A DESCRIPTIVE STUDY: ONLINE HIGH SCHOOL TEACHERS' PERCEPTIONS OF
STUDENTS' ACADEMIC MOTIVATION IN ONLINE, ASYNCHRONOUS COURSES

A doctoral thesis presented
by

Jodie Banyas
to the
Graduate School of Education

In partial fulfillment of the requirements for the degree of
Doctor of Education

in the field of
Education

College of Professional Studies
Northeastern University
Boston, Massachusetts
January 2019
Abstract

Motivation is considered an element essential for success in the online classroom, and, in order to inform online teachers’ pedagogical practices, this quantitative, descriptive study explored teachers’ perceptions of high school students’ motivation in the online learning environment. Identified by convenience sampling, 22 online high school teachers from a national K-12 curriculum provider located in the northeastern United States responded to a modified Perceptions of Student Motivation questionnaire (PSM), four demographic questions, and one open-ended question. Results indicated that teachers did not decisively perceive their students as motivated or unmotivated, and, overall, believed that effort was more influential than engagement or general interest as a motivator in the online classroom. Results also indicated that teachers believed current relevance/value was the most significant cause of lack of student motivation in the online high school classroom. According to the responses from the open-ended question, teachers postulated that multiple factors influenced students’ motivation, factors which were beyond the teachers’ control, supporting the literature that motivation is complex and multifaceted. These findings suggest that teachers continually monitor their perceptions of students’ motivation, their perceived reasons for lack of students’ motivation, and the accuracy of such perceptions. The results also support the deliberate consideration of motivation in all dimensions of online learning.

Keywords: online learning, student motivation, teachers’ perceptions of students’ motivation
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Chapter One: Introduction to the Study

Online high school students have been failing courses for various reasons and at staggering rates (Community College Research Center, 2013; Freidhof, 2017; Jaggars & Xu, 2010), yet the focus of online learning research has been on undergraduate students, not high school students (Childers & Jones, 2017; Hawkins, Graham, Sudweeks, & Barbour, 2013; Martens, Bastiaens, & Kirschner, 2007). Many researchers agree that student motivation is key to both success (Ally, 2008; Murphy & Rodriguez-Manzanares, 2009) and to failure (Bawa, 2016; Chyung, 2001; de la Varre, Irvin, Jordan, Hannum, & Farmer, 2014; Lin, Zhang, & Zheng, 2017) in the online classroom, and teachers can influence student motivation (Çakır & Bichelmeyer, 2016; Chickering & Ehrmann, 1997; DiPietro, Ferdig, Black, & Preston, 2010; Eom & Ashill, 2016; Herbert, 2006; Moisey & Hughes, 2008; Morris & Finnegan, 2009; Murphy & Rodriguez-Manzanares, 2009; C. Weiner, 2003).

The purpose of this descriptive study is to detail student motivation for online high school teachers who were employed with a non-profit, K-12, national online curriculum provider. At this stage in the research, motivation is defined as taking action toward a goal (Ryan & Deci, 2000). Knowledge generated is expected to inform teachers’ online pedagogical practices.

Chapter 1 begins with a statement of the problem followed by a discussion of the significance of the study and the specific aims of the research question. Finally, the theoretical framework that serves as a lens for the study is introduced.

Statement of the Problem

Between the 2002-2003 school year and the 2009-2010 school year, enrollment in online courses by public school students in the United States increased by 470% (National Center for Education Statistics, 2015b, Table 218.20). Approximately 2.2 million students enrolled in 4.5
million total online high school courses during the 2014-2015 school year (Gemin, Pape, Vashaw, & Watson, 2015, p.17). Online education is becoming a common facet of the K-12 landscape, and researchers expect the enrollment increases to continue (Barbour & Reeves, 2009). The National Center for Education Statistics (2015a) does not provide detailed statistics but anticipates that most students will participate in online learning at some point during their K-12 education.

Representatives from educational institutions were concerned with the lack of success in online courses (Chyung, 2001). For example, an online school with more than 90,000 K-12 students in Michigan reported the overall course pass rate was 58%, and 25% of the students did not pass any of their online classes (Freidhof, 2017, p. 2). Combined failure and withdrawal rates for more than 13,000 online core courses in southern community colleges were as high as 62%, whereas combined failure and withdrawal rates for comparable traditional face-to-face core courses were 43% (Community College Research Center, 2013, p. 3). In addition, pass rates for online core courses were 20%, compared to 31% for comparable face-to-face core courses in southern community colleges (Community College Research Center, 2013, p. 4). Researchers reported that students failed courses for multiple reasons. Students had poor study habits (Morris & Finnegan, 2009; Yukselturk & Bulut, 2007), false expectations (Bawa, 2016; Yukselturk & Bulut, 2007), and lack of motivation (Bawa, 2016; Chyung, 2001; de la Varre et al., 2014; Lin et al., 2017).

The Organization for Economic Cooperation and Development’s (Organization for Economic Cooperation and Development [OECD], 2016) demographic analysis revealed achievement disparities with regard to high school students’ socio-economic status and disparities among schools, indicating an inequity within the current school system. Consistent
with the OECD’s (2016) findings, Roblyer and colleagues’ (2008) findings also revealed a disparity; they noted that online high school failure rates were a concern in diverse online schools, and online courses traditionally benefitted students from a more advantaged learning environment. In a study of community colleges in the western United States, White students performed better than African American students, and the disparity was even more pronounced in online courses, as the achievement gap continued to widen (Community College Research Center, 2013; Roblyer et al., 2008; Xu & Jaggars, 2014).

As Roblyer and Davis (2008) suggested, by understanding why students fail, schools can develop strategies and supports to promote student success. Chyung (2001) expressed similar sentiments and suggested that educators methodically address the causes for failure and withdrawal in the online learning environment. Additional researchers called for continued study to understand online learning for high school students (Barbour & Reeves, 2009; Hawkins et al., 2013; Martens et al., 2007).

Online learning research is limited at the K-12 level (Childers & Jones, 2017; Hawkins et al., 2013; Martens et al., 2007), and much of the current research is based on adult learning, a process that differs from that of secondary students (Barbour & Reeves, 2009). Additional research is necessary to understand the elements of high school student success in an online learning environment, and such research results can be utilized to alter online course development and online pedagogy (Roblyer & Davis, 2008; Yukselturk & Bulut, 2007). Given the continued growth of online education, additional research will benefit all students in the online learning environment (Barbour & Reeves, 2009).
Significance of the Problem

Understanding the components of success in online learning for high school students will benefit students, curriculum developers, teachers, and administrators. By identifying online learning styles and characteristics, educators can adjust their practice to promote success for all students (Barbour & Reeves, 2009). By understanding the success factors in online learning, students, teachers, and course developers can adjust their processes to strive for excellence in the online learning environment (Yukselturk & Bulut, 2007). As teachers adjust their practice, the students benefit (Morris & Finnegan, 2009). Continued investigation of online learning will ultimately promote success for all students (Chyung, 2001).

Researchers agree that student motivation is key to success in online learning (Barbour, 2007; Borup, Graham, & Drysdale, 2014; DiPietro et al., 2010; Martens et al., 2007; Murphy & Rodriguez-Manzanares, 2009; Tseng, Gardner, & Yeh, 2016; C. Weiner, 2003; Yukselturk & Bulut, 2007), and teachers, specifically, can influence student motivation in online courses (Çakır & Bichelmeyer, 2016; Chickering & Ehrmann, 1997; DiPietro et al., 2010; Eom & Ashill, 2016; Herbert, 2006; Morris & Finnegan, 2009; Murphy & Rodriguez-Manzanares, 2009; C. Weiner, 2003). For example, teachers encourage motivation by incorporating pedagogical techniques (Çakır & Bichelmeyer, 2016), communications and interaction (Eom & Ashill, 2016; C. Weiner, 2003), feedback (Chickering & Ehrmann, 1997; DiPietro et al., 2010; Herbert, 2006; Morris & Finnegan, 2009; Murphy & Rodriguez-Manzanares, 2009) and personalized instruction (Chickering & Ehrmann, 1997; Moisey & Hughes, 2008) into the course.

Teachers’ perceptions of student motivation and reasons for lack of motivation influence the teachers’ actions in the classroom (Hardré et al., 2006). Teachers’ perceptions impact their behaviors in the classroom and impact students’ learning; therefore, it is key to investigate high
school teacher’s perceptions of student motivation and perceived reasons for lack of motivation (Hardré et al., 2006). By understanding teachers’ perceived reasons for lack of motivation, teachers can modify their practices to better motivate their students (Hardré, Davis, & Sullivan, 2008).

With the persistent growth of online education, the importance of motivation in online learning, and the influence of teachers in the online environment, continued research is critical. In order to promote academic success, particularly success in the online environment, additional study is essential.

**Research Question**

The purpose of this descriptive study is to detail student motivation for online high school teachers who were employed with a non-profit, K-12, national online curriculum provider. Through the use of a survey, the researcher will address the following question:

- What are online high school teachers' perceptions of students’ academic motivation in an online, asynchronous course?

By answering this research question, the researcher will develop a detailed understanding of teachers’ perceived reasons for students’ lack of motivation in online courses. Educators can then modify their online pedagogical behaviors to address the specific reasons for lack of student motivation and thus positively influence student motivation and ultimately, student achievement (Hardré, Davis, & Sullivan, 2008).

**Key Terminology**

Definitions for key terms as applied to this study are below:

*Asynchronous course* – Students in an asynchronous course work through a course with no set meeting times. Students work at their own pace, submitting assignments and
completing assessments based on their individual, personal timeline. Students access the course when their schedule permits, but must complete each course within one year.

**Online course** - Online courses are conducted via the Internet, with no face-to-face contact. Students access course materials through an online learning management system (LMS) and submit assignments and assessments through the LMS as well.

**Motivation** – According to Ryan and Deci (2000), motivation is defined as taking action toward a goal. A motivated student takes action toward a goal, while an unmotivated student feels no desire to take action (Ryan & Deci, 2000).

The following section of this chapter will include a description and discussion of the attributional theory of achievement motivation which will serve as the theoretical lens for this study.

**Framework**

In the attributional theory of achievement motivation, Bernard Weiner (1985) postulated that an outcome of an event, whether a successful event or a failed event, is attributed to a particular reason. Such causal ascriptions and associated emotions influence future behaviors (B. Weiner, 1985). By understanding the cause or the causes of an outcome, interventions and adjustments for subsequent behavior can be recommended (B. Weiner, 1985). An understanding of teachers’ perceptions of student motivation, or lack of student motivation, will guide pedagogical modifications in the online classroom and serve as a foundation to adjust the online curriculum development process (Hardré et al., 2006). If educators question why a student may not be motivated, educators can alter their practice and positively influence student academic success (Gaier, 2015). Thus, B. Weiner’s (1985) attributional theory of achievement motivation will serve as the framework for this study.
History

B. Weiner (1985) viewed expectancy and value theories of motivation as the foundation of attributional theory of achievement motivation and built upon Atkinson (1957), Heider (1958), and Rotter’s (1966) work. Atkinson’s (1957) view of motivation included three foundational components of attribution theory. Atkinson (1957) included motives, in addition to expectancy and value, as part of his determination of the strength of motivation. Atkinson (1957) also included pride as a component of value, where pride was correlated to success. Pride was higher when the task was more challenging or when the expectation of success was low, and pride was lower when the task was easier or when the expectation of success was high (Atkinson, 1957).

Heider (1958) believed that internal personal characteristics and environmental factors influenced action, where ability and effort were considered internal factors, and task difficulty was considered an external factor. Rotter (1966) asserted that there was one internal factor and one external for success and failure, where skill was the internal factor and luck was the external factor. The concepts of internal and external factors were apparent in B. Weiner’s (1985; 2010) attributional theory of achievement motivation.

Causal Dimensions

B. Weiner (1985; 2010) elaborated on these early views of expectancy and value to further develop the attributional theory of achievement motivation. B. Weiner (1985) believed that there were three causal dimensions in the attributional theory of achievement motivation, which integrate to create an understanding of cause: locus, stability, and controllability.

Causal locus. Using Atkinson’s (1957) work as a foundation, B. Weiner (1985; 2010) discussed the notion of causal locus as either an internal cause or an external cause. An internal cause included personal ability and effort, while an external cause included environmental
influences such as the difficulty of a task and luck (B. Weiner, 1985; B. Weiner, 2010). Success attributed to internal factors warranted more pride than success attributed to external factors (B. Weiner, 1985; B. Weiner, 2010). If a task was challenging, success was more likely attributed to internal factors such as effort, but if a task was simple, then success was attributed to external factors such as luck (B. Weiner, 1985; B. Weiner, 2010).

Causal stability. Causal stability, another causal dimension in attributional theory of achievement motivation, suggested that causes can change over time or remain the same (B. Weiner et al., 1971; B. Weiner, 1985). Ability, for example, was stable, because it remained relatively constant over time (B. Weiner et al., 1971; B. Weiner, 1985). Conversely, effort was considered unstable, as effort can vary, depending on the situation (B. Weiner et al., 1971; B. Weiner, 1985). In addition, causal stability impacted changes in expectancy (B. Weiner et al., 1971; B. Weiner, 1985). If a cause was influenced by an internal force (minimal effort, for example) or external force (bad luck, for instance) in the future, then failure did not negatively impact expectancy (B. Weiner et al., 1971; B. Weiner, 1985). If, however, the reason for failure was viewed as rigid (ability, for instance) and steadfast (strict teacher, for example), then failure negatively impacted expectancy (B. Weiner et al., 1971; B. Weiner, 1985). If the reason for failure was anticipated again, then failure and hopelessness were expected; if the reason for failure fluctuated, then hope remained, and the belief remained that the outcome can also change (B. Weiner et al., 1971; B. Weiner, 1985).

Causal control. B. Weiner (1985; 2010) added causal control as another dimension, suggesting that a cause was either controllable or uncontrollable by an individual and noting that certain external and internal factors display a degree of control. For example, if student failure was due to a rigid teacher, then this external factor was beyond the student’s control, but within
the control of the teacher himself (B. Weiner, 1985; B. Weiner, 2010). Effort was an internal factor within an individual’s control, but height, a factor in basketball success, for example, was not controllable (B. Weiner, 1985; B. Weiner, 2010).

**Examples.** Table 1 depicts ability and effort, illustrating that ability is internal, stable, and uncontrollable, whereas effort is internal, unstable and controllable (Graham, 1991). If a student fails a course due to low ability, this failure is considered a personal attribute of the student, consistent through time, and beyond the student’s control (Graham, 1991). If, however, a student fails due to lack of effort, this lack of effort is also considered a personal attribute, but this cause is within the control of the student and can change over time (Graham, 1991).

Table 1

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<tr>
<th>Causal Dimensions</th>
<th>Ability</th>
<th>Effort</th>
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<tr>
<td>Locus</td>
<td>Internal</td>
<td>Internal</td>
</tr>
<tr>
<td>Stability</td>
<td>Stable</td>
<td>Unstable</td>
</tr>
<tr>
<td>Controllability</td>
<td>Uncontrollable</td>
<td>Controllable</td>
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**Emotion**

In addition to the three causal dimensions, B. Weiner (2010) incorporated emotion into his model; he believed that the following emotions and factors were aligned:

- Pride was associated with internal factors of success.
- Guilt and regret were associated with controllable, internal reasons for failure.
- Shame and humiliation were associated with uncontrollable, internal factors of success.
Hopelessness was associated with stable reasons for failure.

Hope was associated with unstable reasons for failure.

Emotions were a key element in motivation, where cognitive process, emotion, and action were linear; emotions ascribed to causes influenced future behavior (B. Weiner, 1985).

B. Weiner (1985) posited that a sequence of events occurred: after an outcome, one experiences an emotion, either positive or negative, and then one develops a reason for the particular outcome. These reasons for success or failure were linked to emotion (B. Weiner, 1985). The reason and corresponding emotions thus impacted future behaviors (B. Weiner, 1985). This sequence of events is illustrated in Figure 1.

The model of attributional theory of achievement motivation assists in the understanding of human behavior and helps to explain “why” an outcome occurred (B. Weiner et al., 1971; B. Weiner, 1985). This theory also supports teachers in their practice; as teachers seek to understand why a student may not be academically successful, they can adjust their practice accordingly (Gaier, 2015).

**Behavioral Impacts**

**Students’ perceptions.** Students’ perceptions and behaviors can be viewed through the attribution theory lens. For example, if a student believes that failure is due to internal factors and success is due external factors, then motivation may be negatively impacted (B. Weiner, 1985). If a student believes that failure is due to unstable factors, then motivation may be positively influenced (B. Weiner, 1985).

**Teachers’ perceptions.** Teachers’ perceptions and behaviors can also be viewed through the attribution theory lens. Teachers’ perceptions of student motivation influenced their own expectations and teaching practices (Hardré et al., 2006; Hardré & Sullivan, 2009). For instance, if a teacher views a lack of student motivation as immutable, then the teacher exhibits a sense of helplessness and expects negative future outcomes (Hardré & Sullivan, 2009). Conversely, if a teacher attributes positive student motivation to internal factors, the teacher thus expects a continued, positive learning outcome (Hardré & Sullivan, 2009).

**Criticisms of the Theory**

B. Weiner (1985; 2000; 2010) suggested that people attempt to understand their own actions and others’ actions by referencing accessible information in order to attribute a cause to a behavior. The basic tenets of this theory have been susceptible to scrutiny and criticism.
Specifically, critics have considered the theory common sense (Fletcher, 1984) and ethnocentric (Duda & Allison, 1989).

**Common sense theory.** Fletcher (1984) deemed this theory unsophisticated and believed that Heider (1958) attempted to explain a common phenomenon. B. Weiner (1985) acknowledged this criticism and agreed that certain concepts may be familiar to a layperson, but explained that the analysis and the conceptual integration were more than common sense; the mapping of the relationships and associations of causal ascriptions, emotions, and behavior were the contributions of the theory. Although the theory may be considered common sense, systemizing such concepts is a goal of psychology (Graham, 1991).

**Ethnocentric.** The theory has also been criticized for its cross-cultural bias and ethnocentric nature. As the theory was developed in the United States with American study participants, the theory represents American culture (Duda & Allison, 1989). Duda and Allison (1989) criticized the assumption that the causal dimensions represented causality outside of the United States, and further suggested that additional cross-cultural qualitative work be conducted to refine the theory. The ethnocentric nature of the model leads to lack of generalizability across cultures (Duda & Allison, 1989).

The parameters defining success and failure vary by culture, causal elements vary by culture, and bipolar dimensions are not plausible in all cultures, thereby limiting the universal applicability of this theory (Duda & Allison, 1989). The definitions of success and failure differ by culture (Duda & Allison, 1989; Maehr & Nicholls, 1980). For example, students in Navajo culture believe effort and improvement illustrate success compared to White students who believe grades represent success (Duda, 1986). Success and failure may also be defined by personal characteristics, personal action, or the learning process, as compared to exam scores or
letter grades (Duda, 1980). The concepts of success and failure are not universal (Duda & Allison, 1989), and additional research is recommended in order to define success and failure by culture (Maehr & Nicholls, 1980).

Causal attributions vary by culture as well. In achievement scenarios, members of various cultures attributed success to differing factors; attributions were inconsistent across cultures (Chandler, Shama, Wolf, & Planchard, 1981). Chandler and colleagues (1981) shared their hesitation with the universality of this model, particularly given that individual causation is not relevant in all cultures. Cultural differences suggested that the attributional theory may not apply globally. Duda and Allison (1989) recommended that researchers conduct qualitative studies to first gather cultural specific casual attributions, fully understand the meaning of the causal attributions, and then develop quantitative, pre-determined options for causal attributions.

**Dichotomous design.** The attribution theory of achievement motivation may not apply globally due to the limitations inherent with a dichotomous design (Duda & Allison, 1989), a design where users must select either one choice or another (internal or external, stable or unstable, controllable or uncontrollable; B. Weiner, 1985; B. Weiner, 2010). Members of cultures with a group focus, for example, may have difficulty assessing a cause as either internal or external when their success may be considered both internal and external, as achievement may be considered a family obligation and a family achievement (Duda & Allison, 1989). The bipolar design of the attribution theory limits the universality of the theory, and rather than a dichotomous design, Duda and Allison (1989) suggested a continuum, or a range of choices for causal ascriptions, thus allowing for cross-cultural inclusion.

**Potential bias.** Given the influence of attribution on behavior, it essential to be aware of potential bias when ascribing a perceived reason for a behavior (Gaier, 2015). A concern with
the attribution theory of academic motivation is that the perceived reasons ascribed to behaviors may be faulty (Gaier, 2015; Kelley, 1973). Both the student and the teacher are prone to bias (Jones & Nisbett, 1972). The student may ascribe causality to the situation, minimizing personal disposition, while the teacher may ascribe causality to the student’s temperament, minimizing situational details (Jones & Nisbett, 1972). Although teachers use the available information and believe their perceptions and ascriptions are correct, properly assisting students may be challenging if these perceptions are faulty (Gaier, 2015). Accurate perceptions and ascriptions are key, as students are more successful when teachers understand how high school students are motivated (Wiesman, 2016).

The attribution theory of achievement motivation has been criticized as common sense (Fletcher, 1984) and as ethnocentric, with lack of cross-cultural generalizability (Duda & Allison, 1989). Despite the criticisms, the theory continues to be widely utilized by many researchers (Graham, 1991), has been tested and supported, and has remained a prominent framework for more than 45 years (Hamm, Perry, Chipperfield, Murayama, & Weiner, 2017).

**Rationale**

As student motivation is pivotal in both success (Ally, 2008; Murphy & Rodriguez-Manzanares, 2009) and failure (Bawa, 2016; Chyung, 2001; de la Varre et al., 2014; Lin et al., 2017) in the online classroom, and as teachers’ perceptions influence their behavior in the classroom (Hardré et al., 2006; Hardré & Sullivan, 2009), the attributional theory of achievement motivation provides a foundation to study teachers’ perceptions of student motivation and perceived reasons for lack of student motivation. This framework also provides options to address the problem of high online failures rates as both teachers’ beliefs and students’ beliefs pertaining to academic success and failure can be modified via training, thus promoting
academic success (Linnenbrink & Pintrich, 2002). The attributional theory of achievement motivation creates the scaffolding to link student motivation, teachers’ perception, teachers’ behaviors, and student success.

**Application**

Ascribing causes to human behavior is the core of attribution theory (B. Weiner, 1985; B. Weiner, 2000; B. Weiner, 2010), and exploring the causes of lack of academic motivation is a relevant application of this theory (Gaier, 2015). In this study, online high school teachers will describe not only their perceptions of student motivation, but also their perceived reasons for lack of motivation. By documenting teachers’ perceptions of student motivation and perceived reasons for lack of motivation, the accuracy of such perceptions can be addressed and teaching strategies can be altered, ultimately influencing student achievement (Hardré, Davis, & Sullivan, 2008).

**Conclusion**

Through the attributional theory of achievement motivation lens, teachers’ perceptions of student motivation in online, high school, asynchronous courses will be described. Teachers influence student motivation (Çakır & Bichelmeyer, 2016; Chickering & Ehrmann, 1997; DiPietro et al., 2010; Eom & Ashill, 2016; Herbert, 2006; Moisey & Hughes, 2008; Morris & Finnegan, 2009; Murphy & Rodriguez-Manzanares, 2009; C. Weiner, 2003), and teachers’ perceptions of student motivation influence pedagogical decisions in the classroom (Hardré et al., 2006; Hardré & Sullivan, 2009). Therefore, it is essential to contribute to research in online high school learning, as current research is limited (Childers & Jones, 2017; Hawkins et al., 2013; Martens et al., 2007) and as motivation is integral to both success (Ally, 2008; Murphy &
Rodriguez-Manzanares, 2009) and failure (Bawa, 2016; Chyung, 2001; de la Varre et al., 2014; Lin et al., 2017) in the online classroom.
Chapter Two: Literature Review

Students are performing poorly in online high school courses, contributing to the poor rankings of US students in the international arena (National Center for Education Statistics, 2016), driving negative economic impacts (Organization for Economic Cooperation and Development, 2010), and perpetuating the gaps in achievement rates by socio-economic status and race (Organization for Economic Cooperation and Development, 2016).

In an effort to understand the contributors to both success and failure in the online learning environment, the characteristics of the online learner, including motivation, and practices that encourage motivation will be analyzed. In this literature review, the characteristics of successful and unsuccessful online learners will first be explored. Following, the complexity of motivation in online learning will be defined, and motivational techniques in online learning, including teacher practices, course design, and institutional contributions will be examined.

**Characteristics of Online Learners**

Multiple factors contributed to both success and failure in the online learning environment for students of all ages. Successful students performed well in their previous traditional and online coursework (Ahn & McEachin, 2017; Morris & Finnegan, 2009; Roblyer, et al., 2008; Yukselturk & Bulut, 2007), employed successful learning strategies (Garthwait, 2014; Lin et al., 2017), believed in their own abilities (Badri et al., 2016; Roblyer, et al., 2008; Yukselturk & Bulut, 2007; Yukselturk & Top, 2013), and were motivated (Ally, 2008; Murphy & Rodriguez-Manzanares, 2009). Unsuccessful students did not use evidence-based learning strategies (Morris & Finnegan, 2009; Yukselturk & Bulut, 2007), harbored online learning misconceptions (Bawa, 2016; Yukselturk & Bulut, 2007), lacked motivation (Bawa, 2016; Chyung, 2001; de la Varre et al., 2014; Lin et al., 2017), and displayed an external locus of
control (Morris & Finnegan, 2009). Although the interplay of these characteristics of success and failure may be complex, high school students are capable of succeeding in an online environment (Kauffman, 2015).

