus of control (Deci & Ryan, 1985; Vallerand et al., 1989). Students who are more intrinsically motivated see the value of a credential, but do not prize the credential more than the experiences and growth the credential represents (Labaree, 1997).

In contrast, students who are more extrinsically motivated believe university is “not just as an investment in the future but also as a means to experience fully a collegiate life—a personal objective that includes a commitment to a student culture characterized by frequent socializing, travel, and entertainment” (Arum & Roksa, 2011, p. 16). Because extrinsic motivation is guided by an appraisal of the exchange value of a given activity or behavior, those who are extrinsically motivated tend to position themselves to receive a greater rate of exchange—more rewards for fewer costs. While there are significant monetary costs associated with attending university, the primary investment in any educational setting is hard work—blood, sweat, and tears. As Pierre Bourdieu (1986) pointed out, becoming an educated person “costs time, time which must be invested personally by the investor. Like the acquisition of muscular physique or a suntan, it cannot be done at second hand” (p. 244). However, like acquiring a muscular physique or a suntan, there lingers a perception that these outcomes can be achieved by shortcut, where the same reward is achieved for less personal effort.

As a signal that students generally have moved towards expecting the same institutional reward for less and less personal effort, the work of Babcock and Marks (2011) reveals that between 1961 and 2003, average study time for full-time students fell from an average of 24 hours per week to a mere 14 hours per week. Similarly, “in 1961, 67 percent of full-time college students reported [studying more than twenty hours per week]; by 1981, the percentage had dropped to 44 percent; today, only one in five full time college students report devoting more than twenty hours per week on studying” (Arum & Roksa, 2011, p. 4). More extrinsically motivated students who seek to avoid this hard work might subsequently be more inclined to resort to cheating. For example, in

the work of Vansteenkiste, Sierens, Soenens, Luyckx, and Lens (2009), “the presence of controlled motivation... yields no benefits at all. Instead, the pressure and stress associated with controlled motivation seem to lead students to procrastinate more. Perhaps as a result of their procrastination and the pressure to do well on tests, controlled students are more anxious when taking tests, are more likely to cheat, and obtain lower grades” (p. 684).

Perhaps not surprisingly, cheating is a behavior seems to have increased in recent years: “In a longitudinal comparison of nine colleges... college students who admitted that they copied from other students on tests or exams increased from 26 percent in 1963 to 52 percent in 1993” (Arum & Roksa, 2011, p. 14). The research of Vandehy, Diekhoff, and LaBeff (2007) supports the idea that this trend has plateaued, as the frequency of cheating amongst university students between 1984 and 2004 consistently hovered in the range between 54% and 61%. Nonetheless, given that the frequency was nearly half as great in 1963, this research aligns nicely with the demonstrable trend in students’ increasing commitment since that era to more extrinsically motivated reasons for attending higher education (see also Whitley, 1998; McCabe, 2005; Klein, Levenburg, McKendall, & Mothersell, 2007). Researchers explained this decades-long shift in student commitment to academics as follows: “students seem to be allocating more time toward distinguishing themselves from their competitors to *get into* a good college, but less time distinguishing themselves academically from their college classmates once they get there” (Babcock & Marks, 2010, p. 5; emphasis in original). This is perhaps no surprise given that many post-secondary graduates are rarely evaluated on their course grades and are more frequently offered interviews simply for having the

appropriate academic credential, regardless of the work that went into earning that credential. However, we have recently entered an era where simply holding a bachelor's degree is no longer sufficient to land a job, a reality captured in the emergence of the phrase "degrees to nowhere."

Shaping student motivations through university orientation and first-year experience. An important element of Deci & Ryan's (1985) theory is that motivation is flexible and dynamically shifts in response to interventions that alter, expand, limit, or reorient individuals' perceptions and associated values. Indeed, the fact that motivation is malleable in the face of intervention is a critical element of what makes educational settings work. For example, by providing students with a compelling rationale centered on the value of participating in a learning activity, educators can help shape student beliefs in ways that enable greater engagement and success in learning:

A substantial body of research on values and academic behaviors suggests that when students value a learning activity... they become increasingly likely to actively engage in that topic, to persist in that topic over time, to achieve highly, to show relatively sophisticated self-regulation, and to understand what they are trying to learn... One way teachers can help students value the uninteresting, but important, learning task is by providing a rationale that (a) identifies the lesson's otherwise hidden value, (b) helps students understand why the lesson is genuinely worth their effort, (c) communicates why the lesson can be expected to be useful to them, and/or (d) helps students see or discover the personal meaning within a lesson" (Jang, 2008, p. 708).

Such interventions work because they guide, enlarge, shape, and alter student perceptions, values, and beliefs. In many ways, providing these types of rationales appeals directly to the values of the person being persuaded: "If, for example, a boy

dislikes picking up his room, a meaningful rationale for doing it might be ‘so that his toys won’t get lost or stepped on and broken’ (Deci, Eghrari, Patrick, & Leone, 1994, p. 124).

While universities typically offer incoming student orientation and first-year experience (FYE) programs designed to acquaint students with rules and rhythm of university life, common practice surrounding these programs does not include providing students with a rationale regarding the core values of post-secondary attainment. Rather, as highlighted by the National Resource Center for First-Year Experience and Students in Transition, “The three most frequently reported objectives for first-year seminars were: (a) develop a connection with the institution, (b) provide orientation to campus resources and services, and (c) develop academic skills” (Young & Hopp, 2014, p. 3). Similarly, in the 29-page document that articulates the core competencies of the Association for Orientation, Transition, and Retention in Higher Education (NODA, 2016), there is no mention of students’ values, motivations, and beliefs or content regarding the importance of conveying to students the “why” or intrinsic value of a post-secondary experience. This is unusual given that research has shown the intrinsic academic motivation is a key correlate of retention, especially as students navigate the difficult adjustments of transitioning to university life (Baker, 2004). Indeed, high levels of intrinsic motivation have been shown to be a key correlate of student retention, as in the research of Vallerand and Bissonnette (1992): “students who persisted... had higher initial levels of intrinsic motivation toward academic activities in general than students who dropped out” (p. 612). Thus, focusing on shaping students’ intrinsic values is not only supported in the literature, but is likely to be an important activity for institutions to focus on.

A new, philosophically-grounded approach to orientation and FYE. Recently, a handful of universities--including Utah State University, Washington State University, and Boise State University—have started providing incoming student orientation programming and FYE curriculum geared towards introducing them to the core values of the liberal arts tradition, which tends to highlight intrinsic motivators and foster an autonomy-orientation to academics. Using a short handbook called *Becoming a Learner: Realizing the Opportunity of Education* (Sanders, 2012), these institutions are actively attempting to persuade incoming students that intrinsic and community-oriented values are central to sustaining attitudes that will lead to post-secondary success. According to author Matthew Sanders (2012), the conceptual and theoretical undergirding of this book extends from the assumption that patterns of communication are constitutive and that "the ways in which we talk about college and learning in our institutions and culture matter" (p. 3). Sanders asserts that, in a very direct sense, unless students are aided in joining an institutionally unified discourse around topics of personal autonomy, responsibility, and growth, their academic focus can easily drift into valuing credentialing over "becoming the kind of person who has the ability to excel in any environment" (p. 8).

Representing a new approach to incoming student orientation and FYE, the *Becoming a Learner* model is designed to address the common academic paradigm experienced by many American students related to a culture of credentialing that has become increasingly common during the last century. As Jacobs (2004) argues, in order to maintain a competitive edge over other universities, including the rapid expansion of online for-profit degree programs, institutions across the United States have put degree completion (or credentialing), not true education, at the heart of their institutional ethos.

One recent study even demonstrated that American university students report significantly higher levels of extrinsic motivation throughout their academic career than their Turkish counterparts (Isiksal, 2010). Indeed, speaking to the curb appeal of extrinsic motivations for attending university, Arum and Roksa (2011) explain that “there is no guarantee that students will prioritize academic learning at the core of their institutional demands. There are many reasons instead to expect students as consumers to focus on receiving services that will allow them, as effortlessly and comfortably as possible, to attain valuable educational credentials that can be exchanged for later labor market success” (p. 17). While this more lucrative, control-orientation view regarding the value of a postsecondary education is alluring, the work of Sanders (2012) points to the purposes of education being primarily geared toward the development of the self, with career and salary concerns taking a back seat to the ideals of the citizen scholar. Sanders emphasizes the value of considering the liberal arts as a dynamic and integral part of the preparation of any specialist, regardless of monetary concerns. The *Becoming a Learner* model argues that “the primary purpose of college is to become a learner” (p. 52) and provides students with a rationale that encourages them to approach their academics with greater integrity, autonomy, and intentionality.

As the *Becoming a Learner* model relates to shaping the intrinsic and extrinsic motivations of students, providing this early rationale during incoming student orientation and FYE can be seen as one active strategy within the larger structure of higher education that attempts to convey the “rules, systems, and forms” of the liberal tradition. By seeking to shift student thinking regarding the purposes of a university education, the *Becoming a Learner* model engages in the transmission of *doxa*: the “set

of core values and discourses which a field articulates as its fundamental principles and which tend to be viewed as inherently true and necessary” (Webb, Schirato, & Danaher, 2002, p. xi). Operating from what Bourdieu referred to as the *autonomous pole* of the field (though in alignment in this case, this is not to be conflated with Deci & Ryan’s autonomy-orientation), Sanders (2012) describes the *Becoming a Learner* model as an attempt to shape student beliefs about the purposes of a university education and to do so in a manner that helps students thrive in the university. Analyzed using a Bourdieusienne lens, the ostensible intent of *Becoming a Learner* is to help students extract cultural capital from the field of higher education at more advantageous rates of exchange. From the theoretical perspective of Deci & Ryan, an additional intent is to help students develop greater autonomy-orientation to their academics. From Sanders’ (2012) perspective, the greatest return on students’ investment in the university comes from engaging what Bourdieu (1993) refers to as the “long cycle” of production (p. 48): cultural capital that takes longer to produce, and which is produced against the grain and through personal excellence, is not only a more rarified commodity, but subsequently a more valuable form of capital. As such, from this perspective, a university experience that is both rigorous and demanding is best poised to help students, especially those who lack privilege, to escape oppressive class structures. Since motivations represent at least a portion of the unspoken practices and skills these students need in order to be successful, institutions of higher education may do well to seek opportunities to cultivate healthy academic motivations in incoming students.

What previous research tells us about the prospect of shaping student motivation. While a wide body of previous research has analyzed student motivations

using the theoretical framework of SDT, none have done so in an attempt to determine how institutional interventions impact student well-being at the undergraduate level. The majority of studies have examined the construct of student motivation at a single point in time, producing results that support the benefits of intrinsic motivation (Vallerand & Bissonnette, 1992; Vansteenkiste et al., 2009; Rucker, 2012; Prowse & Delbridge, 2013; Tetreault, 2013; Van Soom & Donche, 2014; Vaters, 2015; Cannard, Lannegrand-Willems, Safont-Mottay, & Zimmermann, 2016; Hester, 2017). For example, the work of Fryer, Van den Broeck, Ginns, and Nakao (2016) examined the academic motivations of second-year university students at a single point in time and found positive advantages of being autonomy-oriented, which is theoretically in alignment with the core values of the liberal arts tradition. However, this study, like many others, analyzed student motivational well-being without reference to any developmental shifts, especially not shifts that occur in reaction to institutional intervention. This issue of shaping student motivations into greater alignment with institutional values seems completely absent from the literature, which is interesting given that the framework of Deci & Ryan (1985) strongly supports facilitating motivation through providing a rationale.

As another example of SDT-oriented research, Bailey and Phillips (2016) assessed university student motivations at a single point in time using the AMS-C, with the intent of associating the various factors with academic adjustment and meaning in life. This study produced results that support the importance of intrinsic motivation and alignment with the core values of the liberal arts tradition: “students who were motivated to study by their curiosity to explore and learn new concepts, and those who found pleasure in the process of creating and achieving tended to feel a stronger sense of well-

being, higher life satisfaction and meaning, and also performed better academically” (p. 210). However, researching the absolute effect of student motivation in this way does not address the remaining concern that many students arrive to university without proper exposure to core values that support autonomy-oriented motivation. This may highlight the importance of longitudinal, intervention-associated research.

Several other studies in the literature used a longitudinal approach to examining university students’ motivational profiles at multiple points in time, but without assessing any interventions or covariates (Ostovar & Mesrabadi, 2011; Kyndt et al., 2015). The work of Kyndt et al. (2015) revealed that autonomy-orientation appeared to organically increase as students in Belgium transitioned from secondary school to university, which may indicate that institutional intervention need not occur. However, Pan and Gauvin (2012) conducted a longitudinal study in China that surveyed students over their first three years of post-secondary coursework and found contrasting results. In their study, autonomy-oriented motivation amongst university students actually dropped between the first and second year. This may reveal the importance of fostering autonomy-oriented motivation amongst undergraduates at more than just a single time point. Pan and Gauvin (2012) attributed this drop in autonomy-orientation amongst their students to the high academic structure that exists for Chinese students prior to entering university and the comparatively abundant independence that university life affords them. In the United States, we see a similar drop in student motivation between the first and second year of undergraduate enrollment, which is part of the reason that the following year is affectionately referred to as the ‘sophomore slump’ (Graunke & Woosley, 2005).

Amongst those studies that have used multivariate approaches to assess meaningful covariates of academic motivation (as measured by the AMS-C), the work of Hill (2013) is a particularly useful longitudinal example. This study showed a significant relationship between academic motivations and three different covariates (academic emotions, perceived academic ability, and academic satisfaction), all of which shared an advantageous relationship with autonomy-orientation. Similarly, Taylor et al. (2014) conducted a meta-analysis across numerous previous studies, as well as conducting several more studies of their own using high school and university students. Their conclusion is that the body of research regarding SDT in university setting provides “strong support for the prediction of SDT that intrinsic motivation is positively associated with school achievement because it reflects a sense of volition and personal interest rather than external pressure” (p. 355). With so much support for the positive impact that intrinsic motivation can have on undergraduate academic achievement, it is surprising that no study in the reviewed literature investigated any attempt to transition students from a more control oriented motivational state to a more autonomy oriented motivational state.

The most methodologically advanced study in the reviewed literature surrounding SDT at the undergraduate level was a Latent Transition Analysis performed by Gillet, Morin, and Reeve (2017). These authors administered several measures related to student well-being and motivation; each measure was administered twice during university students’ first year (two months apart). Conducting a Latent Profile Analysis at each time point and a Latent Transition Analysis overall, this study revealed that the structure of latent motivational profiles is fairly stable over time at the group level, but fairly dynamic

at the individual level. Students can transition from profile to profile in a developmentally meaningful way. As with previous studies, this study exposed the benefits of having a highly autonomy-oriented motivation profile, something consistent throughout the SDT research. Although the methodological approach used was thorough, the study made no attempt to evaluate the influence that institutional intervention can have on fostering greater autonomy-oriented motivation amongst students, which informs the design of the present study.

Research Design

The purpose of this study is to assess the extent to which student motivations shift and transition as the post-secondary years unfold, especially in relationship to interventions such as FYE courses and incoming student orientation. Compared to the market-view of higher education that has emerged over the past century, the more traditional ideals of a liberal education favor more intrinsic reasons for attending university and support an autonomy-oriented motivational set. Determining if institutional intervention on student motivation can shift students into greater alignment with these core values seems worthwhile to the enterprise of higher education, especially if such a shift is associated with greater academic outcomes. Additionally, since universities generally attempt to intervene on student well-being through entire regiments of educational intervention, it also seems useful to determine if specifically attenuated interventions influence the dynamics of student motivations towards more self-determined academic living.

As was discussed in both Chapter 1 and Chapter 2, the clash between a more self-determined/*autonomous* view of the benefits of higher education and one that focuses more exclusively on the extrinsic/*heteronomous* rewards of education has created a modern conflict, with the American university serving as a primary battle ground. Despite the shift towards a more market-driven philosophy within higher education, specific universities are actively attempting, through incoming student orientation and the first-year experience, to create greater alignment between student perceptions and the central tenets of the liberal arts philosophy. Applying Bourdieu's theory of cultural reproduction and the central tenets of SDT, this research attempts to determine if these interventions (which extend from Bourdieu's *autonomous pole* and prioritize intrinsic motivation) create greater alignment with the organizational mission of the institution. If so, a remaining question is whether congruence with the *autonomous pole* is truly associated with a higher yield of cultural capital as measured by academic self-efficacy, course performance, psychosocial well-being, and persistence from year-to-year.

CHAPTER 3

METHOD

Analyzing Student Motivation

With the infrastructure of American higher education finding itself at a crossroads between extrinsic, market-based reasons for students to pursue post-secondary attainment and more intrinsic, humanistic reasons, an interesting opportunity arises to investigate how these issues are playing out *in vivo* at a modern, four-year, research-oriented institution. The opportunity for this study to occur emerged out of a research partnership between the Utah State University (USU) Office of Student Orientation and Transition Services and the author of *Becoming a Learner*, Dr. Matthew Sanders. At the start of the research partnership, the study was conceived as a formal program evaluation of the *Becoming a Learner* model on behalf of Dr. Sanders. The project was originally conceived with narrower scope and with simpler methods of analysis, though the data collection procedures were methodical and received IRB approval. Later, more advanced statistical techniques seemed fitting for an expanded analysis of the previously collected data. The expanded analysis, with improved statistical techniques and viewed from a broader theoretical framework in the greater sociocultural context, created an ideal subject matter for a doctoral dissertation.

Institutional Context

Rural Setting, High Social Mobility. USU is situated in the foothills of a rural Rocky Mountain valley that straddles Utah's northern border with Idaho. The university

primarily serves students from the state of Utah, with 81% of enrollees being state residents and 82% of students being white (Utah State University, 2017). As Utah's land-grant institution, USU was chartered to focus on the disciplines of agriculture, domestic science, and mechanical arts and has a heritage of open-access, serving high proportions of rural and socioeconomically disadvantaged students. Utah boasts a rate of 91.4% of rural adults with high school diplomas, tying for 8th in the nation with Nebraska and trailing a few percent behind the first place contenders (Johnson, Showalter, Klein, & Lester, 2014). This high percentage of college-educated rural adults is unique given that 41% of rural students in Utah live in poverty, making the high levels of post-secondary attainment remarkable (Strange, Johnson, Showalter, Klein, 2012). Given the high percentage of Utah residents that attend USU, this means that the institution necessarily has an obligation to serve a greater number of disadvantaged students, who are often both from rural backgrounds and socioeconomically challenged.

Notwithstanding USU's demographic circumstances, the university was recently recognized for helping students make remarkable progress despite having underprivileged backgrounds. In a ranking conducted by Washington Monthly (2017), Utah State University, which typically hovers somewhere in the 200's on national ranking lists, ranked 13th overall as a result of the ranking including factors like a higher percentage of first-generation students and Pell-eligible students, as well as USU's predicted (44%) vs. actual graduation rate (50%) over six years. As a result, USU ranks 4th in the nation for achieving social mobility, following closely behind the top three: Harvard, Stanford, and Georgetown. As such, the participants of this study may be

uniquely positioned in ways that differ meaningfully from university students across the nation.

Intervention. Recognizing the complex and multi-faceted issues related to student success and well-being, USU sponsored an ongoing initiative within its office of Student Orientation and Transition Services to engage incoming students in an intervention that seeks to orient their academic mindset to the task of "Becoming a Learner," seeking greater alignment with the purposes of a liberal education. Specifically, professor and author Matthew Sanders (2012) organized and prepared a small booklet of expository insights into the value of a modern liberal education entitled *Becoming a Learner*. By intervening early and proactively, the institution aimed to help students realize that "Overemphasizing job skills distracts us from recognizing the primary purpose of education: to become a learner" (Sanders, 2012, p. 7).

Each summer, USU sponsors a 40-minute talk during thirteen separate New Student Orientation days that are required of all incoming first-year students. During this talk, Dr. Sanders speaks to incoming freshmen and attending parents about the values of a liberal education and suggests to students that effectively engaging their academic career can result in a more positive experience and outcomes. The message of the *Becoming a Learner* model is presented with numerous persuasive examples and anecdotes that encouraged student consideration of the thesis that "The primary purpose of college isn't learning a specific set of professional skills; the primary purpose of college is to become a learner" (Sanders, 2012, p. 2). The stated intent of this presentation is to encourage parents and students to shift their communication patterns related to academics and, in doing so, create a more positive mindset related to the collegiate experience.

As part of the initiative, all students are provided with a copy of the book, *Becoming a Learner*, and, immediately following the presentation, are assigned to work in small groups of 8-10 students facilitated by a peer mentor. During this Q&A breakout session with the peer mentors, the students engage in a 5-10 minute discussion of the *Becoming a Learner* book and presentation. The peer mentors facilitate a reflective discussion centered on the themes of the presentation and individual student reactions to the material. The peer mentors also invite students to discuss their reading with their parents before returning for classes in autumn, as parents have been shown to make an important impact on students' academic motivations (Kriegbaum, Villarreal, Wu, & Heckhausen, 2016). The stated intent of this intervention is to start shifting student dialogue away from the prevalent credential-oriented mindset and towards patterns of communication that emphasize the implicit development of their personal skills through the academic rigor, breadth, and depth of the general education requirements.

In addition to attending new student orientation, incoming students also have the option of participating in a First-Year Experience course, called Connections, in which further discussion of and exposure to the *Becoming a Learner* model is embedded within the curriculum. Speaking of this type of First-Year Experience course, Riesman (1980) explains that when schools effectively set high expectations for university freshmen, the students are “capable not only of doing highly sophisticated work ‘at the frontiers of knowledge’ ... but also of doing diligent work” (p. 295). At USU, this course occurs during the week immediately preceding the first day of classes for fall semester. The course requirements ask students to complete a variety of assignments and activities that seek to orient them to the expectations and rigors of the university experience. Over 80

different faculty members participate in the course and use a modular curriculum, with *Becoming a Learner* as a major emphasis in the lesson plans. Some of the sections of the course reportedly focus heavily on the *Becoming a Learner* material, while others mention the model quite briefly. Regardless of the relative emphasis placed on *Becoming a Learner*, all students who attended Connections write a personal educational mission statement that answers the question, “What are three purposes for attending college?”

Both in the book and his talk, Dr. Sanders asks students to engage academics from a standpoint of answering the following question: how is this course helping me to become a higher quality learner and, subsequently, a higher quality professional? This is presented in contrast to the question: what raw professional skills will this course help me acquire? The short term outcomes of the program intend for the students to 1) meaningfully engage the book, 2) experience a shift in academic paradigms and articulation related to academics, and 3) engage academics with great integrity and intentionality. The long term outcomes of the program intend for students to experience 1) increased professional preparation, achievement, and success 2) healthier academic paradigms displacing the prevalent mindset/culture of credentialing, and 3) internalization of a personal educational mission statement, ultimately resulting in a more positive collegiate experience. Although these outcomes are admirable, it remained to be seen if the program's interventions were potent enough to shift student motivations and ultimately affect their ongoing academic well-being.

Materials

Although the market view of education has been shown to be prevalent across the United States, no information existed regarding the extent to which USU students arrive to campus with a credentialing mindset to begin with. Writing in 1980, David Riesman spoke to the already thriving market-view of education espoused by many students:

“Anyone who seeks to alter student attitudes as an effective means of educational reform has to guard against encouraging the already powerful consumerist attitudes prevalent in many student bodies” (p. 291). Nonetheless, a pre-test baseline was needed to determine the extent that participants believed that university is really just about acquiring professional skill-sets. Some students received a greater helping of the *Becoming a Learner* program (e.g. by taking the Connections course, instead of simply reading the book or hearing Dr. Sander’s talk). As such, it also followed that any impacts the program was having might result in a measurable difference between students' academic motivation and healthy academic behaviors (such as higher academic self-efficacy or more effective course performance). Using a standardized measure of student academic motivation allowed for comparisons against norms for various populations, revealing a greater depth of insight. Additional academic records (course grades, enrollment, academic standing, and general demographics) were also requisitioned from the university over several years to paint a longitudinal portrait of the developmental effects of the program on the student success. Specific questionnaires used were as follows:

Academic Motivation Scale for College. As explained in the Chapter 2, Vallerand et al. (1992) used both qualitative and quantitative methods to produce a 28-item questionnaire, the Academic Motivation Survey for College (AMS-C), which attempts to

measure academic motivation across seven subscales. The survey includes three facets of intrinsic motivation: to know (IM_Know), toward accomplishment (IM_Accomp), and to experience stimulation (IM_Stim). The survey includes three facets of extrinsic motivation: identified (EM_Iden), introjected (EM_Introj), and external regulation (EM_ExReg). The survey also includes one facet of amotivation (Amotivation). This survey asks students to answer the question, “Why do you go to college?”

The AMS-C has been repeatedly tested by researchers subsequent to its 1992 publication in an effort to determine if the seven factor structure is reliable across populations and instances of use. For example, Fairchild, Horst, Finney, and Barron (2005) found the factors of the AMS-C to range in reliability on Cronbach’s alpha from .77 to .90. Other studies have used exploratory structural equation modeling (e.g. Guay, Morin, Litalien, Valois, & Vallerand, 2015) and confirmatory factor analysis (e.g. Cokley, Bernard, Cunningham, & Motoike, 2001) to confirm that the seven factor model is valid and stronger than other configurations of the survey items. Lending credence to the theory that academic motivation can be organized across three intrinsic, three extrinsic, and one amotivational factor emphasizes the importance of a person-centered approach to the use of the survey. A person-centered approach (Pintrich, 2000; Pastor, Barron, Miller, & Davis, 2007) acknowledges that when the results of a survey can vary widely across multiple factors, as are present in the AMS-C, interpreting the results and gleaning meaningful findings can be difficult. Instead of analyzing the results on a factor-by-factor basis, the person centered approach uses Latent Profile Analysis to determine how individual scores vary across meaningful factor combinations. These factor combinations emerge statistically and reveal one or more latent profiles that participants

are grouped into according to similarity of their response across factor combinations (Pastor, Barron, Miller, & Davis, 2007). Subsequently, employing a Latent Transition Analysis can reveal how individual students transition amongst the various latent profiles, which can then be associated with different academic outcomes.

While thousands of papers have referenced or used the AMS-C, to date only one study has attempted to use a Latent Transition Analysis (LTA) to extract latent profiles from the results of the AMS-C and to analyze developmental changes over time. The LTA conducted by Gillet, Morin, and Reeve (2017) classified participants into three latent profiles at each of two time points. In many ways, this study replicates this approach. In considering how to structure the factors of motivation at each timepoint, the work of Fairchild, Horst, Finney, and Barron (2005) informed the approach used in the present study. Specifically, the results of Fairchild et al. (2005) demonstrated that a seven factor model is valid with three factors of intrinsic motivation, three factors of extrinsic motivation, and one factor of amotivation. However, the structure of these factors should account for significant correlations amongst the three factors of intrinsic motivation (which are remarkably high), as well as the correlations amongst the three extrinsic factors, which is how all analyses in this study were completed.

Psychosocial well-being item. Seven items loosely related to students' psychosocial well-being were included in the study for purpose of determining how the student experience varies across latent profiles of motivation. USU's Director of Retention and Student Success developed these items for practical, rather than purely theoretical, reasons. Ostensibly, the questions emerged from the Director's professional experience regarding issues common to her everyday professional concerns on behalf of students. In

this way, the items represent the distilled concerns of a retention specialist relative to issues that are known in research and from experience to dramatically impact student well-being. The items were each assessed on a seven-point likert scale that mimicked the verbal anchors of the AMS-C for the sake of consistency (1-Does not correspond at all; 2-Corresponds a little; 3-Corresponds a little; 4-Corresponds moderately; 5-Corresponds a lot; 6-Corresponds a lot; 7-Corresponds exactly). Each item asked participants to “Indicate to what extent you disagree or agree with the following statement”:

1. I am concerned about fitting in socially at USU.
2. I have friends attending USU.
3. My family supports my decision to attend USU.
4. I have a plan to graduate in four years.
5. I feel confident in my choice of major or program of study.
6. I am concerned about whether I have the math skills to succeed at USU.
7. I feel confident in my decision to attend USU.

For the purposes of analysis, each of these questions was seen as valuable for revealing meaningful differences in the student experience between members of any of the latent profiles that emerged in the study. For example, Questions 1 and 2 regarding social integration address the findings of Noyens, Donche, Coertjens, van Daal, and Van Petegem (2018) that students who arrive to university with high levels of amotivation report lower levels of social integration by the end of their first year. All seven questions relate to stress on some level, which is important as stress has a significant correlation with higher levels of amotivation, as well (Rücker, 2012). While the questions are collectively referred to as psychosocial well-being questions, the items were not authored

to represent a unidimensional view of student well-being or even a single construct, and therefore were not tested for internal consistency.

Becoming a Learner Questions. Questions regarding students' attentiveness during the *Becoming a Learner* presentation and students' rating of the model's value were included on the new student orientation survey that was completed at the end of each orientation day. These questions were authored to determine not only how engaged students were during the presentation, but also to determine how positively they reacted to the message. The first question asked: On a scale of 1-7, rate your level of attentiveness during the Becoming a Learning Presentation (1-I wasn't paying attention; 2; 3-I was mildly attentive; 4; 5-I paid attention; 6; 7-I paid very close attention). The second question asked: On a scale of 1-7, how would you rate the *Becoming a Learner* model as a way to think about your academic career (1-Poor/Useless; 2; 3-Mildly Helpful; 4; 5-Useful/Interesting; 6; 7-Excellent/Thought Provoking). Since this presentation was attended by all incoming students, the intent of these items was to determine individual student variability in attentiveness to and acceptance of the intervention. These items were designed to help determine if meaningful shifts in student motivation across the first year were associated with engagement and receptivity of the *Becoming a Learner* message.