**Student Success**

**Academic history.** Multiple student characteristics aligned with student success. A student’s academic history predicted success in an online course (Ahn & McEachin, 2017; Morris & Finnegan, 2009; Roblyer et al., 2008; Yukselturk & Bulut, 2007). For example, grade point average (GPA) for students of all ages correlated to success in an online course (Ahn & McEachin, 2017; Morris & Finnegan, 2009; Roblyer et al., 2008). High school students who were successful in the traditional classroom and high school students who were successful in the online classroom shared similar attributes and behaviors (Kachel, Henry, & Keller, 2005), such as high levels of motivation, the ability to set goals, and time-management skills (Roblyer et al., 2008).

**Learning strategies.** Research results are inconsistent with regard to learning strategies. In Lin and colleagues’ (2017) study with high school students, learning strategies, such as setting goals, creating to-do lists, pursuing course assistance, and monitoring progress, predicted satisfaction with an online course, perceived course progression, and course grades. In Lin and colleagues’ (2017) study, the use of goal-setting techniques by high school students in online world-language courses correlated to higher grades in that course. In Hu and Driscoll’s (2013) study of undergraduate students, the treatment group received self-regulated learning strategies training and showed statistically significant higher academic achievement, higher persistence on long-term assignments, and lower drop-out rates, compared to the control group who did not receive any learning strategies training. This correlation was not consistent, however, as Cho
and Heron (2015) analyzed the results of their study of undergraduate students and did not calculate a correlation between learning strategies and student achievement.

**Emotional intelligence.** Salovey and Mayer (1990) defined emotional intelligence as the ability to assess the emotions of oneself and of others, to control one’s own emotions, and to use one’s own emotions to achieve personal goals. Berenson and colleagues (2008) found emotional intelligence to be the principal indicator of academic achievement in online learning for undergraduate students; however, when combined with personality, a stronger correlation resulted. Higher grades correlated to higher emotional intelligence, but Berenson and colleagues (2008) warned that additional factors, such as personality traits, also impacted achievement in online courses. Berenson and colleagues (2008) recognized that online learning was frustrating at times, and students who exhibited resilience, the ability to cope with adversity and to successfully manage adversity (Kemp, 2002), had higher levels of emotional intelligence; however, resilience alone did not correlate to success in an online course.

**Time spent in a course.** Researchers (Liu & Cavanaugh, 2011; Morris & Finnegan, 2009; Wuellner, 2015) sought to link the number of times a student logged into the learning management system (LMS) and the length of time a student remained in the LMS with achievement; however, these studies did not yield similar results. Morris and Finnegan (2009) reported that the amount of time undergraduate students spent in their online course accessing the discussion boards and viewing the course materials correlated to success in the course. Similar to Morris and Finnegan (2009), Wuellner (2015) discovered that the amount of time spent in an undergraduate online course correlated to final grades. Specifically, students who scored higher on assessments requiring higher-order thinking skills spent more time in the course reading the materials, accessing the pre-recorded lectures, working on assessments, and seeking
assistance from the teacher (Wuellner, 2015). Wuellner’s (2015) and Morris and Finnegan’s (2009) results, however, conflicted with those of Liu and Cavanaugh (2011). Liu and Cavanaugh (2011) found that the time spent in an online high school course was inconclusive. The time spent in one course correlated to grades, but did not correlate to grades in another course (Liu & Cavanaugh, 2011). Therefore, time spent in an online course did not consistently predict success, indicating that multiple factors impacted student success.

**Active participation.** Although time spent in the course did not statistically correlate to grades, successful online students actively participated in the course and were active learners (Morris & Finnegan, 2009; Roblyer et al., 2008; Yukselturk & Bulut, 2007). As Chickering and Ehrmann (1997) noted, "learning is not a spectator sport" (p. 14). Based on interviews with online teachers of adult learners, Yukselturk and Bulut (2007) found that successful students were active learners, reading through course notes frequently and conscientiously completing assignments. Roblyer and colleagues (2008) agreed, noting that high school students who were active in the online course early predicted future success in the course. Moisey and Hughes (2008) and Ally (2008) elaborated on the online learning process, indicating that online learning is based on constructivism, an educational theory where learners construct knowledge based on their own experiences, requiring all students to actively relate to and make meaning of course content. According to Moisey and Hughes (2008), online learning varies greatly from the sedentary style of a traditional brick and mortar educational environment. Similarly, Morris and Finnegan (2009) discovered that successful undergraduate students participated in online activities with more frequency and for a longer duration than undergraduate students who failed the course. Given the results of the research and aligning with the constructivist theory of learning, students who were active participants in an online course were also successful in that
course. Time spent in the course may not predict success, but active time in the course was a strong predictor of success.

**Active interaction.** Yukselturk and Bulut (2007) interviewed teachers of adult learners and discovered that students who were successful in online courses enthusiastically communicated with fellow students and with teachers. Eom and Ashill (2016) found similar results with a positive correlation between student dialogue and course performance in undergraduate and graduate courses. Yukselturk and Top (2013) also investigated interactions in online classrooms; they studied interactions between adult students and found that women more actively participated in peer interactions than men, but the frequency of the interactions did not correlate to improved outcomes. In Yukselturk and Top’s (2013) study, all participants were active in the course, but the additional degree of activity did not increase the success rate. Successful students actively communicated in the online platform, but the degree of participation did not influence achievement.

Sociable students, students considered outgoing and extroverted, also performed well in some courses, but many were uncomfortable in the online learning environment (Berenson et al., 2008). When studying emotional intelligence of undergraduate students, Berenson and colleagues (2008) noted that sociability correlated to success in online courses. Sociable students earned higher GPAs than students considered tense or aggressive (Berenson et al., 2008). Garthwait (2014), however, disclosed that social and outgoing high school students were often bewildered in an online course. Although sociability correlated to success in online courses, sociable students were not comfortable in the online environment (Garthwait, 2014).

**Interest.** Researchers (Artino, 2009; Yukselturk & Bulut, 2007) studied course interest and learned that students who were involved in the course were more likely to be successful.
Yukselturk and Bulut (2007) interviewed teachers of adult students, and noted that students interested in the course material were more successful. The successful students could relate to the content and could apply the content to their lives and interests (Yukselturk & Bulut, 2007). Artino (2009) found similar results in that service academy undergraduate students interested in the material appreciated the content and were more successful.

**Beliefs.** Successful adult students had positive attitudes (Sun, Tsai, Finger, Chen, & Yeh, 2008), and successful students of all ages believed in their own abilities (Badri et al., 2016; Roblyer, et al., 2008; Yukselturk & Bulut, 2007; Yukselturk & Top, 2013). In addition, students of all ages who believed they had command of their circumstances outperformed those who felt they had little or no control of their situation (Berenson et al., 2008; Morris & Finnegan, 2009; Yukselturk & Bulut, 2007). Berenson and colleagues (2008) explained that undergraduate students with an external locus of control desired extrinsic approval, which, in an online course, was delayed, and the external locus of control reduced their likelihood of success in the online classroom.

**Self-efficacy.** Self-efficacy, the belief in one’s own ability to succeed in a particular environment (Bandura, 1997), also impacted online achievement. Kim, Park, and Cozart (2014) learned that self-efficacy was an important contributor to high school student success; however, these researchers also discovered that emotions impacted self-efficacy. Anger, for example, impacted self-efficacy, explaining that students who need to repeat an online course may be angry, and thus, may not believe in their own abilities, leading to less than desirable results in the course (Kim, Park, & Cozart, 2014; Kim et al., 2015).

Self-efficacy was often improved with familiarity of technology (Badri et al., 2016). For example, high school students utilizing social media tools often felt more confident with their
technology skills, leading to additional interest in the course and to the belief that they could be successful using technology in the online course (Badri et al., 2016).

Self-efficacy may be essential to success in an online course, but levels of self-efficacy changed through the duration of a course, particularly for low-performing high school students (Kim et al., 2015). Kim and colleagues (2015) investigated self-efficacy over time for both high and low performing students. High-performing students began the course with higher levels of self-efficacy than the low-performers, and, as the course progressed, the high-performing students maintained their self-efficacy, while low-performing students’ self-efficacy abated (Kim et al., 2015).

**Self-regulation.** Self-regulation correlated with success for students of all ages (Barbour & McLaren, 2012; Yukselturk & Bulut, 2007) and with course persistence for undergraduate students (Bawa, 2016). According to Zimmerman (2002), a seminal author in self-regulated learning, self-regulation is a “process by which learners transform their mental abilities into academic skills” (p.65). Yukselturk and Bulut (2007) recognized the influence of self-regulation in adult learners by noting that self-regulated learners developed individualized learning opportunities, acknowledged their responsibilities, and maintained focus. Students who displayed self-regulation were successful in online courses (Barbour & McLaren, 2012; Bawa, 2016; Yukselturk & Bulut, 2007).

Self-regulation was a contributing factor to success in an online course; however, the research regarding the levels of self-regulation throughout the duration of an online course conflicted (Kim et al., 2015; Matuga, 2009). Matuga (2009) and Kim and colleagues (2015) investigated self-regulation over time for both high and low performing high school students and their results differed. Kim and colleagues’ (2009) found high-performing students began the
course with higher levels of self-regulation than the low-performers, and, as the course progressed, the high-performing students maintained their self-regulation, while low-performing students’ self-regulation declined. Conversely, Matuga (2009) found high-achieving students’ self-regulation declined as the course progressed, while low-achieving students’ self-regulation increased as the course progressed. Successful students exhibited self-regulation, regardless of whether or not it fluctuated throughout the duration of a course.

The correlation between self-regulation and achievement was variable (Eom & Ashill, 2016; Kim et al., 2016). Eom and Ashill (2016) noted no correlation between self-regulation and learning outcomes for online undergraduate and graduate students, citing teacher influences and extraneous factors as creating additional impacts on learning outcomes. Kim and colleagues (2016) also noted no correlation between self-regulation and learning outcomes for high school students; however, they believed that emotion mitigated self-regulation. Motivation is complex, and as Matuga (2009) noted, the relationship between motivation and achievement is under continued investigation.

Whether or not researchers agree about the impact of self-regulation in online learning, self-regulation is challenging to teach in the online environment because it requires considerable scaffolding and guidance for adolescents (Azevedo, 2005). Self-regulation may be a contributor to success in an online course, but additional influences must also be considered making it difficult for educators to teach self-regulation skills in an online environment (Azevedo, 2005).

**Motivation.** As Ally (2008) noted, motivated students of all ages were successful in online courses. Regardless of the quality of the online resources, if students were not motivated, learning did not occur (Ally, 2008). Ally (2008) posited that motivation was essential, and teachers recognized the need for student motivation in an online course as well. Teachers
acknowledged that discipline and motivation were essential characteristics of a successful online high school student (Murphy & Rodriguez-Manzanares, 2009). Motivation will be discussed in more detail further in the literature review.

**Student success summary.** Successful students were previously successful in their academic pursuits (Ahn & McEachin, 2017; Morris & Finnegan, 2009; Roblyer, Davis, Mills, Marshall, & Pape, 2008; Yukselturk & Bulut, 2007), actively participated (Ally, 2008; Moisey & Hughes, 2008; Roblyer et al., 2008; Yukselturk & Bulut, 2007) in the course by reading through the course materials (Yukselturk & Bulut, 2007) and completing online activities (Moisey & Hughes, 2008), communicated in the online course (Eom & Ashill, 2016; Yukselturk & Bulut, 2007), were interested in the concepts (Yukselturk & Bulut, 2007), displayed self-efficacy (Kim et al., 2014) and self-regulation (Barbour & McLaren, 2012; Yukselturk & Bulut, 2007), and were motivated (Ally, 2008; Murphy & Rodriguez-Manzanares, 2009). Additional factors, such as cognitive abilities and the learning environment, also impacted success (Berenson et al., 2008; Roblyer et al., 2008). Success in the online classroom was attributed to a multitude of factors and influences, including the student and the environment. Student success is complex, as is student failure.

**Student Failure**

Students failed online courses for multiple reasons, including both internal and external factors. Unsuccessful students exhibited poor study habits (Morris & Finnegan, 2009; Yukselturk & Bulut, 2007), harbored false expectations (Bawa, 2016; Yukselturk & Bulut, 2007), lacked motivation (Bawa, 2016; Chyung, 2001; de la Varre et al., 2014; Lin et al., 2017), and displayed an external locus of control (Morris & Finnegan, 2009). Similar to student success, student failure is also individual and complex.
Learning strategies. Students who did not implement appropriate learning strategies were susceptible to failure (Morris & Finnegan, 2009; Yukselturk & Bulut, 2007; C. Weiner, 2003). Morris and Finnegan (2009) learned that undergraduate students who failed online courses did not access the online course content and did not participate in course discussions. Similarly, Morris and Finnegan (2009) discovered that undergraduate students who failed the course participated in online activities with less frequency and with a lower duration than students who passed the course. The teachers interviewed in Yukselturk and Bulut’s (2007) study noted that adult students who failed did not meet course deliverables, did not learn the course concepts, and mismanaged their time. C. Weiner (2003) found that low-performing high school students did not take ownership or responsibility in their online courses. Barbour and McLaren (2012) also learned that high school students mismanaged their time when working in online courses. High school students utilized approximately 50%-80% of their allotted time to focus on their online work, with an average 65% of the allotted time dedicated to the online coursework (Barbour & McLaren, 2012, p. 233). Students who failed online courses lacked or did not employ learning strategies (Morris & Finnegan, 2009; Yukselturk & Bulut; 2007; C. Weiner, 2003).

Misconceptions. Students who failed online courses were found to harbor false expectations regarding online learning (Bawa, 2016; Yukselturk & Bulut, 2007). Misconceptions included lower time requirements (Bawa, 2016; Yukselturk & Bulut, 2007), required effort (Bawa, 2016; Yukselturk & Bulut, 2007), and minimal lifestyle interruptions (Bawa, 2016). Bawa (2016) remarked that undergraduate students underestimated the course requirements necessary to be successful in an online course; the incorrect expectations led to course failure.
Bawa (2016) asserted that undergraduate and graduate students in online courses misjudged the skills required in an online classroom compared to the skills required in a traditional classroom. Undergraduate students overestimated their own technical skills, for example, based on their social media habits, leading to frustration and negative impacts in the online classroom (Bawa, 2016). Undergraduate students were familiar with Facebook and YouTube, but not educational technology tools (Ng, 2012), so Bawa (2016) posited that university students who experienced online classroom technology issues did not allow themselves ample time to become familiar with such technology, and, as a result, they dropped the course. In addition, experienced online undergraduate and graduate teachers cautioned novice undergraduate and graduate teachers against overestimating the technology ability of their students and suggested creating discussion boards for students to share technology concerns and distributing details regarding the university’s technology support to mitigate this risk (Clark-Ibanez & Scott, 2008).

Motivation. Unsuccessful adult students also did not remain motivated throughout an online course (Yukselturk & Bulut, 2007). Students of all ages who felt unprepared or overwhelmed lost motivation and performed poorly or dropped an online course (Bawa, 2016; Chyung, 2001; de la Varre et al., 2014; Lin et al., 2017). Lack of motivation, a topic further explored later in this literature review, contributed to student failure.

Accountability. Although undergraduate students may experience technical issues or other issues with the course, the undergraduate students who decided to withdraw from the course blamed the course issues for their withdrawal, compared to successful undergraduate students who viewed course issues as temporary and as surmountable impediments (Morris & Finnegan, 2009). Undergraduate students who continued in a course, despite the inherent
challenges of online learning, worked through the issues and obstacles (Kemp, 2002). Undergraduate students who completed an online course scored higher than those who withdrew from the same course on the following metrics: ability to make things better, persistence at working through difficulties, and the confidence to make the most of bad situations (Kemp, 2002). Rather than place blame, Chickering and Ehrmann (1997) urged all students to take responsibility for their own learning, and C. Weiner (2003) suggested that this responsibility takes time to develop and evolve for high school students.

**Additional factors.** Additional factors impacted student success in the online classroom. Adult students could not adapt to the active learning required in an online course, particularly after the passive reception of course concepts in a traditional classroom (Yukselturk & Bulut, 2007). Adult students also reported that the course material was not relevant to their personal lives or goals (Chyung, 2001); adult students had low initial confidence levels (Chyung, 2001); high school students had difficulty focusing or had short attention spans (Garthwait, 2014); students of all ages were unsatisfied with a particular aspect of online learning (Chyung, 2001; de la Varre et al., 2014); K-12 students dropped or failed a course due to a combination of factors (de la Varre et al., 2014). Adult students failed or withdrew from online courses due to external factors such as family commitments (Bawa, 2016; Park & Choi, 2009; Yukselturk & Bulut, 2007), health concerns (Yukselturk & Bulut, 2007), or work-related commitments (Yukselturk & Bulut, 2007). K-12 students also failed or withdrew due to negative influence from their parents (de la Varre et al., 2014). Student failure is complex, and a multitude of factors contributed to poor performance.

**Student failure summary.** Roblyer and Davis (2008) acknowledged that research has identified both student and environmental traits that contribute to student failure. Additionally,
Roblyer and Davis (2008) indicated that high school students fail online courses for various reasons, and a method to consistently predicting failure has not been developed. Researchers have identified reasons why students fail online courses, but no tool currently exists to utilize these characteristics to predict, and hence prevent, failure in the online learning environment (Roblyer & Davis, 2008).

Multiple factors negatively influenced student success in the online classroom including the following: lack of learning strategies (Morris & Finnegan, 2009; Yukselturk & Bulut, 2007), online learning misconceptions (Morris & Finnegan, 2009; Yukselturk & Bulut, 2007), lack of motivation (Bawa, 2016; Chyung, 2001; de la Varre et al., 2014; Lin et al., 2017), and influence of external sources (Morris & Finnegan, 2009). Similar to success, failure is complex and is based on multiple influences.

Conclusion

Numerous factors impacted success or contributed to failure in an online environment, and these factors can be both internal and external (Rovai, 2003). Although not one characteristic alone predicted success or failure (Rovai, 2003), researchers identified certain behaviors and characteristics that influenced achievement in an online learning environment. Understanding the attributes of successful students may help future students determine if online learning is truly the best fit for them (Kauffman, 2015; Moisey & Hughes, 2008). All students can reflect and understand their own online learning characteristics in order to be successful in the online classroom (Moisey & Hughes, 2008), and teachers, parents, and additional stakeholders can encourage the positive characteristics needed to promote success for all students.
Motivation in Online Learning

Although multiple factors were apparent in both success and failure in the online classroom, this second section of the literature review will focus on motivation. Successful students of all ages were motivated (Ally, 2008; Murphy & Rodriguez-Manzanares, 2009), while unsuccessful students of all ages lacked motivation (Bawa, 2016; Chyung, 2001; de la Varre et al., 2014; Lin et al., 2017). Motivation, a complex and multi-faceted attribute, influenced success in online courses, and researchers believed motivation was an integral characteristic required for success in an online learning environment for all ages (Berenson et al., 2008; Lin, Wei, & Hung, 2012; C. Weiner, 2003; Yukselturk & Bulut, 2007).

The definitions of motivation varied; however, most included an action and a goal component. Motivation is complex (Hartnett, St. George, & Dron, 2011; C. Weiner, 2003), and the complexity becomes evident with additional attributes of motivation, such as intrinsic and extrinsic motivation (Childers & Jones, 2017; Ryan & Deci, 2000), self-regulation (Badri et al., 2016; Hartnett et al., 2011; Sha et al., 2012), and self-efficacy (Childers & Jones, 2017; Kim et al., 2015). Each of these attributes of motivation adds an additional layer of complexity to the concept. By understanding the intricacies of motivation, teachers, parents, students, and other stakeholders can promote motivation and success for all students in the online classroom.

Definition

Researchers provided multiple definitions of motivation with common themes of action and goals. Ryan and Deci (2000) defined motivation as taking action toward a goal. A student who feels no desire to take action is unmotivated, while a student who is mobilized toward an outcome is motivated (Ryan & Deci, 2000). Additionally, Sha, Looi, Chen, Seow, and Wong’s (2012) definition included an element of action, where motivation is the commencing and
continuation of activities in pursuit of a goal. Childers and Jones (2017) shared a similar definition, where motivation is the inner dedication that compels individuals to achieve their goals. If a student set goals and worked to achieve those goals, then the student was motivated (Childers & Jones, 2017; Sha et al., 2012).

**Complexity**

Although researchers attempted to pinpoint a narrow definition of motivation using goals and action at the core of the designation, others provided a broader, more complex sense of the term. Motivation is multifaceted, and the person and environment must be considered when defining such a term (Hartnett, St. George, & Dron, 2011; Linnenbrink & Pintrich, 2002). Motivation is an interplay between the individual and the environment, where neither the individual nor the environment is able to define motivation independently (Hartnett et al., 2011; Linnenbrink & Pintrich, 2002). Chen and Jang (2010) agreed that motivation is complex; it is not a single, solitary concept. In another view of motivation, C. Weiner (2003) considered motivation an overarching concept, applicable to all phases of online learning from the initial stages of course design through course instruction.

**Intrinsic and extrinsic motivation.** Motivation can be intrinsic or extrinsic (Childers & Jones, 2017; Ryan & Deci, 2000). Intrinsic motivation is when a student completes an activity for an innate sense of satisfaction (Ryan & Deci, 2000; Sha et al., 2012), whereas extrinsic motivation is when a student completes an activity for an external benefit (Ryan & Deci, 2000). Hartnett and colleagues (2011) believed both intrinsic and extrinsic motivation can be simultaneously present and are influenced by the environment and circumstances. Lin and colleagues (2017) warned that student motivation differs between the online learning environment and the traditional school environment, where each setting provided variables that
Research considering intrinsic and extrinsic motivation was varied and conflicting (Eom & Ashill, 2016; Lin et al., 2017; Sha et al., 2012). Eom and Ashill (2016) found that intrinsic motivation positively correlated to achievement for undergraduate and graduate students, while extrinsic motivation did not. Conversely, Lin and colleagues (2017) found that neither intrinsic nor extrinsic motivation correlated to achievement in the online high school setting. Furthermore, Kim and colleagues (2015) found no distinction between high performers and low performers when investigating intrinsic motivation between the two groups of high school students. Sha and colleagues (2012) investigated intrinsic and extrinsic motivation in elementary students and found that both types of motivation impacted learning, but in a different way. While intrinsic motivation influenced engagement and learning, extrinsic motivation influenced task completion (Sha et al., 2012). These results reflect the complexity of studying and identifying motivation. Many researchers included intrinsic and extrinsic motivation as elements of their understanding of motivation, but also recognized that there may be a multitude of factors that can influence motivation and achievement in an online setting.

**Additional factors.** Motivation extends beyond intrinsic and extrinsic influences, and includes attributes such as self-regulation, persistence, self-efficacy, and attitude. Sha and colleagues (2012) included perseverance, determination, and problem solving as indicators of motivation. Jeurissen (2015) noted that persistence was an indicator of motivation. In addition, Jeurissen (2005) believed student’s attitude and academic ability impacted motivation. Kim and colleagues (2014) found that emotions impacted motivation in high school students, and Yukselturk and Bulut (2007) discovered that successful adult students maintained high levels of motivation, whereas the level of motivation for unsuccessful adult students decreased from the
beginning to the end of the course. In short, numerous factors contributed to the complexity of motivation; motivation is complex and can fluctuate.

**Self-regulation.** Self-regulation is a component of motivation. Sha and colleagues (2012) and Hartnett and colleagues (2011) discovered that self-regulation also impacted motivation for undergraduate and adult learners. Badri and colleagues (2016) studied self-regulation in online learning and found that the use of social media, an element of the online learning course students considered intrinsically motivating, impacted high school students’ attitudes and self-regulation of motivation.

**Self-efficacy.** Self-efficacy was an additional factor of motivation. Childers and Jones (2017) learned that higher self-efficacy corresponded to higher motivation in high school students. Kim and colleagues (2015) discovered similar results linking self-efficacy, motivation, and online learning in high school students. Despite low levels of intrinsic value, high school students learned in the online environment when they believed they could be successful, regardless of possible issues (Kim et al., 2015). High school students who believed in their own abilities, an attribute of motivation, were more successful in the online learning environment (Kim et al., 2015). Linnenbrink and Pintrich (2002) cautioned, however, that self-efficacy was context-specific and could change depending on the situation for all learners.

**Additional variables.** Motivation was not limited to self-regulation, self-efficacy, or any of the factors previously discussed. Lim and Kim (2003) studied motivational variables (relevancy, course interest, emotion, reinforcement, and self-efficacy) in undergraduate students and found that the majority of the variables impacted achievement. Only course interest did not influence achievement (Lim & Kim, 2003).

Aspects of motivation may positively or negatively influence achievement in online
courses. Low levels of motivation led to poor performance or withdrawal from an online course. Undergraduate and graduate students who were not motivated were more likely to drop an online course (Bawa, 2016), and unmotivated high school students did not utilize learning strategies (Lin et al., 2017). Multiple factors led to lack of motivation, such as a perception of a particular aspect of the online course for adult learners (Sun et al., 2008), lack of interaction with the teacher and peers for high school students (Lin et al., 2017), or perceived difficulty of the course for high school students (de la Varre et al., 2014). Just as motivation is complex in positively influencing student achievement, lack of motivation is also complex.

**Perceptions.** Students themselves recognized the need to be motivated in online learning (C. Weiner, 2003). When interviewed, high school students proclaimed that online learners must be self-disciplined and motivated in order to be successful in online courses (C. Weiner, 2003). Both motivated and unmotivated high school students recognized this requirement (C. Weiner, 2003). In addition, high school students would only recommend online courses to students who they believed were motivated (C. Weiner, 2003). Many high school students felt that their friends or acquaintances would be unsuccessful in the online learning environment because these students did not possess the necessary skills for success (C. Weiner, 2003).

The perception of motivation was not always consistent between students and members of the support team. For example, online course facilitators believed that poor performing high school students were unmotivated, but the students themselves disagreed (de la Varre et al., 2014). The high school students in de la Varre and colleagues’ study (2014) provided alternative explanations for their performance or course withdrawal such as conflicts with course schedule, dislike of the online format, and lack of teacher feedback, for example; however, the authors ruminated that motivation is complex and multi-faceted, so multiple factors possibly impacted
students’ behavior. Students perceived their own levels of motivation differently than their support team members (de la Varre et al., 2014).

Motivational Theories. The application of motivational theory provided mixed results with regard to student motivation and achievement. Keller’s (1999) ARCS method, a seminal motivational theory applicable to students of all ages, focused on student motivation by implementing four pillars into learning: attention, relevance, confidence, and satisfaction (ARCS). By utilizing Keller’s (1999) theory, adult student motivation and course withdrawal rates improved (Chyung, 2001). High school students were motivated when they believed that the material was relevant to their personal interests or goals (Jeurissen, 2015), and all students preferred to work on assignments, projects, and other tasks they deemed relevant (Keller, 1999).

By applying motivational theory in online courses, some researchers believed that learning, motivation, confidence, and enthusiasm increased for all students (Chyung, 2001; Crimando, Flowers, & Riggar, 2004; Jeurissen, 2015), but this was not consistent. In contrast, Artino (2009) found that undergraduate service academy students interested in the material did not achieve more than those not interested in the material. This conflicted with Keller’s (1999) theory that relevance impacted motivation and achievement. Motivation, however, is comprised of multiple influences and is complex.

Despite an immediate lack of motivation or other skills integral to the online learning process, students are still capable of developing such skills to be successful online (C. Weiner, 2003). Students are capable of developing helpful study habits, discipline, self-regulation, and other skills in order to succeed in an online environment (C. Weiner, 2003).

Given the complexity of motivation, future study is required. Barbour and Reeves (2009) shared their view on the diverse definitions of motivation and the distinct results by noting that
the majority of studies on motivation and online learning have been based on adults and adult characteristics. Implementing the results of research on adults into K-12 practice is challenging, as adults learn differently than adolescents (Barbour & Reeves, 2009; Moore, 1973). Therefore, Barbour and Reeves called for additional research exploring motivation and success in online learning for K-12 students. Motivation can be studied by online learning formats and by content area (Lin et al., 2017).

**Conclusion**

Although researchers may offer differing definitions, indicators, and attributes of motivation, the key is to understand the interaction between the attributes and the environment and then utilize this understanding to influence student success (Kim et al., 2015). By understanding the interconnection between the elements of motivation, teachers, course designers, and other personnel can subsequently support online students. The definitions and studies of motivation yielded multiple results, so it is imperative to utilize these findings to positively impact student success.

**Successful Practices to Influence Motivation**

Motivation was a key contributor to success in an online learning environment for students of all ages (Ally, 2008; Bawa, 2016; Chyung, 2001; de la Varre et al., 2014; Lin et al., 2017; Murphy & Rodriguez-Manzanares, 2009), and online course developers, teachers, and institutional representatives promoted student motivation through a multitude of behaviors. By understanding successful practices that promote student motivation, educators can adjust their practices to positively affect student motivation, and subsequently, influence student achievement.
**Course Design**

Keller (1983), a seminal author in online course development, warned course developers that there were multiple factors that influence student motivation in learning, and developers must consider more than simply a quality teacher as the sole motivational factor. A quality teacher was important, but a thorough and methodical approach to course design for all students also improved motivation (Keller, 1999). Course developers positively influenced student motivation by creating relevant (Keller, 1999; Hartnett et al., 2011), easy to use (Badri et al., 2016; DiPietro et al., 2010; Morris & Finnegan, 2009; Sun et al., 2008), quality courses (Eom & Ashill, 2016; Sun et al., 2008; Yukselturk & Bulut, 2007) that promoted autonomy (Barbour 2007; Barbour & McLaren, 2012; Kachel et al., 2005; Morris & Finnegan, 2009), flexibility (Kachel et al., 2005; Morris & Finnegan, 2009; Sun et al., 2008), communication (Kim et al., 2014; Moisey & Hughes, 2008; Murphy & Rodriguez-Manzanares, 2009), interaction (Borup, Graham, & Davies, 2013; C. Weiner, 2003), and recognized learner individuality (Eom & Ashill, 2016; Yukselturk & Top, 2013).

**Framework.** Online course developers incorporated a variety of theoretical frameworks to design online courses to influence motivation and success. Online course developers utilized seminal works such as Chickering and Ehrmann’s (1997) Seven Principles to encourage interaction, cooperation, active learning, feedback, time on task, high expectations, and individual learning styles. Other developers (Angelo, 2017; Huett, Moller, Young, Bray, & Huett, 2008; Visser & Keller, 1990) utilized Keller’s (1983) model of motivation or an Organizational Elements Model (Chyung, 2001), for example. Still others utilized the cognitive information processing model, catering courses and teaching strategies to meet the unique needs
of the individual learner (Eom & Ashill, 2016). The various theories provided the foundation for online courses.

Researchers (Bawa, 2016; Crimando et al., 2004; Keller, 1999) recognized motivational theories in online course design and provided recommendations based upon these motivational theories. Student motivation correlated to course design for undergraduate and graduate students (Bawa, 2016), and educators referenced motivational theories and design processes to maximize student motivation (Keller, 1999). Using motivational theory as a foundation, recommendations for elements of course design included the following: advanced organizers, online discussions, online course navigation assistance, teacher feedback, instructional games, inquiry-based learning, jigsaw learning, problem-based learning, streamed videos, and a welcome page (Crimando et al., 2004). Such recommendations are evidence of Keller’s (1999) methodical, motivational approach to designing online courses, improving both motivation and achievement.

Course design concentrating on the senses improved motivation (Allison & Rehm, 2016). Allison and Rehm’s (2016) work focused on the senses in online learning, motivating all students to achieve in online courses by using sight, hearing, touch, smell, and taste in the online learning process. Visual learners were motivated by graphic organizers, drawing features, and other tools that the learner could read (Allison & Rehm, 2016). Auditory learners were motivated by listening to a recorded digital slide show, lecture, or podcast (Allison & Rehm, 2016). Kinesthetic learners were motivated by online manipulative tools that were interactive (Allison & Rehm, 2016). Tactile learners were motivated by digital sticky notes and other online note taking devices (Allison & Rehm, 2016). Allison and Rehm (2016) recognized the usefulness of incorporating the senses into course design, but also recognized the difficulty. Sensory approaches may improve motivation but are difficult to implement in the online learning
environment (Allison & Rehm, 2016).

Each of these motivational theories and techniques approached online course design in a methodical manner by deliberately incorporating specific motivational features into the course. By intentionally incorporating theory into their online educational processes, educators can facilitate motivation in online learning. The application of motivational theory motivated students, as did instructional design.

**Instructional design.** Many elements of instructional design prompted motivation and achievement.

**Quality.** Course quality was found to be a key component of student satisfaction that correlated to success and motivation for adult learners (Sun et al., 2008). Motivation was linked to quality course design for undergraduate and graduate students (Bawa, 2016), and quality course design statistically correlated to achievement for undergraduate and graduate students (Eom & Ashill, 2016). Quality courses included a variety of interactive features that promoted and maintained high levels of adult student motivation (Yukselturk & Bulut, 2007). A quality course required more than simply reading text; a quality course included interactive, captivating, educational activities, as well as relevant application of the course material (Kachel et al., 2005) and a focus on pedagogy (Rovai, 2003). Techniques varied, but quality was an integral aspect of motivation in online course design.

High school students shared the need for quality, structured online courses (C. Weiner, 2003). High school students recognized a structured and organized course, appreciated the design, and indicated that a quality course helped them to achieve success (C. Weiner, 2003). These students also communicated that they preferred a relevant and structured course (C. Weiner, 2003). Students acknowledged and favored structured, quality courses, characteristics
that facilitated their motivation and achievement (C. Weiner, 2003).

Quality, motivating courses included a myriad of features. In interviews, online course developers shared that each student’s level of motivation was different, so creating activities to meet all levels of engagement and motivation was key to influencing success (Barbour, 2007). Games (Lin et al., 2012), varied assessment techniques (Sun et al., 2008), and a multitude of motivational approaches (Ally, 2008) within the online course design also motivated students. Online games, for example, improved achievement, confidence, concentration, and motivation for high school students (Lin et al., 2012), and different assessment techniques motivated adult students to put forth a significant effort (Sun et al., 2008). Varied features of quality online courses contributed to motivation and achievement in the online learning platform.

Ease of use. In addition to quality and assorted activities, ease of use, user-friendly navigational ability within a system, of an online course also influenced motivation (Badri et al., 2016; DiPietro et al., 2010; Morris & Finnegan, 2009; Sun et al., 2008). Students of all ages remarked that the ease of use of an online course impacted motivation and success in the course (Badri et al., 2016; DiPietro et al., 2010; Morris & Finnegan, 2009; Sun et al., 2008). The ease of use of an online course also influenced satisfaction and promoted perseverance for adult students (Sun et al., 2008). Badri et al. (2016) found that high school course designers must incorporate ease of use into an online course to improve online learning; ignoring these factors led to negative outcomes.

DiPietro and colleagues (2010) expanded on the ease of use concept. Teachers in a Michigan high school motivated students by creating a systematically arranged, structured online course (DiPietro et al., 2010). These teachers specifically mentioned the importance of including sound instructional design qualities into their online courses to improve motivation, meet
students’ needs, and encourage course completion (DiPietro et al., 2010). By creating a course that was structured and easy to navigate, developers promoted motivation and success.

**Autonomy and flexibility.** Additional motivational factors within an online course included autonomy and flexibility. Students of all ages appreciated the autonomy incorporated into online courses (Barbour, 2007; Barbour & McLaren, 2012; Kachel et al., 2005; Morris & Finnegan, 2009). High school students welcomed the ability to login to the course at their convenience and to work at their own pace without constant teacher supervision, promoting motivation and interest in the content (Barbour & McLaren, 2012; Kachel et al., 2005). Well-designed, structured online courses allowed students to be independent learners, prompting motivation.

In Barbour and McLaren’s (2012) interviews with online high school learners, the students expressed their appreciation of the independence and flexibility allowed in online learning, particularly compared to the traditional classroom environment. Similar to Barbour and McLaren’s (2012) findings, Kachel and colleagues (2005) discovered that high school student motivation improved when students felt as if they controlled the times in which they could login to the course, when they completed their work, and when they selected the location in which they conducted their learning. The independence and choices allowed students to select options that matched their interests (Kachel et al., 2005). Multiple researchers agreed that all students were motivated when they felt the online course design offered such flexibility (Kachel et al., 2005; Morris & Finnegan, 2009; Sun et al., 2008). The combination of flexibility and autonomy in an online course promoted motivation.

Barbour (2007) acknowledged the importance of autonomy in an online high school course, but cautioned that children and adolescents need structure and support within the online
environment. Sha and colleagues (2012) expressed similar statements regarding adult students and recommended that support structures be incorporated into course design. Support structures, such as creating task lists and setting goals, for example, encouraged autonomy and also encouraged self-regulation (Sha et al., 2012). Although autonomy may promote motivation, given an adolescent’s level of development, online courses should also include supports and structure.

**Communication and interaction.** Communication and interaction encouraged motivation in online courses (Kachel et al., 2005; Kim et al., 2014; Murphy & Rodríguez-Manzanares, 2009). Kachel and colleagues (2005) posited that communication was an integral part of the online learning process for high school students. In order to promote communication, course design included interactive social media tools and videos, as these were tools reported as motivational for online high school learners (Murphy & Rodríguez-Manzanares, 2009).

Peer interaction, interaction that led to mutual support structures and the development of a sense of community, was essential in online learning for undergraduate and graduate students (Moisey & Hughes, 2008). Chickering and Ehrmann (1997) stressed the importance of interaction and community for all students, suggesting learning improves when viewed as a group effort and not an individual endeavor. Online interactions between high school students and among students and teachers promoted motivation, as well as learning and intellectual development (Kim et al., 2014).

Students recognized interaction as a component of motivation (Borup et al., 2013; C. Weiner, 2003). Borup and colleagues (2013) investigated different types of interactions and recorded the high school student and parent perceptions of each type of interaction. Parents viewed all types of interaction as equally valuable, while students indicated that the interaction
between the student and the teacher had influenced motivation the most (Borup et al., 2013). In addition, 97.3% of students agreed that the interaction with their parents was motivational (Borup et al., 2013, p. 51). High school students also mentioned that they appreciated the social aspect of a traditional learning environment and missed the social interactions often not available in online learning (C. Weiner, 2003). Courses that encouraged communication and interaction promoted motivation.

While interaction in online learning was essential, it was not without its challenges. Not all students in higher education utilized the online communication and interaction features, leading to dissatisfaction with online learning and, thus, possible attrition (Bawa, 2016). In addition, communication features were challenging to implement in course design, particularly with asynchronous courses given the difficulty creating significant and purposeful discussion in the asynchronous learning environment (Kachel et al., 2005). Interaction and communication were motivational elements included, when possible, into an online course.

**Relevance.** An additional motivational feature of course design was course relevance, where students found course content applicable to their career goals, academically interesting, or personally interesting (Keller & Suzuki, 2004). Relevant activities within the learning management system were motivating as these activities helped students of all ages to understand how the course content fit into their individual lives (Hartnett et al., 2011; Muller & Valasek, 2016; Park & Choi, 2009). For instance, Hartnett and colleagues (2011) found that undergraduate pre-service teachers scored higher on a motivational questionnaire when they felt as if the online assignments were directly related to their future role in the classroom. In Park and Choi’s (2009) study of adult learners, the mean score for the relevance factor on the given questionnaire was significantly higher for students who remained in online courses compared to
those students who withdrew from the same courses. In addition, Park and Choi’s (2009) analysis revealed that adult students who believed course content was relevant to their lives were more likely to persist in an online course than those who did not believe the course was relevant to their lives.

**Individuality.** Although there were multiple methods to incorporate motivation into online learning, motivation is complex, and students are unique individuals who viewed motivational techniques differently (Eom & Ashill, 2016; Yukselturk & Top, 2013). Researchers urged course designers to consider individual learners in course creation (Eom & Ashill, 2016; Yukselturk & Top, 2013). With the increasing number of online enrollments, the differences between online learners is also increasing, thus leading to the need for additional study and incorporation of a variety of learning styles and characteristics into online courses (Yukselturk & Top, 2013). Emotions must be considered in online course design; for example, adult online learners not comfortable with technology experienced angst and apprehension when confronted with new technology (Sun et al., 2008). Each student is unique and is motivated differently, so course designers must consider the individual student during the design process (Eom & Ashill, 2016; Yukselturk & Top, 2013).

**Recommendations.** Considering the individuality of learners, researchers provided recommendations for course developers. Online course developers for students of all ages must consider that online learners hail from various backgrounds and begin online courses with different skill sets (Bawa, 2016; Yukselturk & Top, 2013). Course developers must consider the needs of all of the online learners, their respective learning styles (Eom & Ashill, 2016; Yukselturk & Top, 2013), and cultural attributes (Bawa, 2016). Course designers should also include multiple approaches to learning and techniques for learning in the online environment in
order to promote motivation and achievement (Lin et al., 2017). By considering the unique, individual student when developing courses, course designers can strive to encourage motivation for all students.

The different views, attitudes, and perspectives of students and teachers must also be considered when creating online courses (Bawa, 2016). Course developers must understand and incorporate the students’ perspectives, not simply that of the designers’ into the course (Bawa, 2016). In addition, developers must also consider that student expectations also shift, and thus, must incorporate various tools and technologies into the online courses (Bawa, 2016). Adding to the complexity of motivation is the uniqueness of each individual learner. When designing courses, the multiple facets of motivation as well as the individuality of each student must be considered.

Course design summary. The design of a course motivated students, but researchers did not consistently find a clear link among course design, motivation, and achievement. Roblyer and colleagues (2008) recognized the influence of course design on motivation and learning, but cautioned that it was unclear exactly how each motivational design factor distinctly contributed to the success of the online student. Course design contributes to motivation, but the correlation to achievement is undefined. Online course design impacts motivation, as does the teacher.

Teachers

Teachers encouraged motivation by incorporating pedagogical techniques (Çakır & Bichelmeyer, 2016), communications and interaction (Eom & Ashill, 2016; Fryer & Bovee, 2016; Weiner, 2003), feedback (Chickering & Ehrmann, 1997; DiPietro et al., 2010; Herbert, 2006; Morris & Finnegan, 2009; Murphy & Rodríguez-Manzanares, 2009), and personalized instruction (Chickering & Ehrmann, 1997; Moisey & Hughes, 2008) into the course.
utilized these various techniques to motivate students and to improve success in an online course.

De la Varre and colleagues (2014) discovered that high school students faulted the teacher as the reason for withdrawal from online courses, highlighting the importance of the teacher. In addition, high school teachers’ instructional methods were more important than their credentials (Çakır & Bichelmeyer, 2016). Attention to pedagogy correlated to achievement for students of all ages in the online classroom (Barbour & McLaren, 2012; Çakır & Bichelmeyer, 2016; Rosie, 2000). Rosie (2000) recommended teaching and principles of teaching as the primary emphasis of the online teacher.

**Pedagogy.** A teacher’s pedagogical approach to instruction was more important than a teacher’s credentials (Çakır & Bichelmeyer, 2016). Çakır and Bichelmeyer (2016) found that a high school teacher’s degree, research specialization, number of years of experience, years in a specific educational institution, and applicable experience did not correlate to student achievement. Çakır and Bichelmeyer (2016) postulated that teachers could teach outside of their area of expertise, as long as the online course was of high quality. This stance may support the importance of the quality of an online course and the importance of a pedagogical approach to online learning; however, it also rebukes the current high school teacher training programs that are discipline-oriented.

**Personalization.** As part of a pedagogical approach to online teaching, researchers recommended personalizing instruction to improve motivation (Chen & Jang; 2010; Chickering & Ehrmann, 1997; Moisey & Hughes, 2008). Chen and Jang (2010) recommended creating an environment focused on the adult student, where adult learners felt safe to share their thoughts. Understanding undergraduate and graduate students’ experiences with online learning and students’ personal goals will help to improve motivation and success (Moisey & Hughes, 2008).
In addition, knowing that each student learns differently (Chickering & Ehrmann, 1997; Moisey & Hughes, 2008) and maintaining global awareness will influence achievement (Bawa, 2016; Moisey & Hughes, 2008). Kanuka (2008) emphasized the need to understand students’ learning styles and recommended that all teachers reflect upon their own teaching and learning philosophies in order to make pedagogically appropriate decisions that benefit the student. By considering the uniqueness of each online learner, the teacher can modify instruction to improve motivation.

**Feedback.** Teacher feedback, communications regarding a student’s academic performance (Sprenger, 2005), was strongly linked to motivation in the online classroom. Researchers agreed that feedback was essential for students of all ages (Chickering & Ehrmann, 1997; DiPietro et al., 2010; Herbert, 2006; Morris & Finnegan, 2009; Murphy & Rodríguez-Manzanares, 2009). Researchers also agreed that teachers should provide prompt and quality feedback to all students (Chickering & Ehrmann, 1997; DiPietro et al., 2010; Murphy & Rodríguez-Manzanares, 2009), while also remaining truthful and genuine (C. Weiner, 2003). Teacher feedback was so important that Murphy and Rodríguez-Manzanares (2009) considered feedback the top motivating factor in the online high school classroom. High school teachers reported that feedback motivated students to persevere in the online course, and feedback improved both motivation and engagement (DiPietro et al., 2010). High school students agreed and reported that they felt successful in online courses where teachers provided timely feedback or responded promptly to e-mail (C. Weiner, 2003).

Liu and Cavanaugh (2011) agreed that the current research linked feedback in the online high school classroom to success, but their quantitative study revealed the correlation between feedback and academic success was not statistically significant. Despite agreeing with previous
research, Liu and Cavanaugh’s (2011) results conflicted with other studies. Although feedback may be perceived as motivational, not all researchers correlated teacher feedback with success.

**Learning management system features.** Teachers implemented motivational design techniques into their courses as well. Teachers utilized the LMS to meet the needs of the individual students (Azevedo, 2005), and teachers provided organizational materials to students to promote motivation and course success (Caplan & Graham, 2008). Such materials included an announcement welcoming students to class, course navigation details, course syllabus, and course outline (Caplan & Graham, 2008), materials that promoted student motivation (Chickering & Ehrmann, 1997). Morris and Finnegan (2009) recommended teachers post helpful documents and highlight these materials to the students, while also advising students to utilize the supplementary materials as well as the standard course materials. Organizational materials provided structure and promoted ease of use, leading to a quality course and to student motivation (Azvedo, 2005; Caplan & Graham, 2008).

**Teachers’ perspective.** Teachers also created additional methods to motivate students. Teachers believed that creating checklists of course requirements (required number of logins per week, assignments, and discussion board post requirements, for example) within the LMS (Murphy & Rodríguez-Manzanares, 2009) and setting deadlines for students (Black, DiPietro, Ferdig, & Polling, 2009; DiPietro et al., 2010) was motivating. Teachers strongly believed that utilizing the course structure motivated students to perform well and complete the course (DiPietro et al., 2010), as time-management skills are essential (Chickering & Ehrmann, 1997) in online learning. In addition to utilizing the tools within the LMS, teachers motivated high school students by contacting others involved in the students’ lives such as parents, guidance counselors, or local school representatives (Murphy & Rodriguez-Manzanares, 2009). Teachers’
use of the features of the LMS and additional stakeholders influenced student motivation.

Teachers used the LMS data to review student activity history. Teachers monitored the time spent in the course by high performing undergraduate students and shared those details with the class as an indicator of time required in the course, among other factors, to be successful (Morris & Finnegan, 2009). Teachers utilized the LMS activity data to address concerns with high school students who displayed possible signs of failure (Liu & Cavanaugh, 2012). By accessing the LMS activity data, teachers encouraged success and prevented failure. Although researchers may not agree that the time spent in a course leads to motivation and achievement (Liu & Cavanaugh, 2012; Morris & Finnegan, 2009), quality time in a course did impact achievement (Morris & Finnegan, 2009).

Communication and interaction with the teacher in the online classroom also impacted motivation and success (de la Varre et al., 2014; Eom & Ashill, 2016, C. Weiner, 2003). As Chickering and Ehrmann (1997) noted, teacher-student interaction was a key element in online learning for all students. Likewise, Eom and Ashill (2016) discovered a positive correlation between communication and achievement for undergraduate and graduate students. Eom and Ashill (2016) utilized a collaborative theory of online learning to illustrate the relationship between interaction and learning outcomes and found a positive correlation between student-teacher communications and achievement. C. Weiner (2003) agreed, stating that the effectiveness of online learning improved as high school students interacted and communicated with one another. Developing relationships via online communications built trust and hampered attrition for high school students (de la Varre et al., 2014). Teacher communication promoted motivation and achievement in the online classroom.

Communication was important, but the reports of timeliness in those communications
conflicted. Sun and colleagues (2008) noted that the correlation between the timeliness of communications and academic achievement were statistically significant for adult students, but prolonged delays would obstruct success (Sun et al., 2008). C. Weiner (2003) noted that waiting for a teacher response was not beneficial to the high school students’ learning process. De la Varre and colleagues (2014) warned, however, that despite the appreciation for online interaction and communication, high school students should create sensible assumptions about the response time from teachers. Although communication was essential, researchers did not agree on the exact response time.

In addition to communicating with students, high school teachers believed that teacher presence in the course motivated students (Black et al., 2009; DiPietro et al., 2010). High school teachers built an online presence by accessing the course regularly and by actively participating in discussion board posts, actions which teachers believed improved motivation and engagement (DiPietro et al., 2010). High school teachers also believed that teacher-initiated, regular communication was motivating (Murphy & Rodríguez-Manzanares, 2009). By creating and maintaining a presence in the online classroom, teachers believed they motivated their students to strive for success.

Students recognized teachers’ attitudes in communications, and teachers’ attitudes impacted motivation. If a teacher had a negative attitude, their effectiveness was reduced with adult learners (Sun et al., 2008). Teachers’ attitudes influenced motivation for high school students to access the online course offerings (Badri et al., 2016). In addition, high school teachers believed that an appropriate tone was motivating, including a sense of humor (Murphy & Rodríguez-Manzanares, 2009). If a teacher conveyed a positive attitude or a humorous tone, then students noticed this and their motivation adjusted accordingly (Murphy & Rodríguez-
Manzanares, 2009).