FYE Course Evaluation. Students that elected to participate in USU's FYE experience were asked to complete a 60-item survey regarding their experiences in the First-Year-Experience course. The items on this survey related to teacher performance, the educational objectives of the course, and the associated benefits of participating, with specific items related to the extent to which instructors focused on helping students

understand the purposes of a university education. Specifically, eight of these items are used by the FYE administrators to evaluate the extent to which FYE instructors have focused on helping students to understand the core values of higher education. The items are as follows:

1. I understand *why* I am enrolled in higher education courses.
2. I have learned what an educated person is, and *how an educated person contributes to his or her community*.
3. I have learned the role *general education* plays in my education.
4. I have learned the role the *major* plays in my education.
5. I have learned *how best to engage myself* in the process of becoming an educated person.
6. The FYE course helped me consider the *reasons* I am seeking a university degree.
7. I have learned the importance of selecting a major that fits my *interests*.
8. My FYE instructor explained the FYE course objectives.

Given that there are 80 different instructors of the FYE course at USU, there are concerns about the treatment fidelity of the curriculum they are delivering in regards to the core values of higher education. In order to address this concern, the average results of these eight items across all FYE course evaluations in 2015 ($n = 2,028$) were used to categorize instructors, for the purposes of this study, as either “Above Average” or “Below

Average” in their commitment to communicating the core values of the institution to their students. Subsequently, participants in the present study who took the FYE course were coded as either having had “Above Average” exposure to the core values of the institution through the FYE course or “Below Average” exposure (based on their assigned instructor). This issue of dosage of exposure to the core values of the institution is an important element of answering the research question regarding how shifts in student motivation across the first year of college covary with institutional interventions.

Academic Self-Efficacy. Ten items from existing measures (Dorrance Hall et al., 2017) were used to assess *academic self-efficacy*. Example items included asking the students how confident they were in their ability to: “concentrate on school,” “find time to study,” and “finish homework assignments by deadlines.” This scale ranged from 0-100, where higher scores indicated more academic efficacy. The intent of these items was to determine the extent to which different motivational profiles meaningfully covaried with elements of academic self-efficacy. Previous work by Boiché and Stephan (2014) revealed that these types of study behaviors are an important aspect of enacted academic motivation, mediating the relationship between students’ motivation levels and academic outcomes. As such, assessing students’ academic self-efficacy in the current study was seen as a vital aspect of examining the transitional nature of student motivations over the course of the first year.

Reliability Test of Internal Consistency. Determining a scale’s reliability can be accomplished using the test of internal consistency first developed by Cronbach (1951). As the values of Cronbach’s alpha approach 1, a measure is shown to have tau-equivalent reliability, revealing that the items of the measure work together to assess a single

construct. Within the present study, all construct-oriented measures demonstrated a high degree of internal consistency, as outlined in Table 3.1.

Table 3.1

Test of Reliability across Scales

Scale	# of items	Cronbach's Alpha	<u>95% Confidence Interval (CI)</u>	
			Lower Bound	Upper Bound
AMS-C	28	.927	.92	.93
FYE Course Evaluation	60	.965	.96	.97
Academic Self-Efficacy	10	.825	.81	.84

Procedure

Data collection. During the spring of 2015, USU administered the AMS-C as part of an incoming student survey, which students took after submitting an online intent to enroll form. These students were not scheduled to begin classes until nearly four months later, so this survey established a baseline of student motivation prior to incoming student orientation and FYE interventions regarding *Becoming a Learner*. The research design and survey materials had previously been submitted to USU's Institutional Review Board for evaluation and had received approval.

The survey included a demographics questionnaire in addition to the questions regarding students' psychosocial well-being (levels of family support, confidence in the university, and social well-being). Student consent for participation in this study was obtained by providing a detailed letter of information about the purposes of the study, procedures, risks, benefits, confidentiality, and the voluntary nature of participation (see Appendix C). The letter also informed students that records regarding their academic performance would also be pulled from the university's student information system. Students indicated their understanding of this letter and consented to participating in the research by entering their name and student identification number at the bottom of the consent form. The results were collected online using survey software owned by the university and data was stored in a secure location in the cloud. Student responses were then coded with a participant identification number to preserve their anonymity.

The following summer, USU's incoming students arrived on campus to attend one of thirteen individual incoming student orientation days. During each session, as explained above, Dr. Matthew Sanders provided a 40-minute presentation regarding the purposes of a university education with the intent to convey a rationale to incoming students about the importance of engaging their academics meaningfully. At the completion of each new student orientation day, the questions regarding student attentiveness to and enjoyment of the *Becoming a Learner* presentation were distributed using an online questionnaire. For students who elected to take the First-Year-Experience course, the FYE course evaluation was distributed to attendees at the completion of the course.

Finally, at the end of the spring semester of the following academic year, a survey was distributed via email to all previous respondents to re-administer the AMS-C and the psychosocial well-being questionnaire, as well as to administer the survey of academic self-efficacy. Once data from all questionnaires was compiled, additional information regarding the students' academic performance was collected from USU student information system.

Data preparation. Questionnaires were distributed to participants on four separate occasions. The initial survey and informed consent documents, which were administered during the spring of 2015, were responded to by a total of 3,022 incoming students (see Table 3.2). Of these, 537 (17.8%) did not agree to participate in the research. Of the remaining 2,485, an additional 270 (8.9%) students failed to complete the enrollment process at USU and never attended classes, making them ineligible to complete any of the subsequent surveys. These participants were removed from all analyses. Additionally, 328 students only enrolled for half of the academic year, making their overall data problematically disjointed from students who attended the full year. During analyses, these students' responses were included for initial assessment and then excluded to determine how critical their data were to the reliability of the study. No meaningful differences could be identified for excluding their data from the overall study. As such, these 328 students, which had substantial portions of data missing (having only attended one term), were excluded from all final analyses.

Careless responding. As explained in the research of Meade and Craig (2012), "When data are collected via anonymous internet surveys, particularly under conditions of obligatory participation (such as with student samples), data quality can be a concern"

(p. 1). According to their findings, as much as 10-12% of responses can contain incorrect data as a result of careless responding. After assessing several different methods of identifying careless responding in a survey, Meade and Craig strongly endorse bogus items as an effective way to screen out careless respondents. As such, within the first questionnaire, the bogus question “I am not paying attention to this survey” was included to identify careless respondents. The item was assessed on a seven point likert scale to blend in with the AMC-C (1-Does not correspond at all; 2-Corresponds a little; 3-Corresponds a little; 4-Corresponds moderately; 5-Corresponds a lot; 6-Corresponds a lot; 7-Corresponds exactly). Perhaps not surprisingly, 182 participants (6%) responded to this question with at least a 4 (corresponds moderately). Their survey results were subsequently removed from the study (see Table 3.2).

Missing data. All analyses for this study were conducted using the software Mplus (Muthén & Muthén, 2012), which has “excellent capabilities for dealing with missing values (e.g. full information maximum likelihood [FIML] and multiple imputation)” (Geiser, 2012). Specifically, Mplus estimates the value of specific variables for each individual by using an unbiased parameter and standard error estimate. The result is robust in response to missing data of the MCAR and MAR variety. All analyses and results presented employed FIML where possible. To assess the possibility of MNAR data, a multinomial logistic regression was run to determine if missingness during the follow-up assessment was associated with the key motivational variables in the study. The results of this assessment revealed no indication that academic motivation was associated with participant attrition from this research study (see Table 3.7 in Appendix A).

Participants. Following the data preparation and cleaning procedures, a total of 1,705 incoming students to USU agreed to participate in this research and were included in all analyses (see Table 3.2). Females represent 62% of this sample, with a median age across sexes being 18.7 years. Students represented a variety of majors across the nine colleges of the institution, with the largest contingent being from the Exploratory major (42%). Of the 1,705 participants, only 650 (38%) responded to the follow-up questionnaire, which was administered one year into the study following the completion of the academic year. Given that FIML was employed, this drop in response rate at Time 2 in the study was not concerning.

Table 3.2

Proportion of Survey Respondents Included in the Study

Description of Participants	Action	#	Proportion of Total
Responded to initial survey (Time 1)	Total	3,022	100%
Did not agree to participate in research	Removed	537	17.8%
Did not ultimately enroll at institution	Removed	270	8.9%
Enrolled for only one first-year term	Removed	328	10.9%
Demonstrated careless responding	Removed	182	6%
Included in primary analyses	Included	1,705	56.4%
Responded to follow-up survey (Time 2)	Included	650	21.5%

Note. The 650 students that responded to the follow-up survey represented 21.5% of the overall respondents, but 38% of the 1,705 participants included in the study.

Data Analytic Strategy

Since motivation is a multifaceted construct, a person-centered approach was employed to examine how patterns of difference existed for participants across multiple factors of motivation (Pintrich, 2000; Pastor, Barron, Miller, & Davis, 2007). By using latent profile analysis and latent transition analysis, this study seeks to examine how multiple factors of academic motivation blend together to associate with meaningful student outcomes. The analytic approach was also designed to determine if student motivational profiles dynamically shifted in response to institutional intervention.

Latent profile analyses. The first research question of the study was: what profiles or “types” of student motivations emerge from the AMC-C using a person-centered approach? To extract any number of motivation profiles contained within the AMS-C, a Latent Profile Analysis (LPA) was run using Mplus (Muthén & Muthén, 1998–2012) for both baseline and follow-up data. The baseline data (Time 1) were collected at the time the students submitted their first enrollment request in the spring of 2015. The follow-up data (Time 2) were collected after students’ first year in college in the spring of 2016.

LPA is a powerful, person-centered technique that exposes common response patterns (profiles) across multiple, continuous scale factors within a single questionnaire (Vermunt & Magidson, 2002; Pastor, Barron, Miller, & Davis, 2007). The technique is related to Latent Class Analysis, which uses categorical, rather than continuous data as in the present study (Lazarsfeld & Henry, 1968). Rather than generating profiles using methods that do not account for measurement error, as was highlighted by Davison, Kim, and Close (2009), LPA surfaces *latent* profiles. This process accounts for measurement error and clusters each participant into one of several profiles based on his or her statistical similarity to others in the same profile. As explained by Specht, Luhmann, and Geiser (2014), “The goal of LPA is to identify different subgroups... whose members are similar to each other and different from members of other subgroups” (p. 15). LPA allows the researcher to systematically identify a model of categorization that provides an appropriate number of profiles to represent the population – neither too few nor too many.

An LPA model is sufficient to the extent that each participant can be adequately assigned to a profile of similar responders, while at the same time avoiding the problem of identifying too many profiles such that the distinction of each one gets lost in a larger fray. This study examined solutions from as little as two to as many as five profiles. A combination of the Bayesian Information Criteria (BIC; Nylund, Asparouhov, & Muthén, 2007), entropy (Jung & Wickrama, 2008; Muthén & Asparouhov, 2012), parsimony (Marsh, Lüdtke, Trautwein, & Morin, 2009), and the Vuong-Lo-Mendell-Rubin test (Lo, Mendell, & Rubin, 2001) were used to determine the models with best fit. In order to honor the previous work of Fairchild et al. (2005), each model tested the restriction of correlations amongst the three intrinsic factors of motivation (IM to know, IM toward accomplishment, and IM to experience stimulation) and correlations amongst the three extrinsic factors of motivation (EM identified, EM introjected, and EM externally regulated). Specifically, the results of Fairchild et al. (2005) demonstrated that a seven factor model (with amotivation) is valid when accounting for the significant correlations amongst the three factors of intrinsic motivation and amongst the three extrinsic factors of motivation.

Predicting group membership using covariates. The second research question of this study was: what characteristics and outcomes are associated with each latent profile, as measured in terms of academic self-efficacy, psychosocial well-being, course performance, and persistence from year to year? Once latent profiles have emerged from an LPA, descriptive characteristics that predict membership within each profile can be determined using structural regression modeling (Muthén & Muthén, 2012). This approach reveals how students in each profile differ from one another across meaningful

academic and demographic characteristics. For example, does having a higher ACT score predict membership in one profile over the others? Additionally, differences between profiles on important outcome variables, such as academic performance at the undergraduate level, can also be assessed using this same method.

To accomplish this, variables of interest are added to the LPA model as predictors of group membership. In the present study, the predictor variables include students' academic self-efficacy, course performance, psychosocial well-being, and persistence from year-to-year. The multinomial logistic regression that is performed within the LPA produces odds ratios for each predictor variable, which reveal how each predictor is associated with the likelihood of being a member of any given profile compared to another. As in a standard multinomial logistic regression, results are parametrized in such a way that one of the profiles is used as a reference category for all odds ratios. This reveals whether increases in a covariate, such as ACT score, are associated with a greater likelihood for membership in the reference profile or with membership in another profile. The results of these tests can help to identify meaningful differences that exist between latent profiles across additional variables not included in the original LPA.

Within the present study, over three dozen meaningful covariate items were identified as being of interest in predicting profile membership. An omnibus model of all covariate items revealed problematic overfitting of the regression, which implicated that a strategy of several smaller, theoretically grounded regressions was preferable. This realization led to two different variable groupings for predicting

profile membership at Time 1 (see Table 3.3) and four different variable groupings at Time 2 (see Table 3.4). In all cases, meaningful control variables were included to account for student academic preparedness before entering college. As explained by Lavender (2005), studies of academic performance are too often conducted without controlling for student input variables, an issue identified in the seminal work of Astin (1965).

Table 3.3

Variable Groupings for Regressions Predicting LPA Profile Membership at Time 1

Regression	Theoretical Purpose	Variables Included
1A	FYE participation and First-year outcomes, controlling for academic preparedness	FYE participation, First-year GPA, first-year retention, high school GPA, ACT score
1B	Psychosocial well-being, controlling for academic preparedness	Psychosocial well-being questions, high school GPA, ACT score

Note. First-year retention = enrolling in fall term and being enrolled again the following Fall term; Second-year retention = enrolling in fall term and being enrolled two years later.

Table 3.4

Variable Groupings for Regressions Predicting LPA Profile Membership at Time 2

Regression	Theoretical Purpose	Variables Included
2A	First-year outcomes, controlling for academic preparedness	First-year GPA, first-year retention, high school GPA, ACT score
2B	Academic self-efficacy, controlling for academic performance	Academic self-efficacy questions, first-year GPA
2C	Psychosocial well-being, controlling for academic performance	Psychosocial well-being questions, first-year GPA
2D	Second-year retention, controlling for academic performance	Second-year retention, first-year GPA

Note. First-year retention = enrolling in Fall term and being enrolled again the following Fall term; Second-year retention = enrolling in Fall term and being enrolled two years later.

Latent Transition Analysis. The third research question of this study was: are the student motivational profiles that emerge from an LPA developmentally stable or dynamic across time? To determine if developmental changes occurred in student motivation across the first year of university, a Latent Transition Analysis (LTA) was employed to track person-centered changes across the two LPAs in a time series design: Time 1 (Spring 2015) and Time 2 (Spring 2016). Using maximum information likelihood to account for a reduction in the response rate at Time 2 ($n = 650$ compared to $n = 1,705$ at Time 1), an LTA uses the concept of most likely profile membership to reveal how certain participants have a propensity to shift from one latent profile into another over time (Collins & Lanza, 2013). The results of this most likely profile membership can be used to analyze descriptive differences between the different patterns of transition from Time 1 to Time 2. As with LPA, LTA fitness is determined a combination of the Bayesian Information Criteria (BIC; Nylund, Asparouhov, & Muthén, 2007), entropy (Jung & Wickrama, 2008; Muthén & Asparouhov, 2012), and parsimony (Marsh, Lüdtke, Trautwein, & Morin, 2009).

The association between institutional intervention and motivational transition. The fourth research question of this study was: what university interventions are associated with any observed motivational transitions? To answer this question, the LTA was run several more times and structured to include a multinomial logistic regression with binary and continuous covariates. Increasingly complex covariate models within the LTA can cause the MPlus system to perform poorly, making the results difficult to interpret (Muthén & Muthén, 2012). As such,

as with the LPAs, three groupings of intervention covariates were selected to facilitate parsimony and clarity within each LTA covariate model. Variables representing FYE and incoming student orientation interventions were identified and separately included in the LTA to reveal how student participation in these programs predicted transitioning amongst the latent profiles between Time 1 and Time 2. Specifically, participation in the FYE course and the students' ratings of the *Becoming a Learner* presentation were used as predictor variables (see Table 3.5). As with the LPA, this predictive approach uses maximum information likelihood to establish meaningful differences between the multiple transition patterns that can occur between Time 1 and Time 2 (Muthén & Muthén, 2012).

Table 3.5

LTA Variable Groupings for FYE and New Student Orientation Interventions

Grouping	Predictor Variable	Control Variables	Criterion Variable
		Self-reported	
1	<i>Becoming a Learner</i>	attentiveness during	Transition
	Presentation Rating	<i>Becoming a Learner</i>	Probabilities
		Presentation	
2	FYE Participation (0, 1)	High school GPA	Transition Probabilities
3	FYE Teacher Quality (Above average, Below Average)	High school GPA, first-year GPA	Transition Probabilities

Note. Transition Probabilities = An LTA produces descriptive probabilities regarding how certain levels of intervention variables (e.g. FYE participation vs. non-participation) predict transition amongst latent profiles between Time 1 and Time 2.

Associating motivational transition with academic outcomes. The fifth research question of this study was: what outcomes are associated with any transitions that occur between profiles? Once transitional relationships amongst profiles at Time 1 and at Time 2 were outlined, associations between transition patterns and meaningful academic outcomes were determined using covariates related to academic performance and retention. As before, the LTA was structured to include a multinomial logistic regression with these covariates as predictors of transition group membership (Muthén & Muthén, 2012). In each case, a meaningful outcome variable, such as GPA or student retention, was selected, along with one or more control variables to hold constant. The correlative nature of this type of LTA unusually requires the outcome variables to be used as predictors and the various transition patterns to be treated as the criterion. This seems to illogically reverse the implied direction of influence, ignoring the temporal order of the events. While we typically use events that happen first (transitioning amongst the profiles during the first year) to predict events that happen later (GPA levels during the second year), using multinomial logistic regression allows the prediction to happen just as effectively in reverse. Because of the non-directional nature of correlations, we can use outcome variables to predict explanatory variables (see Table 3.6). As before, increasingly complex covariate models within the LTA can cause the MPlus system to perform poorly, making results difficult to interpret. For this research question, four groupings of outcome-related covariates were selected to facilitate parsimony and clarity within each LTA covariate model. The results of these tests provided added insight into academic outcomes associated with each transition group.

Table 3.6

LTA Variable Groupings for Academic and Retention Outcome Variables

Grouping	Predictor Variable (Outcome Variable)	Control Variable	Criterion Variable (Explanatory Variable)
1	First-year GPA	High school GPA	Transition Probabilities
2	Second-year GPA	High school GPA	Transition Probabilities
3	First-year retention	High school GPA	Transition Probabilities
4	Second-year retention	High school GPA	Transition Probabilities

Note. Transition Probabilities = An LTA produces descriptive probabilities regarding how certain levels of outcome variables (in this case, student academic outcomes) predict earlier transition amongst latent profiles between Time 1 and Time 2.

Theoretical Analysis. As discussed above, the core values of higher education have historically been more fully aligned with the intrinsic end of the motivational spectrum. In this age when incoming students are being offered a wide array of narratives about the value of a university education, several important questions emerge: can universities facilitate a shift in student beliefs about the purposes of a university education to produce greater alignment with the mission and philosophy of a liberal education? And can such a shift improve the quality of the student experience? Using the theoretical lenses of Bourdieu (1993) and the motivational theories of Deci & Ryan (1985), the results of this study were analyzed in an effort to determine if working to

create greater alignment between student beliefs and university mission statements should be an integral function of universities' incoming student orientation and first-year-experience programs.

CHAPTER 4

RESULTS

Findings and Outcomes

LPA Model Testing

Time 1 LPA: Learners, Investors, and Ambivalent Students. A Latent Profile Analysis (LPA) was performed on the motivation data collected at Time 1 to test solutions with as few as two to as many as four profiles, when the model's fit statistics were found to be poor. A three profile solution was identified (based on BIC, VLMR, Entropy, and parsimony) as the solution most well suited to the data. Using the seven factors of the Academic Motivation Scale for College (AMS-C) as a basis for the profiles, a three profile solution produced clearly interpretable results, with fit statistics that were more definite than either a two profile or four profile solution (see Table 4.1).

Table 4.1

Time 1 Fit statistics for Latent Profile Analysis Models (n = 1,705)

# of Profiles	BIC	VLMR <i>p</i> -value	Adjusted LMR <i>p</i> value	Entropy
2	28579.125	.00	.00	0.752
3	27389.843	.0047	.0050	.839
4	26712.766	.1371	.1403	.865

Note. BIC = Bayesian Information Criteria; VLMR = Vuong-Lo-Mendell-Rubin; LMR = Lo-Mendell-Rubin.

The three profiles that emerged from the LPA each demonstrated a distinct pattern across the seven factors of the AMS-C, which led to the following labels: Learners ($n = 1031$, 60.5%), Investors ($n = 563$, 33%), and Ambivalent ($n = 111$, 6.5%). Further explanation regarding the selection of these labels is provided below. Table 4.2 outlines how each of the three profiles descriptively differed for mean scores across each of the seven factors of the AMS-C.

Table 4.2

AMS-C Means of Latent Profiles at Time 1 (n = 1,705)

AMS-C Factor	Variance	<u>Latent Profiles</u>		
		Learners	Investors	Ambivalent
IM_Know	0.757	6.157	5.157	5.383
IM_Accomp	0.995	5.722	3.841	4.571
IM_Stim	1.660	4.559	3.044	3.854
EM_Iden	0.579	6.376	5.653	5.666
EM_Introj	1.080	5.930	3.788	5.128
EM_ExReg	1.071	5.996	5.227	5.607
Amotivation	0.054	1.063	1.099	2.564

Note. IM = Intrinsic Motivation; EM = Extrinsic Motivation.

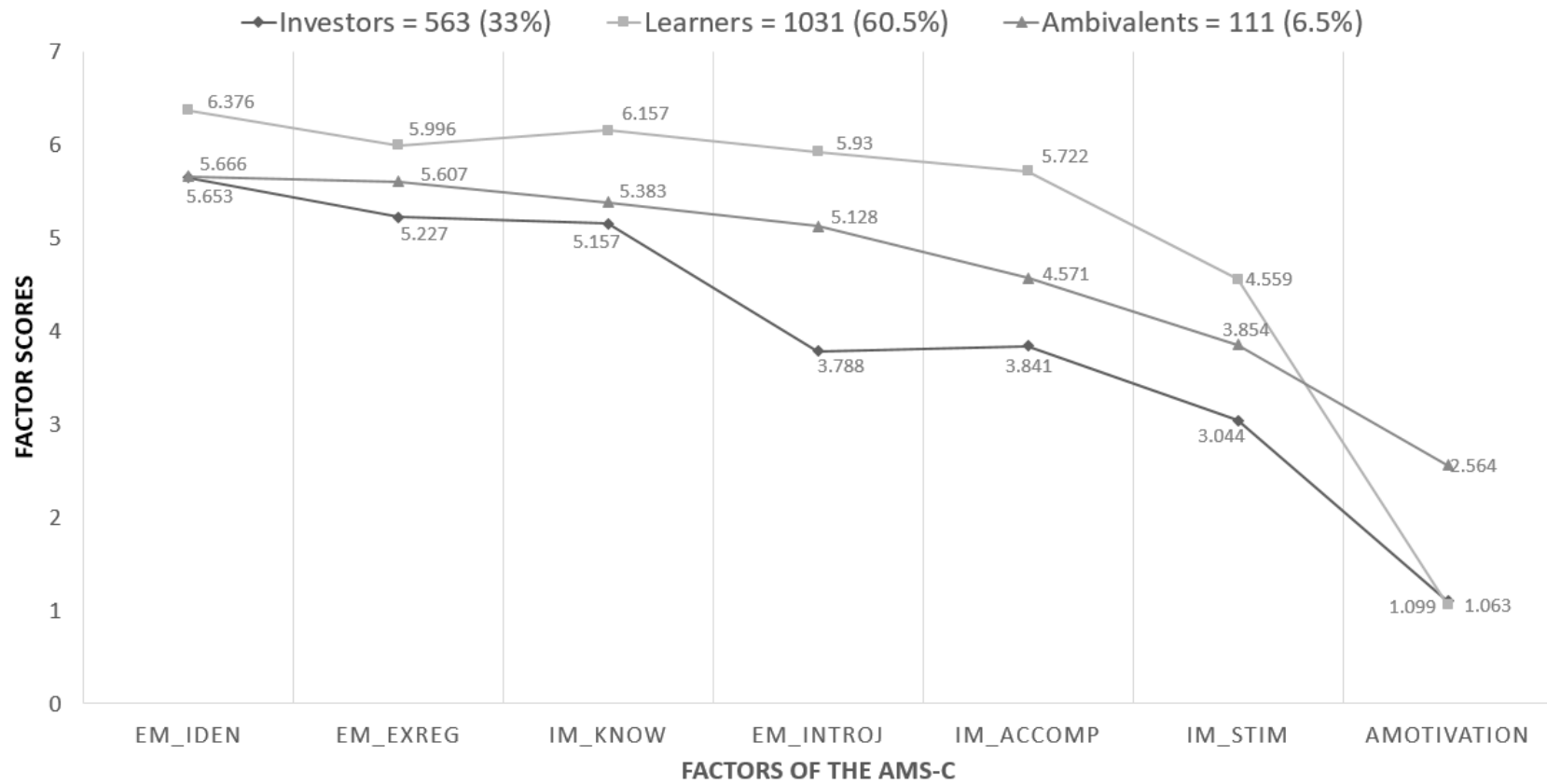
Selecting the profile labels. For clarity and ease of use, the three profiles were labelled Learners, Investors, and Ambivalent. These labels were based on meaningful differences between the profiles in factor scores on the AMS-C. The first profile, Learners, demonstrated the largest most likely class membership (60.5%). This profile was characterized by relatively high levels of EM_Iden, IM_Know, and EM_ExReg, which also happen to be the top three factor mean scores for the Investor and Ambivalent profiles, as well. These three factors represent career focus (EM_Iden), motivation to learn (IM_Know), and a desire for a high paying salary (EM_ExReg). Given the prevalent narratives regarding education as a private good, as discussed in Chapter 2,

perhaps it is not surprising that all three groups prize these motivations for attending university. However, amongst these top three motivations, Learners exceeded the other two profiles by the greatest margin on the factor IM_Know, a factor associated with a love of learning—giving rise to their designation as “Learners.”

The Investor profile exhibited the next largest most likely class membership (33%). This profile demonstrated a distinct grouping of motivation centered on three clear factors (EM_Idea, EM_ExReg, and IM_Know), with each of these three factors displaying mean scores in the moderately high range of 5 (see Figure 2). These three factors relate to career preparation, salary, and learning. Students in the Investor profile clearly know what their priorities are and are confident in the importance of these three factors over all the other potential factors. Students in this profile rated the remaining four factors of academic motivation as having below average importance. In this way, the difference between Learners and Investors is not revealed in each profile’s more highly rated factors of motivation. Both profiles share similar ratings on these top three factors. Instead, the difference between Investors and Learners is revealed in how low Investor’s rank EM_Introj, IM_Accomp, and IM_Stim, with mean factor scores all *below* 4 (compared to Learners whose mean scores on these factors were all *above* 4). For Learners, these variables reveal a desire to prove themselves in the face of a challenge (EM_Introj), an appreciation of academic rigor (IM_Accomp), and at least some interest in deep learning (IM_Stim). In contrast, Investors’ scores on these three variables dip into a range that may indicate that Investors value a more expedient path towards graduation. As such, this motivational profile represents fairly nice alignment with the market-view of education discussed in Chapter 2.

The third profile, Ambivalent, represents the smallest most likely class membership (6.5%) of the three profiles. While mean factor scores for Ambivalent students hover in the upper-middle range of the AMS-C scale (see Figure 2), the most significant departure in this profile compared to the other two profiles is Ambivalent students' mean factor score on Amotivation ($M = 2.564$), intriguingly high compared to Investors ($M = 1.099$) and Learners ($M = 1.063$). Amotivation is measured using items such as, "I can't see why I go to college and, frankly, I couldn't care less." Additionally, the relatively even distribution of Ambivalent students' mean factors scores across all other factors may be indicative of these students' lack of clear motivational trajectory as they enter the university (see Figure 2).

Figure 2. Mean Factor Scores of each Latent Profile at Time 1



Time 2 LPA: Three Profiles or Four? Another LPA was performed on the motivation data collected at Time 2 to test solutions with as few as two to as many as five profiles, when the model's fit statistics were found to be poor. While a four profile solution produced the most straightforward fit statistics, the most likely class membership of one of the profiles was a mere 2% of the entire sample. This is problematic from the standpoint of parsimony because profiles that represent less than 5% of a sample can be difficult to replicate (Geiser, 2012). Selecting to proceed with a three profile solution increased the generalizability of this study, in addition to maintaining interpretable consistency between Time 1 and Time 2. A three profile solution still demonstrated good fit statistics across BIC, VLMR, and Entropy (see Table 4.3).

Table 4.3

Time 2 Fit statistics for Latent Profile Analysis Models (n = 650)

# of Profiles	BIC	VLMR <i>p</i> -value	Adjusted LMR <i>p</i> value	Entropy
2	13412.303	.00	.00	0.979
3	13122.235	.0010	.0011	.842
4	13001.431	.0377	.0390	.876
5	12919.360	.0976	.1006	.90

Note. BIC = Bayesian Information Criteria; VLMR = Vuong-Lo-Mendell-Rubin; LMR = Lo-Mendell-Rubin.

As with the Time 1 LPA, using the seven factors of the Academic Motivation Scale for College (AMS-C) as a basis for the profiles, the three profile solution produced results that were easy to interpret. The three profiles that emerged each demonstrated a distinct pattern across the seven factors of the AMS-C, which were similar to those seen at Time 1. As such, the same three profile labels were adopted: Learners ($n = 395$, 60.8%), Investors ($n = 189$, 29%), and Ambivalent ($n = 66$, 10.2%). Table 4.4 outlines how each of the three profiles descriptively differed for mean scores across each of the seven factors of the AMS-C.