Personalizing the communications improved motivation in an online classroom (Bawa, 2016; Murphy & Rodríguez-Manzanares, 2009; C. Weiner, 2003). When communicating with students, motivation improved when high school students felt a personal connection to the teacher (Murphy & Rodríguez-Manzanares, 2009). This personal connection helped the students to humanize the teacher (Murphy & Rodríguez-Manzanares, 2009) and to avoid the discomfort that many students felt when communicating with teachers and peers who were not visible (Bawa, 2016). High school students often felt annoyance with the minimal social interactions in an online learning environment (C. Weiner, 2003). When students perceived a personal connection to the teacher, their motivation improved.

Teachers utilized many communications methods to motivate the students. High school teachers recommended reviewing student communications to determine what each student finds motivating (Murphy & Rodríguez-Manzanares, 2009). By reviewing e-mails, discussion boards, and other communications, high school teachers detected what motivated individual students (Murphy & Rodríguez-Manzanares, 2009). Communication and teacher presence was motivating to students, and such communication personalized the course and encouraged student motivation and success.

**Individual learner.** Although teachers employed multiple, effective methods of communication and interaction, teachers also considered that individual students may not respond to all techniques (Ally, 2008). In order to promote motivation and success in the online classroom, Ally (2008) recommended a variety of interactive activities and communications between the student, the teacher and course materials. Researchers (Keller, 1999; Keller & Suzuki, 2004) advised, however, that while teachers can promote learning and motivation, they
do not have control over a student’s motivation. Although teachers may modify the LMS and employ motivational techniques, they cannot control a student’s motivation (Keller, 1999; Keller & Suzuki, 2004).

**Hiring institution.** The impact of quality teachers extends to the hiring institution. As teachers were influential in promoting motivation and learning in the online environment, institutional representatives must choose online teachers carefully (Sun et al., 2008). Teaching in the online environment may not be the ideal role for all current face-to-face teachers, and school administrators must make deliberate decisions when hiring or assigning staff to online teaching roles (Sun et al., 2008). As Sun and colleagues (2008) learned in their study of adult online learners, students’ motivation was influenced by the teacher, so they recommended that institutions carefully evaluate and hire online teachers. In their analysis of the literature on K-12 online teaching standards, Ferdig and colleagues (2009) expressed concern with the lack of consistency across multiple publications, resulting in difficulty for representatives of hiring institutions to properly evaluate online teaching candidates. Badri and colleagues’ (2016) suggested that institutions practice caution in their hiring practices as not all traditional face-to-face high school teachers are interested in teaching in the online environment, and as teachers’ attitudes impact students online course performance. In addition, institutional representatives can support both novice and experienced online personnel by providing continued staff development and training, training that focuses on instructional design (Chickering & Ehrmann, 1997) and training that focuses on pedagogy, rather simply training to build enrollment or to improve retention (Bawa, 2016). Additional details regarding the role of the institution in influencing student motivation are located in the third section of this literature review.

**Teacher summary.** Online teachers influenced student motivation in the online learning
environment. Teachers utilized diverse techniques and strategies to encourage both motivation and learning. Teachers communicated and interacted with students (Eom & Ashill, 2016; C. Weiner, 2003), provided feedback (Chickering & Ehrmann, 1997; DiPietro et al., 2010; Morris & Finnegan, 2009; Murphy & Rodríguez-Manzanares, 2009), and personalized the course (Chickering & Ehrmann, 1997; Moisey & Hughes, 2008) in order to motivate students. Teachers developed techniques to encourage students and to improve success in an online course.

Despite the current understanding of the impact of the teacher on motivation and success in the online classroom, additional research and education are needed. Further research must be conducted to understand effective pedagogical practices in the online environment (Ferdig, Cavanaugh, DiPietro, Black, & Dawson, 2009). Teaching in an online course differs vastly from traditional teaching, and experienced teachers must be prepared for the new platform (Ferdig et al., 2009). In addition, teachers must continue to learn and improve their practice (Eom & Ashill, 2016). Continuing to promote education and training is vital to the organization.

**Role of the Institution**

Institutional representatives play a role in promoting motivation and success in an online learning environment. By providing structural supports (Roblyer et al., 2008; Yukselturk & Top, 2013), supporting roles (Ferdig et al., 2009; Moisey & Hughes, 2008), and supporting programs (Bawa, 2016; de la Varre et al., 2014), institutional representatives facilitated student success and motivation. Institutional representatives supported the online learner by providing multiple, sustainable structures.

**Support strategies.** Institutional representatives implemented support strategies to encourage student motivation and success. High school students within organizations that offered supports for online learning were more likely to succeed in an online classroom (Roblyer
et al., 2008). Institutional representatives can focus support structures on students of any age who are performing poorly in the online class and who are not participating in online activities (Roblyer et al., 2008; Yukselturk & Top, 2013). Supports include opportunities to learn time management skills, to reduce test anxiety, develop learning strategies (Moisey & Hughes, 2008), and to develop self-efficacy (Badri et al., 2016). Institutional representatives also encourage motivation through the opportunity to socialize by offering extra-curricular opportunities and field trips for K-12 students (Keeler, 2017). In order to be effective and motivational, however, the supports must be focused and address specific needs of the students (Chen & Jang, 2010). The institutional representatives influenced motivation by providing support structures for the students.

Researchers (Ferdig et al., 2009; Moisey & Hughes, 2008; Sha et al., 2012) recognized that student success required more than student motivation, quality courses, and good teachers. Student motivation and success were also influenced by multiple supporting roles within and beyond the institution (Ferdig et al., 2009; Moisey & Hughes, 2008; Sha et al., 2012). Successful motivational practices in K-12 online education included multiple supporting roles (Ferdig et al., 2009). The online higher education counselor, for example, worked with students to identify and overcome obstacles hindering students’ success and to connect with other members of the support team to promote students’ learning (Moisey & Hughes, 2008). Parents also played a key role in promoting elementary student motivation (Sha et al., 2012). Additional roles included curriculum developer, counselors, local coordinators, advisors, and technical support for high school students (Ferdig et al., 2009). Each of these supporting roles encouraged motivation and promoted success.

Screening process. In order to prevent high school student failure, institutions created a
screening process to select ideal online learning students, and this was found to be a controversial process (Roblyer & Davis, 2008). Some institutions attacked failure rates through an initial evaluation, utilizing pre-determined criteria to accept students into online course programs (Roblyer & Davis, 2008). Students completed an assessment to determine if they had the autonomy and readiness to learn online (Murphy & Rodríguez-Manzanares, 2009), the motivation to learn and to succeed online (Jeurissen, 2015), or the learning style that corresponded to success in the online environment (Berenson et al., 2008). Institutions may prevent failure by selecting only students who, according to institutional criteria, are more likely to succeed.

Not all researchers agreed with the screening approach to selecting online students (Roblyer & Davis, 2008). This profiling practice often explained the difference in achievement rates between high schools (Barbour & Reeves, 2009), but Roblyer and Davis (2008) cautioned against this practice, citing equal rights required in the public school system. Rather than focus on selecting students based on a set of criteria, institutions should focus on supporting all students throughout the learning process (Roblyer & Davis, 2008). By screening and selecting the ideal learner, Roblyer and colleagues (2008) indicated that online high schools may cater toward the high-performers and are missing the focus on the students who need additional attention. Profiling may artificially inflate achievement rates, as this practice does not consider all students (Roblyer & Davis, 2008). Rather than profile, institutions should work to support all students in their online learning experiences (Roblyer & Davis, 2008).

**Orientation.** In order to promote success and to prevent failure, researchers (Bawa, 2016; Berenson et al., 2008; de la Varre, Irvin, Jordan, Hannum, & Farmer, 2014; Garthwait, 2014; Glenn, 2018), advocated for orientation programs before students begin their journey into
online education. The orientation programs were designed to remove the students’ common misconceptions about online learning (Bawa, 2016; de la Varre et al., 2014). The orientation programs, for example, outlined course expectations (Bawa, 2016; de la Varre et al., 2014), course requirements (Bawa, 2016; de la Varre et al., 2014), technical skills (Berenson et al., 2008), and tools to become self-aware (Berenson et al., 2008). Parents would participate in the high school orientation programs, so that they fully comprehended the rigors of online learning (de la Varre et al., 2014). In addition to orientation programs, Garthwait (2014) recommended that high school students complete a course tutorial, built upon individual learning styles, to become acquainted with the LMS. Orientation programs would encourage student motivation and success and minimize misconceptions about online learning, a factor in student failure and course withdrawal (Bawa, 2016; Yukselturk & Bulut, 2007).

**Institution summary.** The institutional representatives also promote motivation and student success. Institutional representatives can provide supports to the students, including structural supports (Roblyer et al., 2008; Yukselturk & Top, 2013), supporting roles (Ferdig et al., 2009; Moisey & Hughes, 2008), and supporting programs (Bawa, 2016; de la Varre et al., 2014). The institutional representatives can provide support to encourage motivation and achievement for all students.

**Conclusion**

Course design, teachers, and the institution itself play critical roles in encouraging motivation and student success in the online environment. Continued research is needed, however. According to DiPietro and colleagues (2010), researchers still only have minimal information about online K-12 pedagogical practices, and other researchers (Ferdig et al., 2009) agreed. Additional study is needed to develop standards that promote motivation and
achievement in online learning in the K-12 environment.

Course design, teachers, and institutional representatives contributed to student motivation and success in the online environment. Course designers promoted motivation and success by incorporating motivational theory and design techniques into the course design itself (Allison & Rehm, 2016; Chickering & Ehrmann, 1997; Eom & Ashill, 2016; Keller, 1983; Keller, 1999). Teachers promoted motivation and success by incorporating pedagogical techniques (Çakır & Bichelmeyer, 2016), communications and interaction (Eom & Ashill, 2016; C. Weiner, 2003), feedback (Chickering & Ehrmann, 1997; DiPietro et al., 2010; Morris & Finnegar, 2009; Murphy & Rodríguez-Manzanares, 2009), and personalized instruction (Chickering & Ehrmann, 1997; Moisey & Hughes, 2008) into the course. Institutional representatives promoted motivation and success by providing support structures for the students (Bawa, 2016; de la Varre et al., 2014; Ferdig et al., 2009; Moisey & Hughes, 2008; Roblyer et al., 2008; Yukselturk & Top, 2013). Each entity utilized motivational techniques to encourage student success in the online learning environment. By understanding these successful motivational techniques, educators and stakeholders can adjust their current practices to reflect motivational techniques and to promote student success.

Summary

By understanding how motivation fits into the interplay between students, teachers, and the learning environment, educators can influence both motivation and achievement. Students can reflect on their own learning characteristics and individual motivation, making adjustments to promote their own success. Course developers can incorporate motivational techniques into online courses to encourage student success. Teachers can utilize motivational methods to develop student success, and institutions can offer supports to optimize student achievement.
Although motivation may be considered instrumental in promoting online success, additional research is required. Further studies investigating student success in online learning environments are essential (Yukselturk & Bulut, 2007). Barbour and Reeves (2009) considered additional research to be vital, and researchers suggested investigating online learning further by examining online pedagogy (Ahn & McEachin, 2017), current online learning preferences (Yukselturk & Top, 2013), and the application of successful techniques to practice (Roblyer & Davis, 2008). Motivation is at the core of online student success, and by studying and incorporating motivational techniques into the overall online learning environment, educators can promote the success of all students.
Chapter Three: Research Methods

The purpose of this descriptive study was to detail student motivation for online high school teachers who were employed with a non-profit, K-12, national online curriculum provider. Through the use of a survey, the researcher addressed the following question:

- What are online high school teachers' perceptions of students’ academic motivation in an online, asynchronous course?

By understanding teachers’ perceptions of motivation in online high school students, teachers, administrators, and curriculum developers can determine the accuracy of such perceptions, develop appropriate practices, and modify their own behaviors to positively influence student achievement (Hardré, Davis, & Sullivan, 2008).

In this methodology chapter, the research design is discussed first, followed by a description of the participant population and sampling details. Next, data collection and analysis processes are defined, and validity, reliability, and generalizability of the study are subsequently described. Finally, the protection of human subjects is explained.

Research Design

The purpose of descriptive research is to detail a phenomenon (Fraenkel, Wallen, & Hyun, 2014) and, in this descriptive study, the purpose was to describe online teachers’ perceptions of student motivation in an online, asynchronous course. A descriptive study provided data regarding teachers’ perceptions of student motivation and perceived reasons for lack of motivation. Specifically, the study described online high school teachers’ understanding of their students’ effort, engagement, and interest, which are indicators of motivation in the online classroom. In addition, the study described online high school teachers’ understanding of the reasons for lack of motivation, such as home factors, current relevance, aspirations/future
utility, peer factors, and personal factors. Teachers in this study collectively instruct approximately 8,000 students each year, so their perceptions were based on a significant number of students in aggregate.

Descriptive studies detail a phenomenon thoroughly and meticulously (Fraenkel et al., 2014). In this study, teachers’ perceptions of student motivation and perceived reasons for lack of motivation were carefully and extensively described. Comprehensive data (discussed in detail later in the chapter) were gathered and summarized. In addition, the survey format allowed for a standardized approach, where all participants received identical questions, allowing for straightforward analysis of the responses (Muijs, 2011). Descriptive research also provided a springboard for future study by identifying variables to explore further at a later time (Fraenkel et al., 2014).

Although qualitative studies yield rich, detailed descriptions of the realities of the participants (Fraenkel et al., 2014), the researcher elected to conduct a quantitative study. A quantitative study allowed the researcher to be an objective observer and to efficiently gather the perspectives of all of the high school teachers within the organization using a standardized approach (Fraenkel et al., 2014).

Although the design of the study was conducive to answering the research question, limitations existed:

- This descriptive method only provided a breadth of detail and did not explore the reasons for teachers’ perceptions and beliefs (Muijs, 2011).
- This descriptive study did not detail a cause and effect insight (Muijs, 2011); however, understanding the statistics may inform future practice.
Positive response bias, where participants respond in a socially acceptable manner, was also a threat (Muijs, 2011). The company recently laid off or re-assigned 10 high school teachers (22% of the high school teaching staff), so participants may have responded to the questionnaire in a manner in which they believed was most favorable (Muijs, 2011) for fear of losing their present form of employment. This threat was minimized through the assurance of participant anonymity.

Population and Sampling

The participants were the teaching staff of a national K-12 online curriculum provider. The high school teaching staff was comprised of 24 White women, four White men, one African American man, one African American woman, and one Asian woman. The teachers have been with the organization a mean of 5.2 years, ranging from less than 1 year with the organization to 12 years with the organization. All teachers were certified in their respective subject area, with an average of two subject areas of certification (grades 7-12 math and biology, for example), and with one teacher certified in five subject areas. Teachers were certified in two states on average, with two teachers certified in four states. Seventeen teachers held a bachelor’s degree as their highest degree, 13 teachers held a master’s degree as their highest degree, and one held a doctoral degree as her highest degree.

There were 31 high school teachers in total, and, including managers, there were four English teachers, four science teachers, three social studies teachers, and two math teachers. There were 18 electives teachers who taught a variety of electives: world languages, art, health, family and consumer science, and business courses, for example. The electives teachers comprised more than half of the high school teaching population due to a multi-year contract.
with a state online school, where the online school purchased only electives courses and corresponding instruction, not core courses.

Daily responsibilities included evaluating assessments, responding to e-mails from students, parents, counselors, and administrators, and supplementing the online course materials. Core teachers (English, math, science, social studies) instructed approximately 125 students each, and electives teacher (world languages, music, business, health, drivers’ education, for example) instructed approximately 400 students each. Teachers conducted two hours of office hours every week using an online website where students can ask questions and receive immediate help from their teacher.

Teachers were also responsible for a variety of additional tasks. In the past, teachers wrote much of the online curriculum, but the company moved toward a model where the curriculum team writes the lessons and assessments, allowing teachers to focus on instruction and personalized contact with students. Teachers also contributed to projects and committees as the need arose.

The researcher is currently a high school teacher within the organization and has been employed with this company for approximately 10 years. The researcher selected this site not only for convenience, but also to study the perceptions of teachers who annually teach collectively more than 8,000 students each year in the northeastern United States.

The study site was a national K-12 online curriculum provider with approximately 250 employees, 31 of whom are high school teachers. The study site headquarters is located in the northeast United States, but teachers work from home and were scattered throughout the country. Teachers worked with full-time online students, the majority of which were also located within the same northeastern state.
Utilizing convenience sampling, the researcher requested that all of the high school teachers within the organization respond to the PSM questionnaire (Hardré et al., 2008).

Fraenkel and colleagues (2014) suggested that 100 participants be included in a descriptive study, but also indicated smaller numbers were acceptable when studying a particular population, and, in this study, the target population was online, asynchronous high school teachers working for a specific K-12 curriculum provider in the northeastern United States. Because convenience sampling was utilized, this sample only represented a specific population, and Fraenkel and colleagues (2014) recommended including detailed demographic information about the sample and study site in order for others to determine the applicability of the results for their own purposes.

The participants were asked to electronically complete a modified PSM questionnaire, a 20-question survey measuring teachers’ perceptions of students’ academic motivation (Hardré et al., 2008). The survey instrument was modified as two questions were removed from the original survey because these question were not applicable to an online learning environment. The two questions removed follow: “3. My students are often distracted or off task, and I have to bring them back to focus on the topic or work at hand,” and “5. My students generally pay attention and focus on what I am teaching” (Hardré et al., 2008, pp. 176 - 179). Participants needed between 15 and 30 minutes to complete the questionnaire (Hardré et al., 2008).

The researcher included the consent form as the initial page of the online survey. Upon agreeing to the consent form, the participants completed the PSM (Hardré et al., 2008) from their computers or mobile devices. If the participants did not agree to the consent form, the embedded logic of the form did not permit the participants to access the PSM (Hardré et al., 2008). After
the initial request for survey completion and two follow-up e-mails, the researcher compiled the data that were completed and analyzed and reported the results.

**Data Collection**

Teachers within the organization completed the PSM questionnaire, a tool deemed acceptable for use in a variety of environments, including an online environment (Hardré et al., 2008). The researcher followed a detailed implementation design in order to encourage teacher participation and survey completion (Dillman et al., 2014).

**Instrument**

The PSM was developed in 2008 in response to a lack of pre-existing quantitative instruments to assess both the teacher perceptions of student academic motivation and the perceived reasons for lack of student academic motivation (Hardré et al., 2008). The researchers developed a quantitative questionnaire of their own because, after extensive review, they were unable to locate any quantitative instruments to assess both teacher perceptions of student motivation and the perceived reasons for lack of motivation (Hardré et al., 2008).

Researchers utilize the PSM to answer two questions (Hardré et al., 2008):

1. “From the perspective of the teacher, how motivated are students to learn and achieve in school” (p. 160)?

2. “If students are not motivated, what are the reasons that the teacher believes explains that lack of motivation” (p. 160)?

In order to answer these questions, Hardré and colleagues (2008) developed the PSM using the Student Effort and Engagement Scale (SEES), a student self-report tool considered highly valid and reliable (Vallerand, Fortier, & Guay, 1997), as the foundation. Hardré and
colleagues (2008) adjusted the questions and the directions of the SEES from the student perspective to the teacher perspective.

The PSM consisted of 20 questions and, unbeknownst to participants, the questions were divided into a motivation scale and a causes scale, with each scale further divided into subscales (Hardré et al., 2008). The motivation scale was subdivided into an effort, engagement, and general interest subscale, and the causes scale was further divided into home factors, current relevance/value, aspirations/future utility, peer factors, and personal factors subscales (Hardré et al., 2008). The participants responded to the questions by using a seven-point Likert-type scale (Hardré et al., 2008).

In addition to the PSM questions, demographic questions were also asked, including: years of traditional, classroom teaching experience, years of online teaching experience, teaching discipline (science, math, English, electives, and social studies), and age. Participants were also asked to answer one open-ended question: “Please use the space below to provide any additional comments regarding your perceptions of student motivation and reasons for lack of motivation.” The open-ended question was reviewed for common themes or noteworthy remarks.

**Validity.** Hardré and colleagues (2008) conducted both reliability and validity testing of the PSM. The researchers (Hardré et al., 2008) conducted four types of validity testing of the PSM with two samples of teachers: one sample of 75 teachers from the southwestern portion of the United States and another sample of 404 teachers from a country in the eastern portion of Asia (p. 161).

First, in order to test for construct validity of the motivation subscales, Hardré and colleagues (2008) conducted literature reviews, surveyed and interviewed teachers, summarized motivational indicators across three broad themes (interest, engagement, and effort) discovered
in the review of the literature and interviews, and developed the motivation subscales of the PSM according to these themes. The researchers (Hardré et al., 2008) conducted teacher surveys and interviews to develop the reasons for lack of motivation subscale and also conducted a confirmatory reflective review, where 36 high school teachers assessed the questionnaire, confirming that the reasons subscale was accurate.

Second, concurrent validity was tested by comparing the results of the PSM with previously tested instruments, and the correlations were as expected. For example, with the teachers from both the United States and from Asia, Hardré and colleagues (2008, p. 163) found that teachers’ perceptions of student academic motivation positively correlated between the PSM and other previously determined valid instruments (Situational Intrinsic Motivation Scale (SIMS; Guay, Vallerand, & Blanchard, 2000), Student Engagement and Effort Scale (SEES; Vallerand et al., 1997), Student Motivation Measure (SMM; Martin, 2003), and the Motivating Strategies for Learning Questionnaire (MSLQ; Duncan & McKeachie, 2005) for learning goals (.68, p < .05), future goals (.67, p < .05), overall SEES student motivation (.49, p < .01), and with teacher efficacy for motivating (.50, p < .05). These researchers (Hardré et al., 2008, p. 163) also discovered that teachers’ perceptions of student academic motivation negatively correlated between the PSM and other previously determined valid instruments for performance avoidance goals (.34, p < 0.5) and for the reasons for lack of motivation (.25-.57, p < .05). In addition, Hardré and colleagues (2008, p. 163) learned that teachers’ perceptions of the reasons for lack of student academic motivation negatively correlated between the PSM and other previously determined valid instruments for student learning goals (.35-.53, p < .05), future goals (.30-.52, p < .05), and overall SEES student engagement (.14-.20, p < .01).
The instrument developers (Hardré et al., 2008) conducted further concurrent validity testing by asking two groups of teachers (the original sample and a new sample with similar demographics) in the United States and in Asia to complete the PSM and an interview. With this testing, the results of the PSM were consistent with the results of the interview responses (Hardré et al., 2008).

Third, based upon face validity testing, 100% of the participants in the informal discussions indicated that the PSM fully reflected their responses (Hardré et al., 2008). Fourth, based upon divergent validity testing, motivation and reasons subscales were negatively correlated, indicating that the subscales were correct from a directional perspective (Hardré et al., 2008).

**Reliability.** In order to determine the reliability of the PSM, Hardré and colleagues (2008) calculated Cronbach’s alpha, and the PSM was deemed reliable for the motivation subscale: students’ effort (α = .90 US; .91 EA; p. 165), student’s engagement (α = .83 US; .93 EA; p. 165), and combined motivation factor (α = .90 US; .89 EA; p. 166). The reasons subscale was deemed reliable as well (Hardré et al., 2008, p. 166): home factors (α = .73 US, α = .85 EA), peer factors (α = .86 US, .83 EA), personal factors (α = .77 US, .78 EA), current relevance/value (α = .78 US, .77 EA), and aspirations/future utility (α = .73 US; .75 EA). Additional summary tables or details regarding Cronbach’s alpha were not included in the published article (Hardré et al., 2008).

Hardré and colleagues (2008) also completed a principle axis factor with oblique rotation. The motivation subscale was comprised of seven items and the reasons subscale was comprised of 13 items (Hardré et al., 2008). After the oblique rotation, 68.7% of variance on the motivation subscale in the US was accounted for and 60.2% of the variance on the reasons subscale in the
US was accounted for (Hardré et al., 2008, p. 167). Additional details are in Table A1 and Table A2 in Appendix A. Table A1 contains the path coefficients for the motivation subscale, and Table A2 contains the path coefficients for the reasons subscale (Hardré et al., 2008, pp. 167-168).

The researchers (Hardré et al., 2008) completed a pattern matrix of factor loadings and determined that both the motivation subscale and the reasons subscales were highly consistent for the sample populations, supporting the assumption that the three parts of the motivation subscale could be considered as a single scale (Hardré et al., 2008). Additional details are in Appendix A. Table A3 contains the pattern matrix of item factor loadings for the motivation subscale for the US sample, and Table A4 contains the pattern matrix of item factor loadings for the reasons subscale for the US sample (Hardré et al., 2008, pp. 167-168). Table A5 contains the pattern matrix of item factor loadings for the motivation subscale for the East Asia sample, and Table A6 contains the pattern matrix of item factor loadings for the reasons subscale for the East Asia sample (Hardré et al., 2008, p. 169).

The researcher e-mailed Dr. Hardré, the lead researcher, and received written permission to use the PSM in her dissertation. The e-mail exchange is in Figure B2, Appendix B.