Table 4.4

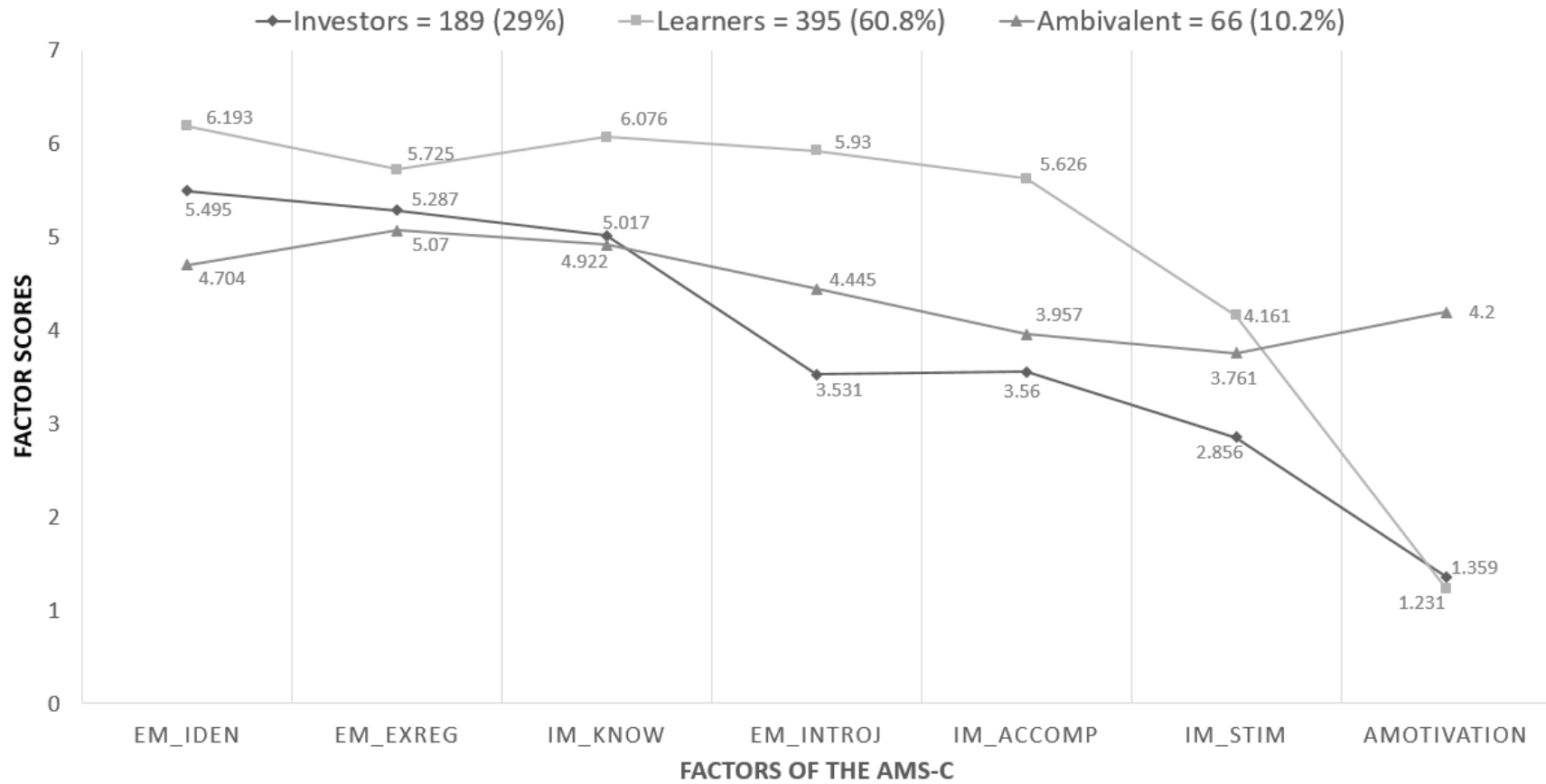
AMS-C Means of Latent Profiles at Time 2 ($n = 650$)

AMS-C Factor	Variance	<u>Latent Profiles</u>		
		Learners	Investors	Ambivalent
IM_Know	1.136	6.076	5.017	4.922
IM_Accomp	1.321	5.626	3.560	3.957
IM_Stim	2.147	4.171	2.856	3.761
EM_Iden	0.913	6.193	5.495	4.704
EM_Introj	1.294	5.930	3.531	4.445
EM_ExReg	1.521	5.725	5.287	5.070
Amotivation	0.306	1.231	1.359	4.210

Note. IM = Intrinsic Motivation; EM = Extrinsic Motivation.

Despite a significant drop in the sample size (from $n = 1,705$ to $n = 650$), all three profiles demonstrated patterns of relationships amongst the mean factor scores that remained consistent with the labels at Time 1 (see Figure 3). For example, amongst the three highest motivators for all three groups (EM_Ideas, IM_Know, and EM_ExReg) the IM_Know score for Learners still exceeded the scores amongst the other two profiles by the greatest margin. Additionally, as before, Investors demonstrated the same two groupings of mean factor scores, with one group hovering around 5 and the other group closer to 3. Interestingly, compared to Time 1, the mean factor scores for Ambivalent students each dropped to a slightly lower value, except for Amotivation, which actually increased from $M = 2.564$ to $M = 4.210$ (see Figure 3).

Figure 3. Mean Factor Scores of each Latent Profile at Time 2



LPA Covariate Testing

In order to define each profile beyond differences amongst their mean factor scores on the AMS-C, covariates of interest were added to each LPA model in order to create several multinomial logistic regressions (. This approach can help to reveal even more meaningful differences between the profiles that are not exclusively measured by the motivational factor scores. These variables included academic performance, retention, and psychosocial well-being.

Time 1 LPA Covariate Testing. By including a regression statement in the programming syntax of Mplus, an LPA model can be coded to include a multinomial logistic regression (Muthén & Muthén, 2012). The model then returns regression coefficients for each included variable of interest. The regression coefficients can then be exponentiated into an odds ratio, which reveals how variations in a predictor variable is associated with more or less likelihood to be a member of one latent profile compared to a reference profile. The first regression run concurrently with the Time 1 LPA included a grouping of variables related to FYE participation (FYE), first-year academic performance (USUGPA), and first-year retention (RET1YR) while controlling for high school GPA (HSGPA) and composite ACT score (ACT). Table 4.5 displays the coefficients, standard errors, significance levels, and odds ratios for each significant covariate in this regression, comparing most likely members of the Investor, Ambivalent, and Learner profiles.

This regression revealed that Learners were more likely than both Investors and Ambivalent students to attend the FYE program and entered the university with

significantly higher high school GPAs. The fact that just one profile, Learners, had such greater high school GPAs upon entry to the university underscored the importance of using this variable as a covariate throughout subsequent analyses. The only other significant finding in this table was that Investors demonstrated significantly higher ACT composite test scores than the other two profiles, indicating that they may generally be better test takers than their peers or perhaps that they prioritize preparation for this type of high-stakes assessment more highly than their peers.

Table 4.5

Regression Coefficients and Odds Ratios for Time 1A LPA Covariates (n = 1,046)

Profile (Reference)	Covariate	Coefficient	Standard Error	p-value	Odds Ratio
Learners (as compared to Investors)	HSGPA	0.672	0.265	0.011	1.958
	ACT	-0.087	0.023	0.000	0.917
	USUGPA	-0.238	0.153	0.121	
	FYE	0.411	0.159	0.010	1.508
	RET1YR	0.261	0.322	0.418	
Ambivalent (as compared to Learners)	HSGPA	-0.95	0.385	0.014	0.387
	ACT	-0.018	0.039	0.646	
	USUGPA	0.196	0.22	0.372	
	FYE	-0.581	0.282	0.040	0.559
	RET1YR	0.103	0.595	0.863	
Ambivalent (as compared to Investors)	HSGPA	-0.278	0.379	0.463	
	ACT	-0.105	0.04	0.009	0.900
	USUGPA	-0.041	0.235	0.860	
	FYE	-0.17	0.297	0.567	
	RET1YR	0.363	0.604	0.548	

Note. HSGPA = high school GPA; ACT = ACT composite score; USUGPA = first-year college GPA; FYE = participation in FYE; RET1YR = retained from the first year of college into the second.

The second regression run concurrently with the Time 1 LPA included a grouping of variables related to students' psychosocial well-being before entering the university, after controlling for high school GPA (HSGPA) and students' composite ACT score (ACT). Table 4.6 displays these results (in order to save space in this table, only findings for significant covariates are displayed). Common patterns displayed in this table provided more insight into the nature of each of the three profiles. First, Learners reported significantly greater confidence in the university and in their choice of major, compared to both Investors and Ambivalent students. Next, Investors arrived to the university significantly less socially concerned than their peers. Finally, Ambivalent students arrived with significantly more concern about math, which may not be surprising given how frequent math is cited as a concern for many at-risk students (Daugherty, Rusinko, & Griggs, 2013).

Table 4.6

Regression Coefficients and Odds Ratios for Time 1B LPA Covariates (n = 1,053)

Profile (Reference)	Covariate	Coefficient	Standard Error	p-value	Odds Ratio
Investors (as compared to Learners)	HSGPA	-0.528	0.235	0.025	0.590
	ACT	0.057	0.025	0.024	1.059
	SOCCON	-0.17	0.054	0.002	0.844
	FRIENDS	-0.12	0.045	0.008	0.887
	CONFMAJ	-0.146	0.05	0.004	0.864
Ambivalent (as compared to Learners)	CONFUSU	-0.38	0.093	0.000	0.684
	HSGPA	-0.755	0.338	0.025	0.470
	CONFMAJ	-0.155	0.077	0.046	0.856
Ambivalent (as compared to Investors)	MATHCON	0.148	0.076	0.051	1.160
	CONFUSU	-0.566	0.132	0.00	0.568
	ACT	-0.08	0.037	0.033	0.923
	SOCCON	0.188	0.086	0.028	1.207
	MATHCON	0.241	0.083	0.004	1.273

Note. HSGPA = high school GPA; ACT = ACT composite score; SOCCON = social concern; FRIENDS = friends attending; FAMSUP = family support; FRYRPLN = four-year planning; CONFMAJ = confidence in major; MATHCON = math concern; CONFUSU = confidence in USU.

Time 2 LPA Covariate Testing. As with Time 1, several groupings of covariates were added to the LPA at Time 2 to reveal characteristic differences between the latent profiles one year into college. The variable grouping for the first regression included first-year GPA and first-year retention, while controlling for high school GPA and students' ACT scores (see Table 4.7). As at Time 1, Time 2 Investors showed significantly higher ACT scores than their peers. Time 2 Ambivalent students showed significantly lower first-year college GPAs than their peers. Remarkably, while there was no significant difference in the first-year retention rate between Investors and Ambivalent students, in contrast, Learners showed a significantly higher retention rate than Ambivalent students. Students who are retained into the second year are 90% less likely to be Ambivalent than to be Learners (after controlling for academic performance). This speaks to the powerful negative relationship between high levels of amotivation and student retention. Students who finish the first year of university in the Ambivalent profile are clearly having a rough time.

Table 4.7

Regression Coefficients and Odds Ratios for Time 2A LPA Covariates (n = 469)

Profile (Reference)	Covariate	Coefficient	Standard Error	p-value	Odds Ratio
Investors (as compared to Learners)	ACT	0.102	0.031	0.001	1.107
	HSGPA	-0.354	0.375	0.345	
	USUGPA	0.179	0.274	0.513	
	RET1YR	-1.901	1.061	0.073	
Ambivalent (as compared to Learners)	ACT	-0.033	0.051	0.522	
	HSGPA	-0.129	0.494	0.794	
	USUGPA	-0.836	0.29	0.004	0.433
	RET1YR	-2.284	1.105	0.039	0.102
Investors (as compared Ambivalent)	ACT	0.134	0.053	0.011	1.143
	HSGPA	-0.225	0.519	0.665	
	USUGPA	1.015	0.334	0.002	2.759
	RET1YR	0.384	0.74	0.604	

Note. HSGPA = high school GPA; ACT = ACT composite score; USUGPA = first-year college GPA; RET1YR = retained from the first year of college into the second.

The second regression at Time 2 included ten academic self-efficacy questions and controlled for first-year college GPA (see Table 4.8; to limit the size of this table, only significant variables were included). As in the previous regression, new insights

were gleaned regarding each of the three profiles. First, Ambivalent students posted significantly lower first-year college GPAs and were also significantly less likely to report remembering information presented in class. Next, Learners reported being significantly more likely than their peers to take notes in class and to find time to study. Finally, Investors reported being significantly less likely to use the campus library.

Table 4.8

Regression Coefficients and Odds Ratios for Time 2B LPA Covariates (n = 601)

Profile (Reference)	Covariate	Coefficient	Standard Error	p-value	Odds Ratio
Learners (as compared to Ambivalent)	USUGPA	0.824	0.232	0	2.280
	TAKNOTES	0.024	0.008	0.004	1.024
	REMINFO	0.025	0.009	0.004	1.025
	MANTIME	-0.024	0.011	0.027	0.976
Learners (as compared to Investors)	TAKNOTES	0.023	0.008	0.004	1.023
	USELIB	0.017	0.004	0	1.017
	PLCSTUD	-0.012	0.005	0.03	0.988
	TIMESTUD	0.017	0.008	0.03	1.017
Ambivalent (as compared to Investors)	USUGPA	-1.095	0.26	0	0.335
	USELIB	0.027	0.006	0	1.027
	REMINFO	-0.029	0.009	0.001	0.971

Note. **USUGPA** = first-year college GPA; **TAKNOTES** = taking notes in class;

REMINFO = remembering information from class; **MANTIME** = managing time;

TIMESTUD = finding time to study; **USELIB** = using the library; **PLCSTUD** = arranging a place to study.

The third regression at Time 2 included the same psychosocial well-being questions that had been used at Time 1, while controlling for first-year college GPA (see Table 4.9; to limit the size of this table, only significant variables were included). This regression revealed that Time 2 Learners are significantly more likely to report having a four year plan for their academic career and that Time 2 Investors complete their first year of university with significantly less concern about math. Similar to the results at Time 1, students in the Time 2 Ambivalent profile posted significantly lower first-year college GPAs and significantly less confidence in selection of major. This latter finding is not surprising given that being certain about one's major is an important motivator for success in college (Tinto, 1987). Time 2 Ambivalent students also reported being significantly more socially concerned than their peers.

Table 4.9

Regression Coefficients and Odds Ratios for Time 2C LPA Covariates (n = 646)

Profile (Reference)	Covariate	Coefficient	Standard Error	p-value	Odds Ratio
Learners (as compared to Investors)	FYRPLN	0.307	0.074	0.000	1.359
	MATHCON	0.135	0.068	0.047	1.145
Learners (as compared to Ambivalent)	USUGPA	0.789	0.229	0.001	2.201
	SOCCON	-0.215	0.102	0.034	0.807
	FAMSUP	0.305	0.135	0.024	1.357
	FYRPLN	0.309	0.1	0.002	1.362
	CONFMAJ	0.301	0.09	0.001	1.351
Ambivalent (as compared to Investors)	CONFUSU	0.399	0.127	0.002	1.490
	USUGPA	-0.788	0.241	0.001	0.454
	SOCCON	0.309	0.099	0.002	1.362
	FRIENDS	0.285	0.113	0.012	1.330
	CONFMAJ	-0.213	0.102	0.037	0.808
	MATHCON	0.284	0.101	0.005	1.328

Note. *USGPA* = first-year college GPA; *SOCCON* = social concern; *FRIENDS* = friends attending; *FAMSUP* = family support; *FYRPLN* = four-year planning; *CONFMAJ* = confidence in major; *MATHCON* = math concern; *CONFUSU* = confidence in USU.

Finally, the fourth variable grouping was for a regression that assessed second-year retention, while controlling for first-year college GPA (see Table 4.10). While Learners were significantly more likely to be retained into their third year of university than Ambivalent students, no other significant finding emerged from this regression, except the recurring pattern that Time 2 Ambivalent students post significantly lower first-year college GPAs.

Table 4.10

Regression Coefficients and Odds Ratios for Time 2D LPA Covariates (n = 580)

Profile (Reference)	Covariate	Coefficient	Standard Error	p-value	Odds Ratio
Learners (as compared to Investors)	USUGPA	-0.16	0.198	0.42	
	RET2YR	0.389	0.278	0.162	
Learners (as compared to Ambivalent)	USUGPA	0.863	0.246	0	2.370
	RET2YR	0.938	0.426	0.028	2.555
Ambivalent (as compared to Investors)	USUGPA	-1.023	0.221	0	0.360
	RET2YR	-0.549	0.401	0.171	

Note. USUGPA = first-year college GPA; RET2YR = retained from the second year of college into the third.

Latent Transition Analysis

LTA Model Testing. With three latent profiles emerging at Time 1 and three latent profiles emerging at Time 2, the next step was to determine the extent to which membership of these profiles remained stable or dynamically shifted over the course of the first year of college. A Latent Transition Analysis (LTA) was run to determine if the three profile by three profile solution was a good fit based on the data collected (see Table 4.11). Entropy of this model demonstrated a lower value of .674, but one still within acceptable limits (Muthén & Asparouhov, 2012). This level of entropy implies that most likely profile membership was well established for roughly two-thirds of the sample, with a remaining third having some level of likelihood for one or more of the nine transition patterns that emerged (A-I; see Table 4.12 in Appendix A).

Table 4.11

Latent Transition Patterns from Time 1 to Time 2 with Mosty Likely Proportions

Latent Transition Pattern	Time 1 Profile	Time 2 Profile	Count	%
A	Investor	Learner	61	3.6%
B	Investor	Investor	487	28.6%
C	Investor	Ambivalent	16	1%
D	Learner	Learner	974	57.1%
E	Learner	Investor	43	2.5%
F	Learner	Ambivalent	48	2.8%
G	Ambivalent	Learner	67	3.9%
H	Ambivalent	Investor	4	0.2%
I	Ambivalent	Ambivalent	5	0.3%

Note. An LTA assigns participants to each transition pattern based on each participant's most likely profile membership.

Associating intervention with change. Adding covariates to an LTA model can help provide greater insight into how each transition pattern is associated with participation in FYE and incoming student orientation experiences. To accomplish this, intervention participation variables are added to the LTA model to perform a multinomial logistic regression, which outlines how institutional interventions predicts membership in

one transition pattern or another. Tables 4.13 through 4.21 outline the results of these analyses.

Table 4.13 shows how different ratings (from 1 to 7) of the *Becoming a Learner* presentation increased or decreased the likelihood of students' transitioning amongst the various profiles between Time 1 and Time 2. The table reveals that as Time 1 Investors rated the *Becoming a Learner* presentation higher, their likelihood for becoming a Time 2 Learner increased while their likelihood of staying an Investor at Time 2 decreased. Similarly, as Time 1 Learners' ratings of the presentation decreased, their likelihood of becoming Ambivalent at Time 2 increased. Finally, Time 1 Ambivalent students who listened to the *Becoming a Learner* presentation had almost no chance of remaining Ambivalent at Time 2. Instead, they transitioned to the other profiles. For Time 1 Ambivalent students, providing an above average rating (of 6 or 7) of the presentation was associated with a 100% chance of becoming a Learner.

Table 4.13

Transition pattern membership probabilities (row) based on Becoming a Learner Ratings 1-7 (column)

Time 1	Time 2							
Profile	Profile	1	2	3	4	5	6	7
	Learner	9%	11.2%	13.8%	16.8%	20%	23.1%	25.5%
Investor	Investor	90.6%	87.9%	84.5%	80.1%	74.3%	66.8%	57.4%
	Ambiv.	0.4%	0.9%	1.6%	3.1%	5.6%	10%	17.1%
Learner	Learner	21.4%	36%	52.9%	68.1%	79.1%	86.1%	90.4%
	Investor	5.6%	7.6%	9.1%	9.5%	8.9%	7.9%	6.7%
	Ambiv.	73.1%	56.4%	38.1%	22.5%	12%	6%	2.9%
Ambivalent	Learner	0%	0%	0%	0%	8.6%	100%	100%
	Investor	100%	100%	100%	100%	91.4%	0%	0%
	Ambiv.	0%	0%	0%	0%	0%	0%	0%

Note. The control variable for this table was student self-reported attentiveness, which was held constant (at its mean) for all membership probabilities provided in this table.

Transition pattern probabilities at each level of rating (1-7) sum to 100% for each Time 1 grouping. The mean Becoming a Learner presentation rating was $M = 5.515$.

The next LTA regression assessed how attending the FYE course altered students' transition pattern probabilities, while holding high school GPA constant to control for

level of academic preparedness. Table 4.14 shows how attending the FYE course was associated with an increased or decreased likelihood of transition from each of the three Time 1 profiles to each of the three Time 2 profiles. Participating in the FYE course increased the likelihood of transition from Investor and Ambivalent to Learner. This was a particularly dramatic effect for Ambivalent students.

Table 4.14

Transition pattern membership probabilities (row) based on FYE participation (column)

Time 1 Profile	Time 2 Profile	FYE Participant	Non-participant
Investor	Learner	28%	22.9%
	Investor	64.9%	69.5%
	Ambivalent	7.1%	7.7%
Learner	Learner	78.9%	76.1%
	Investor	8.3%	14.6%
	Ambivalent	12.8%	9.3%
Ambivalent	Learner	78.7%	37.9%
	Investor	0%	30%
	Ambivalent	21.3%	32%

Note. The control variable for this table was high school GPA, which was held constant (at its mean) for all membership probabilities provided. Transition pattern probabilities at each level of participation (participant, non-participant) sum to 100% for each Time 1 profile grouping.

Table 4.15 catalogs the relationship between having a higher or lower quality FYE teacher and students' likelihood to transition to each of the nine transition patterns (A-I). Amongst students who began college as Time 1 Investors, having a high quality FYE course instructor was generally associated with a stronger likelihood of transitioning to the Learner profile at Time 2 (transition pattern A). What's more, transitioning to Learner in association with having a high quality FYE instructor dramatically increased

the likelihood of achieving a higher first-year college GPA (see Table 4.16). In contrast, for Time 1 Investors who did not benefit from an above average FYE instructor, there was almost no chance of transitioning to the Learner profile at Time 2. Instead, the bulk of these students either remained Investors at Time 2 or transition to become Time 2 Ambivalent. Similarly, Time 1 Ambivalent students who achieved above average academic performance during their first year, in terms of GPA, were extraordinarily more likely to have transitioned to be Time 2 Learners.

Table 4.15

Transition pattern membership probabilities (row) based on quality of FYE teacher (column)

Time 1 Profile	Time 2 Profile	Above Average Teacher Quality	Below Average Teacher Quality
Investor	Learner	10.3%	0.1%
	Investor	89.7%	83.5%
	Ambivalent	0%	16.4%
Learner	Learner	72.7%	68%
	Investor	12%	22.8%
	Ambivalent	15.3%	9.2%
Ambivalent	Learner	100%	100%
	Investor	0%	0%
	Ambivalent	0%	0%

Note. The control variable for this table was high school GPA, which was held constant (at its mean) for all membership probabilities provided. First-year college GPA was also held constant for this analysis. Transition pattern probabilities at each level of participation (participant, non-participant) sum to 100% for each Time 1 profile grouping.

Table 4.16

Transition pattern membership probabilities (row) by Teacher Quality and first-year college GPA (column) controlling for high school GPA

Time 1 Profile	Time 2 Profile	Above Average Teacher Quality				Below Average Teacher Quality			
		<u>First-year College GPA</u>				<u>First-year College GPA</u>			
		1.0	2.0	3.0	4.0	1.0	2.0	3.0	4.0
Investor	Learner	0.3%	1.5%	8.2%	34.1%	0%	0%	.1%	0.6%
	Investor	99.7%	98.5%	91.8%	65.9%	67.6%	76%	82.7%	87.4%
	Ambiv.	0%	0%	0%	0%	32.4%	24%	17.2%	12%
Learner	Learner	17.7%	41.9%	69.4%	87%	19%	40.6%	65%	82.5%
	Investor	16.2%	17.2%	12.9%	7.3%	35.2%	33.8%	24.4%	13.9%
	Ambiv.	66.2%	40.9%	17.7%	5.8%	45.8%	25.6%	10.7%	3.5%
Ambiv.	Learner	0%	0%	100%	100%	0%	0%	100%	0%
	Investor	0%	0%	0%	0%	0%	0%	0%	100%
	Ambiv.	100%	100%	0%	0%	100%	100%	0%	0%

The next regression tested how first-year college GPA was associated with transition pattern probabilities, while controlling for high school GPA. Table 4.17 reveals that Time 1 Ambivalent and Time 1 Investor students who posted above average first-year college GPAs were also more likely to have transitioned to being Learners at Time 2. As these student's grades increase, the likelihood of having become a Learner also increases. A similar pattern is found for students who transition to be Investors at Time 2, but the strength of the pattern is not nearly as pronounced as for students who transition to becoming a Time 2 Learner. In contrast, lower first-year college GPAs are associated with increased likelihood for having transitioned to Time 2 Ambivalent for all three Time 1 profiles.

Table 4.17

Transition pattern membership probabilities (row) based on first-year college GPA (column)

Time 1 Profile	Time 2 Profile	<u>First-year College GPA</u>			
		1.0	2.0	3.0	4.0
Investor	Learner	12.8%	20.8%	25.8%	28.6%
	Investor	37%	56.4%	66.1%	68.9%
	Ambivalent	50.2%	22.9%	8%	2.5%
Learner	Learner	45.8%	64.6%	77%	83.3%
	Investor	6.8%	9.4%	10.9%	11.6%
	Ambivalent	47.4%	26.1%	12.1%	5.1%
Ambivalent	Learner	0%	1.7%	38%	92.2%
	Investor	4.6%	19.3%	34.2%	6.8%
	Ambivalent	95.4%	79%	27.7%	1.1%

Note. The control variable for this table was high school GPA, which was held constant (at its mean) for all membership probabilities provided. Transition pattern probabilities at each level of first-year college GPA (1.0-4.0) sum to 100% for each Time 1 profile grouping. The mean first-year college GPA was $M = 3.132$.

Table 4.18 highlights differences in second-year college GPA amongst the nine transition patterns. Somewhat surprisingly, the gains that were seen for the profiles that

transitioned to Learners at Time 2 in the previous results begin to diminish in the second year. For example, amongst Time 1 Investors that transitioned to Learners at Time 2, higher second-year college GPAs were actually less likely than for students who remained Investors at Time 2.

Table 4.18

Transition pattern membership probabilities (row) based on second-year college GPA (column)

Time 1 Profile	Time 2 Profile	<u>Second-year College GPA</u>			
		1.0	2.0	3.0	4.0
Investor	Learner	25.7%	29.4%	21.7%	12.8%
	Investor	21.3%	49.1%	72.7%	86.1%
	Ambivalent	53%	21.5%	5.6%	1.2%
Learner	Learner	41.7%	67%	80.6%	63.5%
	Investor	0.1%	.7%	5.9%	32.9%
	Ambivalent	58.2%	32.4%	13.5%	3.7%
Ambivalent	Learner	0%	0%	45.8%	88.5%
	Investor	0%	0%	54.2%	11.5%
	Ambivalent	100%	100%	0%	0%

Note. The control variable for this table was high school GPA, which was held constant (at its mean) for all membership probabilities provided. Transition pattern probabilities at each level of second-year college GPA (1.0-4.0) sum to 100% for each Time 1 profile grouping. The mean second-year college GPA was $M = 3.214$.

Table 4.19 reveals a startling finding for students who transitioned from Time 1 Investors and Time 1 Ambivalent to be Time 2 Learners. Amongst those who were not retained in the second year, the prediction probability for being in one of these two transition patterns was 0%. In other words, students who transitioned to being Learners at

Time 2 were extraordinarily likely to persist into their second year. Other meaningful relationships are displayed in the table.

Table 4.19

Transition pattern membership probabilities (row) based on first-year retention (column)

Time 1 Profile	Time 2 Profile	First-year Retained	Not Retained
Investor	Learner	27.3%	0%
	Investor	66.4%	64.2%
	Ambivalent	6.3%	35.8%
Learner	Learner	80.3%	27.5%
	Investor	9.2%	31%
	Ambivalent	10.5%	41.4%
Ambivalent	Learner	55.1%	0%
	Investor	15%	100%
	Ambivalent	29.9%	0%

Note. The control variable for this table was high school GPA, which was held constant (at its mean) for all membership probabilities provided. Transition pattern probabilities at each level of retention (retained, not retained) sum to 100% for each Time 1 profile grouping.

In a very similar manner as Table 4.18, which dealt with second-year college GPA, Table 4.20 shows that some of the first-year gains made amongst students that

transitioned into the Time 2 Learner profile are diminished. Specifically, for both Time 1 Investors and Ambivalent students that transitioned to be Time 2 Learners, there was actually a greater association for not being retained into the second year.

Table 4.20

Transition pattern membership probabilities (row) based on second-year retention (column)

Time 1 Profile	Time 2 Profile	Second-year Retained	Not Retained
Investor	Learner	25.8%	30.1%
	Investor	68.9%	54.8%
	Ambivalent	5.3%	15.2%
Learner	Learner	83%	53.8%
	Investor	6.9%	26.2%
	Ambivalent	10.1%	20%
Ambivalent	Learner	49.1%	63.5%
	Investor	23.3%	0%
	Ambivalent	27.6%	36.5%

Note. The control variable for this table was high school GPA, which was held constant (at its mean) for all membership probabilities provided. Transition pattern probabilities at each level of participation (retained, not retained) sum to 100% for each Time 1 profile grouping.

While Tables 4.13-4.20 display predictive relationships between the nine transition patterns (A-I) and various meaningful covariates, Table 4.21 displays descriptive means for each of the nine transition patterns across five variables (high school GPA, first- and second-year college GPA, & first- and second-year retention rates). Three transition patterns (C, H, & I) were too small in most likely membership for these descriptive means to be meaningfully interpretable.

Table 4.21

Mean values for high school GPA, first- and second-year GPA, and first- and second-year retention rates by Most Likely Transition Pattern

Pattern	Time 1 Profile	Time 2 Profile	Count	H.S. GPA	GPA Year 1	GPA Year 2	Ret. Year 1	Ret. Year 2
A	Investor	Learner	61	3.70	3.41	3.38	91%	81%
B	Investor	Investor	487	3.60	3.00	3.23	73%	66%
C	Investor	Ambiv.	16*	3.34	2.40	2.81	69%	50%
D	Learner	Learner	974	3.61	3.01	3.21	76%	63%
E	Learner	Investor	43	3.82	3.33	3.51	83%	61%
F	Learner	Ambiv.	48	3.56	2.79	3.03	73%	50%
G	Ambiv.	Learner	67	3.45	2.90	3.08	79%	69%
H	Ambiv.	Investor	4*	3.49	2.54	3.21	50%	75%
I	Ambiv.	Ambiv.	5*	3.44	2.85	2.21	80%	60%

*Note. *The cell values are problematically small, making the associated statistics unreliable; Ret. = retained; H.S.GPA = high school GPA.*

CHAPTER 5

DISCUSSION

Review of Significant Findings

Overall, the findings of this study reveal a distinct pattern of success for intrinsically motivated students and especially for those students who became more intrinsically motivated over the course of their first year of university. The first-year outcomes achieved by students at the autonomy-oriented end of the SDT continuum were more advantageous, in terms of retention and GPA, when compared with students at the control-oriented end of the continuum. Furthermore, students who experienced a shift in motivation towards more autonomy-oriented motivation did so in association with institutional intervention. Subsequently, these students experienced greater academic outcomes than their peers. However, this pattern of improved academic performance diminished in the second year, revealing the fading effects of a motivational intervention. This chapter reviews these significant findings in relation to the two main data analytic strategies employed: Latent Profile Analysis and Latent Transition Analysis. The chapter also provides a general discussion of these findings, as they relate to the literature, and an analysis of results as they apply to self-determination theory and the theoretical work of Bourdieu. Finally, the chapter explores the limitations of the study, with implications for future research, as well as a discussion of how these results inform the institutional practice in higher education.

Latent Profile Analysis

Overall findings regarding motivation profiles at Time 1 and Time 2. In keeping with the continuum of self-determination presented by Deci & Ryan (2002; see Figure 1), the findings of this study produced three profiles that ostensibly appear to align nicely with the three groupings of motivation proposed in SDT: amotivation, extrinsic motivation, and intrinsic motivation. The Ambivalent profile that emerged is most closely aligned with control/amotivated end of the SDT continuum, an association that only strengthened as the academic year progressed. Conversely, the Investor profile is most closely aligned with the more central, extrinsic portion of the SDT continuum, including high levels of both EM *external regulation* and EM *identified* (being salary and career focused). This profile also had high levels of IM *to know*, which emphasizes the importance of the person-centered approach used in this study (Pintrich, 2000; Pastor, Barron, Miller, & Davis, 2007); by focusing on the individual experience, rather than the variables themselves, this approach reveals that motivation can be a complexly varied palette of both extrinsic and intrinsic factors. Based on their responses, it can be extrapolated that Investors envisage learning (but not deep learning) as a key element of their path towards professional success. A mixed motivational pattern also emerged for Learners, who, though most closely aligned with the autonomy-oriented end of the SDT continuum, also valued all three facets EM to a higher degree than either of the other two profiles. This mixture of both intrinsic and extrinsic motivational factors in this profile emphasizes the importance of addressing motivation from a person-centered approach, rather than relying on more traditional variable-centered methodologies (Pastor, Barron, Miller, & Davis, 2007).

Remarkably, the three profiles that emerged in this study at Time 1 are nearly identical in their mean factor scores to the three profiles that emerged in the study by Hill (2013), who surveyed first-year undergraduate students at a university in the United Kingdom. Hill employed cluster analysis, rather than LPA, and had substantially fewer students (82 compared to 1,705 in this study) but achieved similar results. The most startling difference between Hill's study and this study is the proportion of students in each profile. Hill found 14.6% of participants in the cluster most closely aligned with Learners in this study (compared to 60.5% here), 28.1% of participants in Hill's cluster most closely aligned with Ambivalent students in this study (6.5%), and 57.3% of participants in Hill's cluster most closely aligned with Investors in this study (33%). The UK's focus on professional training at the post-secondary level may explain the much greater proportion of students with an Investor mindset.

Another interesting outcome in this study is that the profiles remained fairly stable at the group level between Time 1 and Time 2, while there was substantive movement amongst profiles at the individual level. Specifically, 14% of participants shifted in their most likely class membership between Time 1 and Time 2. This mimics the findings of Gillet, Morin, and Reeve (2017), who found profile stability at the group level, but large movement amongst profiles at the individual level. In this study, students who began the school year Ambivalent were most likely to transition to a different profile by the end of the year; in contrast, most likely members of the Investor and Learner profiles were most likely to remain the same. Given the vast differences between these profiles, it is important to understand that each profile represents a separate and distinct set of beliefs regarding the purposes of a university education.

Learners: Characteristics and General Findings. Learners were characterized by a high mean factor score of IM *to know*, which was considerably higher compared to Investors or Ambivalent students. This factor relates to students' love of learning for its own sake (e.g. "I attend college because I experience pleasure and satisfaction while learning new things"). This factor, in combination with high levels of IM *towards accomplishment*, gave rise to this profile being labelled *Learners*. IM *towards accomplishment* speaks to students' desire to overcome challenges associated with rigorous learning. Learners' mean factor scores on both these facets of academic motivation were more than one point higher than the other two profiles at both Time 1 and Time 2. Learners also demonstrated higher levels of EM *introjected*, which speaks to their desire to prove themselves in the face of challenging university coursework for the validation that achievement provides (Vallerand et al., 1992).

As a result of these characteristics, it is perhaps not surprising that Learners demonstrated significantly higher high school GPAs than the other two profiles and were roughly 50% more likely to participate in the FYE course. Learners reported significantly greater confidence in the university upon entry and significantly greater confidence in their choice of major than either of the other two profiles. This particular finding is important, given that the work of Tinto (1987) revealed that participation in FYE and confidence in major selection are key correlates of overall student well-being and success.

Consistent with SDT's assertion that more autonomy-oriented motivation leads to higher academic performance than more controlled motivation (Taylor et al., 2014), Learners were 90% more likely than Ambivalent students to be retained from the first

year of college into the second, while Investors showed no difference from Ambivalent students in likelihood to be retained. Time 2 Learners posted significantly higher first-year college GPAs compared to Time 2 Ambivalent students. They also reported being significantly better than the other two profiles at finding time to study, which may simply reflect their overall affinity for learning. In keeping with this finding, Learners were significantly more likely than the other two profiles to report four-year academic planning, reflecting their long-term consideration for their academic career. Time 2 Learners also posted significantly higher second-year college GPAs than Ambivalent students, whereas second-year GPAs posted by Investors' were only slightly higher. Overall, these results represent an academic distinction between Learners and Ambivalent students that does not exist when comparing Investors to Ambivalent students. Finally, Time 1 Learners were most likely to stay Learners at Time 2, with 91.5% of students remaining in the same profile.

Investors: Characteristics and General Findings. Investors were characterized by prioritizing both EM *identified* and EM *external regulation*, both of which represent motivations for professional success and associated monetary benefits. This desire for successful career preparation and a high paying salary was paired for these students with relatively high levels of IM *to know*, which may indicate that these students recognize that post-secondary learning (but not deep learning) is an integral aspect of career preparation. In contrast to Learners, Investors posted relatively moderate mean factor scores for IM *toward accomplishment*, EM *introjected*, and IM *to experience stimulation* (even lower than Ambivalent students, at both Time 1 and Time 2). This speaks to

Investors' ardent prioritization of aspects of higher education that are exclusively occupationally relevant.

Investors also posted significantly greater ACT scores than the other two profiles, an association that remained consistent across Time 1 and Time 2. This may indicate that, overall, Investors are better test takers or perhaps that they prioritize preparation for this type of high-stakes assessment more highly than their peers. Patterns about their low level of concern for math may also indicate that they are more logical and pragmatic than their peers. Investors also arrive to university expressing less social concern than the other two profiles and report being less likely to use the campus library. From Time 1 to Time 2, Investors are most likely to stay Investors (86.3%).

This profile is most theoretically aligned with the market view of higher education, and many of this study's findings regarding Investors reveal the extent to which market ideology aligns with this profile. For example, as discussed in Chapter 2, because extrinsic motivation is guided by an appraisal of the exchange value of a given activity or behavior, those who are extrinsically motivated tend to position themselves to receive a greater rate of exchange—more rewards for fewer costs. Commensurate with this reality is the finding that Investors report spending significantly less time devoted to their studies than Learners. They also display a more pragmatic motivational summary, which may speak to their realization that a more advantageous rate of exchange for the college credential is desirable.

Ambivalent students: Characteristics and General Findings. While all three profiles increased in amotivation between Time 1 and Time 2, the Ambivalent profile was characterized by the largest increase on this factor (a gain of +1.64). For Time 2

Ambivalent students, this increase in amotivation was accompanied by a drop in the mean scores of all other factors. For this reason, it is inappropriate to treat the Time 1 Ambivalent and Time 2 Ambivalent profiles as identical, especially since the individual members of these two profiles changed so greatly between Time 1 and Time 2. To be clear, 93.4% of the seventy-six Time 1 Ambivalent students were no longer Ambivalent at Time 2, which may speak to the potent impact of the institutional interventions. Similarly, 92.8% of the sixty-nine Time 2 Ambivalent students did not begin as Ambivalent at Time 1, which is cause for concern. Overall, this speaks to the Ambivalent profile as a relatively transient motivational state, perhaps capturing students who are in a temporary condition of amotivational crisis.

Ambivalent students were characterized by a fairly even spread of endorsement for the six factors of intrinsic and extrinsic motivation, with elevated levels of amotivation compared to the other profiles. The title Ambivalent is in keeping with their mean factor scores across all seven factors of the AMS-C, in addition to their general performance at the university compared to the other two profiles. For example, Ambivalent students arrive to the university reporting significantly higher levels of concern in mathematics. Time 2 Ambivalent students also post significantly lower GPAs than the other two profiles, which is in keeping with multiple studies about the negative consequences of more control-oriented motivation (e.g. Deci, Vallerand, Pelletier, & Ryan, 1991).

Ambivalent students reported being significantly less likely to remember information presented in class compared to the other two profiles. This may make sense given that living in a state of uncertainty has been shown to place a handicapping

cognitive load on individuals, impairing their ability to self-regulate (Alquist, Baumeister, & Tice, 2012; Baumeister & al-Ghamdi, 2014). Time 2 Ambivalent students also reported significantly greater concern about their social relationships than the other two profiles, which aligns with the findings of Noyens et al. (2018), who found that students who arrive to university with high levels of amotivation report lower levels of social integration by the end of their first year. Time 2 Ambivalent students also reported less confidence in their major than the other two profiles. This is cause for concern given that Tinto (1987) has suggested that ongoing uncertainty about one's major "can lead to departure both from the institution and from the higher educational enterprise as a whole" (p. 43). Similarly, since Time 2 Ambivalent students prioritize EM *external regulation* and deprioritize intrinsic factors, while simultaneously reporting high levels of amotivation, the work of Kasser & Ryan (1993) is especially relevant. Specifically, Kasser & Ryan demonstrated that having financial aspirations as the central motivation for attending university is "associated with less self-actualization, less vitality, more depression, and more anxiety" (p. 420). This may explain, in part, why Time 2 Ambivalent students demonstrated significantly lower levels of confidence in their major than the other two profiles and significantly lower levels of confidence in the university compared to Learners. This may indicate that these students are inadvertently developing a disposition for existing in a more control-oriented motivational state at the amotivated end of the SDT continuum. Based on the findings of previous literature, these students may be simultaneously practicing to continue living with a control-orientation mindset within later professional environments as well (Richer, Blanchard, and Vallerand, 2002).

While these findings suggest that we should be concerned for Ambivalent students at Time 2, there is reason to believe that their situation at Time 1 is not a lost cause. Specifically, Time 1 Ambivalent students were most likely to become Learners at Time 2 (88.2%). What's more, and perhaps the most key finding of this study, this shift to becoming Learners demonstrated a strong association with experiencing a positive reaction to the *Becoming a Learner* presentation given during incoming student orientation. After controlling for attentiveness, Ambivalent students that rated this presentation as a 6 or 7 (Excellent/Thought Provoking) were estimated to be 100% likely to transition to the Learner profile by Time 2, emphasizing the reality that shifting student motivations is possible and worthwhile. A similarly strong association existed for attendees of the FYE course. Specifically, Time 1 Ambivalent students who participated in FYE were 78.7% likely to have shifted to Time 2 Learners, whereas Ambivalent students who do not participate in FYE were only 37.9% likely to have made this shift. In other words, attending the FYE course nearly doubled Ambivalent students likelihood to shift to the Learner profile at Time 2. While not as strong of an association as with Ambivalent students, a similar pattern exists for Time 1 Investors. These findings speak to the importance of offering students robust programming focused on a rationale for the purposes of a university education. Overall, exposure to the institutional interventions led to a motivational shift, which produced meaningful associated academic outcomes, a pattern revealed through the Latent Transition Analysis.

Review of Significant Findings: Latent Transition Analysis

Transition patterns and covariates for Time 1 Investors (patterns A-C). For students that began the academic year as Investors, the results of this study demonstrate

that institutional interventions were associated with a shift in specific students' motivational profile, from being less autonomy-oriented to being more autonomy-oriented. For Time 1 Investors students, higher ratings of the *Becoming a Learner* presentation were associated with an increased likelihood to shift to the Learner profile by the end of the first academic year, while lower ratings were associated with a greater likelihood to remain in the Investor profile. Interestingly, higher ratings were also associated with a slightly greater likelihood to become Ambivalent at Time 2, which may speak to some kind of purpose-confusion experienced by Time 1 Investors. For example, it is possible that the reframing that occurs during the *Becoming a Learner* presentation inadvertently wrests from these students the perception that college is primarily about getting a high paying job. To whatever extent these students are endeared to the market-view paradigm of higher education, the *Becoming a Learner* model could reasonably be construed as causing some level of motivational anomy. Further investigation would be required to suss this interesting pattern out, perhaps using qualitative interviews of students who fit this transition pattern. Overall, however, above average ratings of the presentation were associated with a greater likelihood of becoming a Learner.

For Time 1 Investors, participation in the FYE course also predicted a shift into the Learner profile at Time 2, whereas failure to participate predicted a greater likelihood to remain in the Investor profile. This speaks to the important impact that FYE can have in helping to develop students' understanding of university as more than just a job-training program. What's more, attending the FYE course and being assigned to an instructor that emphasized the 'why' of higher education to a greater degree than other instructors was associated with significantly higher first-year college GPAs for Investors

who transitioned to the Learner profile. This may reveal that moving into a more autonomy-oriented motivation profile helps students to function and succeed despite the challenging nature of the work. Comparatively, Investors that were not assigned to high quality FYE instructors were predicted to have almost no chance of transitioning to the Learner profile at Time 2 (see Table 4.15). An inverse relationship exists for Investors that stayed Investors: being assigned to a low quality FYE Instructor simply increased the likelihood of staying an Investor at Time 2. Astonishingly, Time 1 Investors who were assigned to high quality FYE instructors were also predicted to have a 0% chance of transitioning into the Ambivalent profile. This finding speaks not only to the importance of FYE courses, but also to the importance of focusing on the core values of higher education within the course.

For Time 1 Investors, posting high first-year college GPAs was positively associated with staying in the Investor profile at Time 2 and also positively associated with transitioning to the Learner profile. However, posting high second-year college GPAs was only positively associated with remaining an Investor, which may indicate diminishing returns of the first-year institutional interventions. A similar pattern existed for retention rates for Time 1 Investors, where not being retained after the first year was associated with a predicted 0% chance of having transitioned to a Learner and a predicted 64% chance of having stayed an Investor. However, this pattern was not continued into the second-year retention rates, again indicating that there may be diminishing returns of an intervention that occurs only at the beginning of the collegiate experience.

Perhaps most remarkable amongst these findings were the descriptive statistics of the academic outcomes achieved by Time 1 Investors that become Time 2 Learners

(transition pattern A), especially when compared to those that remain in the Investor group at Time 2 (pattern B). Table 4.21 shows that students in pattern A outperform students in pattern B across first- and second-year college GPAs, as well as first- and second-year retention rates. These results speak to the uncanny power of moving students towards autonomy-oriented motivations. As is predicted in the literature, more autonomy-oriented students not only achieve significantly greater academic outcomes but also have a more positive academic experience along the way. However, because of the difference in sample size for pattern A (61) and pattern B (487), interpreting these descriptive outcomes must necessarily be couched against the predictive patterns displayed in tables 4.13-4.20, which generally serve to support the same conclusions, although to a more reserved extent.

Transition patterns and covariates for Time 1 Learners (D-F). The transition pattern results for students who began the academic year as Time 1 Learners are consistent with the SDT literature. Higher ratings of the *Becoming a Learner* presentation and participation in the FYE course were both positively associated with likelihood of remaining in the Learner profile for students who started that way (transition pattern D). Likelihood of membership in transition pattern D was also positively associated with higher first-year college GPAs, as well as first- and second-year retention rates. These results, while not unexpected given previous research, support the assertion of SDT that autonomy-oriented motivation predicts academic success. While the descriptive GPAs of students in transition pattern E (Time 1 Learner to Time 2 Investor) are higher, the drastic difference in sample size for patterns D (974) and pattern E (43) indicate that relying on the predictions, rather than the descriptive differences would be more appropriate.

Transition patterns and covariates for Time 1 Ambivalent students (G-I).

The transition pattern results for Time 1 Ambivalent students are hard to interpret given the fact that such a high percentage (88.2%) transition to the Learner profile at Time 2 (pattern G). What is clear is that this transition is positively associated with high ratings of the *Becoming a Learner* presentation and participation in the FYE course. For example, when Time 1 Ambivalent students participate in the FYE course, they are 78.7% likely to transition to the Learner profile, compared to only 37.9% for non-participants. Students in transition pattern G are dramatically more likely to post higher first- and second-year GPAs, as well as first-year retention rates. However, as with Investors that transition to Learners (pattern A), there appears to be a diminishing return on these outcomes during the second year. Time 1 Ambivalent students who become Learners at Time 2 were associated with a greater likelihood of not being retained during the second year. Once again, this may indicate a diminishing impact of institutional interventions that occur only at the start of the university experience, which further research could clarify.

General Discussion and Theoretical Analysis

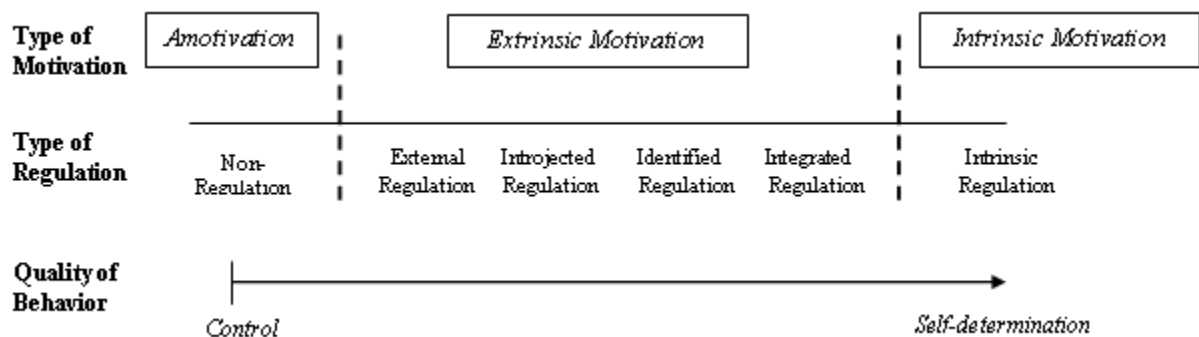
Market-based ideology. The first question of the study was regarding the different profiles or “types” that would emerge using the person-centered approach of LPA. A main assertion in the present study, which arose from the literature review, was that the United States has culturally shifted to favor a more market-based view of post-secondary attainment. The nature of the three profiles that were identified in this study reveal strong support of this pattern. All three latent motivational profiles demonstrated core attentiveness to the motivational factors associated with career preparation and

salary, EM *identified* and EM *external regulation*. EM *identified* was the factor ranked first amongst all three profiles. *Identified* motivation is assessed on the AMS-C using questions that address students' goals for occupational placement and success, while simultaneously emphasizing the student's own agency. Each question references some aspect of the occupational domain using words like career, job market, or worker competence while simultaneously emphasizing the individual's interests or choices. For example, "I attend college because eventually it will enable me to enter the job market in a field that I like." Similarly, EM *external regulation* was the second highest mean factor score for Investors and Ambivalent students and the third highest for Learners. *Externally regulated* motivation is assessed using questions that addressed the most extrinsic rewards associated with university education: a lucrative salary and prestigious employment. These items were the most utilitarian and pragmatic on the questionnaire. For example, "I attend college because with only a high-school degree I would not find a high-paying job later on." Along with the items associated with EM *identified*, these *externally regulated* motivation items were the most closely aligned with a market-view of education. The fact that these two factors received such relatively high mean factor scores for all three profiles marries well with the statistic that "Since 1970, the percentage of freshmen who rate 'being very well off financially' as an 'essential' or 'very important' goal has risen from 36.2 to 73.6 percent" (Bok, 2006, p. 26).

While the pull of the market was manifest in all three latent profiles, each profile demonstrated that a person-centered approach is most well-suited to the discussion of academic motivation, as a variable-centered approach would *not* have revealed how mixed student motivations can be (Pastor, Barron, Miller, & Davis, 2007). For example,

Learners demonstrated a nice spread of endorsement across motivational factors from both the intrinsic and extrinsic portions of the SDT continuum. Similarly, while Investors were more likely to endorse extrinsic motivators compared to intrinsic ones, their preference for IM *to know* was still relatively high. Ambivalent students were also clearly more influenced by the controlled end of the SDT continuum than the other profiles, but still endorsed items across the extrinsic and intrinsic portions of the spectrum. Curiously, for Ambivalent students, EM *external regulation* was the *only* mean factor score to exceed 5 at Time 2 (on a scale of 1-7; see Table 4.4). This may reveal a strong pull of monetary concerns in the absence of other motivational drives. Overall, the three profiles aligned nicely with each of the three sections of the SDT continuum (see Figure 1 below): amotivation (Ambivalent), extrinsic motivation (Investors), and intrinsic motivation (Learners).

Figure 1. Continuum of Self-determination (Deci & Ryan, 2002, p. 16)



These findings support the idea that there really are a diverse assortment of motivational factors that can work together to drive students to pursue post-secondary attainment (Vallerand et al., 1989), but that the weight of the market still influences students across the spectrum. This evidence of the pull of the market on student motivations supports the concerns of Scott and Sloan (1991) that a “new practicality” (p. 4) has taken hold of the cultural conversation surrounding higher education:

There is today an increasing emphasis on making the curriculum more responsive to the needs of industry and government... college students participate in a desperate scramble either to get into professional schools or to secure a good job. In pursuit of these goals, they have developed a new attitude of pragmatism. Their pragmatism, moreover, is both shared and compounded by educational planners who, in the name of cost-efficiency, seek to eliminate from the curriculum the under-subscribed and, therefore, less marketable programs. As a result, the traditional liberal arts curriculum, which is seen to have little “cash-value,” is severely threatened. (p. 4)

Based on the literature review, one may have expected the Investor profile, with its clear preference for market-based motivation, to emerge as the profile with greatest student membership, as in the work of Hill (2013). However, rather than seeing market-ideology drive membership of a single, extrinsically-oriented profile, the results of this study reveal that extrinsic motivation for occupational well-being is a prioritized element of *all three* identified student motivation profiles, even including the more autonomy-oriented Learner profile.

Surprisingly, the negative influence that the market might have on student well-being is shown to be mitigated, at least in part, by the co-presence of intrinsic motivation within the Learner profile, especially at Time 2. For example, within the profiles that

transitioned to Learner at Time 2, the academic benefits of developing greater intrinsic academic motivation were clear. These students posted significantly higher first year college GPAs and first year retention rates than peers who did not transition to the Learner profiles an outcome that was born out in the predictive models represented in Tables 4.17 and 4.19. These results, which reveal positive outcomes for students who value *both* intrinsic and extrinsic motivators for attending university, support the assertion of Sanders (2012) within the *Becoming a Learner* model that students need not give up career aspirations. Instead, Sanders encourages students to prioritize holistic academic development and, in the process, also develop oneself for professional well-being. This same assertion was made by Cicero, who prized both the development of *humanitas* (humanity) and *exercitatio* (professional training).

Beliefs and values matter: Autonomy-Orientation. The second research question within this study regarded the extent to which student beliefs and values represented within each latent profile could be associated with significant academic outcomes, including academic self-efficacy, psychosocial well-being, course performance, and persistence from year to year. A core element within the work of Deci & Ryan (2000) is their recognition that motivation is not merely a question of amount (one person is highly motivated, while another is not), but more importantly a question of the nature and focus of the motivation. The results of the preset study support Deci and Ryan's assertion: the focus of students' motivation was shown to be associated with dramatically different academic outcomes for students. To put it another way, this study reveals that student beliefs and values about the purposes of university (whether they be

more intrinsic, more extrinsic, or more amotivated) were associated with meaningful differences in academic performance.

On the more autonomy-oriented end of the SDT continuum, the Learner profile (with its significantly higher levels of IM *to know* and IM *toward accomplishment*) perhaps most fully represents a core tenet of the liberal arts tradition. The ideals were captured by Riesman (1980): “the belief that people of whatever age who want to gain a sense of purpose and accomplishment must struggle against the intrinsic difficulties of their subject matter” (p. 313) and not exclusively go through the motions of an academic program in search of extrinsic rewards. This may be a key reason why Learners are so much more willing than their peers to participate in the elective FYE course, a decision which requires a certain level of recognition that university is about more than just occupational outcomes. However, no significant differences were discovered for any of the profiles at Time 1 in regards to first-year college GPA and first year retention. All three groups were evenly matched on these measures, which is somewhat unexpected (see Table 4.5). This seems to indicate that where students begin in their motivations is not nearly as important as what motivations develop over the course of the first year. As a result, the absolute value of starting university as a Learner cannot be seen in grades or retention. Instead, the Time 1 Learner advantage is only manifest in their greater confidence in their major and in the university, something that Tinto (1987) suggested should improve student well-being and retention. However, aside from this small finding, there seems to be no significant advantages to *beginning* the first-year of university as a Learner, unless you remain in that profile at Time 2.

At Time 2, while both Learners and Investors outstrip Ambivalent students in first-year college GPA, only Time 2 Learners have significantly higher first- and second-year retention rates compared to Time 2 Ambivalent students. Indeed, Time 2 Investors are no more or less likely to be retained in either year compared to Time 2 Ambivalent students. Aligning with the work of Deci, Vallerand, Pelletier, and Ryan (1991), this may speak to the power of autonomy-orientation (rather than a control-orientation) on the SDT continuum helping students to sustain interest in academics, an activity that is designed to be fairly rigorous and is therefore something that is easy to tire from. In keeping with the advantages of a more autonomy-oriented profile, Time 2 Learners reported significantly higher levels of notetaking, finding time to study, and four year planning. In fact, Time 2 Learners were roughly 36% more likely than Investors and Ambivalent students to report having a four year plan for their academic career. This is perhaps not surprising, as more intrinsically motivated individuals have been shown to be far more future-oriented in their goals (Gorin, Husman, & Turner, 1998; Husman & Lens, 1999). Perhaps more important than the absolute advantages of being a Learner at Time 2 are the advantages seen for students who start as Learners at Time 1 *and remain in the Learner category* at Time 2 (transition pattern D) compared to those who transition away from the Learner profile. *Remaining* a Learner was associated with a higher likelihood for increased first-year college GPA (Table 4.17), first-year retention rates (Table 4.19), and second-year retention rates (Table 4.20), compared to students who transition away from the Learner profile. Overall, these results support the findings of previous research that autonomy-oriented motivation is associated with greater academic outcomes.

Beliefs and values matter: Extrinsic Motivation. To begin a discussion of the Investor profile, it is helpful to remember that the literature on students who are more extrinsically motivated indicates that their outcomes might reveal a lack of concern for their community. For example, the work of Moosmayer (2012) revealed that “behavior rooted in economic values reduces personal well-being and diminishes value for the community” (p. 156). While students in the Time 1 Investor profile reported having *fewer* friends attending the university compared to Learners, they also reported arriving to the university less socially concerned than both Learners and Ambivalent students (by a difference of as much as 20%; see Table 4.6). In other words, their lack of friendships did not produce an increased amount of social concern, as one might expect. Similarly, at Time 2, Investors were significantly less likely than even Ambivalent students to report having friends at the university. They were also 36% less likely than Ambivalent students to report being socially concerned (Table 4.9). The pattern of having fewer friends and also being less concerned about the fact fits nicely with previous research that revealed that motivations grounded in financial aspiration negatively impact personal well-being and increase antisocial thinking, all at the expense of community-oriented values (Kasser, 2002). Overall, being less autonomy-oriented has been associated with a greater focus on the self and tendencies towards social isolation (Gagné, 2003; McHoskey, 1999).

Overall, the Investor profile was characterized by a more logical or pragmatic approach to the university. For example, Investors not only devalued academic rigor (lower IM *toward accomplishment*) and seeking opportunities to prove themselves (lower EM *introjected*), but they also indicated significantly less concern about math than Ambivalent students at Time 1 (Table 4.6) and significantly less concern about math than

either of the other two profiles at Time 2 (Table 4.9). They consistently were shown to have significantly higher ACT test scores compared to the other two profiles, which is meaningful because the ACT is known for emphasizing complex math reasoning and also underscores the ability to properly interpret charts and graphs, an act of logical reasoning. When applying raw logic to the value of post-secondary attainment, it would not be surprising to yield an interpretation that university preparation is about little else than achieving employment and a high paying salary. From this perspective, as explained by Labaree (1997), “the value of education is not intrinsic but extrinsic. The primary aim is to exchange one’s education for something more substantial—namely a job, which will provide the holder with a comfortable standard of living, financial security, social power, and cultural prestige” (p. 31). However, unlike Ambivalent students, the absolute impact of being an Investor at either Time 1 or Time 2 was not associated with poorer academic outcomes (grades and retention) compared to Learners. This may reveal that entering the university as an Investor is not inherently problematic, as was implied in the literature regarding extrinsic motivation. Instead, the problems of a more extrinsic or control oriented motivation palette seem to have only been impactful for those in the Ambivalent profile. However, an argument can still be made that the Investor outcomes were not, overall, as strong as the outcomes achieved by those who started with or developed a more autonomy-oriented profile.