**Justification.** According to Hardré and colleagues (2008), the PSM has been used in high schools, internationally, in numerous languages (English, Chinese, and Spanish), and in a variety of developed environments (rural, suburban, and urban). The instrument has been proven reliable with practicing teachers (Hardré et al., 2008), thus adding credibility to the instrument. Based on informal discussions, Hardré and colleagues (2008) noted that administrators found the tool useful and relevant. In addition, the PSM was also acceptable to utilize in an online learning environment (Hardré et al., 2008).
The instrument required minimal time from the participants and was completed when convenient for the participants (Hardré et al., 2008), thus encouraging participation. The survey was free, and scoring required no training, specialized knowledge, or specific software (Hardré et al., 2008). By completing the PSM, the participants’ responses provided the data necessary for the researcher to answer the research question.

**Procedures**

In order to encourage participation, the researcher followed a detailed implementation design (Dillman et al., 2014). The researcher followed the process below (Dillman et al., 2014):

- Day 1: Notified the participants via e-mail that they were invited to participate in an Internet survey and included the survey link (Appendix C).
- Day 6: Distributed a second e-mail invitation to participate to encourage participant responses.
- Day 8: Sent the final request to participate in the study to encourage participant responses.

Moreover, the researcher followed additional recommendations from Dillman and colleagues (2014) to improve response rates. The researcher asked participants for their help and articulated the importance of the study (Dillman et al., 2014). The researcher created a visually appealing questionnaire and maintained an easy to follow process for the participants (Dillman et al., 2014). The researcher aimed to improve response rates by building trust and authenticity by offering participants the opportunity to ask questions, by articulating the support of both the study site and Northeastern University, and by clearly communicating strict confidentiality procedures (Dillman et al., 2014). The questionnaire is located in Appendix D.
**Data Analysis**

As this study was a descriptive study, the researcher employed descriptive statistics where the motivational and reasons variables were concepts to describe a phenomenon (Fraenkel et al., 2014). In addition, as this was a descriptive study, a hypothesis was not necessary (Fraenkel et al., 2014; Muijs, 2011).

Participants completed the PSM questionnaire (Hardré et al., 2008) electronically through the Google Forms platform, and the results were initially stored on Google Drive web site. The researcher exported the data directly from Google Drive to Microsoft Excel.

In order to maintain the integrity of the original data set, the researcher saved the exported data in Excel and then re-saved the file under a new name before beginning a review of the data. The researcher reviewed, cleaned, and manipulated the data, as necessary. The researcher also reverse scored the negatively worded question (question number four) of the completed questionnaire. As each step was completed, the researcher saved the data with a new version number.

Once the above steps were performed, the data was ready for analysis utilizing Microsoft Excel. The researcher conducted several forms of descriptive analysis. The researcher included a count of the number of participants, a count of number of years with the company, a count of participants by discipline, and a count of the number of years of experience teaching in a traditional face-to-face environment by provided interval, and a count of age by provided interval.

The researcher calculated descriptive statistics, such as frequency and measures of central tendency, for teachers’ perceptions of the characteristics of student academic motivation and the perceived causes of lack of student academic motivation. The researcher obtained data
pertaining to teachers’ perceptions of motivation, as determined by the PSM: effort, engagement, and general interest (Hardré et al., 2008). The researcher also obtained data pertaining to teachers’ perceptions of causes of lack of motivation, as determined by the PSM: home factors, current relevance and value, aspirations and future utility, peer factors, and personal factors (Hardré et al., 2008).

The researcher created frequency charts for each question from the PSM as well from the responses for the demographic questions. The frequency charts were created for each individual question, for the subscales (effort, engagement, general interest, home factors, current relevance/value, aspirations/future utility, peer factors, personal factors), and for the higher-level categories (motivation and reasons for lack of motivation) of the PSM (Hardré et al., 2008).

The researcher calculated the mean for each question, subscale, and scale of the PSM (Hardré et al., 2008). The researcher also calculated the standard deviation for each subscale. These measures was used because the variables of the PSM were interval variables (Muijs, 2011), as the survey uses a Likert-type scale (Hardré et al., 2008). The measures of central tendency allowed the researcher to determine if responses were clustered together or if responses were scattered (Muijs, 2011).

The researcher conducted analysis by demographics with caution. Analysis comparing teacher perceptions of student motivation by discipline (math vs. history, for example), by years with the company, and by years of teaching experience yielded insightful analysis, but the researcher conducted such calculations with care due to a possible loss of participant anonymity.

This analysis explored teachers’ perceptions of students’ academic motivation and the perceived reasons for lack of motivation. By understanding the reasons why students are failing, educators can adjust their practice to positively influence motivation and student achievement
Teachers can address the specific reasons for lack of student motivation by utilizing the detailed survey results, as the PSM and corresponding analysis will detail the reasons for lack of motivation such as home factors, current relevance, aspirations/future utility, peer factors, and personal factors (Hardré, Davis, & Sullivan, 2008).

**Validity, Reliability and Generalizability**

The researcher aimed to control for threats to validity. Teacher characteristics such as reasons for selecting online teaching and type of online courses (remedial vs. advanced, core vs. elective) may influence the results (Fraenkel et al., 2014). In order to control for this, the motivational variables were clearly defined.

Location was a threat, where survey completion conditions may influence the results (Fraenkel et al., 2014). The participants completed a web-based survey in numerous surroundings, uncontrolled by the researcher, and this threat was minimized through specific survey instructions.

Mortality was a threat to external validity (Fraenkel et al., 2014). Specific groups of teachers may not have responded to the survey, thus influencing the results. If a specific group did not respond to the survey (specific discipline or range of experience, for example), then the results may have been impacted. This threat was controlled through detailed survey response follow-up procedures.

The ability to generalize the results of this study is limited. As convenience sampling was used, the results were applicable to the particular population and will not be generalizable (Fraenkel et al., 2014). The results may not be generalizable nationally, as only one site in the northeastern United States was used. In addition, only online, asynchronous, high school teachers were surveyed so results may not generalize to other grade levels or to other learning
environments. Specific demographic details were provided regarding the study site and the population (Fraenkel et al., 2014).

**Self-Reflexivity and Transparency**

I strongly believe in the power of an education and the opportunities that it can offer, a belief influenced by my upbringing and experiences. As both a traditional and online student, I was consistently motivated to perform well academically, relishing good grades, setting goals, enjoying the learning process, strongly believing that an education would lead me to career success and to financial stability. In addition to my role as a student in online courses, I teach and develop online high school courses. For nearly a decade, I have taught a range of online high school math and business courses, expecting high quality work from my students. I have also developed math and business courses for the online platform, using instructional design techniques that I believe would support student motivation, learning, and achievement.

These experiences, however, may not necessarily reflect the experiences and perspectives of the participants in the study. I am motivated to perform well in my online courses and view a 4.0 GPA as an indicator of success, but the participants may believe that success is defined differently, where, for example, personal accomplishments outside of the classroom may be indicators of success (Fennell & Arnot, 2008). I must remain cognizant of my personal perspective, as first and foremost I am a critical researcher (Roulston & Shelton, 2015).

**Protection of Human Subjects**

The researcher followed ethical practices throughout the study; the participants encountered minimal risk. The participants were asked to complete the PSM and to provide demographic details. Given the projected sample size, there was a small chance that responses may be traced to an individual.
All teachers from the study site had equal opportunity to participate, could decline to participate, and could withdraw from the study (Fraenkel et al., 2014). The freedom to participate, decline, and withdraw was clearly articulated in the consent form (Fraenkel et al., 2014). The participants were not offered any form of compensation for participation. The participants electronically signed the consent form, a document that contained a clear description of the study, before beginning the survey (Appendix E).

The researcher and the participants have a working relationship, but the researcher was not a direct manager of any teacher. The researcher was a peer to the participants and did not wield any influence over any of the participants.

The study site and participant data remained confidential (Fraenkel et al., 2014). Data were aggregated at a summary level, and individual details were not part of the analysis or published results. The researcher did not publish or identify any individual participants, nor did the researcher identify the research site. Login credentials were not requested or collected.

Data was kept on a password-protected computer and on a password-protected Google Drive. The desktop folders containing the data were encrypted. The consent forms and data files will be retained for 5 years and then deleted. In addition, only the researcher and the dissertation chair had access to this information.

The researcher followed all Internal Review Board’s (IRB) processes and secured IRB approval through Northeastern University before proceeding (Appendix F). Throughout the study, the researcher maintained high ethical standards, participants were protected from harm, and data remained confidential.
Summary

Through the use of a descriptive study, the researcher described online high school teachers’ perceptions of student motivation and the perceived reasons for lack of motivation. Participants completed the PSM questionnaire (Hardré et al., 2008), and descriptive statistics were utilized to analyze the results. Participants’ confidentiality was ensured, as responses remained anonymous.
Chapter 4: Results

The purpose of this descriptive study was to detail student motivation for online high school teachers who were employed with a non-profit, K-12, national online curriculum provider. Through the use of a survey, the researcher addressed the following question:

- What are online high school teachers' perceptions of students’ academic motivation in an online, asynchronous course?

In order to answer this question, online high school teachers within the organization responded to the Perceptions of Student Motivation (PSM) questionnaire (Hardré, Davis, & Sullivan, 2008), one open-ended question, and four demographic questions. Participants’ responses and participants’ demographics are detailed in this chapter.

**Demographics**

All high school teachers within the organization were invited to complete the survey. Excluding the researcher, 22 teachers out of 30 completed the questionnaire for a response rate of 73.3%.

Participants responded to four demographic questions using a dropdown menu:

1. How many years have you taught with this company?
2. Select your current discipline.
3. How many years have you taught in a traditional face-to-face classroom?
4. What is your age?

Participants identified their respective disciplines as follows: electives – 54.5% (n = 12), English – 18.2% (n = 4), science – 9.1% (n = 2), math – 0% (n = 0), and social studies – 0% (n = 0). Four participants elected not to select a discipline. Details by discipline are shown in Table 2.
Table 2

*Responses by Discipline*

<table>
<thead>
<tr>
<th>Discipline</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electives</td>
<td>12</td>
<td>54.5%</td>
</tr>
<tr>
<td>English</td>
<td>4</td>
<td>18.2%</td>
</tr>
<tr>
<td>Math</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Science</td>
<td>2</td>
<td>9.1%</td>
</tr>
<tr>
<td>Social Studies</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Prefer Not to Answer</td>
<td>4</td>
<td>18.2%</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>22</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

As illustrated in Table 3, participants’ years with the organization varied from less than 1 year (n = 1) to more than 10 years (n = 2). Three participants selected “prefer not to answer” when prompted for the number of years with the company.

Table 3

*Number of Years with the Company*

<table>
<thead>
<tr>
<th>Years</th>
<th>N</th>
<th>%</th>
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<td>9.1%</td>
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<td>6</td>
<td>1</td>
<td>4.5%</td>
</tr>
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<td>7</td>
<td>2</td>
<td>9.1%</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>9.1%</td>
</tr>
<tr>
<td>More than 10</td>
<td>2</td>
<td>9.1%</td>
</tr>
<tr>
<td>Prefer Not to Answer</td>
<td>3</td>
<td>13.6%</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>22</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Of the 22 respondents, three participants never taught in a traditional face-to-face classroom, and 11 respondents taught five years or less in a traditional face-to-face classroom,
the most common response. Three participants taught 6-10 years, one taught 11-15 years, and two taught 16 – 20 years in a traditional face-to-face classroom. Two respondents elected not to provide a response to this question. Details for years teaching in a face-to-face classroom are in Table 4.

Table 4

*Years Teaching in a Face-to-Face Classroom*

<table>
<thead>
<tr>
<th>Years</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>3</td>
<td>13.6%</td>
</tr>
<tr>
<td>5 or less</td>
<td>11</td>
<td>50.0%</td>
</tr>
<tr>
<td>6-10</td>
<td>3</td>
<td>13.6%</td>
</tr>
<tr>
<td>11-15</td>
<td>1</td>
<td>4.5%</td>
</tr>
<tr>
<td>16-20</td>
<td>2</td>
<td>9.1%</td>
</tr>
<tr>
<td>21-25</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>26-30</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>More than 30</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>Prefer Not to Answer</td>
<td>2</td>
<td>9.1%</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td>22</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

The majority of participants (n = 14, 63.6%) were between 31 and 40 years of age. One participant was between 26 and 30; two were between 41 and 45; one was between 51 and 55; and one was between 55 and 60 years of age. Three participants preferred not to provide an answer to this demographic question. Details by age in are Table 5.

Table 5

*Age*

<table>
<thead>
<tr>
<th>Years</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25</td>
<td>0</td>
<td>0.0%</td>
</tr>
<tr>
<td>26-30</td>
<td>1</td>
<td>4.5%</td>
</tr>
<tr>
<td>31-35</td>
<td>7</td>
<td>31.8%</td>
</tr>
<tr>
<td>36-40</td>
<td>7</td>
<td>31.8%</td>
</tr>
<tr>
<td>41-45</td>
<td>2</td>
<td>9.1%</td>
</tr>
<tr>
<td>51-55</td>
<td>1</td>
<td>4.5%</td>
</tr>
</tbody>
</table>
Table 5. Age (continued)

<table>
<thead>
<tr>
<th>Years</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>55-60</td>
<td>1</td>
<td>4.5%</td>
</tr>
<tr>
<td>Prefer Not to Answer</td>
<td>3</td>
<td>13.6%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>22</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

**Description of Statistics**

Online high school teachers completed the Perceptions of Student Motivation (PSM) questionnaire (Hardré et al., 2008) electronically through the Google Forms platform, and the results were initially stored on the Google Drive web site. The researcher exported the data directly from Google Drive to Microsoft Excel. Using Microsoft Excel, the researcher calculated descriptive statistics including frequency charts and measures of central tendency for teachers’ perceptions of the characteristics of student academic motivation and the perceived causes of lack of student academic motivation. The researcher obtained data pertaining to teachers’ perceptions of motivation, as determined by the PSM: effort, engagement, and general interest (Hardré et al., 2008). The researcher also obtained data pertaining to teachers’ perceptions of causes of lack of motivation, as determined by the PSM: home factors, current relevance and value, aspirations and future utility, peer factors, and personal factors (Hardré et al., 2008).

The researcher created frequency charts and calculated the median for each statement from the PSM. The frequency charts were created for each individual statement, for the subscales (effort, engagement, general interest, home factors, current relevance/value, aspirations/future utility, peer factors, personal factors), and for the higher-level categories (motivation and reasons for lack of motivation) of the PSM (Hardré et al., 2008).

The researcher calculated the mean for each question, subscale, and scale of the PSM (Hardré et al., 2008). The researcher also calculated the standard deviation for each subscale.
The researcher recognized the discussion of using the mean and the standard deviation to analyze Likert-type data, but operated on the assumption that the space between points on the Likert-type scale were evenly spaced, a frequent assumption (Blaikie, 2003; Jamieson, 2004; Wu & Leung, 2017) and an assumption that yields meaningful results (Stevens, 1946). Based on 80 years of empirical data, calculating the mean for Likert-type scales is an acceptable practice (Norman, 2010). Following this assumption, an interval scale allowed for mean and standard deviation calculations (Blaikie, 2003; Wu & Leung, 2017). The measures of central tendency permitted the researcher to determine if responses were clustered together or if responses were scattered (Muijs, 2011),

The PSM (Hardré et al., 2008) utilized a seven-point Likert-type scale. Responses for values of 1, 3, 5, and 7 were labelled: a response of 1 indicated “not true at all”; a response of 3 indicated “more not true than true”; a response of 5 indicated “more true than not”; and a response of 7 indicated “very much true.”

**Outcomes**

Participants responded to 18 questions of the PSM (Hardré et al., 2008), and the responses are tallied in Table 6. Each question represented either the motivation or causes scale and the respective subscales. The detailed analysis by scale and subscale follows.

Table 6

*Count of Response by Statement*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Likert-Type Scale</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The students in this class really try to learn.</td>
<td>0 1 4 5 9 3 0</td>
<td>22</td>
</tr>
</tbody>
</table>
Table 6. Count of Response by Statement (continued)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Likert-Type Scale</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. My students work at learning new things in this class.</td>
<td>0 1 4 4 9 3 1</td>
<td>22</td>
</tr>
<tr>
<td>3. The students in this class generally do class-related tasks and</td>
<td>0 1 1 8 6 6 0</td>
<td>22</td>
</tr>
<tr>
<td>assignments willingly.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. The students in this class don't put forth much effort to learn the</td>
<td>0 5 6 1 3 6 1</td>
<td>22</td>
</tr>
<tr>
<td>content.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. In general, my students are genuinely interested in what they are</td>
<td>0 2 5 4 8 3 0</td>
<td>22</td>
</tr>
<tr>
<td>asked to learn in class.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Generally, my students are unmotivated because their parents don't</td>
<td>4 4 4 8 2 0</td>
<td>22</td>
</tr>
<tr>
<td>care about or value education.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. When my students aren't engaged in school, it's because they don't</td>
<td>0 1 1 3 5 7</td>
<td>22</td>
</tr>
<tr>
<td>see the value of what they are being asked to learn.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. If students aren't motivated to learn in my class, it is often because</td>
<td>1 3 0 11 4 2 1</td>
<td>22</td>
</tr>
<tr>
<td>they don't have aspirations that connect to education, like plans to go</td>
<td></td>
<td></td>
</tr>
<tr>
<td>to college.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Students often lack effort at school because they don't have the</td>
<td>0 2 2 4 6 6 2</td>
<td>22</td>
</tr>
<tr>
<td>support at home.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. If students don't see the point of learning the content, then they</td>
<td>0 0 2 1 5 4 10</td>
<td>22</td>
</tr>
<tr>
<td>aren't motivated to learn it.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Some of my students just have too many home problems to make school</td>
<td>0 2 4 6 2 3 5</td>
<td>22</td>
</tr>
<tr>
<td>a priority.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Most often, if students aren't engaged in my class, it's because</td>
<td>0 1 0 5 7 5 4</td>
<td>22</td>
</tr>
<tr>
<td>they don't see the relevance of the content in their world.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Some of my students aren't motivated to work in school because</td>
<td>0 2 2 9 6 1 2</td>
<td>22</td>
</tr>
<tr>
<td>education has no place in the futures they see for themselves.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 6. Count of Response by Statement (continued)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Likert-Type Scale</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>14. Generally, the students in my class who are not interested in learning are that way because of peer pressure to devalue school.</td>
<td>3 5 4 7 3 0 0 22</td>
<td></td>
</tr>
<tr>
<td>15. Most often, if students aren't working in my class, it's because they don't see how useful this information can be.</td>
<td>0 1 2 2 8 5 4 22</td>
<td></td>
</tr>
<tr>
<td>16. Negative peer pressure is one big reason why some of my students are not motivated to learn in school.</td>
<td>2 7 4 5 4 0 0 22</td>
<td></td>
</tr>
<tr>
<td>17. Some students are not motivated to learn because they are just lazy.</td>
<td>1 2 3 2 9 3 2 22</td>
<td></td>
</tr>
<tr>
<td>18. Some students in my class just don't care about learning - period.</td>
<td>1 3 4 3 7 1 3 22</td>
<td></td>
</tr>
<tr>
<td>Grand Total</td>
<td>12 43 52 88 103 58 40 396</td>
<td></td>
</tr>
</tbody>
</table>

**Motivation**

Participants responded to the PSM, a survey which included a motivation scale and a causes scale (Hardré et al., 2008). Each scale included a subscale, and the subscales of the motivation scale included effort, engagement, and general interest (Hardré et al., 2008). The count of participant responses for the motivation scale and subscales are illustrated in Table 7.

On the effort subscale, 55% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher for “The students in this class really try to learn,” and 59% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher for “My students work at learning new things in class.” For both statements on the effort subscale, nine participants selected “more true than not true,” the most common response.
On the engagement subscale, 55% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher for “The students in this class generally do class-related tasks and assignments willingly,” and the most common response (n = 8) was a neutral response (4 on the Likert-type scale). 91% of the participants selected neutral or higher for the same statement. 45% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher for statement 4: “The students in this class don't put forth much effort to learn the content.” The responses were dispersed with five responses with a rating of two, six responses with a rating of three, and six responses with a rating of six on the Likert-type scale.

On the general interest subscale, 50% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher for “In general, my students are genuinely interested in what they are asked to learn in class.” Participants most frequently selected “more true than not true” (5 on the Likert-type scale) with eight participants selecting this response.

Table 7

*Count of Responses for the Motivation Scale and Subscales*

<table>
<thead>
<tr>
<th>Motivation Subscale</th>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effort</td>
<td>1. The students in this class really try to learn.</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>5</td>
<td>9</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>2. My students work at learning new things in this class.</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>4</td>
<td>9</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Engagement</td>
<td>3. The students in this class generally do class-related tasks and assignments willingly.</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>4. The students in this class don't put forth much effort to learn the content.</td>
<td>0</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 7. Count of Responses for the Motivation Scale and Subscales (continued)

<table>
<thead>
<tr>
<th>Motivation Subscale</th>
<th>Statement</th>
<th>Likert-type Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Interest</td>
<td>5. In general, my students are genuinely interested in what they are asked to learn in class.</td>
<td>0 2 5 4 8 3 0</td>
</tr>
</tbody>
</table>

The median responses for each statement within the motivation subscales are shown in Table 8. The median response for both questions of the effort subscale was “more true than not true” (5 on the Likert-type scale). On the engagement subscale, the median response for the statement “The students in this class generally do class-related tasks and assignments willingly” was 5, and the median response for the statement “The students in this class don't put forth much effort to learn the content” was 4.5. The median for the one statement on the general interest subscale was 4.5.

Table 8

Median Response by Statement - Motivation Scale

<table>
<thead>
<tr>
<th>Scale</th>
<th>Statement</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effort</td>
<td>1. The students in this class really try to learn.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>2. My students work at learning new things in this class.</td>
<td>5</td>
</tr>
<tr>
<td>Engagement</td>
<td>3. The students in this class generally do class-related tasks and assignments willingly.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>4. The students in this class don't put forth much effort to learn the content.</td>
<td>4.5</td>
</tr>
<tr>
<td>General Interest</td>
<td>5. In general, my students are genuinely interested in what they are asked to learn in class.</td>
<td>4.5</td>
</tr>
</tbody>
</table>
The mean response for the motivation scale was 4.4, with a response of 4 considered neutral and a response of 5 considered “more true than not true.” The mean response for the effort subscale was 4.5; the mean response for the engagement subscale was 4.3; and the mean response for the general interest subscale was 4.2. The participants rated “The students in this class generally do class-related tasks and assignments willingly” from the engagement subscale the highest with a mean response of 4.7 and with one of the lower standard deviations of 1.1. After reverse scoring, participants rated “The students in this class don't put forth much effort to learn the content” the lowest with a mean response of 3.9 and with the largest standard deviation of 1.7. Details regarding the mean and standard deviation for the motivation scale and subscales are shown in Table 9.

Table 9

Mean and Standard Deviation for the Motivation Scale and Subscales

<table>
<thead>
<tr>
<th>Motivation Subscale</th>
<th>Statement</th>
<th>Mean Response</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effort</td>
<td>1. The students in this class really try to learn.</td>
<td>4.5</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>2. My students work at learning new things in this class.</td>
<td>4.4</td>
<td>1.1</td>
</tr>
<tr>
<td></td>
<td>3. The students in this class generally do class-related tasks and assignments willingly.</td>
<td>4.5</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>4. The students in this class don't put forth much effort to learn the content.</td>
<td>4.7</td>
<td>1.1</td>
</tr>
<tr>
<td>Engagement</td>
<td>3. The students in this class generally do class-related tasks and assignments willingly.</td>
<td>3.9</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>4. The students in this class don't put forth much effort to learn the content.</td>
<td>4.2</td>
<td>1.2</td>
</tr>
<tr>
<td>General Interest</td>
<td>5. In general, my students are genuinely interested in what they are asked to learn in class.</td>
<td>4.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Grand Total</td>
<td></td>
<td>4.4</td>
<td>1.3</td>
</tr>
</tbody>
</table>
Participants who elected not to select a discipline (n = 4) responded with the highest overall mean on the motivation scale with a mean of 5.4, where a response of 5 was considered “more true than not true.” Participants reporting a core discipline (math, science, social studies, and English; n = 6) reported the lowest mean response overall on the motivation scale with a mean of 4.0, and participants reporting as electives (n = 12) scored a mean of 4.2 on the motivation scale, with a response of 4 considered neutral. The participants who did not select a discipline reported the highest overall mean on the motivation scale with a mean of 5.6 on the effort subscale, and core teachers reported the lowest overall mean on the motivation scale with a mean of 3.7 on the engagement subscale.

Overall, the mean response for the effort subscale was the highest with a mean of 4.5. Both the core teachers (n = 6) and the participants who elected not to select a discipline (n = 4) rated the effort subscale with the highest mean. The electives teachers did not rate effort as highly as the other disciplines; the electives teachers (n = 12) scored engagement with the highest mean. The mean response for the general interest subscale was the lowest with a mean of 4.2, but not all disciplines consistently rated this subscale as the lowest. The core teachers and the participants who elected not to select a discipline rated this subscale with the lowest mean, whereas the electives teachers did not. Details for mean response by discipline are in Table 10.