Beliefs and values matter: Control-Orientation. The Ambivalent profile was most closely aligned with the control-orientation end of the SDT continuum, an orientation that emphasizes amotivation and external regulation. The association between the Ambivalent profile and the control end of the SDT continuum was particularly

pronounced at Time 2, when EM *external regulation* rose to be the highest mean factor score within the profile (indeed, the only mean factor score to exceed 5; see Table 4.4). Unusually, being Ambivalent at Time 1 was not associated with any noticeably negative outcomes, which may not be surprising given that 93.4% of the seventy-six Time 1 Ambivalent students were *no longer* Ambivalent at Time 2. The negative impacts of being in the Ambivalent profile were almost exclusively manifest at Time 2, which is startling given that a full 92.8% of the sixty-nine Time 2 Ambivalent students were *not* Ambivalent at the start of the academic year. These students posted significantly lower first-year college GPAs than their peers and significantly lower retention rates than Learners (Table 4.7).

Time 2 Ambivalent students were significantly less likely than their peers to report remembering information presented in class, something predicted in the work of Vansteenkiste, Sierens, Soenens, Luyckx, and Lens (2009): “the presence of controlled motivation... yields no benefits at all. Instead, the pressure and stress associated with controlled motivation seem to lead students to... [be] more anxious when taking tests... and obtain lower grades” (p. 684). Indeed, Time 2 Ambivalent students were 32% more likely to be concerned about math compared to Investors. Perhaps not surprisingly, Time 2 Ambivalent students were also significantly less likely to report confidence in their major compared to their peers and significantly less likely than Learners to report confidence in the university. Tinto (1987) speaks to the problematic nature of having ongoing uncertainty, pointing out that indecision is “a much more common theme among student leavers than among student persisters” (p. 44). In keeping with this suggestion,

Time 2 Ambivalent students were 90% less likely to be retained into the second year of university compared to Learners (see Table 4.7).

Students who were Ambivalent at Time 2 also reported being significantly more socially concerned than their peers (Table 4.9), something predicted by the literature. Specifically, a growing body of research has demonstrated that more control-oriented motivation fosters less civil and more anti-social behavior (Gagné, 2003; McHoskey, 1999). Time 2 Ambivalent students also reported receiving significantly less family support regarding their decision to attend college than Learners, which is something predicted in a rich body of literature (Kasser & Ryan, 1993; Kasser, Ryan, Zax, & Sameroff, 1995; Deci & Ryan, 2000). As explained by Gagné (2003), “When we lack [proper] nurturing, we are likely to substitute it by pursuing goals that might appear on the surface to satisfy basic psychological needs, but that do not promote prosocial behavior. This means that when our basic psychological needs are unfulfilled, we are more likely to engage in behaviors that have *ourselves* as the focus” (p. 202; emphasis in original). Thus, students who feel less support from their families are likely to simultaneously feel less autonomy-orientation to their academic pursuits, opening the door for focusing on extrinsic and amotivated reasons for attending college. This collection of findings for Ambivalent students adds to the existing body of literature that reveals the negative academic consequences of a control-oriented motivation for pursuing higher education (Vallerand & Bissonnette, 1992; Vansteenkiste et al., 2009; Rucker, 2012; Prowse & Delbridge, 2013; Van Soom & Donche, 2014; Vaters, 2015; Cannard, Lannegrand-Willems, Safont-Mottay, & Zimmermann, 2016; Hester, 2017).

Shaping student beliefs through institutional intervention. The third and fourth research questions in this study were in regards to the developmental nature of the three motivation profiles and the extent to which institutional interventions were associated with dynamic changes in student motivations. As in the research of Gillet, Morin, and Reeve (2017), the overall characteristics of the three motivational profiles remained fairly consistent over students' first year of university, while individual student profiles changed quite dynamically. The most dynamic shifts occurred for students who started in the Ambivalent profile: nearly all of these students shifted to the Learner profile at Time 2. Additionally, dynamic changes occurred for students who transitioned to the Ambivalent profile at Time 2, who primarily started out as Learners and Investors.

Perhaps the most notable finding of this study is that changes in student motivation profiles occurred in connection with various institutional interventions. Firstly, as displayed in Table 4.13, average and above average student ratings of the *Becoming a Learner* presentation during the incoming student orientation program were associated with a higher predicted likelihood of transitioning from the Investor and Ambivalent profiles to the Learner profile at Time 2, even after controlling for academic preparedness (high school GPA). Conversely, for all Time 1 profiles, average and above average student ratings of the *Becoming a Learner* presentation were associated with a lower predicted likelihood of transitioning to the Investor profile (or remaining an Investor for those that started in that profile). To be clear, in order to make the shift from the Investor profile to the Learner profile, students needed to dramatically increase their endorsement of IM toward accomplishment, EM introjected, and IM to experience stimulation, effectively shifting their entire motivational palette to the more autonomy-

oriented end of the continuum. What this shift would effectively mean for these students is a development of greater acceptance for something that Bourdieu (1993) referred to as the “long cycle” of cultural production. Succinctly stated, this concept represents the belief that excellence that is produced against the grain and at greater personal cost (in time and energy) is not only more rarified but subsequently more valuable. For the 61 students who made the shift from Investor to Learner, the academic dividends of this transition are displayed in Table 4.21. These students, perhaps as a result of capturing the spirit of the liberal arts tradition, posted substantially higher GPAs and retention rates throughout their first two years of university.

Startlingly, for Time 1 Ambivalent students, providing an above average rating of the *Becoming a Learner* presentation was associated with a 100% predicted likelihood of transitioning to the Learner profile at Time 2. In order to make this shift, these students would not only need to increase in relative levels of motivation across all extrinsic and intrinsic factors, but also completely resolve their elevated endorsement of amotivation. Nicely, for the 67 students in this transition pattern (pattern G), the shift was associated with relatively higher levels of academic performance and retention across the first two years of university (see Table 4.21). These findings are in keeping with the results of Bailey and Phillips (2016), who found support for the importance of intrinsic motivation and greater alignment with the core values of the liberal arts tradition: “students who were motivated to study by their curiosity to explore and learn new concepts, and those who found pleasure in the process of creating and achieving tended to feel a stronger sense of well-being, higher life satisfaction and meaning, and also performed better academically” (p. 210).

With such high association between the ratings of the *Becoming a Learner* presentation and transitioning into a more autonomy-oriented profile, the importance of institutions working to provide a philosophy-driven rationale to their students cannot be overstated. More importantly, the fact that this intervention only lasted 40-minutes speaks to the potential high potency of such a low dosage intervention. Similar to the findings of the research of Jang (2008), the *Becoming a Learner* presentation met several important criteria of effective persuasion, which “(a) identifies the [activity’s] otherwise hidden value, (b) helps students understand why the [activity] is genuinely worth their effort, (c) communicates why the [activity] can be expected to be useful to them, and/or (d) helps students see or discover the personal meaning within [an activity]” (p. 708). In fact, given that so little literature exists regarding the value of providing students with an autonomy-supporting, philosophical rationale about the core values of higher education, it’s entirely possible that this 40 minute presentation represented the only rationale that the incoming students had ever received to counter the prevailing market-driven views regarding the purposes of post-secondary attainment.

In addition to the *Becoming a Learner* presentation, student participation in the FYE course was similarly associated with a greater likelihood to transition into a more autonomy-oriented motivation profile, even after controlling for academic preparedness (see Table 4.14). Specifically, Investors that attended the FYE course were 5.1% more likely to transition to the Learner profile compared to students that did not attend. Even more impressive, Ambivalent students that attended the FYE course were 40.8% more likely to transition into the Learner profile compared to students that did not attend. Adding to the power of this finding, Ambivalent students who attended the FYE course

were predicted to not only be less likely to remain Ambivalent, but also predicted to have a 0% likelihood of transitioning to the Investor profile at Time 2 (30% lower compared to students who did not attend). The FYE course was designed to help students develop greater understanding about the value of higher education and assist students in acquiring skills and knowledge necessary for achieving academic success (such as study skills, a growth mindset, and general knowledge about campus). In keeping with the central tenets of expectancy-value theory (Atkinson & Reitman, 1956), it is reasonable to assume that FYE was effective because it intervened on what students believed about the incentives associated with university success, while simultaneously increasing the likelihood of their achieving that success through skill-building.

The benefit of providing a rationale. By assisting in properly setting student expectations for what higher education is and does, the *Becoming a Learner* model fulfills a critical element of what research shows helps students succeed. As explained in the research of Copeland and Levesque-Bristol (2011), “Students who came to the university with some expectations of what the university experience would be like rated the learning climate as significantly more positive than those who had no expectations. Based on these findings, universities are encouraged to establish clear and realistic expectations of and for students during preliminary campus visits, orientation seminars, introduction letters, and university promotions or advertisements” (p. 510). As Bourdieu (1993) suggested, without guidance from the *autonomous pole* of the field of higher education, students are predisposed to relying on the *heteronomous* discourses available in the larger society to shape their expectations. Since these external concerns are focused on market-relevance, students are likely to socially reproduce and live out such

conceptualizations and be subsequently disappointed—unless guided onto a difference path. Nicely, the present research demonstrates that making such a shift towards the *autonomous pole* of higher education is not only possible, but facilitates achieving significantly better academic results as well.

As discussed in the Chapter 2, the mere act of providing individuals with a rationale regarding why a given activity is approachable, meaningful, and valuable can dramatically increase the likelihood of success in that endeavor. As revealed in the work of Deci, Eghrari, Patrick, and Leone (1994), providing a rationale is especially crucial in activities that are inherently challenging and rigorous, but still “useful for effective functioning in the social world” (p. 120), such as attending university. In the present study, both the *Becoming a Learner* presentation and FYE were strongly associated with students transitioning into the Learner category, a more autonomy-oriented motivational profile. These findings demonstrate that both incoming student orientation and FYE courses can be a hearty and viable means to not only providing students with a rationale, but also helping them to achieve greater academic outcomes. What’s more, these findings support the idea that while students predominantly arrive to university with a market-driven mindset, they can nonetheless be properly guided into possessing more balanced academic motivations that prioritize the core values of the liberal arts tradition.

Academic outcomes associated with transition. The covariate models tested in this study reveal a positive association between transitioning to the Learner profile at Time 2 and the academic outcomes of first-year college GPA and first-year retention. For Time 1 Ambivalent students, higher than average first-year college GPAs predicted a much higher than average likelihood of having transitioned in the Learner profile at Time

2 and an extraordinary decrease in the likelihood of having remained Ambivalent (see Table 4.17). Additionally, for Time 1 Ambivalent students, being retained into the second year of university was associated with a 55.1% chance of having transitioned into the Learner profile at Time 2 (compared to a 15% chance of transitioning to the Investor profile and a 29.9% chance of remaining Ambivalent; see Table 4.19). Perhaps more surprisingly, for Time 1 Ambivalent students who were *not* retained in the second academic year, there was a predicted 100% likelihood that they had transitioned into the Investor profile at Time 2. These predictive findings speak to the powerful effect of developing a more autonomy-oriented motivational set as it relates to helping students sustain commitment to post-secondary attainment. As was concluded by Fazey and Fazey (2001), “Students arrive at university with the potential to be autonomous in their learning. It is the responsibility of those who structure the learning environment to nurture undergraduate potential if autonomous behavior is to be realized as an outcome of higher education” (p. 385).

For Time 1 Investors, higher than average first-year college GPAs were associated with an increased likelihood for both transitioning to the Learner profile at Time 2 and also for remaining an Investor (see Table 4.17). This predictive model, which controls for students’ academic preparedness (high school GPA), differs slightly for the pattern of gains displayed in Table 4.21 for the students in transition pattern A (shifting from Investor to Learner). The descriptive gains displayed for these students are extraordinarily higher than the gains predicted in the models display in Tables 4.17 through 4.20 (for both the first and second year). However, Table 4.21 also reveals that students in pattern A posted significantly higher high school GPAs than most other

transition patterns. Since all four predictive models controlled for high school GPA, this helps to explain why the predictive models show relatively depressed outcome predictions for students in pattern A compared to the actual outcomes achieved by the 61 pattern A students. This reality may reveal a strong impact that academic preparedness may have had in helping the 61 students in transition pattern A accept and incorporate the *doxa* of higher education into their motivational profile. In other words, as Bourdieu (1986) might suggest, these students' ability to extract capital from the university (in the form of a motivational shift towards greater alignment with the *doxa*) depended, at least in part, on advantages acquired in students' previous circumstances.

Nonetheless, it is also important to note that students in transition pattern A demonstrated greater academic resilience than their peers. Specifically, all students in this study experienced an average drop in GPA of .60 between high school and the first-year of college (likely because a different standard of excellence is used). However, students in pattern A demonstrated the lowest average drop in GPA, just .29, between high school and the first-year of college—half of the average drop experienced by their peers. This may speak to the powerful effect of transitioning from a more extrinsically motivated profile to a more intrinsically motivated one. As was explained by Taylor et al. (2014), “intrinsic motivation is positively associated with school achievement because it reflects a sense of volition and personal interest rather than external pressure” (p. 355). As such, in shifting to the Learner profile, students in transition pattern A may have alleviated some academic pressure fueled by a more control-oriented motivational palette and opened themselves up for a higher performing first year. Time 1 Investors who were retained into the second year of university were also 27.3% more likely to have

transitioned to the Learner profile at Time 2 compared to Time 1 Investors who were not retained (see Table 4.19). Unexpectedly, as will be discussed, these patterns of success in first-year retention and college GPA were not carried forward into students' academic performance during the second year of university.

The fading outcomes associated with providing a rationale. The results of this study reveal diminishing academic performance during the second academic year for students who had previously posted significant gains as a result of shifting to a more autonomy-oriented profile. Tables 4.18 and 4.20 reveal a reversal in the association between transitioning to the Learner profile and academic well-being. For Time 1 Investors who became Learners at Time 2, above average GPAs were actually associated with a lower likelihood of having made this transition towards a more autonomy-oriented profile (see Table 4.18). Similarly, for both Time 1 Investors and Time 1 Ambivalent students, shifting to the Learner profile at Time 2 shared a stronger predicted association with *not* being retained into the third year of university (see Table 4.20). A similar fading of the predicted association between autonomy-oriented motivation and academic performance was seen for students that started the academic year in the Learner category. Overall, these findings speak to the reality that providing students with an autonomy-supportive rationale at the beginning of their academic career may not have staying power over several years. This reality, while discouraging, is not altogether unexpected.

To begin with, amongst all students in this study, Tables 4.2 and 4.4 reveal an overall drop in intrinsic motivation between Time 1 and Time 2, with an increase across all three profiles in amotivation. While similar drops occurred in several of the extrinsic motivation factors between Time 1 and Time 2, EM *external regulation* actually

increased for the Investor and Ambivalent profiles. Similarly, EM *introjected*, a career-oriented variable, increased for the Learner profile. These developmental changes may reveal that the first year of university generally takes a toll on student autonomy-oriented motivation, a pattern seen amongst Chinese university students in the work of Pan and Gauvin (2012). While little research has been conducted on the diminishing returns of providing students with a motivational rationale for academic engagement, at least a few studies reveal that the effects of motivational interventions can diminish over time. For example, in a six-week longitudinal study conducted by Nelson et al. (2105), providing an autonomy-supportive intervention had a positive impact on undergraduate students, but this effect plateaued and slightly diminished over time. Similarly, the recent work of Patall, Vasquez, Steingut, Trimble, & Pituch (2017) supports the idea that institutional interventions on motivation can fade over time. Their study, which investigated academic motivation amongst high school science students, found that ongoing participation in uninteresting academic activities (busywork) accumulated over time to predict lower perceived autonomy amongst students. Conversely, the study found that continually providing students with autonomy-supportive interventions also accumulated over time, predicting ever enhanced levels of self-determination. Thus, the recommendation of these authors was that autonomy-supportive educational interventions need to be designed with *motivational sustainability* in mind, rather than approached as a one-and-done solution.

The fact that university students lose motivational steam over the first year is not surprising to anyone orbiting near higher education. The first year of university is typically filled with general education requirements, which, as discussed in Chapter 2, are often seen by students and critics as superfluous elements of what “should be” an

occupationally-relevant degree program. Without proper context for the general education requirements (i.e. a rationale), it would be very easy for students to see general education courses as “busywork,” especially if the courses are taught poorly. Poor instruction often fosters a control-orientation amongst students (Patall et al., 2017), not in the least because it has the tendency to make students the objects of the curriculum, rather than subjects of their own academic experiences (González, Moll, & Amanti, 2006). Instead of allowing such demotivating circumstances to exist, universities should support faculty in scaffolding student well-being through motivational interventions so well supported in the literature, including this study. As was explained by Reeve, Jang, Hardre, and Omura (2002), “hearing a rationale helps people transform the otherwise boring task into a potentially more interesting one, a strategy that fosters engagement because increased interest predicts increased effort” (p. 185). Given that the first-year autonomy-supportive motivational interventions in this study shared such a strong relationship with improved student outcomes, it follows that institutions would do well to see such programs and services universalized and fine-tuned into longitudinally sustainable formats.

Fine tuning the message of institutional interventions. One of the most powerful findings of this study regards the differences achieved by FYE instructors who had above average ratings in conveying the “why” of higher education compared to those who had below average ratings. As explained in Chapter 3, eight items on the FYE course evaluation had been identified by program administrators as particularly meaningful in determining if instructors had focused on helping students to understand the core values of the institution. Based on the analysis, FYE course participants included

in this study were coded as either having had “Above Average” or “Below Average” exposure to the core values of the liberal arts tradition. Predictive models of the impact that this exposure had on students’ transition amongst motivation and subsequent first-year college GPAs are displayed in 4.15 and 4.16. The results reveal that FYE instructor quality truly matters, especially for students who start as Investors. For these students, above average teacher quality was associated with a 0% chance of transitioning to the control-oriented Ambivalent profile at Time 2. Conversely, having a low quality FYE instructor was associated with almost no chance of transitioning to the autonomy-oriented Learner profile at Time 2. Overall, Table 4.16 reveals that achieving above average GPAs was associated with transitioning to the Learner profile in connection with a high quality FYE experience. These results speak to the importance of fine tuning the FYE message around autonomy-supportive exposure to the holistic purposes of a university experience.

Similar support regarding the need for fine tuning of the *Becoming a Learner* presentation was also found in the results of this study. Interestingly, for Time 1 Investors, average and above average ratings of the presentation seemed to produce two different effects, as shown in Table 4.13. Specifically, while higher ratings were primarily associated with a positive predicted relationship of Time 1 Investors shifting to the Learner profile, a positive predicted relationship was also shown for Time 1 Investors in their likelihood to shift to the Ambivalent profile. However, this is not altogether unexpected; during the presentation, Sanders (2012) encouraged incoming students to focus their academic efforts on their development of the whole self, with career and salary concerns taking a back seat to the ideals of the citizen scholar. From the standpoint of the Investor students, this new call to an intrinsically-motivated paradigm may have

inadvertently served to set expectations in unfamiliar motivational territory. As noted in the motivational research of Deci, Eghrari, et al. (1994), setting high expectations for students can often create a second barrier that needs to be overcome: “The request to do an activity that is not intrinsically motivated, even when a meaningful rationale is provided, can create an internal conflict with the person's inclinations, thus resulting in the person's feeling pressure and tension” (p. 124). However, these authors reveal that helping students overcome this tension is as easy as acknowledging the likely conflict: “An *acknowledgment* of the apparent conflict between the request and the inclinations conveys respect for the person's inclinations and right to choose. Thus, it can help alleviate the tension and allow the person to understand that the requested behavior can harmoniously coexist with his or her inclinations” (Deci, Eghrari, et al., 1994, p. 124; emphasis in the original). Thus, acknowledging to students that the prevailing market-view of post-secondary attainment is not only alluring, but pragmatically sound, might assuage them into embracing a more autonomy-oriented perspective.

The benefits of alignment between student motivations and institutional *doxa*. The fifth research question of this study was the extent to which meaningful outcomes were associated with greater alignment between student motivations and the core values of the liberal arts tradition. As has been shown, the overall results of this study support the idea that greater alignment with the core values of higher education is possible and produces meaningful results. Put another way, cultural practice in the domain of education is transferable through institutional intervention, a concept posited in the work of Bourdieu (1974).

Elements of the data collected, such as the pervasive influence of EM *identified* and EM *external regulation* across all three profiles, reveal the *heteronomous* influence of market-ideology on all students in the study well before they arrive to university. Nonetheless, the pattern of an increasing student prioritization of the occupational outcomes of university was actually reversed in many students through simple, autonomy-oriented institutional interventions. This demonstrates the power that communication from the *autonomous pole* of the field can have on shaping student beliefs and values, simultaneously helping their academic performance and ability to extract capital from the field of higher education. As the effects of these motivational interventions were diminished after one year, the results reveal that the *heteronomous* discourses regarding higher education are ever present and make it easy for students to resort to external, socially-relevant discourses regarding the value of higher education. However, the fact that the interventions work so well reveals that these problematic discourses need not inevitably be reproduced. Nonetheless, the results reveal that a market-driven ideology is *likely* to be reproduced without ongoing intervention from the *autonomous pole* regarding the core values of the liberal arts tradition.

Just as market-based influences utilize complex structures of social and cultural practice to shape the sociopolitical conversation regarding education, those committed to the central ideals of higher education may see these results as an indication that similarly complex networks of autonomy-supportive interventions at all levels of society are strongly needed and desirable. While evidence exists to support the idea that the structure of higher education in the United States has historically served to reproduce problematic power relations (Soares, 2007; Howard & Gaztambide-Fernandez, 2010), this study

reveals that potent interventions delivered at critical junctures of student development can stem the tide and reverse inequitable power relations. For example, participating in the FYE course was associated with Ambivalent students being twice as likely to transition to the Learner profile compared to students who did not attend FYE. As a result, 88% of the Time 1 Ambivalent students become Learners at Time 2—and achieved better first-year outcomes as a result!—a finding that represents a strong showing for the democratic ideals of education. Though not entirely ameliorating their academic performance in terms of first-year college GPA, the transition to the Learner profile for incoming Ambivalent students was associated with extraordinarily high first and second year retention rates—much higher than almost every other transition pattern, save only for Investors who made the transition to the Learner profile (see Table 4.21). Thus, by intervening on student beliefs and values regarding the purposes of higher education, the programs examined in this study served to improve and universalize ongoing academic well-being.

From the standpoint that the university is a field of cultural production (Bourdieu, 1993), Table 4.14 reveals that students who did not participate in the FYE experience were significantly less likely to transition to the more autonomy-oriented Learner profile. What's more, Tables 4.16 through 4.21 reveal that students who did not make this transition were also not predicted to extract as much cultural capital from the field of higher education (in the form of higher GPAs and retention rates during their first year). Conversely, the tables regarding second-year outcomes (4.18 and 4.20) work together to reveal a surprising pattern in the opposite direction. Specifically, for students who started as members of either the Investor or Ambivalent profiles and then transitioned to the

Investor profile at Time 2, first-year academic performance and retention was predicted to be low, but second-year academic performance and retention was predicted to be high. This may reveal that the more control-oriented students have an initial barrier to overcome, with many students not making it through the first academic year. Subsequently, students in the Investor profile who make it over the motivation barriers of the first year are no longer accompanied by their counterparts who have left. Thus, we begin to see improved average results for this group in the second year. In other words, a survival of the fittest scenario may have played out, where the academically ill-prepared were sloughed off of the Investor profile during the first year, improving the subsequent average statistics for the remaining students during the second year. As such, for Investors, if you can make it through the first year and into the second, then perhaps the outcomes are not nearly as bad.

The results of the study also reveal that the autonomy-supportive institutional interventions provided to students gave them an intangible form of capital (in this case, intrinsic motivation) that sustained their ability to apply themselves in a manner that produced greater academic outcomes, at least for a time. As suggested by Bourdieu (1993), 'players' who understand more fully the rules and rhythm of the game are likely to extract capital at more advantageous rates of exchange than less equipped peers. Through participation in the *Becoming a Learner* presentation and the FYE course, results suggest that students *were* able to grasp the *doxa* of the institution: the "set of core values and discourses which a field articulates as its fundamental principles and which tend to be viewed as inherently true and necessary" (Webb, Schirato, & Danaher, 2002, p. xi). Conversely, the results also show that a failure to grasp the core values resulted in

a disadvantaged position during the first academic year. For example, for Ambivalent students, taking up the institutional *doxa* and becoming Learners was associated with dramatically improved academic outcomes. Those Ambivalent students who did not make this shift were predicted to see abysmal academic results. Thus, by seeking to balance this disparity through clarifying the core values of the university, the institution achieved transformational equity for students. In this case, autonomy-oriented motivation served as a cultural practice that allowed the possessors to extract greater benefits from the university at more advantageous rates of exchange compared to other students who possessed more control-oriented tools and strategies.

An exciting aspect of these results is the reality that the *Becoming a Learner* presentation and FYE course are egalitarian acts performed by institutional actors that seek to advantage the disadvantaged. Rather than working to protect the interests of well-positioned students, the results of this study reveal that the interventions empowered individuals entering the institution with less academic capital than their peers, an enhancement that later paid academic dividends. As mentioned in Chapter 2, individuals with less cultural capital are, by the nature of their sociocultural standing, more likely to not fully recognize their dominated positions within society. Because of this, Bourdieu (2000) believed that the dominated classes often possess “resigned or fatalistic dispositions which lead members of the dominated classes to put up with objective conditions that would be judged intolerable or revolting by agents otherwise disposed” (p. 217), a description that marries well with the concept of amotivation. For example, many students were willing to endorse items such as “I can’t see why I go to college and, frankly, I couldn’t care less.” However, participation in the FYE course and the

Becoming a Learner presentation reversed this outlook. This finding supports the idea that “the academy’s position... within a dominant class has the potential to help it... [provide] access to literacies and positions of power that can assist these dominated groups” (Webb, Schirato, and Danaher, 2002, p. 139). As such, with this strongly influential communication from those at the *autonomous pole* of higher education, students in this study were no longer confined by the *heteronomous* discourses that are dominant in society.

Limitations and Suggestions for Future Research

A primary limitation of this study was that it was conducted at a single institution of higher education that happens to have atypical student demographics. The state of Utah itself is unique for being the only state in the nation with a majority of citizens belonging to a single religious sect: 62.8% of the state’s population are adherents to the Latter-day Saint faith (also known as Mormonism; Canham, 2017). This inevitably makes the state of Utah a lifestyle enclave parallel to that belief system, creating circumstances unlike any other state in the nation. Since 81% of Utah State University’s students are state residents, the student body likely possesses more uniform values and beliefs surrounding the value of education (a focus of the Latter-day Saint faith) than might exist at other institutions of higher education across the nation (Chadwick & Top, 2001). This study did not seek to determine to what extent this uniformity impacted the results achieved. Given that the proportions of students in each motivation profile differed in this study from the work of Hill (2013), it is possible that replication at another U.S. university would be useful in determining how ubiquitous these three profiles are.

A similar limitation to the one mentioned above is that, being 82% white, the USU student body does not have sufficient racial/ethnic diversity to support stable analyses regarding that topic. Replicating this research at a more ethnically diverse institution would be valuable, as it would help to define how populations who are educationally at-risk based on minority status fit into the larger motivational model discussed. Along these same lines, USU does not adequately or accurately track the first-generation status of its students; a known issue reported by the Office of Retention at USU is that many students misreport their first-generation status, not fully understanding the essential parameters. This was not fully understood at the outset of the present study. As such, examining how the three motivation profiles matched with first-generation status was not ultimately possible, although a more informed research design could procure this information from students and make such analyses possible. Similarly, an analysis of student socioeconomic status was not planned at the outset of the study, but seems valuable given the results obtained. Revisiting this topic remains a high priority in future iterations of this work, as the existing data set would yield meaningful insights into how SES interacts with student motivation and outcomes. Overall, this program of research would benefit from future attempts to more fully address marginalized student populations, especially considering the nice foundation that the Bourdieusienne framework lays for such analyses.

A limitation in the ability to replicate this study at other locations is that the interventions used are idiosyncratically tied to the institution itself. Logistically, it is very unlikely that other institutions of higher education would be able to wholly adopt the *Becoming a Learner* presentation for their incoming students. Similarly, it seems even

less likely that institutions would be able to adopt the FYE curriculum and course design without significant revision, as practitioners are so often wont to do. As such, research at other locations would need to consider the extent to which any intervention offered maintained a high degree of fidelity to the philosophies of the interventions discussed here. Issues to consider would be the autonomy-supportive nature of such interventions (Deci, Vallerand, et al., 1991) , their focus on the core values of the liberal tradition (as outlined in Chapter 2), and the extent to which they speak to the ideas captured in the eight items of the FYE course evaluation listed in Appendix B.

Another limitation in this study was that nearly all incoming USU students participated in the *Becoming a Learner* presentation, as it was a core element of mandatory incoming student orientation. As such, a meaningful comparison group did not exist to provide evident support that participation in the presentation was meaningfully associated with student transition amongst the motivational profiles. The workaround utilized (relying on students' ratings of the presentation while controlling for attentiveness) was satisfactory, but not overly satisfactory. For example, the predictive model was at least somewhat difficult to interpret (see Table 4.13). The results demonstrate that students' average and above average reactions to the presentation were associated with a greater likelihood to transition to the Learner profile, but an adequate comparison group would have made this finding more substantial.

As is not uncommon, this research study was designed in 2014, but primary analysis occurred three-and-a-half years later in 2017 and 2018. Consequently, some of the most informative and valuable literature referenced was not available to inform the research design. For example, three of the most influential studies on the analytic strategy

were published after the research design was finalized: Taylor et al. (2014); Bailey and Phillips (2016); and Gillet, Morin, and Reeve (2017). All three studies provided excellent examples of combining the AMS-C with other standardized measures of student well-being that would have married well with the current studies methods, such as the *Student Adaptation to College Questionnaire* (Baker & Siryk, 1989) and the *Meaning in Life Questionnaire* (Steger, Frazier, Oishi, & Kaler, 2006). These options may have been preferable to the unstandardized psychosocial well-being questions used here. Along this same line of reasoning, the scope of the research design used in this study was quite expansive, as evidenced in the 21 tables required to unfold the results in Chapter 4. Choosing to use more standardized measures of student well-being, such as the alternative questionnaires mentioned above, may have allowed for factor summarization, rather than an item-by-item analysis. Not surprisingly, standardized measures allow more results to be conveyed in fewer tables.

Implications for Practice

Polar ideals for education: An ongoing encounter. Despite the criticisms that have been raised in recent years regarding the viability of the overall higher education enterprise in the United States (Boles, 2012; Selingo, 2013; Blumenstyk, 2014), post-secondary education on the whole will likely remain an integral aspect of American society for many years to come. However, while post-secondary educational opportunities are not going away, the central tenets of the liberal arts philosophy could realistically be brushed aside and wholly supplanted with a newly envisaged, market-based model of adult education. As long as society continues to value national economic success as *the* article of faith for policymaking in education, other values that *could* be

developed through a well-constituted public university system will continue to be pushed aside: autonomy-oriented motivation, civic virtue, the public good, cultural vitality, democratic equity, transformative solidarity, domestic efficacy, and so forth. These niceties of civilization are not entitlements, but must be cultivated and intentionally fostered in each rising generation. As demonstrated in this research, while the market-based interpretation of higher education is prominent, it is not permanent. The interventions used in this research, namely an autonomy-supportive rationale and curriculum administered at the start of the university experience, were effective in shaping student beliefs and bringing them in greater alignment with the core values of the liberal arts tradition.

While any approach to shaping society is a gambit for improving the human condition, the heritage of the liberal arts, combined with a wide swath of empirical research (including this study), all support the idea that developing humanity—not exclusively professionalism—should be a core aim of our publically funded educational enterprises (Deci, Vallerand, et al., 1991; Vallerand & Bissonnette, 1992; Vansteenkiste et al., 2009; Rucker, 2012; Prowse & Delbridge, 2013; Tetreault, 2013; Taylor et al., 2014; Van Soom & Donche, 2014; Vaters, 2015; Bailey and Phillips, 2016; Cannard et al., 2016; Gillet, Morin, and Reeve, 2017; Hester, 2017). Indeed, educational policy should not pressure the system into an extrinsic corner. Institutions have a great deal more to offer than job-placement for graduates, but legislatures seem keen on inserting “job placement” into the language of any newly proposed bill for funding in higher education. Forcing institutions to increasingly measure their success using this metric is not only untenable, but amotivating for those that must administrate institutions of higher

education. This is especially true considering that the vast majority of Americans work in jobs unrelated to their major; indeed, only 27.3% work in a major-related field (Abel & Deitz, 2015). Falling back on the economy as a measure of success for every public enterprise is something that legislatures are increasingly encouraged to do (Castro, Poole, & Hammond, 2011). However, this behavior is antithetical to the community values that legislatures are supposedly founded to support. It is therefore concerning if the economy ever looms in the minds of our lawmakers as they steer educational policy. As demonstrated in the results of this study, rather than serving as society's economic engine, the academy needs to be restored to a state of freedom from the market in order to facilitate student success. As explained in the work of Sanders (2012), the mission of higher education can still serve the market, but educators and students should not be beholden to it. Indeed, the market is not the prime directive of society.

Notwithstanding this support for a more holistic approach to the academy, there will continue to be critical voices, who seek to steer the conversation back towards the market-values of *heteronomous pole*. For example, Elon Musk, himself a graduate of UPenn's Wharton School of Business and famous for his roles in PayPal, Tesla and SpaceX, recently quipped that "There's no need to even have a college degree—at all—or even high school. If somebody graduated from a great university, that may be an indication they are capable of great things, but that's not necessarily the case. You know, if you look at, say, people like Bill Gates or Larry Allison, Steve Jobs—these guys didn't graduate from college, but if you had a chance to hire them, of course that would be a good idea" (Auto Bild, 2014). Notice here that Musk's remark implies that "great things" are measured not by contributions made domestically, civically, or even culturally, but

exclusively by success in the market. As long as such voices are upheld to the public, the value of a broad, autonomy-oriented education will continue to be harried and marginalized. Indeed, the prominence of such dismissive voices accounts for why extrinsic motivation was so highly prized generally amongst students in this study, a key finding overall.

Increased access means increased obligation. In this era of increased access, universities cannot afford to assume that students arrive understanding the rules and rhythm of how to make university work for them. On the contrary, the results of this study demonstrate that incoming students enter with strategies of interpretation that would be more relevant in an external, *heteronomous* setting. Not inherently understanding the discourses originating from the *autonomous pole* of higher education, students are inclined to view post-secondary attainment primarily as a means to increase wages. As demonstrated in the academic outcomes achieved by the less autonomy-oriented students, a more market-based conception alienated them from extracting capital from the institution and was even associated with a greater likelihood of departure from the university. Conversely, strongly influential communication from figures at the *autonomous pole* of the institution resulted in a shift in student motivation towards the more autonomy-oriented end of the SDT continuum. This demonstrates that even once-*amotivated* students were, as Riesman (1980) described it, “capable not only of doing highly sophisticated work ‘at the frontiers of knowledge’ ... but also of doing diligent work” (p. 295). Thus, autonomy-supportive interventions fill a void that may have always existed, but one that has rarely been acknowledged.

Speaking of this problem—that universities do not always tell students the essentials of what they need to know in order to be successful—authors Webb, Schirato, and Danaher (2002) highlight how frequently universities expect students to simply thrive in an environment that often imposes uncontextualized expectations: “This failure lies at the heart of the higher educational system: students are charged with reproducing a discourse that is foreign to them, but which they understand is important in negotiating their way through their university careers” (p. 131). In other words, students understand that the credential is important, but do not understand why the credential necessarily contains its constituent parts, such as general education. For example, Copeland and Levesque-Bristol (2011) found that students who did not understand the value of general education requirements experienced a much more stressful learning climate than students who could articulate the value of such courses:

Many students who feel pressured to take general education requirements which they do not find useful to their course of study have less positive perceptions of the learning climate. By simply giving students adequate justification for such requirements and by encouraging teachers to periodically take time to discuss and reiterate the value and potential applications of course material, many students will begin to perceive the course as useful. Furthermore, by relating course materials to individual students’ interests, students will be more likely to perceive the course as useful throughout its duration. (p. 509).

Notwithstanding this opportunity to increase student awareness regarding the value of general education, society is not making it easy for students to even possess the right metrics for measuring the value of a liberal arts experience. For example, politicians (even Barack Obama, at times) and other talking heads keep insisting that job-placement—not breadth or depth of understanding—is the measure of post-secondary

success. This reality means that those interested in preserving higher education for the public good and for the good of the disadvantaged must necessarily take up the cause and do the work of convincing society that there are alternative metrics of higher education's value that are as meaningful. Put a different way, the liberal arts tradition needs to be restored as a key article of faith within United States education policy.

Alignment between student beliefs and institutional core values matters.

Bourdieu (1993) suggested that it is the obligation of the scholastically privileged among us, who may have a more advantageous perspective on social ills, to intervene—to help the larger group and especially the disadvantaged. This concept is explained by Webb, Schirato, and Danaher (2002):

Students and professors are given a vantage point to see the world from a larger and wider perspective than that available to those who are preoccupied with acting within it according to immediate demands and necessities. It is rather like a person who looks at a town from an overlooking hill, able to peer down at all the streets and houses. In some senses that person's perspective is more privileged than that of someone driving a car within the town, who is preoccupied with the immediate needs of negotiating the traffic and avoiding a crash. The spectator on the hill is granted the semblance of the objective perspective which Bourdieu sees as vital to reflexive practice. (p. 137)

The results of this study reveal that a serious disadvantage that students can have when entering university is not possessing the right motivational lenses of interpretation. Students who did not shift towards a more autonomy-oriented motivation profile were not only more likely to leave the institution, but also achieved poorer academic results. Unfortunately, their unmet expectations set the stage for academic alienation. As highlighted in Chapter 2, many students are attracted to universities via the ongoing

admissions arms race, which sets student expectations for university based on images of smiling coeds, sprawling emerald lawns, and occupationally-tethered degree programs. However, most of what is asked of incoming students is not explicitly connected to professional development and requires diligent work, with only intermittent opportunities for social engagement and recreation. The results of this study reveal that institutions might do well to dynamically shift the conversation—and student results—by focusing more on intrinsic and autonomy-supportive messaging to prospective students. This means appropriately setting student expectations for the work that will be required of them, which only takes meaning when viewed through the core values of the liberal arts tradition. This messaging cannot occur early enough and the results of this study even indicate that such a rationale may need to be provided to more than just students.

As was explored in Chapter 1 and 2, so much of what students believe about the purposes of a college education is based on what they are exposed to throughout their entire lives—domestically from their parents and siblings, socially from friends and neighbors, institutionally from schools and religious organizations, commercially as consumers in the market, and culturally as participants in the greater society. The results of this study and others (e.g. Deci, Vallerand, et al., 1991) suggest that we might have greater success if the values of the liberal arts tradition were disseminated further upstream, rather than waiting until students are at our doorstep. Intimating to students a more autonomy-supportive view of higher education could be accompanied by efforts to share the same message with K12 students, parents, K12 educators, guidance counselors, policymakers, and individuals in the private sector. University admissions and recruiting offices may be an especially important stop on this whistlestop tour. Put succinctly, the

message that needs to be conveyed to society is that students thrive when the whole person is educated and autonomy is supported. Indeed, evidence suggests that society thrives when its citizens are well educated. For example, Table 5.1 reveals a quick review of just a few contributions (economic, domestic, and civic) that more highly educated individuals make to society, in general. While not comprehensive, such results are likely useful for building this conversation that, when properly contextualized, the hard work of post-secondary attainment pays off in more than just the single domain of economics.

Table 5.1

Contributions that more highly educated individuals make to society—economic, domestic, and civic (all correlative)

Category of Contribution	Level of Educational Attainment			
	High School	Certificate	Associates	Bachelors
Median Lifetime Earnings ^{1,2}	\$1,304,000	\$1,544,000	\$1,727,000	\$2,268,000
Top Lifetime Earnings ¹	\$1,876,000	\$2,220,000	\$2,292,000	\$4,483,000
Unemployment Rate ⁴	7.03%		~5.89%	3.35%
20-year Divorce Rate for Women ³	59%		~51%	22%
20-year Divorce Rate for Men ³	53%		~46%	35%
Participation in Volunteerism ⁵	15.6%		26.5%	38.8%

Note on sources. 1. Carnevale, Rose, and Cheah (2011); 2. Carnevale, Rose, and Hanson (2012); 3. Copen, Daniels, Vespa, and Mosher (2012); 4. Bureau of Labor Statistics, U.S. Department of Labor (2015); 5. Bureau of Labor Statistics, U.S. Department of Labor (2016).

The relationship between intrinsic motivation and the core values of the liberal arts tradition should not be overlooked, not in the least because this study demonstrated that developing higher levels of autonomy-orientation in the first year was associated with a greater likelihood to persist toward graduation. Previous research has associated graduating from college with an increased likelihood to make higher quality civic contributions:

After reviewing in the research on societal benefits stemming from increased levels of education, [researchers] concluded that college graduates are better citizens: they are more likely to vote, more likely to assume civic leadership positions, more likely to utilize new technologies, more likely to support advanced education for their children and their communities, and less likely to be involved in criminal activities. (Hossler, Schmit, & Vesper, 1999, p. 5).

Not surprisingly, individuals that are more autonomy-oriented in their motivations, like the Learners in this study, are also more likely to be civically active. In the work of Koestner, Losier, Vallerand, and Carducci (1996), intrinsic motivation was associated with a greater likelihood to seek out information about political issues and, more importantly, to be more accurate in knowledge of campaign issues, especially compared to more extrinsically motivated citizens. Similarly, high levels of EM *identified* are a strong indicator of likeliness to vote, which may reveal Learners, with their combination of intrinsic motivation and EM *identified*, would not only be more likely than their peers to vote, but also to possess accurate knowledge about campaign issues and candidates while doing so. Similarly, intrinsic motivation has been linked to increased intentions to volunteer (Wu, Li, & Khoo, 2016) and to work harder while volunteering (Bidee et al., 2013). These characteristics suggest that there is reason to believe that more autonomy-

oriented students are subsequently more equipped to fulfill the obligations typically associated with a citizen scholar by contributing to the economic, civic, and cultural vitality of society.

Sadly, this core ideal of the liberal arts tradition—that graduates can make contributions outside the professional domain—is not self-evident, widely accessible, or even intuitive. The reality that a broad, autonomy-supportive education is not only better for the individual, but better for society is an important message, but one that is easily lost in the larger fray. We cannot expect that policymakers, who are mostly business owners and lawyers (Pew Charitable Trusts, 2015), will naturally “get” this message without intentional intervention. So too, we must realize that K12 educators are often not provided with resources they need to grasp, internalize, and share this message with their students. Instead, the ever-present auspices of Taylorism (Au, 2011) convey a different message, one that conflates education with industry. Speaking of this problem over thirty years ago, Katz (1987) pointed to the issue as one with moral gravity: “Universities are less able than ever to define the ways in which they are distinct from other social institutions, how the principles on which they operate differ from those in business and government, and why they should enjoy special privileges. Therefore, the next great crisis of the university may not be demographic, fiscal, or organizational. Instead, it may be moral” (p. 180). For those that agree, it is likely that significant headway in restoring the core values of the liberal arts tradition will not occur until we work to reprioritize occupational relevance—and even the credential itself—to be ancillary aspects of the *real* mission of public higher education: holistic, autonomy-supportive education for the public good. As was so charismatically argued by Pasi Sahlberg (2011), part of this

process includes deprioritizing standardized assessment, a main specter of market-driven administration (see also Robinson, 2010). Moreover, the process requires a recognition that, because empirical evidence only takes the conversation so far, an added measure of philosophical/moral assertion remains an integral part of upholding the higher education enterprise for both the public and personal good.

Ongoing support of autonomy is critical. Embedded in the results of this study, which showed diminishing effects of the autonomy-supportive motivational intervention, is evidence to support the need to regularly revisit the core values of education with students. Peripheral discourses will always swirl and erode the foundation of student motivation in the absence of messaging from the *autonomous pole* of the field. As history has often shown, the forces of entropy will always chip away at the highest morals of society, drawing it towards breakdown (Isaacson, 2007). As such, those at the *autonomous pole* cannot rest in their cultivation without surrendering ground to *heteronomous* influences. For example, The Wall Street Journal recently featured an article called “U.S. colleges are separating into winners and losers” (Belkin, 2018). The article reviewed an analysis regarding how some universities in this age are enjoying vibrant success while others are not. Following this analysis, the author used Clemson as evidence to unabashedly support a single supposed characteristic that universally makes institutions successful: “Clemson’s success is tied to its embrace of the labor market... The school has several corporate partners and has tied curriculum to their needs” (para. 19). Though small and baseless, such minor incursions against the liberal arts and in favor of the market, when as high profile, are how specious ideological structures are created and maintained (Gladwell, 2006).

When institutions speak of improving retention or improving student well-being, they often miss the reality that the issue they are tiptoeing around is the need to overcome the system's own alienation of students. As explained by Osin (2017), a body of philosophy that supports the theories of Deci & Ryan (1985) has examined the proposition that institutional structures, particularly in the realm of education, often create their own internal barriers to student self-determination:

The category of alienation has been used to explain the interconnections between a number of negative phenomena (students' experience of their powerlessness and the senselessness of learning, dissatisfaction with education, copying from other students' work, absenteeism, withdrawal from the educational system) and the content of the educational activities as well as the peculiarities of the social institutions of the educational system. (p. 264)

Put another way, institutions often provide students with less-than-ideal educational offerings that undermine student confidence in the prospect of post-secondary attainment. When combined with archaic policies and outmoded services, it is little wonder that huge numbers of students simply walk away from higher education.

While the results of the present study support ongoing, autonomy-supportive intervention for students, the prospect is a two-edged sword. Part of this involves proliferating autonomy-supportive interventions throughout the institution, with a desire to sustain student—and institutional—well-being overtime. Specifically, if a few institutional actors convey to students that higher education is a vanguard for supporting broad, holistic, autonomy-supportive development, then the entire institution needs to work together to deliver on that ideal. To achieve this, universities should hold high internal standards for faculty, staff, and administrators, expecting all to be competent

wielders of the torch of education. Indeed, in order to accomplish this, it is just as likely that faculty, staff, and administrators would benefit from autonomy-supportive engagement as well. As explained by Tinto (2008):

High expectations are an essential condition for student success. Simply put, no one rises to low expectations. But establishing high expectations is no simple matter. It requires more than just words... It also requires the establishment of policies and practices — and in turn, patterns of faculty, staff, and student actions — that reinforce those words in everyday practice... Attaining high expectations requires high support... Without support, high expectations are but a hollow promise. (p. 2)

Indeed, poor training and poor support surrounding the core values of the liberal tradition does little else but to squander the public trust. Instead, institutions should set high expectations for students and faculty alike and then provide commensurate support for everyone to succeed.

Turning the tide of student beliefs and motivation. Perhaps greatest amongst this study's implications for practices is support for the need to shift towards intervening on habits of mind, rather than habits of behavior (e.g. study skills). Adding these results to the top of the pile, there exists a litany of empirical evidence to support autonomy-supportive educational environments (Deci, Vallerand, et al., 1991; Vallerand & Bissonnette, 1992; Vansteenkiste et al., 2009; Rucker, 2012; Prowse & Delbridge, 2013; Tetreault, 2013; Taylor et al., 2014; Van Soom & Donche, 2014; Vaters, 2015; Bailey and Phillips, 2016; Cannard et al., 2016; Gillet, Morin, and Reeve, 2017; Hester, 2017). Perhaps no one has explained the need for a return to developing students' humanity better than Jack Ma, founder of *Alibaba*—a multinational e-commerce, retail, and

technology conglomerate. Speaking at the World Economic Forum, Ma (2018) shared the following thoughts:

Only by changing education, our children can compete with machines. It is likely that robots will replace hundreds of millions of jobs by 2030. If we do not change the way we teach, we will be in trouble. The way we teach, the things we teach our kids are things from the past 200 years, it is knowledge based and we cannot teach our kids to compete with machines—they are smarter. Teachers must stop teaching knowledge, we have to teach something unique, so that a machine can never catch up with us. These are the soft skills we need to be teaching our children: values, believing, independent thinking, teamwork, care for others. Knowledge will not teach you that. That is why I think we should teach our kids sports, music, painting and art in general—to make sure humans are different. Everything we teach should be different from machines. If a machine could do better, you need to think about it! (n.p.)

Taken as a whole, this body of research implies that the economic motivations for post-secondary attainment are far afield from society's best interests. However, this study reveals that the prospect of turning the tide is not a lost cause and could realistically contribute to achieving more democratic equity within society,

Conclusion

The purpose of this study was to assess the extent to which student motivations shifted in response to institutional interventions—specifically, an FYE course and a motivational presentation during incoming student orientation. The results of the study demonstrate that institutional interventions *can* shift students into greater alignment with the core values of higher education and that this shift *is* associated with great academic outcomes. Additionally, the results support the idea that attenuating such interventions might facilitate greater influence on the dynamics of student motivations towards more self-determined academic orientation.

The sum of this project supports the idea that *beliefs about what it means to be a student matter*. As has been shown in previous research, what students *believe* about the purpose of a university education and about the purpose of being an undergraduate student can be widely varied. Some believe the purpose of a college education is to prepare them for entry into the job market, seeing themselves as valuable to society in an exclusively occupational way. Other students believe that the experience of a university education is about achieving both career competence *and* growth towards their personal potential in many domains—accomplishment, proving oneself, deep learning. Still yet, there are a few students who are not particularly sure *why* the university experience is valuable, whether to themselves, to prospective employers, or to society—but these students do not necessarily stay that way.

The core findings reveal the idea that meaningful academic outcomes *are* the product of student beliefs about the purposes of university education and their motivations for attending. Students' core beliefs about their own role as undergraduates and about the purposes of higher education shape their expectations for the nature of the relationship they create and maintain with the institution. In this way, these beliefs may act as a sort of *climate* for student academic engagement. Subsequent attitudes and behaviors flow out of this climate, representing the *daily weather* of student-being. Ultimately, these day-to-day attitudes and behaviors produce final and meaningful academic outcomes, which either reinforce or negate the original beliefs.

If a student believes that a post-secondary education will exclusively prepare them for a narrow band of career opportunities in the occupational domain, then they may approach their academics in a way that welcomes a great deal of prescribed coursework.

This set of beliefs will produce a matching identity for the student to embrace; the student might conceive of themselves as a commodity on a production line, where progress at each benchmark is certified by the faculty, whose exclusive role is grading the quality of goods. These students' daily attitudes, especially in the face of adversity, confusion, and the radical independence that college life often produces, might lead to commensurate behaviors of disengagement. Such behaviors ultimately achieve less than ideal outcomes. In this way, core beliefs set student expectations for the obligations they must live up to and also frames the level of commitment they are willing to demonstrate. This view of student well-being speaks to importance of understanding the dynamic relationship between student beliefs about the purposes of a college education and their ultimate success.

Despite the shift towards a more market-driven philosophy within higher education, the university programs examined in this study were effective in creating greater alignment between student motivations and the central tenets of the liberal arts philosophy. Applying Bourdieu's theory of cultural reproduction and the central tenets of SDT, this research also demonstrated that these interventions created greater alignment with the organizational mission of the institution. What's more, this congruence with the *autonomous pole* was associated with a higher yield of cultural capital amongst students, as measured by academic self-efficacy, course performance, psychosocial well-being, and retention from year-to-year. Overall, these results support the idea that working to create greater alignment between student beliefs and university mission statements should be an integral function of universities' incoming student orientation and first-year-experience

programs. The findings also echo the conclusions of Copeland and Levesque-Bristol (2011):

Beyond what has been suggested above, one of the greatest things that a university can do to foster the path to student success is to train all faculty and staff on the importance of autonomy supportive and adequately challenging environments and positive relationships. If all aspects of an institution... worked together to create a more positive learning environment and one that aimed to fulfill the basic psychological needs of each student, we believe that student retention would become an obsolete concern. (p. 512)

Indeed, educators who seek to help disadvantaged students rise above the strong current of market-ideology can be confident that their efforts are not only empirically supported, but can help produce meaningful academic gains. As Michael Apple (2004) once suggested, education is both a political and ethical act, which means that educators need not shy away from the opportunity to convey beliefs and practices that have been shown to produce the greatest amounts of success. Such success supports the highest levels of democratic equity. In providing such support, educators are making good on their personal potential to improve the human condition through the scholastic empowerment of the rising generation.

REFERENCES

- Abel, J. R., & Deitz, R. (2015). Agglomeration and job matching among college graduates. *Regional Science and Urban Economics*, *51*, 14-24.
- Adamson, M. (2009). The financialization of student life: Five propositions on student debt. *Polygraph*, *21*, 97-110.
- Alquist, J. L., Baumeister, R. F., & Tice, D. M. (2012, January). *What you don't know can hurt you: Uncertainty depletes self-regulatory resources*. Paper presented at the meeting of the Society for Personality and Social Psychology, San Diego, CA.
- Apple, M. W. (1978). Ideology, reproduction, and educational reform. *Comparative education review*, *22*(3), 367-387.
- Apple, M. W. (2004). *Ideology and curriculum*. Routledge.
- Arum, R., & Roksa, J. (2011). *Academically adrift: Limited learning on college campuses*. University of Chicago Press.
- Astin, A. W. (1965). *Who goes where to college?* Science Research Associates.
- Astin, A. W. (1970). The methodology of research on college impact, part one. *Sociology of Education*, *223-254*.
- Astin, A. W. (1975). *Preventing students from dropping out*. San Francisco: Jossey-Bass.
- Atkinson, J. W., & Reitman, W. R. (1956). Performance as a function of motive strength and expectancy of goal-attainment. *The Journal of Abnormal and Social Psychology*, *53*(3), 361.
- Au, W. (2010). *Unequal by design: High-stakes testing and the standardization of inequality*. Routledge.
- Au, W. (2011). Teaching under the new Taylorism: High-stakes testing and the

- standardization of the 21st century curriculum. *Journal of Curriculum Studies*, 43(1), 25-45.
- Auto Bild. (2014, November 5). Tesla CEO Elon Musk [Video File]. Retrieved from <https://www.youtube.com/watch?v=FE4iFYqi4QU>
- Babcock, P., & Marks, M. (2010). Leisure college, USA: The decline in student study time. *Education Outlook, No. 7*. American Enterprise Institute for Public Policy Research.
- Babcock, P., & Marks, M. (2011). The falling time cost of college: Evidence from half a century of time use data. *Review of Economics and Statistics*, 93(2), 468-478.
- Bailey, T. H., & Phillips, L. J. (2016). The influence of motivation and adaptation on students' subjective well-being, meaning in life and academic performance. *Higher Education Research & Development*, 35(2), 201-216.
- Baker, S. R. (2004). Intrinsic, extrinsic, and amotivational orientations: Their role in university adjustment, stress, well-being, and subsequent academic performance. *Current Psychology*, 23(3), 189-202.
- Baker, R.W., & Siryk, B. (1989). *Student Adaptation to College Questionnaire (SACQ)*. Los Angeles, CA: Western Psychological Services.
- Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191.
- Baumeister, R. F., & al-Ghamdi, N. (2014). Relevance of willpower dynamics, self-control, and ego depletion to flawed student decision making. *International Journal of Education and Social Science*, 1(3), 147-155.
- Belkin, D. (2018, February 21). U.S. colleges are separating into winners and losers. The

- Wall Street Journal. Retrieved from <https://www.wsj.com/articles/after-decades-of-growth-colleges-find-its-survival-of-the-fittest-1519209001>
- Bidee, J., Vantilborgh, T., Pepermans, R., Huybrechts, G., Willems, J., Jegers, M., & Hofmans, J. (2013). Autonomous motivation stimulates volunteers' work effort: A self-determination theory approach to volunteerism. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 24(1), 32-47.
- Blumenstyk, G. (2014). *American higher education in crisis*. Oxford University Press.
- Boiché, J., & Stephan, Y. (2014). Motivational profiles and achievement: A prospective study testing potential mediators. *Motivation and Emotion*, 38(1), 79-92.
- Bok, D. C. (1986). *Higher learning*. Harvard University Press.
- Bok, D. (2006). *Our underachieving colleges: A candid look at how much students learn and why they should be learning more*. Princeton University Press.
- Boles, B. (2012). *Better than college: How to build a successful life without a four-year degree*. California: Teller Press.
- Botstein, L. (1991). Reclaiming the tradition: Education reform in historical perspective. In Scott, B. A. & Sloan, R. P. (Eds.). (1991). *The liberal arts in a time of crisis*, 103-114. New York: Westport
- Bourdieu, P. (1974). The school as a conservative force: scholastic and cultural inequalities. In J. Eggleston (Ed.). *Contemporary research in the sociology of education*. London: Methuen.
- Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*. Harvard University Press.
- Bourdieu, P. (1986). The forms of capital. In J. Richardson (Ed.) *Handbook of theory and*

- research for the sociology of education*, 241-258. New York: Greenwood.
- Bourdieu, P. (1993). *The field of cultural production: Essays on art and literature*. Columbia University Press.
- Bourdieu, P. (1994). Rethinking the state: Genesis and structure of the bureaucratic field. *Sociological Theory*, 12(1), 1-18.
- Bourdieu, P. (1998). *Practical reason*. Cambridge: Polity Press.
- Bowles, S. & Gintis, H. (1977). *Schooling in capitalist America*. New York: Basic Books.
- Brown, A. D. (2016). *Corporatized higher education: A quantitative study examining faculty motivation using self-determination theory*. (Doctoral dissertation, University of Nevada, Las Vegas).
- Bureau of Labor Statistics, U.S. Department of Labor (2015, April). Unemployment rates by educational attainment. *The Economics Daily*. Retrieved from <https://www.bls.gov/opub/ted/2015/unemployment-rates-by-educational-attainment-in-april-2015.htm>
- Bureau of Labor Statistics, U.S. Department of Labor (2016, February). Volunteering in the United States, 2015. *Economic News Release*. Retrieved from <https://www.bls.gov/news.release/volun.nr0.htm>
- Callan, P. (2006). *Commentary on measuring up 2006 report*. San Jose, CA: The National Center for Public Policy and Higher Education.
- Canham, M. (2017, July 16). Salt Lake County is becoming less Mormon – Utah County is headed in the other direction. *Salt Lake Tribune*. Retrieved from <http://archive.sltrib.com/article.php?id=5403049&itype=CMSID>

- Cannard, C., Lannegrand-Willems, L., Safont-Mottay, C., & Zimmermann, G. (2016).
Brief report: Academic amotivation in light of the dark side of identity formation.
Journal of Adolescence, 47, 179-184.
- Carnevale, A. P., Rose, S.J., & Cheah, B. (2011). *The college payoff: Education, occupations, lifetime earnings*. Washington, DC: Georgetown University Center on Education and the Workforce.
- Carnevale, A., Rose, S. J., & Hanson, A. (2012). *Certificates: Gateway to gainful employment and college degrees*. Washington, DC: Georgetown University Center on Education and the Workforce.
- Carnoy, M., Froumin, I., Loyalka, P. K., & Tilak, J. B. (2014). The concept of public goods, the state, and higher education finance: a view from the BRICs. *Higher Education*, 68(3), 359-378.
- Castro, J., Poole, K., & Hammond, B. (2011, August). *The critical link between higher education and economic development*. Presented at the Annual Summit of the National Conference of State Legislatures.
- Chadwick, B. A., & Top, B. L. (2001). "Seek learning, even by study and also by faith": The relationship between personal religiosity and academic achievement among Latter-day Saint high-school students. *Religious Educator: Perspectives on the Restored Gospel*, 2(2), 12.
- Christensen, C. M., & Eyring, H. J. (2011). *The innovative university: Changing the DNA of higher education from the inside out*. John Wiley & Sons.
- Cicero, M.T. (2001). *Cicero on the ideal orator (De Oratore)*. New York: Oxford University Press.