Table 10

Mean Response by Discipline

<table>
<thead>
<tr>
<th>Scale</th>
<th>Subscale</th>
<th>Core</th>
<th>Electives</th>
<th>Prefer Not to Answer</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td></td>
<td>4.0</td>
<td>4.2</td>
<td>5.4</td>
<td>4.4</td>
</tr>
<tr>
<td>Effort</td>
<td></td>
<td>4.3</td>
<td>4.2</td>
<td>5.6</td>
<td>4.5</td>
</tr>
<tr>
<td>Engagement</td>
<td></td>
<td>3.7</td>
<td>4.3</td>
<td>5.4</td>
<td>4.3</td>
</tr>
<tr>
<td>General Interest</td>
<td></td>
<td>4.0</td>
<td>4.2</td>
<td>4.8</td>
<td>4.2</td>
</tr>
</tbody>
</table>
Participants with 6-10 years of traditional classroom teaching experience (n = 3) reported the lowest overall mean on the motivation scale with a mean of 3.4, compared to the mean of 5.3 for teachers who did not provide their years of classroom experience (n = 2). Participants reporting 6-10 years of traditional classroom teaching experience reported the lowest mean for the subscales with a mean of 3.0 on the general interest subscale, with 3 considered “more not true than true.”

The mean response for the effort subscale was the highest with a mean of 4.5. The mean response for the effort subscale was higher than the other subscales across each age group, with the exception of participants with 16 – 20 years of traditional classroom experience (n = 2). Participants with 16 – 20 years of traditional classroom experience scored general interest with the highest mean, while the mean for general interest was the lowest mean scored overall on the causes scale. Details for mean response by number of years of traditional face-to-face teaching experience are in Table 11.

Table 11

<table>
<thead>
<tr>
<th>Scale</th>
<th>Years Teaching Experience in a Traditional Face-to-Face Classroom</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
</tr>
<tr>
<td>Motivation</td>
<td>4.3</td>
</tr>
<tr>
<td>Effort</td>
<td>4.3</td>
</tr>
<tr>
<td>Engagement</td>
<td>4.3</td>
</tr>
<tr>
<td>General Interest</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Participants who did not disclose their age (n = 3) reported the highest mean response on the overall motivation scale with a mean of 5.5. Participants aged 41 and 45 (n = 2) reported a mean of 5.3, compared to participants aged 31 to 35 (n = 7) with a mean response of 3.9.
Participants aged 26-30 (n = 1) reported the highest mean response on any motivation subscale, with a mean response of 6.0 on the general interest subscale.

The mean response overall of the effort subscale was highest with a mean of 4.5, but the mean response was inconsistent across the age groups. Participants age 26–30 (n = 1), 51–55 (n = 1), and 55–60 (n = 1) did not score the effort subscale with the highest mean. Similarly, the mean response for the general interest was the lowest overall, but the mean response was inconsistent across age groups. Participants age 26–30 (n = 1), 31–35 (n = 7), 51–55 (n = 1), and 55–60 (n = 1) did not score general interest with the lowest mean. Details for mean responses by age are in Table 12.

Table 12

Mean Response by Age

<table>
<thead>
<tr>
<th>Scale</th>
<th>Subscale</th>
<th>26-30</th>
<th>31-35</th>
<th>36-40</th>
<th>41-45</th>
<th>51-55</th>
<th>55-60</th>
<th>Prefer Not to Answer</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effort</td>
<td></td>
<td>4.5</td>
<td>3.9</td>
<td>4.3</td>
<td>5.5</td>
<td>4.0</td>
<td>4.5</td>
<td>5.8</td>
<td>4.5</td>
</tr>
<tr>
<td>Engagement</td>
<td></td>
<td>3.5</td>
<td>3.9</td>
<td>4.0</td>
<td>5.3</td>
<td>5.5</td>
<td>3.0</td>
<td>5.7</td>
<td>4.3</td>
</tr>
<tr>
<td>General Interest</td>
<td></td>
<td>6.0</td>
<td>3.9</td>
<td>3.7</td>
<td>5.0</td>
<td>5.0</td>
<td>5.0</td>
<td>4.7</td>
<td>4.2</td>
</tr>
</tbody>
</table>

Participants who did not disclose their years with the company (n = 3) reported the highest mean response on the overall motivation scale with a mean of 5.5. Participants with two years with the company (n = 3) reported the lowest mean response on the overall motivation scale with a mean of 3.1. Participants with the company less than one year (n = 1) reported the highest mean response on a motivation subscale, with a mean response of 6.0 on the general interest subscale.
Although the mean response for the effort subscale was the highest overall, the response was inconsistent by years with the company. For example, participants with two years with the company (n = 3) reported the lowest mean response on the effort subscale with a mean of 2.8, compared to those who did not provide the number of years with the company (n = 3) whose mean score was 5.8 for the effort subscale. The mean response for the general subscale was the lowest overall, but the response varied by years with the company. The mean for those with four years with the company (n = 1) was 2.0 for the general interest scale, compared to a mean of 6.0 for those with the company less than one year (n = 1). Details for mean response by years with the company are in Table 13.

Table 13

*Mean Response by Years with the Company*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Subscale</th>
<th>Less than 1 Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>More than 10</th>
<th>Prefer Not to Answer</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td></td>
<td>5.4</td>
<td>4.8</td>
<td>3.1</td>
<td>4.5</td>
<td>4.0</td>
<td>3.2</td>
<td>3.6</td>
<td>4.7</td>
<td>5.4</td>
<td>3.8</td>
<td>5.5</td>
<td>4.4</td>
</tr>
<tr>
<td>Effort</td>
<td></td>
<td>5.0</td>
<td>4.5</td>
<td>2.8</td>
<td>4.6</td>
<td>5.0</td>
<td>3.5</td>
<td>4.5</td>
<td>4.3</td>
<td>5.5</td>
<td>4.3</td>
<td>5.8</td>
<td>4.5</td>
</tr>
<tr>
<td>Engagement</td>
<td></td>
<td>5.5</td>
<td>5.0</td>
<td>3.2</td>
<td>4.3</td>
<td>4.0</td>
<td>2.5</td>
<td>3.0</td>
<td>5.3</td>
<td>5.3</td>
<td>3.8</td>
<td>5.7</td>
<td>4.3</td>
</tr>
<tr>
<td>General Interest</td>
<td></td>
<td>6.0</td>
<td>5.0</td>
<td>3.3</td>
<td>4.8</td>
<td>2.0</td>
<td>4.0</td>
<td>3.0</td>
<td>4.5</td>
<td>5.5</td>
<td>3.0</td>
<td>4.7</td>
<td>4.2</td>
</tr>
</tbody>
</table>

Causes

In addition to the motivation scale and corresponding subscales, participants also responded to the statements from the causes scale and corresponding causes subscales (Hardré et al., 2008). The subscales of the causes scale included home factors, current relevance/value, aspirations/future utility, peer factors, and personal factors (Hardré et al., 2008). The count of participant responses for the causes scale and subscale are illustrated in Table 14.
On the overall aspirations/future utility subscale, 50% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher in response to the statements. For this subscale, 32% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher for “If students aren't motivated to learn in my class, it is often because they don't have aspirations that connect to education, like plans to go to college.” For the same statement, 82% of the participants selected a neutral response or higher, with the most responses (50% of the responses) submitted as neutral (4 on the Likert-type scale; n = 11). 77% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher for “Most often, if students aren't working in my class, it's because they don't see how useful this information can be.” For the same statement, eight participants chose “more true than not true” (5 on the Likert-type scale), the most common response for this question.

On the overall current relevance/value subscale, 79% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher in response to the statements. The current relevance/value subscale received the most of responses of “more true than not true” (5 on the Likert-type scale) or higher compared to the other causes subscales. The statement “If students don't see the point of learning the content, then they aren't motivated to learn it” received more agreement than any of the other statements on the causes scale with 86% of participants selecting 5 or above on the Likert-type scale. Ten participants selected “very much true” (7 on the Likert-type scale), the most common response for this statement. The statement “If students don't see the point of learning the content, then they aren't motivated to learn it” received the most number of “very much true” (7 on the Likert-type scale) responses of any statement on the survey.
On the overall current home factors subscale, 39% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher in response to the statements. For the statement “Generally, my students are unmotivated because their parents don't care about or value education,” 9% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher with the majority of responses neutral (4 on the Likert-type scale; n = 8). For the statement “Students often lack effort at school because they don't have the support at home,” 64% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher with six participants responding with a 5 or a 6 on the Likert-type scale.

On the overall current peer factors subscale, 16% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher in response to the statements. 14% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher in response to the statement “Generally, the students in my class who are not interested in learning are that way because of peer pressure to devalue school,” with the most common response neutral (4 on the Likert-type scale; n = 7). 18% selected “more true than not true” (5 on the Likert-type scale) or higher in response to the statement “Negative peer pressure is one big reason why some of my students are not motivated to learn in school” with the most common response a 2 (n = 7).

On the overall current personal factors subscale, 57% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher in response to the statements. For the statement “Some students are not motivated to learn because they are just lazy” 64% of the participants selected “more true than not true” (5 on the Likert-type scale) or higher, with 5 as the most common response (n = 9). For the statement “Some students in my class just don't care about learning – period,” 50% of the participants selected “more true than not true” (5 on the
Likert-type scale) or higher, with seven participants choosing 5 as a response, the most common response.

Table 14

*Count of Responses for the Causes Scale and Subscales*

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Statement</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aspirations/Future Utility</strong></td>
<td>8. If students aren't motivated to learn in my class, it is often because they don't have aspirations that connect to education, like plans to go to college.</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>11</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>13. Some of my students aren't motivated to work in school because education has no place in the futures they see for themselves.</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>9</td>
<td>6</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>15. Most often, if students aren't working in my class, it's because they don't see how useful this information can be.</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>8</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td><strong>Current Relevance/Value</strong></td>
<td>7. When my students aren't engaged in school, it's because they don't see the value of what they are being asked to learn.</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>7</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>10. If students don't see the point of learning the content, then they aren't motivated to learn it.</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>5</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>12. Most often, if students aren't engaged in my class, it's because they don't see the relevance of the content in their world.</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>5</td>
<td>7</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td><strong>Home Factors</strong></td>
<td>6. Generally, my students are unmotivated because their parents don't care about or value education.</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>9. Students often lack effort at school because they don't have the support at home.</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>
Table 14. Count of Responses for the Causes Scale and Subscales (continued)

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Statement</th>
<th>Likert-Type Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Peer Factors</td>
<td>11. Some of my students just have too many home problems to make school</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>a priority.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14. Generally, the students in my class who are not interested in learning</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>are that way because of peer pressure to devalue school.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16. Negative peer pressure is one big reason why some of my students are</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>not motivated to learn in school.</td>
<td></td>
</tr>
<tr>
<td>Personal Factors</td>
<td>17. Some students are not motivated to learn because they are just lazy.</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>18. Some students in my class just don't care about learning - period.</td>
<td>1</td>
</tr>
</tbody>
</table>

The median responses for each statement within the causes subscales are shown in Table 15. On the aspirations/future utility subscale, the median for statement “If students aren't motivated to learn in my class, it is often because they don't have aspirations that connect to education, like plans to go to college” and for the statement “Some of my students aren't motivated to work in school because education has no place in the futures they see for themselves” was 4, a neutral response. The median response for the statement “Most often, if students aren't working in my class, it's because they don't see how useful this information can be” was 5, a response considered “more true than not true.”

On the current relevance/value subscale, the median for statement “When my students aren't engaged in school, it's because they don't see the value of what they are being asked to learn” and for the statement “If students don't see the point of learning the content, then they
aren't motivated to learn it” was 6, the highest median for any question on either the motivation scale or the causes scale. The median for the statement “Most often, if students aren't engaged in my class, it's because they don't see the relevance of the content in their world” was 5.

On the home factors subscale, the median for the statement “Generally, my students are unmotivated because their parents don't care about or value education” was 3; the median for the statement “Students often lack effort at school because they don't have the support at home” was 5; and the median for the statement “Some of my students just have too many home problems to make school a priority” was 4.

The median for both questions on the peer factors subscale was 3. The median for both of these statements (“Generally, the students in my class who are not interested in learning are that way because of peer pressure to devalue school” and “Negative peer pressure is one big reason why some of my students are not motivated to learn in school”) and one statement on the home factors subscale (“Generally, my students are unmotivated because their parents don't care about or value education”) was 3, the lowest median for any of the statements on either the motivation scale or the causes scale.

On the personal factors subscale, the median for the statement “Some students are not motivated to learn because they are just lazy” was 5, and the median for the statement “Some students in my class just don't care about learning – period” was 4.5.

Table 15

<table>
<thead>
<tr>
<th>Median Response by Statement - Causes Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scale</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Aspirations/Future Utility</td>
</tr>
</tbody>
</table>
Table 15. Median Response by Statement - Causes Scale (continued)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Statement</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13. Some of my students aren't motivated to work in school because education has no place in the futures they see for themselves.</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>15. Most often, if students aren't working in my class, it's because they don't see how useful this information can be.</td>
<td>5</td>
</tr>
<tr>
<td>Current Relevance/Value</td>
<td>7. When my students aren't engaged in school, it's because they don't see the value of what they are being asked to learn.</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>10. If students don't see the point of learning the content, then they aren't motivated to learn it.</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>12. Most often, if students aren't engaged in my class, it's because they don't see the relevance of the content in their world.</td>
<td>5</td>
</tr>
<tr>
<td>Home Factors</td>
<td>6. Generally, my students are unmotivated because their parents don't care about or value education.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>9. Students often lack effort at school because they don't have the support at home.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>11. Some of my students just have too many home problems to make school a priority.</td>
<td>4</td>
</tr>
<tr>
<td>Peer Factors</td>
<td>14. Generally, the students in my class who are not interested in learning are that way because of peer pressure to devalue school.</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>16. Negative peer pressure is one big reason why some of my students are not motivated to learn in school.</td>
<td>3</td>
</tr>
<tr>
<td>Personal Factors</td>
<td>17. Some students are not motivated to learn because they are just lazy.</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>18. Some students in my class just don't care about learning - period.</td>
<td>4.5</td>
</tr>
</tbody>
</table>

The mean response for “If students don't see the point of learning the content, then they aren't motivated to learn it” was 5.9, the highest mean response for all statements within the
causes scale. The mean response for “Generally, my students are unmotivated because their parents don't care about or value education” was 3.0, the lowest mean response for all statements within the causes scale. The responses for the statement “Some students in my class just don't care about learning - period” were most dispersed with a standard deviation of 1.72. Additional details are in Table 16.

Table 16

*Mean and Standard Deviation for the Causes Scale and Subscales*

<table>
<thead>
<tr>
<th>Causes</th>
<th>Statement</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirations/Future Utility</td>
<td>8. If students aren't motivated to learn in my class, it is often because they don't have aspirations that connect to education, like plans to go to college.</td>
<td>4.1</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>13. Some of my students aren't motivated to work in school because education has no place in the futures they see for themselves.</td>
<td>4.4</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>15. Most often, if students aren't working in my class, it's because they don't see how useful this information can be.</td>
<td>5.2</td>
<td>1.4</td>
</tr>
<tr>
<td>Current Relevance/Value</td>
<td>7. When my students aren't engaged in school, it's because they don't see the value of what they are being asked to learn.</td>
<td>5.4</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>10. If students don't see the point of learning the content, then they aren't motivated to learn it.</td>
<td>5.9</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>12. Most often, if students aren't engaged in my class, it's because they don't see the relevance of the content in their world.</td>
<td>5.2</td>
<td>1.3</td>
</tr>
</tbody>
</table>
Table 16. Mean and Standard Deviation for the Causes Scale and Subscales (continued)

<table>
<thead>
<tr>
<th>Causes</th>
<th>Statement</th>
<th>Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Factors</td>
<td>6. Generally, my students are unmotivated because their parents don't care about or value education.</td>
<td>4.2</td>
<td>1.7</td>
</tr>
<tr>
<td></td>
<td>9. Students often lack effort at school because they don't have the support at home.</td>
<td>3.0</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>11. Some of my students just have too many home problems to make school a priority.</td>
<td>4.8</td>
<td>1.4</td>
</tr>
<tr>
<td>Peer factors</td>
<td>14. Generally, the students in my class who are not interested in learning are that way because of peer pressure to devalue school.</td>
<td>3.1</td>
<td>1.3</td>
</tr>
<tr>
<td></td>
<td>16. Negative peer pressure is one big reason why some of my students are not motivated to learn in school.</td>
<td>4.7</td>
<td>1.7</td>
</tr>
<tr>
<td>Personal Factors</td>
<td>17. Some students are not motivated to learn because they are just lazy.</td>
<td>4.4</td>
<td>1.6</td>
</tr>
<tr>
<td></td>
<td>18. Some students in my class just don't care about learning - period.</td>
<td>4.2</td>
<td>1.7</td>
</tr>
</tbody>
</table>

The mean for the current relevance/value subscale was the highest overall. With a mean of 5.9, core teachers (math, science, social studies, and English; n = 6) most strongly perceived current relevance/value as a cause for lack of motivation, and all disciplines rated this subscale as the highest. Across all disciplines, the mean for the peer factors subscale was the lowest with an overall mean of 3.1. The mean for peer factors as a cause for lack of motivation for participants who elected not to provide their discipline (n = 4) was 2.5, a score between “not true at all” and
“more not true than true” and the lowest mean for any of the subscales by discipline. Additional details are in Table 17.

Table 17

Mean Response by Discipline

<table>
<thead>
<tr>
<th>Scale</th>
<th>Subscale</th>
<th>Core</th>
<th>Electives</th>
<th>Prefer Not to Answer</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causes</td>
<td>Causes</td>
<td>4.4</td>
<td>4.7</td>
<td>3.7</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>Aspirations/Future Utility</td>
<td>4.3</td>
<td>4.8</td>
<td>4.2</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>Current Relevance/Value</td>
<td>5.9</td>
<td>5.5</td>
<td>4.9</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>Home Factors</td>
<td>3.7</td>
<td>4.6</td>
<td>3.7</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>Peer factors</td>
<td>2.8</td>
<td>3.5</td>
<td>2.5</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>Personal Factors</td>
<td>4.8</td>
<td>4.7</td>
<td>2.6</td>
<td>4.4</td>
</tr>
</tbody>
</table>

Participants rated the current relevance/value subscale as the highest with a mean of 5.5, consistent by the number of years of experience in a traditional face-to-face classroom, with the exception of participants with 11 – 15 years of experience (n = 1) whose means were identical across multiple causes subscales. The mean response for the current relevance/value subscale was the highest for participants who have never taught in a traditional classroom (n = 3) with a mean of 5.9 and lowest for participants who elected not to provide their years of traditional teaching experience (n = 2) with a mean of 4.8. The mean for peer factors was the lowest overall and consistent across with disciplines with the exception of participants with 11 – 15 years of experience (n = 1) who rated home factors the lowest.

The highest mean within the causes subscales was 5.9 when viewed by years teaching experience in a traditional classroom, scored by participants who have never taught in a traditional classroom (n = 3) for the current relevance/value subscale. The lowest mean response within the causes subscale was 2.0 by participants who elected not to provide their number of years of teaching experience (n = 2) for the peer factors subscale. Participants with 11 – 15 years
of traditional classroom experience \((n = 1)\) had a mean score of 5 for the peer factors subscale, a mean higher than each of the other groups of years of experience. Additional details are in Table 18.

Table 18

*Mean Response by Number of Years Teaching in a Traditional Face-to-Face Classroom*

<table>
<thead>
<tr>
<th>Scale</th>
<th>Subscale</th>
<th>Never</th>
<th>5 or less</th>
<th>6-10</th>
<th>11-15</th>
<th>16-20</th>
<th>Prefer Not to Answer</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causes</td>
<td>Aspirations/Future Utility</td>
<td>4.8</td>
<td>4.6</td>
<td>4.5</td>
<td>4.5</td>
<td>3.9</td>
<td>3.4</td>
<td>4.4</td>
</tr>
<tr>
<td></td>
<td>Current Relevance/Value</td>
<td>5.9</td>
<td>5.7</td>
<td>5.3</td>
<td>5.0</td>
<td>5.0</td>
<td>4.8</td>
<td>5.5</td>
</tr>
<tr>
<td></td>
<td>Home Factors</td>
<td>4.7</td>
<td>4.4</td>
<td>4.4</td>
<td>3.7</td>
<td>3.0</td>
<td>3.3</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>Peer factors</td>
<td>3.3</td>
<td>3.2</td>
<td>2.8</td>
<td>5.0</td>
<td>2.5</td>
<td>2.0</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td>Personal Factors</td>
<td>4.7</td>
<td>4.3</td>
<td>5.5</td>
<td>4.0</td>
<td>4.8</td>
<td>2.3</td>
<td>4.4</td>
</tr>
</tbody>
</table>

For all age groups, with the exception of 51 – 55 \((n = 1)\), the mean response was highest for current relevance/value subscale. For all age groups, with the exception of 55 – 60, the mean response was lowest for the peer factors subscale. Although peer factors scored the lowest mean of the causes subscales, this was not consistent by age. The mean for peer factors was not the lowest for participants aged 26 – 30 \((n = 1)\), 41 – 45 \((n = 2)\), and 55 – 60 \((n = 1)\).

The highest mean within the causes subscales was 7.0 when viewed by age, scored by participants aged 55-60 \((n = 1)\) for the current relevance/value subscale. The lowest mean within the causes subscales was 1.5 when viewed by age, scored by participants aged 51-55 \((n = 1)\) for the peer factors subscale. Additional details are in Table 19.
Table 19

Mean Response by Age

<table>
<thead>
<tr>
<th>Scale Subscale</th>
<th>Years</th>
<th></th>
<th></th>
<th></th>
<th>Prefer not to answer</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>26-30</td>
<td>31-35</td>
<td>36-40</td>
<td>41-45</td>
<td>51-55</td>
</tr>
<tr>
<td>Causes</td>
<td></td>
<td>4.8</td>
<td>4.9</td>
<td>4.8</td>
<td>3.5</td>
<td>2.9</td>
</tr>
<tr>
<td>Aspirations/Future Utility</td>
<td></td>
<td>5.3</td>
<td>4.9</td>
<td>4.7</td>
<td>3.5</td>
<td>3.3</td>
</tr>
<tr>
<td>Current Relevance/Value</td>
<td></td>
<td>6.0</td>
<td>6.2</td>
<td>5.6</td>
<td>4.2</td>
<td>3.0</td>
</tr>
<tr>
<td>Home Factors</td>
<td></td>
<td>5.0</td>
<td>4.4</td>
<td>4.9</td>
<td>2.8</td>
<td>2.7</td>
</tr>
<tr>
<td>Peer factors</td>
<td></td>
<td>4.0</td>
<td>3.5</td>
<td>3.1</td>
<td>3.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Personal Factors</td>
<td></td>
<td>3.0</td>
<td>4.9</td>
<td>5.2</td>
<td>3.3</td>
<td>4.0</td>
</tr>
</tbody>
</table>

For all years with the company, the mean response was highest for current relevance/value subscale and lowest for peer factors. Participants rated the current relevance/value subscale as the highest with a mean of 5.5, consistent by number of years with the company. The highest mean within the causes subscales was 6.7 when viewed by years with the company, scored by participants with 1 year with the company (n = 1) for the current relevance/value subscale. The lowest mean within the causes subscales was 2.0 when viewed by years with the company, scored by those with 6 years (n = 1), 7 years (n = 2), and by those who preferred not to answer (n = 3) within the peer factors subscale. Additional details are in Table 20.

Table 20

Mean Response by Years with the Company

<table>
<thead>
<tr>
<th>Scale Subscale</th>
<th>Less than 1 Year</th>
<th>Years</th>
<th></th>
<th></th>
<th>More than 10</th>
<th>Prefer Not to Answer</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causes</td>
<td>3.8</td>
<td>5.4</td>
<td>5.2</td>
<td>4.5</td>
<td>5.1</td>
<td>1.5</td>
<td>4.7</td>
</tr>
</tbody>
</table>
Table 20. Mean Response by Years with the Company (continued)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Subscale</th>
<th>Less than 1 Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>More than 10</th>
<th>Prefer Not to Answer</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirations/Future</td>
<td>Utility</td>
<td>4.3</td>
<td>6.3</td>
<td>5.2</td>
<td>4.3</td>
<td>5</td>
<td>4.8</td>
<td>5.3</td>
<td>4.2</td>
<td>3.2</td>
<td>0</td>
<td>4.7</td>
<td>4.1</td>
<td>4.5</td>
</tr>
<tr>
<td>Relevance/Current</td>
<td>Value</td>
<td>5.3</td>
<td>6.7</td>
<td>5.9</td>
<td>5.6</td>
<td>6</td>
<td>6.5</td>
<td>6</td>
<td>5</td>
<td>4.3</td>
<td>0</td>
<td>5.5</td>
<td>4.8</td>
<td>5.5</td>
</tr>
<tr>
<td>Home Factors</td>
<td></td>
<td>3.3</td>
<td>5.7</td>
<td>5.4</td>
<td>4.2</td>
<td>4.3</td>
<td>4.3</td>
<td>4.3</td>
<td>3.7</td>
<td>3.5</td>
<td>0</td>
<td>4.2</td>
<td>3.2</td>
<td>4.2</td>
</tr>
<tr>
<td>Peer factors</td>
<td>Personal Factors</td>
<td>2.5</td>
<td>3.5</td>
<td>3.3</td>
<td>3.9</td>
<td>4</td>
<td>3.3</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>2</td>
<td>3.1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3</td>
<td>3.5</td>
<td>5.8</td>
<td>4.1</td>
<td>6</td>
<td>6.3</td>
<td>5</td>
<td>4.5</td>
<td>3.3</td>
<td>0</td>
<td>5</td>
<td>2.2</td>
<td>4.4</td>
</tr>
</tbody>
</table>

**Summary of PSM Results**

Overall, participants provided responses between neutral and “more true than not true” (scores between 4 and 5 on the Likert-type scale) when asked about their students’ motivation. The median responses for each statement on the motivation subscales were either 4.5 or 5. On the motivation subscales, participants scored effort the highest with a mean of 4.5, followed by engagement with a mean of 4.3 and general interest with a mean of 4.2. Although the mean for the effort subscale was highest overall, the mean response by demographic varied.

Participants perceived current relevance/value as the most significant cause of lack of student motivation in the online high school classroom. Specifically, participants believed that students must understand the reason to learn the content in order to be motivated. The responses for the statements on the causes subscales illustrated both the highest median and the lowest median. The median for the statements “When my students aren't engaged in school, it's because they don't see the value of what they are being asked to learn” and “If students don't see the point of learning the content, then they aren't motivated to learn it” on the current relevance/value subscale were the highest. Participants perceived peer factors as the least significant cause of
lack of motivation in the online high school classroom, where the median for both statements was lower than all but one other statement on the causes scale.

**Responses to Open-Ended Question**

In addition to responding to the PSM (Hardré et al., 2008), participants were asked to answer one open-ended question: “Please use the space below to provide any additional comments regarding your perceptions of student motivation and reasons for lack of motivation.” 68% (n = 15) of the respondents provided an answer to this open-ended question.

In the comments, online high school teachers mentioned similar factors as those addressed in the causes subscales of the PSM (Hardré et al., 2008). Comparable to the home factors subscale, for example, one participant mentioned home issues as a contributor to lack of motivation: “I think motivation is dependent upon environment. If students live in a community or home without value for education, they are not intrinsically motivated to work hard in school.”

Another participant mentioned multiple aspects of the causes subscales in her response. This participant cited both home factors and peer factor as influences on motivation: “I believe that much of what affects motivation is beyond the teachers/schools reach. Parents, peers--good or bad, and romantic relationships trump anything we can do as teachers, because for teens, that's what makes the world go around.”

In the comments, participants referenced factors of the subscales of the PSM (Hardré et al., 2008), while others noted factors beyond the scope of the subscales. Participants commented that ability impacted motivation, for instance. One participant relayed her experience as a foreign language teacher: “The content is beyond their ability, such as learning a language. Some
students have trouble learning certain content even though they are interested and want to learn. They lose motivation if not doing okay/well eventually.”

Other participants shared their difficulty with assessing student motivation in an online environment. One participant commented that she didn’t know her students very well, given the online environment: “In the online environment I know very little about most of my students' home lives, peers, and parental influences… [F]or the most part I don't know much of anything about my students' daily lives and experiences.” Another participant noted that the diversity of the student body within the environment made it difficult to assess motivation and reasons for lack of motivation:

There are so many types of students who all have different reasons for being in the online setting (bullied, sick, disabilities, behavioral issues, school option, etc.). Because of this, it is difficult to answer a lot of these survey questions with general answers because there is no "general" in our online setting.

Other participants believed that students’ academic backgrounds impacted their motivation. One participant believed that students’ lack of a solid language foundation influenced their motivation and recounted her experiences as a foreign language teacher:

In my case, it is mostly because the subject matter is really challenging, and they lack the background knowledge that they used to have in previous years. I teach a foreign language, and it is getting more difficult for students to learn any new world language because grammar is no longer taught in most schools. Without a basic knowledge of grammar, i.e., nouns, verbs, it is really difficult to learn these elements in a new language.

Multiple participants reflected upon the complexity of motivation, citing the interplay of numerous factors that impacted motivation. For instance, one participant noted, “Each
individual has his/her own reasons to be motivated to do something. There is also a multitude of reasons for an individual to lack motivation as well.” Another participant expressed the complexity of motivation noting that “there is not one size fits all for their motivation, especially in our online setting.” While participants reported various causes for lack of motivation, one participant indicated that praise increased motivation, while also expressing that the reasons for lack of motivation are beyond her sphere of influence:

I work outside the margins in my courses in hopes of heading off those issues for my students, but I'm still not even scratching the surface of the larger issues. I praise my students all the time (even when they may not deserve praise for academic performance)... I wish I had more answers, but I believe that much of what affects motivation is beyond the teachers/schools reach…I do know for a fact that I've seen an increase in motivation when I amped up the praise factor. Students will cling to anyone or anything that makes them feel better about themselves.

The participants who responded to the open-ended question shared their perspectives of student motivation and reasons for lack of motivation. Many of the reasons cited were included as part of the survey, while other reasons were not part of the survey. The participants shared their individual perspectives, most commonly citing the complexity of motivation and influences beyond their control.

Conclusion

Through the use of a survey, the researcher addressed the research question: “What are online high school teachers' perceptions of students’ academic motivation in an online, asynchronous course?” In general, participants responded neutrally (overall mean of 4.4) to statements reflecting their students’ motivation, with participants experiencing engagement as
the most common form of motivation. Based on the mean response of 4.7, the highest for any of the statements on the motivation scale, the participants most agreed with the statement “The students in this class generally do class-related tasks and assignments willingly.” The responses to the statement “The students in this class don’t put forth much effort to learn the content” varied the most within the motivation scale with a standard deviation of 1.7.

Participants cited current relevance/value as the most important cause for lack of motivation, with the highest mean (mean of 5.9) for the statement “If students don't see the point of learning the content, then they aren't motivated to learn it.” Of the causes subscales, participants believed peer factors had the least influence on motivation. The responses to the statements “Some of my students just have too many home problems to make school a priority” and “Some students in my class just don't care about learning – period” were most varied with a standard deviation of 1.7.

The participants’ comments reflected the difficulty to assess motivation and reasons for motivation in the online classroom, given the diversity of the online environment, factors beyond the participants’ control, and the complexity of motivation. The participants’ comments and the results of the survey will be discussed in further in Chapter 5, where the researcher links the results to the literature.
Chapter 5: Analysis of Findings

The purpose of this descriptive study was to detail student motivation for online high school teachers who were employed with a non-profit, K-12, national online curriculum provider. Through the use of a survey, the researcher addressed the following question:

- What are online high school teachers' perceptions of students’ academic motivation in an online, asynchronous course?

Online high school teachers within the organization responded to the Perceptions of Student Motivation (PSM) questionnaire (Hardré et al., 2008), one open-ended question, and four demographic questions. The PSM was divided into a motivation scale and a causes scale, and each scale was further divided by subscale (Hardré et al., 2008). The subscales of the motivation scale included effort, engagement, and general interest, and the subscales of the causes scales included home factors, current relevance and value, aspirations and future utility, peer factors, and personal factors (Hardré et al., 2008).

The overall mean response for the motivation scale was 4.4, with a response of 4 considered neutral and a response of 5 considered “more true than not true.” Participants provided responses between neutral and “more true than not true” (scores between 4 and 5 on the Likert-type scale) as the mean response for each motivation subscale, and the median responses for each statement on the motivation subscales were either 4.5 or 5. Participants ranked the motivation subscales in the following order: effort (mean of 4.5), engagement (mean of 4.3), and general interest (mean of 4.2). The neutral collective response to the motivation scale and corresponding subscales indicated that participants did not perceive their students as clearly motivated or unmotivated and explained such neutral responses via the open-ended question:
Honestly it was hard to answer some of these questions because in the online environment I know very little about most of my students' home lives, peers, and parental influences. Every once in a while I get a tidbit of information, but for the most part I don't know much of anything about my students' daily lives and experiences.

Regarding the perceived causes for lack of motivation in an online high school class, participants perceived current relevance/value as the most significant cause; participants believed that students must understand the reason to learn the content in order to be motivated.

Participants rated the following two statements on the causes scales (from the current relevance/value subscale) with the highest median (median of 6) when compared to other statements on the causes scale: “When my students aren't engaged in school, it's because they don't see the value of what they are being asked to learn” and “If students don't see the point of learning the content, then they aren't motivated to learn it.” Participants rated the following two statements (from the peer factors subscale) with the lowest median when compared to other statements on the causes scale: “Generally, the students in my class who are not interested in learning are that way because of peer pressure to devalue school” and “Negative peer pressure is one big reason why some of my students are not motivated to learn in school,” ranking peer factors as the least significant cause of lack of motivation in the online high school classroom.

**Motivation**

Participants responded to the statements from both the motivation scale and the causes scale of the PSM (Hardré et al., 2008). Both the motivation scale and the causes scale included subscales, and the subscales of the motivation scale were effort, engagement, and general interest (Hardré et al., 2008).
Effort

Participants rated the effort subscale with the highest mean, when compared to the engagement and general interest subscales of the motivation scale. Specifically, 59% of the teachers selected “more true than not true” or higher for the statement “My students work at learning new things in this class.” This statement, a statement on the effort subscale, received the most number of responses of 5 or above on the Likert-type scale for any statement on the motivation scale. The mean response of the effort subscale was higher than the other subscales, yet the collective response was slightly above neutral, signifying that participants may not have a clear insight into their students’ effort.

Teachers perceived evidence of effort in the online classroom, and, according to the literature, effort correlated to performance in the classroom (Kim, Seung, Cozart, & Lee, 2015; Legault, Green-Demers, Pelletier, & Harris, 2006). High levels of effort were linked to strong academic performance (Kim et al., 2015), and reduced levels of effort were linked to lower levels of academic performance (Legault et al., 2006). In addition, students’ perceptions about their own effort were linked to negative school behaviors (lack of studying, for example) and to overall withdrawal from their academic activities (Legault et al., 2006). Students’ misperceptions about the required effort were linked to failure in online courses (Bawa, 2016; Yukselturk & Bulut, 2007).

Engagement

Engagement is defined as the emotional (Kim et al., 2015) and intellectual interaction with the course, with peers within the course, and with instructor (Dixson, 2015). Participants rated the engagement subscale with the second highest mean, compared to the other subscales of the motivation scale. The statement “The students in this class generally do class-related tasks
and assignments willingly” received the most number of neutral responses for any statement on the motivation scale, and 55% of the participants selected “more true than not true” or higher for this statement. The mean response of the engagement subscale was slightly above neutral (mean of 4.3) indicating that participants may not have a comprehensive view of students’ engagement in the online classroom. Although all participants may not distinctly perceive that their students are engaged in the content, Bigatel and Williams (2015) positively correlated engagement and academic success.

According to the literature, teachers purposefully encouraged engagement by actively participating in the discussion boards, providing prompt replies to student e-mail, adding variety to the course (both audio and text, for example), and sharing quality feedback with students (DiPietro, Ferdig, Black, & Preston, 2010). Online high school teachers believed that such behaviors promoted student engagement, motivation, and course success (DiPietro et al., 2010). Aligning with DiPietro and colleagues’ study (2010), a participant wrote in response to the open-ended question that she attempted to improve motivation with feedback as well; in particular, she praised her students at every opportunity:

I praise my students all the time (even when they may not deserve praise for academic performance)… I do know for a fact that I've seen an increase in motivation when I amped up the praise factor. Students will cling to anyone or anything that makes them feel better about themselves.

Students believed that support and engagement from trusted adults promoted academic success (Oviatt, Graham, Borup, & Davies, 2016). Specifically, students perceived assistance in the form of encouragement, explanations of course materials, and organizational help from teachers, counselors, and parents, as integral to success in the online classroom (Oviatt et al.,
Jackson and Zmuda (2014) cautioned, however, that educators may confuse compliance with engagement, and current educational environments encourage compliance, not engagement. True engagement requires effort from the students, an effort to reach academic standards and an effort to apply course concepts to their personal lives (Jackson & Zmuda, 2014).

**General Interest**

When responding to the statement “In general, my students are genuinely interested in what they are asked to learn in class” on the general interest subscale, 50% of the teachers selected “more true than not true” or higher for a median response of 4.5 and a mean response of 4.2, where a response of 4 was considered neutral. The mean response of the general interest subscale was 4.2, where a response of 4 was considered neutral, possibly illustrating that participants cannot fully assess their students’ general interest in the online course.

Although not all participants perceived that their students were interested in the course content, Linnenbrink and Pintrich (2002) concluded that students’ engagement, motivation, and academic performance increased when students were personally interested in the course content or when teachers created situational interest through compelling activities and tasks. Legault and colleagues (2006) discovered that when students lacked interest in a course, they became disengaged academically.

Teachers believed that course interest promoted motivation, and they cultivated interest by altering the online course content to include current students’ interests (DiPietro et al., 2010) and by incorporating multiple forms of media into the online course (Murphy & Rodriguez-Manzanares, 2009). Teachers also, however, believed that academics were not the first choice
for students; rather, students would prefer spending time on non-academic pursuits such as playing video games (Hardré et al., 2006).

**Motivation Conclusion**

Participants scored the effort, engagement, and general interest subscales with a collective neutral response, possibly indicating that the participants did not have decisive knowledge and insight into their students' motivation. Participants scored each subscale of the motivation scale with an overall mean of 4.4, a mean slightly above neutral, illustrating that participants did not categorically perceive their students as motivated or unmotivated.

Motivation is complex, as are the various components of motivation (Legault et al., 2006). Multiple participants recognized this complexity in their open-ended responses with statements such as the following: “There is not one size fits all for their motivation, especially in our online setting.” A student’s motivation extends beyond personal characteristics and can be influenced by the environment (Shernoff, Tonks, & Anderson, 2014), by the lack of autonomy, competence, and social supports, for example (Legault et al., 2006), or by other causes as examined in the PSM (Hardré et al., 2008).

**Causes**

According to the attributional theory of academic motivation, people attribute outcomes of events to particular reasons, impacting future behaviors (B. Weiner, 1985). Teachers attributed students’ lack of motivation to particular reasons as well, citing home factors, content relevance, future utility, peer factors, personal factors (Hardré et al., 2008), and factors beyond their control (Hardré et al., 2006). In an effort to understand the perceived reasons for lack of online students’ motivation for this particular study site, participants responded to the statements from the causes scale of the PSM (Hardré et al., 2008). The subscales of the causes scale
aspirations and future utility, current relevance and value, home factors, peer factors, and personal factors (Hardré et al., 2008). In addition, teachers responded to one open-ended question: “Please use the space below to provide any additional comments regarding your perceptions of student motivation and reasons for lack of motivation.”

**Aspirations/Future Utility**

Miller and colleagues (1996) defined future utility as the potential value of an activity, values which included receiving future financial gains, university acceptance, or achieving future career goals. Students who believed activities aligned with their future goals performed better academically than students who did not see the future value in an activity (De Volder, Lens, & Hogan, 1982; Fuligni, 2001), and researchers (Miller et al., 1996; Raynor, 1970) discovered a significant positive correlation between students’ perceptions of future utility and academic performance.

According to Hardré and colleagues (2006), teachers believed that students lost motivation in courses because the students perceived a lack of future utility with the content. Participants’ beliefs aligned with Hardré and colleagues’ (2006) findings, echoed in an open-ended response: “The most motivated students are very comfortable learning independently in an online environment and plan to use what they are learning outside of the classroom.” The survey data also supports Hardré and colleagues’ (2006) findings. When responding to the statement “Most often, if students aren’t working in my class, it’s because they don’t see how useful this information can be” on the aspirations/future utility subscale, 77% of the teachers selected “more true than not true” or higher for a median response of 5 and a mean response of 5.2.

The statement “If students aren’t motivated to learn in my class, it is often because they don’t have aspirations that connect to education, like plans to go to college” received the most
number of neutral responses for the entire survey. One participant provided a potential insight into this result: “I do believe that some students want to go to college, however, intellectual capacity combined with other factors make it challenging.” This participant recognized that students may have a desire to attend college, but there may be additional causes at play that interfere with this desire. The reasons for lack of motivation are complex, and there are multiple issues that may impact students’ motivation as another participant noted: “There are also a multitude of reasons for an individual to lack motivation.”

Hardré and colleagues’ (2006) believed that when students did exert effort in a course, the effort was not due to future utility, but rather to extrinsic motivators such as test scores and grades (Hardré et al., 2006). A participant acknowledged these external motivators with her comments: “I think students just want the instant gratification of a good grade. They are less concerned with actually learning and knowing the information being presented.” This participant recognized that external motivators impacted motivation.

Although none of the participants mentioned specific high-stakes testing as a cause for lack of motivation, Hardré and colleagues’ (2006) noted that teachers recognized that future utility was essential for motivation, but future utility competed with instruction essential for high-stakes testing; content tested on high-stakes exams took precedence (Hardré et al., 2006).

**Current Relevance/Values**

Students who were not interested in school were at a higher risk of dropping out than students who did find relevance in the concepts (Vallerand, Fortier, & Guay, 1997). Although most students do find meaning at school, including extrinsic motivators, those who don’t are more likely to drop out (Vallerand et al., 1997). Students lost motivation when they did not see the value in the concepts or tasks; if students valued the tasks or concepts, they were more
willing to complete the activity (Legault et al., 2006). Hidi and Harackiewicz (2000) noted, however, that all students can be motivated to explore their individual interests, but those interests may be outside of the academic realm. Jackson and Zmuda (2014) agreed and cited athletics and artistic accomplishments as examples of activities where students found the activity relevant and were motivated to perform well.

Hidi and Harackiewicz (2000) cautioned that it may take time for students to find the relevance in an activity; students may first need to develop an interest in the activity before finding the relevance and motivation for that activity. In addition, when students had self-confidence and believed they could work through any academic issue, they were more likely to engage in activity in which they did not value or find relevant (Kim et al., 2015).

Aligning with the literature, participants in this study ranked the current relevance/values subscale with the highest overall mean. In addition, the participants scored the statement “If students don’t see the point of learning the content, then they aren’t motivated to learn it” with the highest overall mean on the causes scale. Hardré and colleagues’ (2006) noted that teachers believed that creating and maintaining students’ interest was essential, yet many teachers struggled to create such relevance citing the pressure to teach concepts tested on high-stakes exams (Hardré et al., 2006). Teachers believed that they had the ability and ideas to develop curriculum relevant to their students’ lives, but this creativity was hampered by the demands from schools and administrators for students to perform well on such tests (Hardré et al., 2006).

**Home Factors**

Parents influenced their students’ academic motivation (Gottfried, Fleming, & Gottfried, 1994; Grolnick, Ryan, & Calfee, 1989), and students were more influenced by their parents’ perceptions than by their own previous academic history (Parsons, Kaczala, & Meece, 1982).
Vallerand and colleagues (1997) also recognized parental influence on student motivation and claimed that parents exerted considerable influence on students’ motivation, noting that students’ perceptions of their own ability and independence relied more heavily on their parents’ influence than on the influence of teachers or on the influence of other school personnel. By not encouraging students’ independence, Vallerand and colleagues (1997) asserted that parents and other educational support members subverted students’ individual beliefs of their own abilities and of their own independence, leading to decreased student motivation and possible future negative consequences such as withdrawing from school. Students who withdrew from school believed that the support for independence they received from their academic community (parents, teachers, and school administrators) was markedly lower than the support for independence received by students who remained in school (Vallerand et al., 1997). Chen and Lan (1998), however, argued that this parental influence varied and depended on the students’ cultural background, where parental influence was likely determined by the attitudes and practices of the parents’ home country.

Conversely, teachers perceived parents to have little influence on high school students’ motivation, explaining that parents were unlikely to cause students to be unmotivated; although parents may influence motivation, parents will most likely not cause students’ lack of motivation (Hardré et al., 2006). Similarly, Miller, Greene, Montalvo, Ravindran, and Nichols (1996) did not find a correlation between students pleasing their family and their own academic engagement or performance; however, Miller and colleagues did find a correlation between students pleasing their teacher and their own academic engagement or performance.

Participants in this study scored the home factors subscale with a mean of 4.2, where a score of 4 was considered neutral. In addition, the statement “Generally, my students are
unmotivated because their parents don’t care about or value education” received a mean score of 3 (“more not true than true”), the lowest overall mean score of any of the statements on the causes scale, indicating a slight disagreement, aligning with Hardré and colleagues (2006) and Miller and colleagues’ (1996) results.

According to the results of the PSM, overall participants placed less emphasis on home factors as a cause for lack of online students’ motivation; however, the responses to the open-ended questions portrayed support for home as a cause for lack of motivation. Two participants specifically mentioned the impact of the home on motivation. One participant stated: “Many students are not motivated due … lack of full support at home.” Another participant expanded on the impact of the home and believed that, despite the negative influence, some students are able to succeed:

I think motivation is dependent upon environment. If students live in a community or home without value for education, they are not intrinsically motivated to work hard in school. There are exceptional students who are able to see past the lack of regard for learning, but many are unable to determine that for themselves.

Parsons and colleagues (1982) noted that parents’ attributions impacted students’ performance, more so than the students’ own ability. For instance, parents interpreted math performance differently, based on gender; parents attributed their daughter’s performance in math class to diligence and perseverance, while attributing their son’s academic performance in math class to math aptitude (Parsons et al., 1982). Parsons and colleagues (1982) believed that parents’ attributional process influenced their children’s attributional process, where their children subsequently ascribed differing reasons to their own accomplishments based on gender. Eccles (1992) referred to this as the “biasing effect” (p. 165) such that parents’ beliefs impacted
their children’s achievements.

**Peer Factors**

Peers exerted significant influence on traditional face-to-face classroom students, such that students with negative peer relationships were more likely to be unsuccessful in the classroom (Legault et al., 2006) and were more likely to drop out of school (J. Parker & Asher, 1987). Student motivation positively correlated with the achievement level of a student’s peer group: when students associated with high-achieving peers, their motivation increased, and when students associated with low-achieving peers, their motivation decreased (Wiesman, 2012). Similarly, a social network that positively supported a student’s self-perceptions of academic ability positively influenced a student’s motivation (Legault et al., 2006), and a social network that negatively impacted a student’s self-perception of academic ability and autonomy negatively impacted a student’s motivation (Vallerand et al., 1997).

Although the literature supports the influence of peers in reducing motivation, participants ranked peer factors as the least likely cause of lack of motivation based on mean. Both statements in the peer factor subscale earned a mean of 3.1, illustrating slight disagreement with the influence of peers on motivation. Collectively, the participants slightly disagreed with peer influence on motivation in their classes; however one participant shared the belief that peers exerted a negative influence on motivation: “When students are thrust into an online environment (out of necessity or as an administrative decision), and especially as a group, there is a marked absence of motivation to learn as negativity and indifference tend to be contagious.”

Multiple participants mentioned that assessing peer influence (and other causes for lack of motivation) were difficult to assess because, based on the online learning environment and
asynchronous courses, the participants were unfamiliar with their students. The following statement reflected similar statements from multiple participants:

Honestly it was hard to answer some of these questions because in the online environment I know very little about most of my students' home lives, peers, and parental influences. Every once in a while I get a tidbit of information, but for the most part I don't know much of anything about my students' daily lives and experiences.

**Personal Factors**

On the personal factors subscale, 50% of the participants rated the statement “Some students in my class just don’t care about learning - period” 5 or higher. Multiple comments provided further insight into these results. Participants cited additional factors that may impact the reasons why students do not care about learning: “I…believe that some students live in a survivalist mode, and education comes far behind their basic food, shelter, safety, and parental needs. Without their basic needs being met, it is unlikely that a child can place significant importance on learning.”

In this survey, 64% of the participants rated the statement “Some students are not motivated to learn because they are just lazy” 5 or higher, with 9 participants scoring this statement a 5 (“more true than not true”). In the open-ended responses, one participant mentioned laziness (among other factors) that contributed to lack of motivation. Based on the results of their study, Gilmore and Boulton-Lewis (2009), however, cautioned against labelling students as lazy. Gilmore and Boulton-Lewis (2009) studied the accuracy of teachers’ perceptions of students’ motivation and discovered that students originally labelled as lazy by parents and teachers were not lazy. After subsequent testing, Gilmore and Boulton-Lewis (2009) learned that the seven to ten year old traditional face-to face classroom students in this study
were not lazy, but rather these students had a previously undiagnosed learning disability or other factor that negatively impacted their classroom performance.

**Other Causes**

The PSM (Hardré et al., 2008) assessed five causes for lack of motivation, yet perceived reasons for lack of motivation extended beyond the scope of the questionnaire. According to Hardré and colleagues (2006), teachers recognized that students’ motivation was influence by a multitude of factors, the majority of which were external and extrinsic, such as economic concerns and pressures from high-stakes testing. Teachers also noted that such factors were beyond both the students’ control and the teachers’ control and expressed a sense of powerlessness to mitigate such factors (Hardré et al., 2006).

Participants in this study also expressed similar views in their response to the open-ended question. One participant wrote: “I wish I had more answers, but I believe that much of what affects motivation is beyond the teachers/schools reach.” Other teachers mentioned “physical limitations,” “intellectual capacity,” a focus on meeting basic needs such as “food, shelter, [and] safety,” and “health issues.” The factors beyond the scope of the survey and circumstances outside of the teachers’ influence impacted students’ motivation.