- Clark, M. H., & Cundiff, N. L. (2011). Assessing the effectiveness of a college freshman seminar using propensity score adjustments. *Research in Higher Education*, 52(6), 616-639.
- Cohen, P. (2016, February 21). A rising call to promote STEM education and cut liberal arts funding. *The New York Times*. New York, p. B1-B3.
- Cokley, K. O., Bernard, N., Cunningham, D., & Motoike, J. (2001). A psychometric investigation of the academic motivation scale using a United States sample. *Measurement and Evaluation in Counseling and Development*, 34(2), 109.
- Collins, L. M., & Lanza, S. T. (2013). *Latent class and latent transition analysis: With applications in the social, behavioral, and health sciences*. John Wiley & Sons.
- Copeland, K. J., & Levesque-Bristol, C. (2011). The retention dilemma: Effectively reaching the first-year university student. *Journal of College Student Retention: Research, Theory & Practice*, 12(4), 485-515.
- Copen, C. E., Daniels, K., Vespa, J., & Mosher, W. D. (2012). First marriages in the United States: data from the 2006–2010 National Survey of Family Growth. *National health statistics reports*, 49(1), 1-22.
- Covaleskie, J. F. (2010). Educational attainment and economic inequality: What schools cannot do. *Journal of Thought*, 45(1), 83-96.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334.
- Daugherty, T. K., Rusinko, J. P., & Griggs, T. L. (2013). Math beliefs: Theory-framed and data-driven student success. *Learning Assistance Review*, 18(2), 67-104.
- Davison, M. L., Kim, S.-K., & Close, C. (2009). Factor analytic modeling within person

- variation in score profiles. *Multivariate Behavioral Research*, 44, 668-687.
- Deci, E. L., Connell, J. P., & Ryan, R. M. (1989). Self-determination in a work organization. *Journal of Applied Psychology*, 74(4), 580.
- Deci, E. L., Eghrari, H., Patrick, B. C., & Leone, D. R. (1994). Facilitating internalization: The self-determination theory perspective. *Journal of Personality*, 62(1), 119-142.
- Deci, E.L. & Ryan, R.M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Deci, E. L., & Ryan, R. M. (2000). The " what" and " why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227-268.
- Deci, E. L. & Ryan, R. M. (2002) (Eds.). *Handbook on self-determination research*. Rochester: University of Rochester Press.
- Deci, E. L., Vallerand, R. J., Pelletier, L. G., & Ryan, R. M. (1991). Motivation and education: The self-determination perspective. *Educational Psychologist*, 26(3-4), 325-346.
- Dorrance Hall, E., McNallie, J., Custers, K., Timmermans, E., Wilson, S. R., & Van den Bulck, J. (2017). A cross-cultural examination of the mediating role of family support and parental advice quality on the relationship between family communication patterns and first-year college student adjustment in the United States and Belgium. *Communication Research*, 44(5), 638-667.
- Duffy, E.A., & Goldberg, I. (1998). *Crafting a class: College admissions and financial aid, 1955-1994*. Princeton, New Jersey: Princeton University Press.
- Dweck, C. S. (2006). *Mindset: The new psychology of success*. Random House

Incorporated.

- Dweck, C.S. (2007). The secret to raising smart kids. *Scientific American Mind*, 18(6), 36-43.
- Eisner, E. (2002). *The educational imagination*. Upper Saddle River, NJ: Merrill.
- Ellsberg, M. (2011). *The Education of Millionaires: Everything You Won't Learn in College about how to be Successful*. Penguin.
- Engel, M. (1991). Ideology and the politics of public higher education: Responses to budget crises and curricular reorganization. In Scott, B. A. & Sloan, R. P. (Eds.). (1991). *The liberal arts in a time of crisis*. New York: Westport, 33-46.
- Fairchild, A. J., Horst, S. J., Finney, S. J., & Barron, K. E. (2005). Evaluating existing and new validity evidence for the Academic Motivation Scale. *Contemporary Educational Psychology*, 30(3), 331-358.
- Fazey, D. M., & Fazey, J. A. (2001). The potential for autonomy in learning: Perceptions of competence, motivation and locus of control in first-year undergraduate students. *Studies in Higher Education*, 26(3), 345-361.
- Fryer, L., Van den Broeck, A., Ginns, P., & Nakao, K. (2016). Understanding students' instrumental goals, motivation deficits and achievement: Through the lens of a latent profile analysis. *Psychologica Belgica*, 56(3).
- Fuller, M. B. (2014). A history of financial aid to students. *Journal of Student Financial Aid*, 44(1), 4.
- Gagné, M. (2003). The role of autonomy support and autonomy orientation in prosocial behavior engagement. *Motivation and Emotion*, 27(3), 199-223.

- Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational behavior, 26*(4), 331-362.
- Geiser, C. (2012). *Data analysis with Mplus*. Guilford Press.
- Gillet, N., Morin, A. J., & Reeve, J. (2017). Stability, change, and implications of students' motivation profiles: A latent transition analysis. *Contemporary Educational Psychology, 51*, 222-239.
- Gladwell, M. (2006). *The tipping point: How little things can make a big difference*. Back Bay Books.
- González, N., Moll, L. C., & Amanti, C. (Eds.). (2006). *Funds of knowledge: Theorizing practices in households, communities, and classrooms*. Routledge.
- Gorin, J. S., Husman, J., & Turner, J. E. (1998). *The interaction of extrinsic and intrinsic motivation on college students' use of learning*. Presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Graunke, S. S., & Woosley, S. A. (2005). An exploration of the factors that affect the academic success of college sophomores. *College Student Journal, 39*(2).
- Guay, F., Morin, A. J., Litalien, D., Valois, P., & Vallerand, R. J. (2015). Application of exploratory structural equation modeling to evaluate the academic motivation scale. *The Journal of Experimental Education, 83*(1), 51-82.
- Harvey, W. B., Harvey, A. M., & King, M. (2004). The impact of the Brown v. Board of Education decision on postsecondary participation of African Americans. *Journal of Negro Education, 328-340*.
- Heller, H. (2016). *The Capitalist University: The Transformations of Higher Education in the United States (1945-2016)*. Pluto Press.

- Hersh, R. H. (1997). The liberal arts college: The most practical and professional education for the twenty-first century. *Liberal Education*, 83(3), 26-33.
- Hester, S. R. (2017). *The effect of motivation on academic performance in traditional and non-traditional freshmen college students*. (Doctoral dissertation, Grand Canyon University).
- Hill, A. P. (2013). Motivation and university experience in first-year university students: A self-determination theory perspective. *Journal of Hospitality, Leisure, Sport & Tourism Education*, 13, 244-254.
- Hollinshead, B. S. (1952). *Who should go to college?* Columbia University Press.
- Hossler, D., Schmit, J., & Vesper, N. (1999). *Going to college: How social, economic, and educational factors influence the decisions students make*. JHU Press.
- Howard, A., & Gaztambide-Fernandez, R. A. (Eds.). (2010). *Educating elites: Class privilege and educational advantage*. New York: Rowman & Littlefield.
- Husman, J., & Lens, W. (1999). The role of the future in student motivation. *Educational Psychologist*, 34(2), 113-125.
- Isaacson, W. (2007, May). The empire in the mirror. *The New York Times*. Retrieved from <http://www.nytimes.com/2007/05/13/books/review/Isaacson-t.html?mtrref=www.google.com>
- Isiksal, M. (2010). A comparative study on undergraduate students' academic motivation and academic self-concept. *The Spanish Journal of Psychology*, 13(2), 572-585.
- Jacobs, J. (2004). Credentialing vs. educating. *The Virginia Quarterly Review*, 80 (2).
- Jang, H. (2008). Supporting students' motivation, engagement, and learning during an uninteresting activity. *Journal of Educational Psychology*, 100(4), 798.

- Johnson, J., Showalter, D., Klein, R., & Lester, C. (2014). *Why rural matters 2013-2014: The condition of rural education in the 50 states*. Rural School and Community Trust.
- Jung, T., & Wickrama, K. A. S. (2008). An introduction to latent class growth analysis and growth mixture modeling. *Social and Personality Psychology Compass*, 2(1), 302-317.
- Kane, H. (2001). *Triumph of the mundane: The unseen trends that shape our lives and environment*. Washington, DC: Island Press.
- Kasser, T. (2002). *The high price of materialism*. Cambridge, MA: MIT Press.
- Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: Correlates of financial success as a central life aspiration. *Journal of Personality and Social Psychology*, 65, 410-422.
- Kasser, T., & Ryan, R. M. (1996). Further examining the American dream: Differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin*, 22, 281-288.
- Kasser, T., Ryan, R. M., Zax, M., & Sameroff, A. J. (1995). The relations of maternal and social environments to late adolescents' materialistic and prosocial values. *Developmental Psychology*, 31(6), 907.
- Katz, M. B. (1987). *Reconstructing American Education*. Harvard University Press.
- Kelly, K. F. (2001). *Meeting needs and making profits: The rise of for-profit degree-granting institutions*. Denver, CO: Education Commission of the States.
- Kinzie, J., Palmer, M., Hayek, J., Hossler, D., Jacob, S. A., & Cummings, H. (2004).

Fifty years of college choice: Social, political and institutional influences on the decision-making process. *New Agenda Series*, (5)3. Lumina Foundation for Education.

Klein, H. A., Levenburg, N. M., McKendall, M., & Mothersell, W. (2007). Cheating during the college years: How do business school students compare? *Journal of Business Ethics*, 72(2), 197-206.

Koestner, R., Losier, G. F., Vallerand, R. J., & Carducci, D. (1996). Identified and introjected forms of political internalization: Extending self-determination theory. *Journal of personality and social psychology*, 70(5), 1025.

Kotler, P., & Fox, K. F. (1985). *Strategic marketing for educational institutions*. Prentice-Hall.

Kriegbaum, K., Villarreal, B., Wu, V. C., & Heckhausen, J. (2016). Parents still matter: Patterns of shared agency with parents predict college students' academic motivation and achievement. *Motivation Science*, 2(2), 97.

Kyndt, E., Coertjens, L., Van Daal, T., Donche, V., Gijbels, D., & Van Petegem, P. (2015). The development of students' motivation in the transition from secondary to higher education: A longitudinal study. *Learning and Individual Differences*, 39, 114-123.

Labaree, D. F. (1997). *How to succeed in school without really learning: The credentials race in American education*. Yale University Press.

Labaree, D. F. (2017). *A perfect mess: The unlikely ascendancy of American higher education*. University of Chicago Press.

Lam, C. F., & Gurland, S. T. (2008). Self-determined work motivation predicts job

outcomes, but what predicts self-determined work motivation? *Journal of research in personality*, 42(4), 1109-1115.

Lavender, M. M. (2005). *Comparison of academic motivation of academically prepared and academically unprepared community college students*. (Dissertation, Florida State University).

Lazarsfeld, P. F., & Henry, N. W. (1968). *Latent structure analysis*. Boston: Houghton Mifflin.

Liang, B., White, A., Mousseau, A. M. D., Hasse, A., Knight, L., Berado, D., & Lund, T. J. (2017). The four P's of purpose among college bound students: People, propensity, passion, prosocial benefits. *The Journal of Positive Psychology*, 12(3), 281-294.

Lo, Y., Mendell, N. R., & Rubin, D. B. (2001). Testing the number of components in a normal mixture. *Biometrika*, 88(3), 767-778.

Ma, J. (2018, January). An insight, an idea with Jack Ma. [Interview]. *World Economic Forum, Davos, Switzerland*.

Mann, H. (1848). *Twelfth annual report as Secretary of Massachusetts State Board of Education*. Retrieved from <https://genius.com/Horace-mann-twelfth-annual-report-to-the-secretary-of-the-massachusetts-state-board-of-education-1848-annotated>

Mann, H. (1855). *Lectures on education*. WB Fowle and N. Capen.

Marsh, H. W., Lüdtke, O., Trautwein, U., & Morin, A. J. (2009). Classical latent profile

- analysis of academic self-concept dimensions: Synergy of person-and variable-centered approaches to theoretical models of self-concept. *Structural Equation Modeling*, 16(2), 191-225.
- Marx, K. (1844). *Economic and philosophic manuscripts of 1844*. (M. Milligan, Trans.). Amherst, NY: Prometheus Books.
- Marx, K. (1867). *Capital*, volume I. (B. Fowkes, Trans.). London: Penguin.
- McCabe, D. L. (2005). Cheating among college and university students: A North American perspective. *International Journal for Educational Integrity*, 1(1).
- McHoskey, J. W. (1999). Machiavellianism, intrinsic versus extrinsic goals, and social interest: A self-determination theory analysis. *Motivation and Emotion*, 23(4), 267-283.
- Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological Methods*, 17(3), 437.
- Miller, B. J. (2007). *Unfolding analyses of the Academic Motivation Scale: A different approach to evaluating scale validity and self-determination theory*. (Doctoral dissertation, James Madison University).
- Mitchell, J. & Belkin, D. (2017, September 7). Americans losing faith in college degrees, poll finds. *Wall Street Journal*. Retrieved from <https://www.wsj.com/articles/americans-losing-faith-in-college-degrees-poll-finds-1504776601>
- Miyoshi, M. (2000). The university and the "global" economy: The cases of the United States and Japan. *The South Atlantic Quarterly*, 99(4), 669-696.
- Moosmayer, D. C. (2012). A model of management academics' intentions to influence

- values. *Academy of Management Learning & Education*, 11(2), 155-173.
- Morphew, C. C., & Hartley, M. (2006). Mission statements: A thematic analysis of rhetoric across institutional type. *The Journal of Higher Education*, 77(3), 456-471.
- Mortenson, T. G. (2012). *State funding: A race to the bottom*. American Council on Education.
- Muthén, B. O. & Asparouhov, T. (2012, August). *New developments in Mplus version 7: Part 2*. Presentation at Utrecht University. Retrieved from <https://www.statmodel.com/download/handouts/V7Part2.pdf>
- Muthén, L. K., & Muthén, B. O. (1998-2012). *Mplus user's guide* (7th ed.). Los Angeles, CA: Muthén & Muthén.
- Nelson, S. K., Della Porta, M. D., Jacobs Bao, K., Lee, H. C., Choi, I., & Lyubomirsky, S. (2015). 'It's up to you': Experimentally manipulated autonomy support for prosocial behavior improves well-being in two cultures over six weeks. *The Journal of Positive Psychology*, 10(5), 463-476.
- NODA (2016, August 3). *The NODA core competencies*. The Association for Orientation, Transition, and Retention in Higher Education.
- Noyens, D., Donche, V., Coertjens, L., van Daal, T., & Van Petegem, P. (2018). The directional links between students' academic motivation and social integration during the first year of higher education. *European Journal of Psychology of Education*, 1-20.
- Nylund, K. L., Asparouhov, T., & Muthén, B. O. (2007). Deciding on the number of

- classes in latent class analysis and growth mixture modeling: A Monte Carlo simulation study. *Structural Equation Modeling: A Multidisciplinary Journal*, 14, 535-569.
- Oestereicher, E. (1991). The depoliticization of the liberal arts. In Scott, B. A. & Sloan, R. P. (Eds.), *The liberal arts in a time of crisis*. New York: Westport, 11-16.
- Osin, E. N. (2017). The category of alienation in educational psychology: Its history and prospects. *Russian Education & Society*, 59(5-6), 256-273.
- Ostovar, N., & Mesrabadi, J. (2011). Students' motivational profiles changes in an academic setting: A longitudinal study. *Procedia-Social and Behavioral Sciences*, 30, 1018-1021.
- Pan, Y., & Gauvain, M. (2012). The continuity of college students' autonomous learning motivation and its predictors: A three-year longitudinal study. *Learning and Individual Differences*, 22(1), 92-99.
- Park, L. E., Ward, D. E., & Naragon-Gainey, K. (2017). It's all about the money (for some): Consequences of financially contingent self-worth. *Personality and Social Psychology Bulletin*, 43(5), 601-622.
- Pastor, D. A., Barron, K. E., Miller, B. J., Davis, S. L. (2007). A latent profile analysis of college students' achievement goal orientation. *Contemporary Educational Psychology*, 32, 8-47.
- Patall, E. A., Vasquez, A. C., Steingut, R. R., Trimble, S. S., & Pituch, K. A. (2017). Supporting and thwarting autonomy in the high school science classroom. *Cognition and Instruction*, 35(4), 337-362.
- Paulsen, M. B. (1990). College choice: Understanding student enrollment behavior.

- ASHE-ERIC Higher Education Report No. 6*. The George Washington University.
- Pew Charitable Trusts (2015). Who we elect: the demographics of state legislatures. *National Conference of State Legislatures*. Retrieved from <http://www.ncsl.org/research/about-state-legislatures/who-we-elect.aspx>
- Pintrich, P. R. (2000). Multiple goals, multiple pathways: The role of goal orientation in learning and achievement. *Journal of Educational Psychology* 92(3): 544–555.
- Pisarik, C. T. (2009). Motivational orientation and burnout among undergraduate college students. *College Student Journal*, 43(4), 1238-1253.
- Pfnister, A. O., & Finkelstein, M. J. (1984). Introduction. *The Journal of Higher Education*, 55(2), 117-121.
- Prowse, A., & Delbridge, R. (2013). “I can’t be arsed” A small-scale exploration of students’ self-reported motivation on entering a course of study and eventual “success.” *Education+ Training*, 55(7), 654-664.
- Ratelle, C. F., Guay, F., Vallerand, R. J., Larose, S., & Senécal, C. (2007). Autonomous, controlled, and amotivated types of academic motivation: A person-oriented analysis. *Journal of Educational Psychology*, 99(4), 734.
- Reeve, J., Jang, H., Hardre, P., & Omura, M. (2002). Providing a rationale in an autonomy-supportive way as a strategy to motivate others during an uninteresting activity. *Motivation and Emotion*, 26(3), 183-207.
- Richer, S. F., Blanchard, C., & Vallerand, R. J. (2002). A motivational model of work turnover. *Journal of Applied Social Psychology*, 32(10), 2089-2113.
- Robinson, K. (2010). *Changing education paradigms*. London: RSA Animate, The Royal Society of Arts.

- Rücker, J. C. (2012). *The relationship between motivation, perceived stress and academic achievement in students*. (Bachelor's thesis, University of Twente).
- Ryan, R. M., & Deci, E. L. (2000a). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54-67.
- Ryan, R. M., & Deci, E. L. (2000b). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68.
- Sahile, A. (2014). The effects of self-efficacy and motivational orientations on academic achievement of freshman science students. *Science, Technology and Arts Research Journal*, 3(3), 176-184.
- Sahlberg, P. (2011). The fourth way of Finland. *Journal of Educational Change*, 12(2), 173-185.
- Sanders, M. (2012). *Becoming a learner*. Logan, UT: Institution for Communication & Leadership.
- Schunk, D. H. (1991). Self-efficacy and academic motivation. *Educational Psychologist*, 26(3-4), 207-231.
- Selingo, J. J. (2013). *College (un) bound: The future of higher education and what it means for students*. Houghton Mifflin Harcourt.
- Slaughter, S., & Leslie, L. L. (1997). *Academic capitalism: Politics, policies, and the entrepreneurial university*. Johns Hopkins University Press.
- Smith, K. J., Davy, J. A., & Rosenberg, D. L. (2012). An empirical analysis of an

- alternative configuration of the Academic Motivation Scale. *Assessment in Education: Principles, Policy & Practice*, 19(2), 231-250.
- Soares, J. A. (2007). *The power of privilege: Yale and America's elite colleges*. Stanford: Stanford University Press.
- Specht, J., Luhmann, M., & Geiser, C. (2014). On the consistency of personality types across adulthood: latent profile analyses in two large-scale panel studies. *Journal of Personality and Social Psychology*, 107(3), 540.
- Stanley, T. J. (2000). *The millionaire mind*. Andrews McMeel Publishing.
- Steger, M.F., Frazier, P., Oishi, S., & Kaler, M. (2006). The meaning in life questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, 53(1), 80–93.
- Strange, M., Johnson, J., Showalter, D., & Klein, R. (2012). *Why Rural Matters 2011-12: The Condition of Rural Education in the 50 States*. Rural School and Community Trust.
- Sukhsarwala, B., Kacker, P., & Mukundan, C. R. (2015). Academic motivation, dispositional mindfulness, emotional maturity and academic achievement of college students. *International Journal of Management & Behavioural Sciences*, 6, 282.
- Taylor, G., Jungert, T., Mageau, G. A., Schattke, K., Dedic, H., Rosenfield, S., & Koestner, R. (2014). A self-determination theory approach to predicting school achievement over time: The unique role of intrinsic motivation. *Contemporary Educational Psychology*, 39(4), 342-358.
- Taylor, P., Parker, K., Fry, R., Cohn, D., Wang, W., Velasco, G., & Dockterman, D.

- (2011). *Is college worth it?* Pew Social and Demographic Trends.
- Tetreault, J. (2013). *College student retention: A self-determination perspective*.
University of Massachusetts Boston.
- Tinto, V. (1987). *Leaving college: Rethinking the causes and cures of student attrition*.
University of Chicago Press.
- Tinto, V. (2008). Inextricably intertwined: High expectations and high support. Foreword
to *Essential Elements of Engagement: High Expectations, High Support*.
Community College Survey of Student Engagement.
- U.S. Department of Education (1999). Fall enrollment in colleges and universities.
Digest of Education Statistics, Table 175.
- U.S. Department of Education (2016). *Federal student aid, annual report FY 2016*.
Washington, D.C.
- Utah State University. (2018, February 3). Utah State University enrollments at a glance.
Office of Analysis, Assessment, and Accreditation. Retrieved from
<http://www.usu.edu/aaa/enrollmentsataglance.cfm>
- Vallerand, R. J., & Bissonnette, R. (1992). Intrinsic, extrinsic, and amotivational styles as
predictors of behavior: A prospective study. *Journal of Personality*, 60(3), 599-
620.
- Vallerand, R.J., & Blais, M.R. (1987). *Vers une conceptualisation tripartite de la MI: La
MI a la connaissance, a l'accomplissement et aux sensations*. Manuscrit inedit,
Laboratoire de psychologie Sociale, Universite du Quebec a Montreal.
- Vallerand, R. J., Blais, M. R., Brière, N. M., & Pelletier, L. G. (1989). Construction et

- validation de l'échelle de motivation en éducation (EME). *Canadian Journal of Behavioural Science*, 21(3), 323.
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Briere, N. M., Senecal, C., & Vallieres, E. F. (1992). The academic motivation scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement*, 52(4), 1003-1017.
- Vallerand, R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senecal, C., & Vallieres, E. F. (1993). On the assessment of intrinsic, extrinsic, and amotivation in education: Evidence on the concurrent and construct validity of the Academic Motivation Scale. *Educational and Psychological Measurement*, 53(1), 159-172.
- Van Soom, C., & Donche, V. (2014). Profiling first-year students in STEM programs based on autonomous motivation and academic self-concept and relationship with academic achievement. *PloS One*, 9(11), e112489.
- Vandehey, M., Diekhoff, G., & LaBeff, E. (2007). College cheating: A twenty-year follow-up and the addition of an honor code. *Journal of College Student Development*, 48(4), 468-480.
- Vansteenkiste, M., Sierens, E., Soenens, B., Luyckx, K., & Lens, W. (2009). Motivational profiles from a self-determination perspective: The quality of motivation matters. *Journal of Educational Psychology*, 101(3), 671.
- Vaters, C. A. (2015). *Motivation and Well-being: A Test of Self-Determination Theory Using a Person-Centered Approach*. (Doctoral dissertation, The University of Western Ontario).
- Vermunt, J. K., & Magidson, J. (2002). Latent class cluster analysis. In J. A. Hagenaars

- & A. L. McCutcheon (Eds.), *Applied latent class analysis*, 89–106. Cambridge, UK: Cambridge University Press.
- Washington Monthly (2017). *2017 college guide and rankings*. Retrieved from <https://washingtonmonthly.com/2017college-guide?ranking=2017-rankings-national-universities>
- Webb, J., Schirato, T., & Danaher, G. (2002). *Understanding Bourdieu*. Sage.
- Whitley, B. E. (1998). Factors associated with cheating among college students. *Research in Higher Education*, 39(3), 235–274.
- Wu, Y., Li, C., & Khoo, S. (2016). Predicting future volunteering intentions through a self-determination theory perspective. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, 27(3), 1266-1279.
- Young, D. G., & Hopp, J. M. (2014). *2012-2013 national survey of first-year seminars: Exploring high-impact practices in the first college year. Research Reports on College Transitions No. 4*. National Resource Center for the First-Year Experience and Students in Transition.
- Zemsky, R., Wegner, G., & Massy, W. F. (2005). *Remaking the American university: Market-smart and mission-centered*. Rutgers University Press.

APPENDICES

APPENDIX A: ANCILLARY TABLES

Table 3.7

MNAR Regression Coefficients for Missingness at Time 2 (n = 1,705)

Profile (Reference)	Covariate	Coefficient	Standard Error	p-value
Investors	HSGPA	-0.136	0.200	0.496
(as compared to Learners)	MISSING	0.136	0.160	0.397
Ambivalent	HSGPA	-0.839	0.289	0.004
(as compared to Learners)	MISSING	-0.102	0.281	0.716
Ambivalent	HSGPA	-0.703	0.304	0.021
(as compared to Investors)	MISSING	-0.034	0.293	0.908

Note. HSGPA = high school GPA; MISSING = Missingness at Time 2.

Table 4.12

Average latent profile probabilities for most likely latent profile pattern (Row) by assigned latent profile pattern (Column)

	A	B	C	D	E	F	G	H	I
A	0.769	0.075	0.00	0.145	0.001	0.00	0.009	0.00	0.00
B	0.211	0.653	0.054	0.049	0.021	0.007	0.002	0.002	0.001
C	0.00	0.003	0.901	0.00	0.00	0.094	0.00	0.00	0.002
D	0.03	0.037	0.004	0.773	0.082	0.07	0.002	0.00	0.00
E	0.002	0.139	0.00	0.114	0.737	0.001	0.00	0.008	0.00
F	0.00	0.00	0.064	0.00	0.003	0.919	0.00	0.00	0.013
G	0.016	0.017	0.002	0.032	0.004	0.004	0.595	0.173	0.157
H	0.00	0.00	0.00	0.00	0.00	0.00	0.114	0.886	0.00
I	0.00	0.00	0.00	0.001	0.00	0.001	0.098	0.00	0.9

Note. Table 4.11 outlines the Time 1 and Time 2 profile membership of each transition pattern, A through I.

APPENDIX B: QUESTIONNAIRES**Academic Motivation Scale for College**

Vallerand, R. J., Pelletier, L. G., Blais, M. R., Briere, N. M., Senecal, C., & Vallieres, E.

F. (1992). The academic motivation scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement*, 52(4), 1003-1017.

Vallerand, R. J., Pelletier, L. G., Blais, M. R., Brière, N. M., Senecal, C., & Vallieres, E.

F. (1993). On the assessment of intrinsic, extrinsic, and amotivation in education: Evidence on the concurrent and construct validity of the Academic Motivation Scale. *Educational and Psychological Measurement*, 53(1), 159-172.

Psychosocial Well-being Items

<p>Indicate to what extent you disagree or agree with each of the following statements: (1-Does not correspond at all; 2-Corresponds a little; 3-Corresponds a little; 4-Corresponds moderately; 5-Corresponds a lot; 6-Corresponds a lot; 7-Corresponds exactly)</p>
1. I am concerned about fitting in socially at USU.
2. I have friends attending USU.
3. My family supports my decision to attend USU.
4. I have a plan to graduate in four years (excepting religions or military service).
5. I feel confident in my choice of major or program of study.
6. I am concerned about whether I have the math skills to succeed at USU.
7. I feel confident in my decision to attend USU.

Becoming a Learner Questions

1. On a scale of 1-7, rate your level of attentiveness during the Becoming a Learning Presentation?

(1 - I wasn't paying attention; 2; 3 - I was mildly attentive; 4; 5 - I paid attention; 6; 7 - I paid very close attention)

2. On a scale of 1-7, how would you rate the *Becoming a Learner* model as a way to think about your academic career?

(1 - Poor/Useless; 2; 3 - Mildly Helpful; 4; 5 - Useful/Interesting; 6; 7 - Excellent/Thought Provoking)

FYE Course Evaluation

The course evaluation contained 60 items, but only eight items were used in this study:

<p>Please indicate your agreement with the following statements. As a result of attending Connections:</p> <p>(1 - Strongly disagree; 2-Disagree; 3-Somewhat disagree; 4-Neutral; 5-Somewhat Agree; 6-Agree; 7-Strongly Agree)</p>
1. I understand why I am enrolled in higher education courses.
2. I have learned what an educated person is, and how an educated person contributes to his or her community.
3. I have learned the role general education plays in my education.
4. I have learned the role the major plays in my education.
5. I have learned how best to engage myself in the process of becoming an educated person.
6. The FYE course helped me consider the reasons I am seeking a university degree.
7. I have learned the importance of selecting a major that fits my interests.
8. My FYE instructor explained the FYE course objectives.

Academic Self-Efficacy Items

Please move the slider below to answer how characteristic of your performance the following behavior is:

(0-Not at all characteristic; 100-Very characteristic)

1. Finish homework assignments by deadlines

2. Study when there are other interesting things to do

3. Concentrate on school subjects

4. Take notes of class instruction

5. Use the library to get information for class assignments

6. Planning your schoolwork

7. Remembering information presented in class and textbooks

8. Arranging a place to study without distractions

9. Managing time efficiently

10. Finding time to study

APPENDIX C: LETTER OF INFORMATION



Student Orientation and Transition Services
0122 Old Main Hill
Logan UT 84322-0122
Telephone: (435) 797-5541



Page 1 of 2

INFORMED CONSENT

Assessing Student Orientation and the First-year Experience Course at USU

***Introduction/ Purpose** Matt Sanders from the Department of Languages, Philosophy, and Communication Studies and Mitchell Colver in the Office of Student Orientation and Transition Services at Utah State University are conducting a research study to find out more about the effectiveness of certain elements of USU's orientation and first-year-experience program. You have been asked to take part because, as a new USU student, you will be participating in the orientation experience. There will be approximately 3000 total participants in this research.

***Procedures** If you agree to be in this research study, you will be asked to complete four or five questionnaires related to academic motivation and mindset throughout your first year at UtahState. These surveys will be distributed to you via email and through other electronic means during registration, immediately following SOAR, and at the beginning of Fall and Spring Semester. Each survey will contain roughly 50 questions and should take less than 20 minutes to complete. Additional information about your academic performance will be pulled (in a secure manner that protects your identity) throughout your academic career at USU.

***Risks** There are no known risks to participating in this study.

***Benefits** There are no personal benefits to participating in the study. Although, your participation will help USU to improve the quality of the student experience and student retention.

Explanation & offer to answer questions If you have other questions or research-related problems, you may reach (PI) Matt Sanders at (435) 797-8409 or matt.sanders@usu.edu.

***Payment/Compensation** Participants will not be paid for participation in this study.

***Voluntary nature of participation and right to withdraw without consequence** Participation in research is entirely voluntary. You may refuse to participate or withdraw at any time without consequence or loss of benefits. To remove yourself from participation, please contact the PI accordingly. No explanation is required.

***Confidentiality** Research records will be kept confidential, consistent with federal and state regulations. Only the investigators, the Assistant Vice President for Enrollment and Retention (currently John Mortenson) and the Director of Student Orientation and Transition Services (currently Lisa Hancock) will have access to the data which will be kept in a locked file cabinet or on a password protected computer in a locked room. To protect your privacy, personal, identifiable information will be



Student Orientation and Transition Services
0122 Old Main Hill
Logan UT 84322-0122
Telephone: (435) 797-5541



Page 2 of 2

INFORMED CONSENT

Assessing Student Orientation and the First-year Experience Course at USU

removed from study documents and replaced with a study identifier. Identifying information will be stored separately from data and will be kept. This data will be stored through December of 2021 in order to track ongoing progress at USU, at which point the data will be destroyed.

***IRB Approval Statement** The Institutional Review Board for the protection of human participants at Utah State University has approved this research study. If you have any questions or concerns about your rights or a research-related injury and would like to contact someone other than the research team, you may contact the IRB Administrator at (435) 797-0567 or email irb@usu.edu to obtain information or to offer input.

***Copy of consent** You have been given two copies of this Informed Consent. Please sign both copies and keep one copy for your files.

***Investigator Statement** "I certify that the research study has been explained to the individual, by me or my research staff, and that the individual understands the nature and purpose, the possible risks and benefits associated with taking part in this research study. Any questions that have been raised have been answered."

Exclusion of Minors This study will not involve the use of any minors as participants. IF YOU ARE CURRENTLY YOUNGER THAN 18 YEARS OF AGE, please decline from participation in the study.

***Signature of Researcher(s)**

Matt Sanders
Principal Investigator
435-797-8409
Matt.sanders@usu.edu

Mitchell Colver
Student Researcher
435-797-5541
mitchell.colver@usu.edu

Signature of Participant By signing below, I agree to participate.

Participant's signature

Date

CURRICULUM VITAE

Mitchell Colver
(May 2018)

EDUCATION

- Expected Spring 2018*** ***Utah State University***
 Ph.D. in Education: Curriculum & Instruction
 Dissertation: “Why Do You Go To College? Outcomes Associated with Student Beliefs about the Purposes of a College Education”
 Research Activities: Analytics in Higher Education, Student Perceptions regarding the purposes of the Liberal Arts, Self-Regulation & Play, Program Evaluation and Student Thriving
- 2010*** ***Eastern Washington University***
 M.S. Experimental Psychology
 Thesis: “Getting aesthetic chills from music: the connection between openness to experience and frisson.”
- 2007*** ***Brigham Young University Hawaii***
 B.A. Psychology / Music
Summa cum laude

TEACHING

Instructor of Record

- TEAL 6710: Diversity in Education – *Fall 2016, Spring 2017, Spring 2018*
- PSYC 304: Educational Psychology – *Fall 2012*
- PSYC 498: Psychology of Music – *Spring, Summer, & Fall 2010, Spring 2011, Winter & Summer 2013*
- PSYC 498: Courtship & Attraction – *Spring 2014*
- USU 1010: Connections – First Year Experience Course – *Spring 2016, Fall 2017*
- USU 2160: Student Applied Leadership Training (Co-Instructor) – *Spring 2015, Spring 2016*

Assistant Instructor

- PSYC 309: Scientific Principles of Psychology – *Winter 2010*
- PSYC 100: General Psychology – *Fall 2009*

Guest Lecturer

- PSYC 301: Theories of Personality
- PSYC 381: Social Psychology

Courses Prepared

- PSYC 315 – Psychology of Human Relations
- PSYC 301 - Theories of Personality

PROFESSIONAL POSITIONS

2016-Present ***Senior Data Analyst / Internal Analytics Consultant***

Utah State University – Academic & Instructional Services

- Facilitating and supporting a university-wide culture shift around data usage, quantitative program evaluation, and the democratization of analytics in higher education
- Providing broad-based institutional leadership regarding analytics innovation and design
- Organizing and developing messaging surrounding the philosophy of analytics and quantitative program evaluation in higher education
- Working with key partners from across the institution to enable program evaluation, professional growth, and development relative to analytics and data literacy
- Creating, maintaining, and executing project communications plans for internal and external audiences
- Building and maintaining working relationships with university data trustees and stewards
- Collaborating with project leadership and participants to develop internal best practices around application usage, data interpretation, and interventions

2016-Present ***Graduate Level Adjunct Faculty - Diversity***

Utah State University – School of Teacher Education and Leadership

- Responsible for teaching *Diversity in Education* to master’s level and doctoral students
- Recommended for appointment by multiple faculty members within department

2014-2016 ***Student Transitions Coordinator***

Utah State University – Student Orientation and Transition Services

- Planning and execution of International, Transfer, and Online Student Orientation
- Dynamic interdepartmental collaboration to achieve strategic enrollment management
- Monitoring program statistics to ensure program efficacy and strategic innovation
- Extensive data collection, management, and analysis for multiple departments/programs
- Web and print publication production and editing
- Training, mentoring and oversight of 50 peer mentors
- Responsible for conducting retention research and program evaluation, with a mandate to share notable findings nationally and internationally in both print and in-person formats

2010 – 2014 ***Retention Specialist***

Eastern Washington University – Learning Commons

- Developing and implementing a 30-hour training program through the College Reading and Learning Association, with emphasis on student development theory
- Successfully conducting over 150 hours of training annually for 12 different programs
- Hiring, training, and supervising 50+ student employees quarterly to provide campus-wide tutoring in a variety of subjects
- Managing a \$120,000 annual budget
- Developing and implementing policy and monitoring program statistics during three consecutive years of seeing the program’s budget double
- Managing an online tutoring program and advertising campaign
- Personally meeting with over 400 students annually

Ancillary Duties for First-Year Experience / Summer Bridge Program – Eastern Scholars Academy

- Successfully planning and implementing a two-week summer residential program
- Recruiting, training, and supervision of 25 peer mentors
- Implementation & development of a four-day staff training
- Skilled in use of extensive elements of active learning and group dynamics
- Organization and scheduling of student and professional staff
- Conducting ongoing student enrichment, personal interaction, and mentoring

2010 – 2014 ***Adjunct Faculty - Psychology***

Eastern Washington University – Department of Psychology

- Taught courses and seminars on an adjunct basis to class sizes of 100+
- Offered all-day seminars to students at Bellevue College in the greater Seattle area

2008 – 2010 ***TRiO Learning Group Facilitator / Writing Responder***

Eastern Washington University - Student Support Services (SSS) & Writers' Center

- Facilitation of collaborative learning groups and one-on-one sessions
- Attending extensive training and professional development workshops
- Promoted to Program Coordinator during an inaugural year of program expansion
- Development of academic writing using student-centered response techniques
- Inter-departmental collaboration
- Coordination and implementation of student workshops on research writing
- Responsible for website development and management
- Certified Tutor, Levels I-III – College Reading & Learning Association

2007 – 2008 ***Instructional Assistant / Response to Intervention***

Clark County School District – Jack Dailey Elementary School

- Implementation of remedial reading program for at-risk students in a Title I school
- Primarily servicing foster, refugee, and low income students
- One-on-one development of student reading skills

SELECTED AWARDS, HONORS, & RECOGNITION

2016-2017 ***Emma Eccles Jones Graduate Level Scholarship***

Dean's Office – EEJ College of Education and Human Services – Utah State University

2016 ***Highest Rated Session at Conference***

Empowering Teaching Excellence Conference, Utah State University, Logan, UT

2016 ***Best Education Session at Conference***

Association for Orientation, Transitions, & Retention in Higher Education, Region III Conference

2015-2016 ***Curtis & Marsha Roberts Graduate Level Scholarship***

School of Teacher Education and Leadership – Utah State University

2015-2016 ***Ferne Page West Graduate Level Scholarship***

Emma Eccles Jones College of Education and Human Services – Utah State University

- 2015-2016** ***Professional Employees Scholarship***
Professional Employees Association – Utah State University
- 2014** ***Outstanding Service & Academic Support Award***
Learning Commons – Eastern Washington University
- 2013** ***Faculty Champion Award***
Academic Success Center – Eastern Washington University
- 2009-2010** ***Nicholas T. Curtis Memorial Fund Graduate Level Scholarship***
Department of Psychology – Utah State University
- 2009-2010** ***Students in Service Scholarship (450 hrs.)***
Americorps – Eastern Washington University
- 2008** ***Award for Creative & Aesthetic Contributions as a Staff Member***
Clark County School District
- 2003** ***Award for Remarkable Personal Contribution***
Kula Manu Student Journal – Brigham Young University Hawaii
- 2003** ***Music Performance Scholarship - Organ***
Department of Music – Brigham Young University Hawaii
- 1999** ***Certificate of Recognition***
Duke University Talent Identification Program

RESEARCH & SCHOLARLY ACTIVITIES

Publications – Books

Colver, M.C. (2013). *Study Simpler: Study Skills Development*. Independent publication: CreateSpace.

Published Academic Journal Articles (Peer Reviewed)

Scharp, K., Dorrance Hall, E., Sanders, M. & **Colver, M.C.** (in press). The relationship between family communication, transition efficacy, and communication skill. *Journal of College Orientation and Transition*.

Colver, M.C. & Fry, T. (2016). Evidence to support peer tutoring programs at the undergraduate level. *Journal of College Reading and Learning*, 46(1), 16-41.

Colver, M.C. & El-Alayli, A. (2015). Getting aesthetic chills from music: the connection between openness to experience and frisson. *Psychology of Music*. doi: 10.1177/0305735615572358

Academic Journal Articles under Review

Hagman, A., **Colver, M.C.**, Kil, D. & Louviere, J. (under review). Methodological & institutional hurdles in measuring the impact of university initiatives.

Public Scholarship

Colver, M.C. & El-Alayli, A. (2015). Getting aesthetic chills from music: the connection between openness to experience and frisson. *Psychology of Music*. doi: 10.1177/0305735615572358

The above research article was highlighted in a number of online and print publications as well as in other forms of national and international news media, as sampled below:

Tandon, R. (host). (2016, June 23). Up all night: News interviews and stories from around the world [Interview]. BBC Radio 5.

Daley, J. (2016, June 20). What happens in the brain when music causes chills? *Smithsonian*. Retrieved from <http://www.smithsonianmag.com/smart-news/researchers-look-what-happens-brain-when-music-causes-chills-180959481/?no-ist>

Romm, C. (2016, June 1). These are the people most likely to get the chills from sad music. *New York Magazine*. Retrieved from <http://nymag.com/scienceofus/2016/06/these-are-the-people-most-likely-to-get-the-chills-from-sad-music.html>

Mulligan, J. (host). (2016, May 31). Why some music gives us goosebumps [Interview]. *Radio New Zealand National*. Retrieved from <http://www.radionz.co.nz/national/programmes/afternoons/audio/201802749/why-some-music-gives-us-goosebumps>

Colver, M.C. (2016, May 25). Why does great music give you the chills? *Slate*. Retrieved from http://www.slate.com/articles/health_and_science/science/2016/05/getting_chills_when_listening_to_music_might_mean_you_re_a_more_emotional.html

RESEARCH PRESENTATIONS

Refereed Scholarly Presentations—National & International

Colver, M.C. (2017, July). Student thriving: Applying student development theory to improve student services. Presented at the annual conference of AMOSSHE, Brighton, UK.

Colver, M.C. (2017, April). *Teachers as cultural workers: Freire on literacy, love, and shared authority in the classroom*. Presented at the annual conference of the American Educational Research Association (AERA), San Antonio, TX.

Baldasare, A., Vito, M., Chaney, M., & **Colver, M.C.** (2017, April). *How to pull off institution-wide change management with analytics*. Presented at the annual Civitas Learning Summit. *This presentation received an encore and was rescheduled to run for a second time during the summit.*

Ruby, S., Flodin, B., Bronowski, M., & **Colver, M.C.** (2013, February). *Assistive technology 101: Training for college students with academic need*. Presented at the annual convention of the National Association of School Psychologists (NASP), Seattle, WA.

Refereed Scholarly Presentations—Regional & State

Colver, M.C. (2017, September). *Empowering student competence: Using play in K-12*

settings to expand the world of post-secondary possibilities. Presented at the annual Utah System of Higher Education (USHE) Conference for School Counselors and Administrators, Salt Lake City, UT.

Colver, M.C. (2016, September). *Empowering students to self-regulate: Why performance-based extracurriculars are so important.* Presented at the annual Utah System of Higher Education (USHE) Conference for School Counselors and Administrators, Salt Lake City, UT.

Colver, M.C. (2016, April). *Using the ISB: Improving international orientation through research.* Presented at the annual workshop of the Utah Board of International Educations (UBIE), Salt Lake City, UT.

Colver, M.C. (2015, April). *Getting aesthetic chills from music: A huge dose of pleasure from one hearing only.* Presented at the 11th annual Student Research Symposium of Utah State University, Logan, UT.

Colver, M.C. (2011, April). *Personality and frisson (aesthetic chills) as a response to music.* Paper presented at the annual conference of the Western Psychological Association (WPA), Los Angeles, CA.

Colver, M.C. & Bershaw, C. (2010, May). *Stereotypical perceptions of personality type and circadian preference.* Presented at the annual Student Research and Creative Works Symposium of Eastern Washington University, Cheney, WA.

OTHER CONFERENCE PRESENTATIONS

Refereed Conference Presentations—National & International

Colver, M.C. & Grassley, T. (2017, July). *The appreciative manager: Using Appreciative Advising to foster team culture.* Presented at the annual international conference of the National Academic Advising Association (NACADA: The Global Community for Academic Advising), Sheffield, UK.

Weingarten, J., Bottom, A., **Colver, M.C.**, & Galey, H. (2015, May). *Bi-regional I & XII highlight: Online orientations: New ideas for the next generation.* Presented at the annual conference of the National Association of Foreign Student Advisers (NAFSA), Boston, MA.

Colver, M.C. & Beorchia, M. (2015, October). *The early and often of student engagement: Using Adlerian psychology to focus students' academic goals through High Impact Behaviors.* Workshop presented at the annual conference of the National Academic Advising Association (NACADA: The Global Community for Academic Advising), Las Vegas, NV.

Colver, M.C. (2016, April). *"The Hero's Journey": Framing the role of orientation peer mentors.* Presented as a *Regional Highlight* at the annual conference of the Association for Orientation, Transitions, & Retention in Higher Education (NODA), Indianapolis, IN.

Pantlik, J. M. & **Colver, M.C.** (2016, November). *Welcome! (again): OTR considerations for deferred students.* Presented at the annual conference of the Association for Orientation, Transitions, & Retention in Higher Education (NODA), Indianapolis, IN.

Colver, M.C. (2014, June). *Study Simpler: A holistic approach to study skills development*. Book presented at the annual Assessment and Persistence conference of NASPA–Student Affairs Administrators in Higher Education, San Antonio, TX.

Refereed Conference Presentations—Regional & State

Colver, M.C. (2016, August). *Avoiding inert knowledge: Making students the subject of the classroom*. Presented at the annual Empowering Teaching Excellence Conference, Utah State University, Logan, UT. Selected as the *Highest Rated Session* at the conference.

Colver, M.C. (2016, June). *Math Ready is College Ready: Preparing Students for a Successful University Experience*. Presented at the annual Utah State Office of Education (USOE) Student Advocacy Services Conference, Heber City, UT.

Colver, M.C. (2016, April). *"The Hero's Journey": Framing the role of orientation peer mentors*. Presented at the annual Region III conference of the Association for Orientation, Transitions, & Retention in Higher Education (NODA), Ogden, UT. Selected as *Best Education Session* at the conference.

Colver, M.C., Peltier, C. & Llewellyn, R. (2015, October). *Avoiding Fire Hose Orientation: Using a Cone of Communication to Empower Incoming International Students*. Presented at the annual Region II conference of the National Association of Foreign Student Advisers (NAFSA), St. George, UT. Selected as a Region II Highlight Presentation.

Colver, M.C. & Llewellyn, R. (2015, April). *International student orientation: Online modules make all the difference*. Presented at the annual workshop of the Utah Board of International Educations (UBIE), Salt Lake City, UT.

Beorchia, M. & **Colver, M.C.** (2015, March). *The early and often of student engagement: Using Adlerian psychology to focus students' academic goals through high impact behaviors*. Presented at the annual Region 10 conference of the National Academic Advising Association (NACADA), Boulder, CO.

Colver, M.C. (2014, October). *Brief motivational interviewing for holistic study skills development*. Presented at the annual Utah state conference of NASPA–Student Affairs Administrators in Higher Education, Logan, UT.

PROFESSIONAL DEVELOPMENT PRESENTED

Professional Development Workshops

Colver, MC (2017, August). It's not me, it's you: Avoiding attribution bias during the process of courses enhancement. Professional development presented to faculty at the annual Empowering Teaching Excellence Conference, Utah State University, Logan, UT.

Colver, M.C. (2017, May 5). *Empowering student competence: Using play in K-12 settings to expand the world of post-secondary possibilities*. Professional development presented to the teachers and staff of Edith Bowen Laboratory School, Logan, UT.

- Colver, M.C.** (2017, May). *The person speaking is the person learning: Facilitating student discussions in broadcast courses*. Professional development presented to faculty at the Empowering Teaching Excellence eLearning Workshop, Utah State University, Logan, UT.
- Colver, M.C.** (2017, March). *Empowering students to self-regulate: Why performance-based extracurriculars are so important*. Professional development presented to principals, teachers, and school counselors of Timpanogos High School, Orem, UT.
- Colver, M.C.** (2017, March). *Self-efficacy*. Professional development presented to staff and administrators of the College of Arts and Sciences, University of Colorado, Boulder, CO.
- Colver, M.C.** (2017, January). *Empowering students to self-regulate: Why performance-based extracurriculars are so important*. Professional development presented to principals, teachers, and school counselors of Mt. Nebo School District, Payson, UT.
- Colver, M.C.** (2016, December). *Empowering students to self-regulate: Why performance-based extracurriculars are so important*. Professional development presented to the principals and school counselors of Alpine School District, American Fork, UT.
- Colver, M.C.** (2016, November). *Empowering students to self-regulate: Why performance-based extracurriculars are so important*. Professional development presented to the principals, superintendents, and school counselors of Cache County School District and Logan City School District, North Logan, UT.
- Colver, M.C. & Clark, S.** (2016, August). *Managing different sized audiences with common strategies*. Professional development provided to faculty during the Foundations of USU Teaching seminar, Utah State University, Logan, UT.
- Colver, M.C.** (2016, August). *Myers-Briggs: Finding unity through diversity*. Professional development provided to the Office of Global Engagement, Utah State University, Logan, UT.
- Colver, M.C.** (2013, October). *Myers-Briggs: Drive your style*. Professional development provided to the Academic Advising Association (ACADA), Eastern Washington University, Cheney, WA.
- Colver, M.C.** (2013, May). *Starting simpler: Using Study Simpler in Academic Advising*. Seminar provided to the Academic Advising Association (ACADA), Eastern Washington University, Cheney, WA.
- Colver, M.C.** (2012, October). *Inspiring the future: Putting the puzzle together*. Professional development provided to the Division of Undergraduate Affairs, Eastern Washington University, Cheney, WA.
- Colver, M.C.** (2012, August). *VIA character strengths & weaknesses: Appreciating our diversity*. Professional development provided to the Academic Success Center, Eastern Washington University, Cheney, WA.

Colver, M.C. (2012, July). *The Jupiters of life: Student motivation*. Seminar provided to the Academic Advising Association (ACADA), Eastern Washington University, Cheney, WA.

INVITED PRESENTATIONS

Invited Workshops & Seminars

- Beorchia, M. & **Colver, M.C.** (2018, March 14). *Achieving goals*. Seminar provided to students of the Second Year Scholarship Program, Residence Life, Utah State University, Logan, UT.
- Colver, M.C.** (2018, March 5). *Getting aesthetic chills from music*. Presented at a colloquium of the Gonzaga University Department of Music, Spokane, WA.
- Colver, M.C.** (2017, September). *The neuroscience of pleasure*. Workshop presented to students as part of the USUSA Passion Workshop Series, Utah State University, Logan, UT.
- Howes, V. & **Colver, M.C.** (2016, June). *Stand up, stand out: Ignite yourself through helping others*. Presented at the annual Utah State University Leadership Conference, Logan, UT.
- Colver, M.C.** (2016, January). *Self-regulation and energy*. Seminar provided to the students of the Society for Collegiate Leadership and Achievement (SCLA), Utah State University, Logan, UT.
- Colver, M.C.** (2015, November). *I'm wishing: Nurturing the real self*. Seminar provided to the Student Activities Board, Utah State University, Logan, UT.
- Colver, M.C.** (2015, January). *Effective tutoring strategies*. Training provided to the tutors of the Academic Resource Center, Utah State University, Logan, UT.
- Colver, M.C.** (2014, June). *Individual differences and sisterhood*. Seminar presented to the Alpha Pi Sigma sorority, Eastern Washington University, Cheney, WA.
- Colver, M.C.** (2013, December). *Starting simpler: Using Study Simpler in Residential Life*. Seminar presented to Residential Life, Eastern Washington University, Cheney, WA.
- Colver, M.C.** (2013, November). *The I.D.E.A. of diversity: Motivation Styles*. Seminar presented to Sorority & Fraternity Life, Eastern Washington University, Cheney, WA.
- Colver, M.C.** (2013, June). *New member education*. Seminar presented at the Greek Leadership Conference, Eastern Washington University, Cheney, WA.
- Colver, M.C.** (2013, February). *The Jupiters of life: Student motivation*. Seminar provided to the students of TRiO, Eastern Washington University, Cheney, WA.
- Colver, M.C.** (2012, September). *The Jupiters of life: Student motivation*. Seminar provided

to the Sorority & Fraternity Life Presidents Council, Eastern Washington University, Cheney, WA.

INTERNAL & EXTERNAL FUNDING

Funded (Internal Funding = \$9,200)

- 2017** **Principal Investigator.** Travel Grant Award, Research & Graduate Studies, Utah State University.
Amount: \$800
- 2017** **Principal Investigator.** Travel Grant Award, Research & Graduate Studies, Utah State University.
Amount: \$600
- 2015** **Principal Investigator.** *Transportation and Innovation Grant.* Utah State University Sustainability Project.
Amount: \$6,600
- 2015** **Principal Investigator.** Travel Grant Award, Research & Graduate Studies, Utah State University.
Amount: \$800
- 2015** **Principal Investigator.** Travel Grant Award, Research & Graduate Studies, Utah State University.
Amount: \$400

Funded (External Funding = \$575)

- 2015** **Principal Investigator.** Travel Grant Award, Region 10 Conference, National Academic Advising Association (NACADA).
Amount: \$575

MENTORING ACTIVITIES

- 2015-2016** **Internship Supervisor**
Dept. of Technical and Professional Comm., Utah State University, Logan, UT.
- 2013-2014** **Supervision of Graduate Assistant, Trevor Fry – Department of Psychology**
Eastern Washington University
- 2012-2013** **Supervision of Graduate Assistant, Krista Philen – Department of School Psychology**
Eastern Washington University
- 2012** **Mentor to Lewis & Clark High School Senior**
Practicum in Community Involvement Program, Spokane, WA.
- 2011-2012** **Supervision of Graduate Assistant, Timothy Grassley – Fine Arts**
Eastern Washington University
- 2010-2011** **Supervision of Graduate Assistant, Wylie Rhoads – Department of Psychology**
Eastern Washington University

COMMITTEE SERVICE

Chair

<i>Learning Analytics Implementation Committee</i> Utah State University	2016-2017
<i>Retention Subcommittee on Collegiate Readiness</i> Utah State University	2015-2016
<i>Search Committee, Program Leading to University Success</i> Eastern Washington University	2013
<i>Planning Committee – Play Fair</i> TRiO Student Support Services, Eastern Washington University, Cheney, WA.	2013

Committee Member

<i>Retention Committee & Data Consortium</i> Utah State University	2014-2017
<i>Search Committee, Financial Aid Office</i> Utah State University	2015
<i>Search Committee, University Advising</i> Utah State University	2015
<i>Common Literacy Committee</i> Utah State University	2014-2016
<i>Catalog Committee</i> Utah State University	2014
<i>Noise Reduction Committee</i> Libraries, Eastern Washington University, Cheney, WA.	2014
<i>Search Committee, Program Leading to University Success</i> Eastern Washington University	2012
<i>Organizing Committee</i> BYU-Idaho Sinfonietta Washington & British Columbia Tour	2010

INTERNSHIPS

2016-2017	<i>Internship in Curriculum Development</i> Edith Bowen Laboratory School & Bear River Charter School
2009	<i>Internship in Clinical Counseling</i> Counseling & Psychological Services, Eastern Washington University

NATIONAL SERVICE

2015-2017	<i>Reviewer</i> <i>Psychology of Music</i> – Sage Journals
2017	<i>Reviewer</i> American Educational Research Association (AERA)
2016	<i>Reviewer</i>

Association for Orientation, Transition, and Retention in Higher Education (NODA)

- 2016** ***Panelist***
 First-Generation Pre-Conference Session at the annual conference of the Association for Orientation, Transitions, & Retention in Higher Education (NODA)
- 2015** ***Reviewer***
Journal of College Reading and Learning – College Reading and Learning Association

UNIVERSITY SERVICE

- 2016-2017** ***Student Conduct Hearing Board Member***
 Office of Student Conduct, Utah State University, Logan, UT
- 2015-2016** ***Adventure Out Club Advisor***
 Utah State University
- 2015-2016** ***Honor's Society Advisor***
 The Society for Collegiate Leadership & Achievement, Utah State University, Logan, UT.
- 2012 - 2014** ***Presidential Appointee & Council Member***
 Student Disciplinary Council, Eastern Washington University, Cheney, WA.
- 2012 – 2013** ***Academic Advisor***
 FirstSTEP, Eastern Washington University, Cheney, WA.
- 2011 – 2014** ***Consultant, Statistical Analysis***
 Writers' Center, Eastern Washington University, Cheney, WA.
- 2013** ***Consultant, Statistical Analysis***
 TRiO Student Support Services, Eastern Washington University, Cheney, WA.
- 2013** ***Judge – Psychological Sciences Poster Presentation***
 Student Research & Creative Works Symposium, Eastern Washington University, Cheney, WA.
- 2010** ***Research Lab Manager***
 Department of Psychology, Eastern Washington University, Cheney, WA.
- 2003 & 2007** ***Essay Editor & Staff Writer***
 Kula Manu Student Journal - Brigham Young University Hawaii

COMMUNITY SERVICE

- 2015** ***Volunteer Staff***
 Loaves & Fishes Community Meal, Logan, UT.
- 2015** ***Conference Volunteer***
 Region 10 Conference, National Academic Advising Association (NACADA), Boulder, CO.
- 2011** ***Team Leader***
 First Annual TRiO Day Clothing Drive, Eastern Washington University, Cheney, WA.

- 2008** *Event Staff*
Jack Dailey Elementary School Fundraiser, Clark County School District, Las Vegas, NV.
- 2003 & 2007** *Competition Judge & Chaperone*
Neighbor Island Tournament, Hawaii Speech League
- 2006** *Assistant Coach, Head Chaperone, & Competition Judge*
Foothill High School Speech & Debate Team, Henderson, NV.
- 2005** *Event Staff*
Family Carnival, Candlelighters Childhood Cancer Foundation of Nevada, Las Vegas, NV.

CERTIFICATIONS

- 2017** *Teaching Scholar Certificate*
Center for Innovative Design and Instruction, Utah State University
- 2013** *Certified Facilitator*
Reiss Motivation Profile, IDS Publishing
- 2007-2010** *Certified Tutor, Levels I- III*
College Reading and Learning Association (CRLA) International Tutor Certification Program

PROFESSIONAL ASSOCIATIONS

- 2016-2018** *Member*
American Educational Research Association
- 2016-2017** *Member*
Association for Orientation, Transition, and Retention in Higher Education (NODA)
- 2015-2016** *Member*
National Academic Advising Association (NACADA)
- 2013-2014** *Member*
Student Affairs Professionals in Higher Education (NASPA)
- 2011-2012** *Member*
Western Psychological Association (WPA)