Students’ perceptions of their own motivation impacted their achievement (Linnenbrink & Pintrich, 2002). If students believed they lacked the ability to perform in the classroom and lacked the ability to make their own decisions regarding their academics (compared to their parents or teachers making the decisions), they were more likely to dropout (Vallerand et al., 1997). In addition, teachers believed that students with a history of academic success were more likely to be motivated and to continue such achievement efforts (Hardré et al., 2006).

Similar to the literature, participants mentioned students’ ability as contributing to their
lack of motivation. “The content is beyond their ability, such as learning a language. Some students have trouble learning certain content; even though they are interested and want to learn. They lose motivation if not doing okay/well eventually.”

**Perceptions and Practice**

Hardré and Hennessey (2013) discovered that many teachers believed that motivation was a malleable, significant influence in schooling and could be altered with external factors, such as differing pedagogical approaches. The teachers who believed motivation was malleable adjusted their practice to motivate their students, and conversely, those who did not believe that motivation was malleable did not make an effort to change their approach to motivate the students they believed were unmotivated (Hardré & Hennessey, 2013). Teachers who believed motivation could be changed through their interventions were more likely to adjust their practice to motivate their students (Hardré & Hennessey, 2013).

Aligning with Hardré and Hennessey’s (2013) work, one participant recognized the obstacles to motivation, yet this participant continued to counter such obstacles and modify her pedagogical approach in order to reach her students. She wrote:

My goals were to find ways to engage and motivate students--despite outside influences that distract students from enjoying what they do…I work outside the margins in my courses in hopes of heading off those issues for my students, but I'm still not even scratching the surface of the larger issues.

In the open-ended responses, only one participant mentioned adjusting her practice to meet the motivational needs of her students.

Sweet, Guthrie, and Ng (1998) noted that teachers attributed students’ motivation differently, based on the students’ achievement levels. Teachers attributed motivation and
performance for high achievers to intrinsic motivation and attributed motivation and performance for low achievers to external factors, believing that high performers were motivated by interests and goals and believing that low performers were motivated by environmental factors such as kinesthetic learning activities (Sweet, Guthrie, & Ng, 1998). In addition, teachers perceived low motivation for low achievers, aligning with the perceptions that the students had of themselves (Sweet et al., 1998).

Teachers adjusted their classroom approach according to their beliefs about students’ academic ability, students’ goals, and students’ motivation (Hardré et al., 2006). For example, teachers assigned more complicated tasks to those they perceived with higher ability levels and assigned less complicated tasks to those they perceived with lower ability levels (Snow, 1994). Teachers’ perceptions of their students’ ability correlated to their perceptions of their students’ motivation, where greater perceptions of ability correlated to greater perceptions of motivation (Hardré et al., 2006). In addition, teachers’ perceptions of their own ability to motivate their students were a key indicator influencing teachers’ own practices (Hardré & Hennessey, 2013). If teachers believed that their actions truly motivated their students and if they perceived their students to have the ability, teachers were more likely to adjust their pedagogical approach than teachers who believed their actions did little to motivate their students, even with students who they believed had the academic ability to be successful (Hardré & Hennessey, 2013). This belief in their own ability positively correlated to teachers’ perceptions of students’ motivation and their classroom teaching approach (Hardré et al., 2006).

Sweet and colleagues (1998) studied teachers’ perceptions of student motivation as well and noted that teachers recognized the need to motivate their students by adjusting their practice (providing age-related interesting activities, for example); despite recognizing the importance of
motivating their students, teachers did not consistently incorporate such methods into their
classroom instruction. Although teachers recognized when students were not motivated, they
were unable to confidently determine the causes for this lack of motivation or to create methods
to positively influence their students’ motivation (Hardré & Hennessey, 2013). Teachers
believed they lacked the expertise and proficiency to successfully motivate the students they
believed were unmotivated (Hardré & Hennessey, 2013). They believed that they were unable to
influence students’ motivation, yet these teachers acknowledged the need to motivate
unmotivated students based on the specific reasons for their lack of motivation (Hardré &
Hennessey, 2013).

Hardré and Hennessey (2013) posited that teachers had little knowledge of motivation,
minimal motivational methods, or believed that the methods they did employ were unsuccessful.
Hardré and Hennessey (2013) also surmised that these teachers perceived their motivational
methods were futile because the reasons for the students’ lack of motivation extended beyond the
control of the teacher, citing factors such as a home with a single parent or poverty. One
participant expressed similar beliefs. She recognized the economic hardships and other issues
that her students faced, but also noted that these issues were well beyond her control: “I’m still
not even scratching the surface of the larger issues.”

Causes Conclusion

Participants responded to the statements from the causes scale of the PSM (Hardré et al.,
2008) and provided additional perspectives for reasons for lack of student motivation in the
online classroom. Based on mean, participants ranked current relevance/value as the primary
cause of lack of motivation, yet the participants’ responses to the open-ended question revealed a
more complicated account of motivation. Participants routinely revealed the complexity of
motivation and the reasons for lack of motivation, similar to Hardré and colleagues’ (2006) findings.

**Recommendations/Implications for Practice**

Participants responded slightly above neutral when asked about their online students’ motivation, revealing the possibility that participants did not have a clear insight into this specific learner characteristic. Therefore, before teachers can modify their practice, they must become familiar with their students and develop accurate observations into their students’ motivation and potential reasons for lack of motivation.

Once teachers can correctly assess their students’ motivation, both teachers and administrators can address the lack of student motivation and perceived reasons for lack of motivation in the online learning environment. Specific actions and recommendations are outlined below.

**Improve Motivation**

Specific pedagogical approaches can improve motivation (Jackson & Zmuda, 2014; Kim et al., 2015). Teachers can provide straightforward instructions, detailed processes, and rubrics as well as monitor their students’ progress and provide appropriate scaffolding (Kim et al., 2015), particularly at points in the academic process where students are confused (Jackson & Zmuda, 2014). In addition, teachers can provide options for students (e.g., choosing between two assignments) and investigative or other activities that promote an active, personalized participation in the course content, including activities that appropriately challenge students rather than activities that simply require recitation and memorization of course content (Jackson & Zmuda, 2014).
Teachers can also promote motivation by developing instructional materials that are based on students’ interests (Sweet et al., 1998) and that concentrate on developing intrinsic motivation (Wiesman, 2012). Such materials and subsequent motivation can be created by truly knowing the students, including the students’ culture, values, and personal interests (Hardré, 2012).

In addition, teachers can positively influence motivation by providing prompt, detailed, positive, and constructive feedback to all students (Chickering & Ehrmann, 1997; DiPietro et al., 2010; Murphy & Rodríguez-Manzanares, 2009), while also remaining truthful and genuine (C. Weiner, 2003) as students can recognize insincere comments and may discontinue with the course if such feedback is detected (Murphy & Rodríguez-Manzanares, 2009). Teachers can create checklists of course requirements (e.g., required number of course logins per week, assignments, and discussion board post requirements) within the LMS (Murphy & Rodríguez-Manzanares, 2009) and set deadlines for students in courses that currently do not include due dates (Black, DiPietro, Ferdig, & Polling, 2009; DiPietro et al., 2010). Teachers can also initiate frequent, routine, personalized communications with their students (Bawa, 2016; Murphy & Rodríguez-Manzanares, 2009; C. Weiner, 2003) through e-mail and discussion boards.

**Address Causes**

Online high school students’ perceived reasons for lack of motivation included home factors, content relevance, future utility, peer factors, personal factors (Hardré et al., 2008), and factors beyond a teacher’s control (Hardré et al., 2006). Each of these causes can be addressed in order to promote students’ achievement in the online learning environment.

**Home factors.** In order to promote student motivation, teachers and administrators can encourage parental support and involvement (Borup, West, Graham, & Davies, 2014; Legault et
al., 2006; Murphy & Rodríguez-Manzanares, 2009; Vallerand et al., 1997). Teachers can copy parents on e-mails directed to the student (Murphy & Rodríguez-Manzanares, 2009). Parents can provide a home setting conducive to learning, volunteer with the online school (Borup, West, Graham, & Davies, 2014), show interest in their child’s school work, and encourage their online student (Murphy & Rodríguez-Manzanares, 2009).

**Current relevance.** Teachers can promote relevance within courses to influence motivation (Jackson & Zmuda, 2014; Kachel, Henry, & Keller, 2005), particularly by sharing the value of the content and by allowing students to develop their own illustrations for how the content relates to real-world scenarios (Legault et al., 2006). Teachers can specifically and immediately address the relevance of the course, explain the reason for learning the material, and then describe how each concept aligns with a larger goal or intention, continuing to highlight the relevance throughout the course (Jackson & Zmuda, 2014).

**Aspirations/future utility.** Teachers can also share the future utility of the content with students (demonstrating the relevance to a future career or to meet college entrance requirements, for example), a particularly useful recommendation when students are not immediately interested in the concepts (Miller et al., 1996). Students’ motivation may increase when they understand how their current learning can assist them in achieving their future goals (Miller et al., 1996).

**Peer factors.** Teachers can nurture students’ social needs as students are more willing to comply with academic requirements if their valued social group also values such requirements (Legault et al., 2006; Wiesman, 2012). Teachers can make careful selections, for example, when creating peer working groups (Wiesman, 2012) and can encourage peer activities which can include both academic activities and extracurricular activities (Legault et al., 2006).
**Personal factors.** Teachers and administrators can invite students to reflect on their own self-perceptions, encouraging students to expend effort on the assigned task (not on lack of ability) and promoting a student’s belief that they can be successful (Ames, 1992). Teachers can support students by sharing an authentic and encouraging perspective, while also remaining positive, and provide tasks that students can accomplish, given their individual ability levels (Linnenbrink & Pintrich, 2002).

**Other factors.** As Hardré and colleagues (2006) and participants of this study noted, students’ motivation can be influenced by a myriad of factors, factors, such as lack of shelter and food, that are beyond the control of the teacher. Institutional representatives can investigate the particular issues of their student population and offer resources to assist; resources can include weekend and summer meals, before and after school care, medical services, dental services, food pantries, and gently used clothing stores, for example. Students may be more motivated to learn if their basic needs are met. As one participant noted, “Without their basic needs being met, it is unlikely that a child can place significant importance on learning.”

**Role of the Teacher**

Teachers’ perceptions of students’ motivation impact their pedagogical approach (Hardré & Hennessey, 2013; Sweet et al., 1998); teachers must exercise caution when assigning labels to students (Wiesman, 2016) and should consider possible underlying issues (Gilmore & Boulton-Lewis, 2009; Levine, 2003). In addition, teachers can review the evidence-based research in order to determine an effective method to motivate their students and, in turn, to possibly influence the students’ academic performance (Wiesman, 2016).

Teachers can develop the skills to recognize students’ behaviors that may be indicative of lack of motivation or other underlying issues (poor academic performance, for example);
however, teachers can also recognize that lack of achievement may be indicative of unmet student needs or undiagnosed concerns (Hardré, 2012; Kim et al., 2015). Teachers can utilize calculated, evidence-based motivational strategies in their courses (Wiesman, 2016) and move away from a random, universal approach, recognizing that multiple attempts and behaviors may need to be employed before student behavior is influenced (Hardré, 2012). In addition, teachers can consider the diverse motivational needs in their online courses in order to promote achievement of all students (Murphy & Rodriguez-Manzanares, 2009).

Teachers can also create additional opportunities to become more familiar with their students. Teachers can create online surveys, for example, that would allow students to share an insight into their personal lives. Teachers can then use the results of these surveys to create personalized communications and to modify instruction.

**Role of Institutional Administrators**

When creating professional development opportunities, school administrators can include all facets of motivation (engagement and interest, for example) as a module in the professional development session (Bigatel & Williams, 2015; Wiesman, 2012). In addition, school administrators can encourage teachers to learn from one another through meetings, mentorships, conferences, and social networking, for instance (Hardre, 2012). When traditional face-to-face teachers transition to the online classroom, administrators can provide the appropriate training for the teachers to be successful in the unfamiliar environment (Barbour, 2012).

**Attributional Retraining**

Weiner (1985) postulated that it is human nature to attribute outcomes of events to particular reasons, and both students and teachers may attach a reason for lack of student motivation. Teachers and administrators should use caution with motivational labels, however,
as labels can be faulty (Gilmore & Boulton-Lewis, 2009) and as motivation is a multi-dimensional concept (Linnenbrink & Pintrich, 2002). Although teachers and students may harbor false perceptions of the reasons for lack of student motivation, such perceptions can change; both students’ and teachers’ beliefs about the perceived reasons for failure and lack of motivation can be altered through retraining (Linnenbrink & Pintrich, 2002).

Attributional retraining may be an effective approach to consider in the online classroom to improve student performance. Students can watch a video or presentation on ascribing failure to reasons within their control, and then they can reflect on their own ascriptions and develop a plan to adjust their own ascriptions (Hamm, Perry, Chipperfield, Murayama, & Weiner, 2017; P. Parker, Perry, Chipperfield, Hamm, & Pekrun, 2018). Such methods proved effective in undergraduate face-to-face courses (Hamm et al., 2017) and in undergraduate online courses (P. Parker et al., 2018). Hamm and colleagues (2017) discovered that students who completed attributional retraining earned a full letter grade higher on the final exam than those students who completed stress reduction training. Parker and colleagues (2018) noted similar results: students who completed attributional retraining earned a higher letter grade on a post-test course exam than students who did not complete the attributional retraining program.

The creation of successful attributional retraining programs on a larger scale is possible and can be offered as online programs (Hamm et al., 2017; P. Parker et al., 2018). Such programs, however, should consider both the subject matter and the students’ ages, as attributions vary by discipline (Borkowski, Weyhing, & Carr, 1988) and as conceptions of effort and ability differ by age and evolve through time (Folmer et al., 2008).

**Conclusion**

Once teachers are familiar with their students and can accurately assess their students’
motivation, teachers can then investigate the possible reasons for lack of student motivation, correct both their own and their students’ misconceptions, while also encouraging academic success for each student (Linnenbrink & Pintrich, 2002). Teachers can then align pedagogical strategies and causal attributions to encourage student motivation and success (Hardré et al., 2008).

**Limitations**

Limitations exist for this study. The study was conducted within a specific K-12 organization using convenience sampling, and others should carefully review the demographics to determine applicability to their own environment. As Fraenkel and colleagues (2014) recommended, the researcher included demographic details in order for others to discern the feasibility of applying the results to another purpose.

The PSM (Hardré et al., 2008) listed specific causes for lack of motivation (home factors, content relevance, future utility, peer factors, personal factors). Additional factors, such as economic hardships, possibly contributed to lack of motivation, factors not assessed in the PSM (Hardré et al., 2008).

In the open-ended comments, participants shared that they had difficulty responding to the survey due to lack of familiarity with the students (“Honestly it was hard to answer some of these questions because in the online environment I know very little about most of my students' home lives, peers, and parental influences” and “It's hard to know answers to student motivation until I learn more about their home life, health issues, etc.”). The online, asynchronous environment may not provide the opportunity for teachers to know their students in the same manner as a traditional face-to-face classroom environment; thus, results may not accurately reflect the perceived motivation of all students.
The survey itself was from a deficit perspective (“When my students aren’t engaged in school, it’s because they don’t see the value of what they are being asked to learn”). If the survey was created from a strengths based perspective (Students are motivated because they see the value of what they are being asked to learn, for example), the results may have differed.

Participants may have responded to the questionnaire in a manner in which they believe was most favorable (Muijs, 2011) due to the recent layoffs. The company recently laid off or re-assigned 10 high school teachers (22% of the high school teaching staff), and participants may have been fearful of losing their present form of employment.

**Future Research**

Participants responded neutrally when assessing their students’ motivation, indicating a possible lack of clear perspective into their online students’ character. Given the neutrality of the responses, future research within the online, asynchronous environment should include developing practices for teachers to know their students and to correctly assess their students’ motivation. After creating and implementing methods to better be able to assess their students’ motivation, future study can include both a quantitative and/or qualitative comparison of teachers’ perceptions and students’ perceptions of student motivation in the same environment or in similar environments with a larger sample.

Additional multiple opportunities exist for research in online learning at the high school level. Such research will yield further knowledge regarding high school student motivation in online courses, ultimately leading to results which, when incorporated into practice, will positively influence student achievement in the online classroom. Researchers can

- conduct a similar study in multiple environments with a larger sample,
• collect qualitative data from both teachers and students to develop a richer understanding of perceptions of student motivation and reasons for lack of motivation,

• study the relationship between teachers’ and students’ views of motivation and perceived reasons for lack of motivation,

• calculate the correlation between student achievement (final course grades, for example) and teachers’ perceptions of motivation,

• analyze perceptions of motivation by course type (AP, remedial, credit recovery) or online course delivery method (synchronous, live, or blended courses),

• conduct longitudinal studies following high-school students who failed online courses,

• and conduct an intervention study on the impact of attributional retraining on motivational beliefs of both students and teachers in the online environment.

Conclusion

Overall, the participants in this study did not perceive their students as decisively motivated or unmotivated, and collectively, the participants perceived effort as the most common indicator of motivation (when compared to engagement and general interest). As a population, the participants perceived current relevance/value as the most significant cause of lack of student motivation in the online high school classroom and peer factors as the least significant cause of lack of motivation in the online high school classroom. Through the open-ended responses, participants shared the perception that additional factors impacted their students’ motivation, factors often beyond their control, reflecting that motivation is complex.

Similar to the participants’ responses, and as various researchers noted (Hartnett, St. George, & Dron, 2011; Linnenbrink & Pintrich, 2002), motivation is multifaceted, and the person and environment should be considered when evaluating students’ motivation. When
considering online learning, motivation should be deliberately addressed in all elements of online learning, such as course design, development, and instruction (C. Weiner, 2003).

Consideration of motivation in all aspects of online learning is essential; motivation contributes to student achievement (Ally, 2008; Murphy & Rodriguez-Manzanares, 2009) and to student failure (Bawa, 2016; Chyung, 2001; de la Varre et al., 2014; Lin et al., 2017), and researchers believe that motivation is key to success in the online learning environment (Berenson et al., 2008; Lin, Wei, & Hung, 2012; C. Weiner, 2003; Yukselturk & Bulut, 2007).

In addition, teachers’ perceptions of student motivation impacts teachers’ actions in the classroom (Hardré & Hennessey, 2013; Sweet et al., 1998), illustrating the importance of understanding the accuracy of such perceptions (Gilmore & Boulton-Lewis, 2009). When online high school teachers correctly analyze the reasons for lack of student motivation, teachers can then develop a pedagogical approach to specifically address the reasons for lack of motivation, positively influence students’ motivation (Hardré & Hennessey, 2013), and, in turn, possibly positively influencing student achievement in the online classroom.

Based on the literature and results of this study, the researcher advocates for continued study of motivation and perceptions of motivation in the online classroom, specifically additional study to understand the causes for lack of motivation and to develop particular pedagogical approaches to mitigate such negative motivational influences. The researcher also recommends the development of standardized best practices in online teaching (DiPietro et al., 2010) by delivery methods, such as asynchronous, synchronous, and blended, (Murphy & Rodriguez-Manzanares, 2009) that also influence teacher preparation and current teacher training programs (Ferdig, Cavanaugh, DiPietro, Black, & Dawson, 2009).
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### Table 21

**Path Coefficients for PSM Motivation Subscale US and East Asian Samples**

<table>
<thead>
<tr>
<th>Items on the PSM</th>
<th>Path Coefficient in the US Sample</th>
<th>Path Coefficient in the East Asian Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>psm_1</td>
<td>.576</td>
<td>.820</td>
</tr>
<tr>
<td>psm_2</td>
<td>.944</td>
<td>.665</td>
</tr>
<tr>
<td>psm_5</td>
<td>.517</td>
<td>.728</td>
</tr>
<tr>
<td>psm_6</td>
<td>.730</td>
<td>.590</td>
</tr>
<tr>
<td>psm_3</td>
<td>.815</td>
<td>.838</td>
</tr>
<tr>
<td>psm_4</td>
<td>.941</td>
<td>.400</td>
</tr>
<tr>
<td>psm_7</td>
<td>.590</td>
<td>.723</td>
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<tr>
<td>Percent of variance explained</td>
<td>68.7%</td>
<td>58.8%</td>
</tr>
</tbody>
</table>

### Table 22

*Path Coefficients for PSM Reasons Subscale US and East Asian Samples*

<table>
<thead>
<tr>
<th>Items on the PSM</th>
<th>Path Coefficient in the US Sample</th>
<th>Path Coefficient in the East Asian Sample</th>
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</thead>
<tbody>
<tr>
<td>psm_8</td>
<td>.699</td>
<td>.577</td>
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<tr>
<td>psm_11</td>
<td>.707</td>
<td>.785</td>
</tr>
<tr>
<td>psm_13</td>
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<td>.570</td>
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<tr>
<td>psm_9</td>
<td>.403</td>
<td>.499</td>
</tr>
<tr>
<td>psm_12</td>
<td>.416</td>
<td>.530</td>
</tr>
<tr>
<td>psm_14</td>
<td>.857</td>
<td>x</td>
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<tr>
<td>psm_10</td>
<td>.847</td>
<td>x</td>
</tr>
<tr>
<td>psm_15</td>
<td>x</td>
<td>x</td>
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<td>psm_17</td>
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<td>.673</td>
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<tr>
<td>psm_16</td>
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<td>.831</td>
</tr>
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<td>psm_18</td>
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<td>.576</td>
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<td>psm_19</td>
<td>.733</td>
<td>.733</td>
</tr>
<tr>
<td>psm_20</td>
<td>.400</td>
<td>.400</td>
</tr>
<tr>
<td>Percent of variance explained</td>
<td>60.2%</td>
<td>48.4%</td>
</tr>
</tbody>
</table>

### Table 23

**Pattern Matrix of Item Factor Loadings for PSM Motivation Subscales, US Sample**

<table>
<thead>
<tr>
<th>PSM Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Psm_1</td>
<td>0.02</td>
<td>0.58</td>
<td>70.34</td>
</tr>
<tr>
<td>Psm_2</td>
<td>0.07</td>
<td>0.94</td>
<td>0.08</td>
</tr>
<tr>
<td>Psm_3</td>
<td>0.82</td>
<td>0.05</td>
<td>0.02</td>
</tr>
<tr>
<td>psm_4</td>
<td>0.94</td>
<td>70.05</td>
<td>0.03</td>
</tr>
<tr>
<td>psm_5</td>
<td>70.13</td>
<td>70.22</td>
<td>0.52</td>
</tr>
<tr>
<td>psm_6</td>
<td>70.04</td>
<td>0.03</td>
<td>0.73</td>
</tr>
<tr>
<td>psm_7</td>
<td>0.60</td>
<td>0.06</td>
<td>70.16</td>
</tr>
</tbody>
</table>


### Table 24

**Pattern Matrix of Item Factor Loadings for PSM Reasons Subscales, US Sample**

<table>
<thead>
<tr>
<th>Items on the PSM</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>psm_8</td>
<td>0.70</td>
<td>0.01</td>
<td>0.26</td>
<td>0.10</td>
<td>-0.13</td>
</tr>
<tr>
<td>psm_9</td>
<td>0.36</td>
<td>-0.20</td>
<td>-0.19</td>
<td>0.40</td>
<td>0.00</td>
</tr>
<tr>
<td>psm_10</td>
<td>0.11</td>
<td>0.02</td>
<td>-0.06</td>
<td>-0.02</td>
<td>-0.85</td>
</tr>
<tr>
<td>psm_11</td>
<td>0.71</td>
<td>0.08</td>
<td>0.07</td>
<td>-0.04</td>
<td>-0.03</td>
</tr>
<tr>
<td>psm_12</td>
<td>-0.04</td>
<td>0.05</td>
<td>0.13</td>
<td>0.42</td>
<td>-0.11</td>
</tr>
<tr>
<td>psm_13</td>
<td>0.63</td>
<td>0.06</td>
<td>-0.12</td>
<td>-0.02</td>
<td>0.02</td>
</tr>
<tr>
<td>psm_14</td>
<td>4.00</td>
<td>0.08</td>
<td>-0.15</td>
<td>0.87</td>
<td>0.09</td>
</tr>
<tr>
<td>psm_15</td>
<td>0.32</td>
<td>0.34</td>
<td>-0.01</td>
<td>0.21</td>
<td>-0.12</td>
</tr>
<tr>
<td>psm_16</td>
<td>-0.12</td>
<td>0.10</td>
<td>-0.92</td>
<td>-2.00</td>
<td>-0.12</td>
</tr>
<tr>
<td>psm_17</td>
<td>0.06</td>
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<td>-0.34</td>
<td>0.35</td>
<td>-0.24</td>
</tr>
<tr>
<td>psm_18</td>
<td>0.16</td>
<td>0.04</td>
<td>-0.77</td>
<td>0.01</td>
<td>0.07</td>
</tr>
<tr>
<td>psm_19</td>
<td>0.03</td>
<td>0.76</td>
<td>0.04</td>
<td>0.04</td>
<td>0.00</td>
</tr>
<tr>
<td>psm_20</td>
<td>0.11</td>
<td>0.70</td>
<td>-0.27</td>
<td>0.01</td>
<td>-0.02</td>
</tr>
</tbody>
</table>

Table A25

**Pattern Matrix of Item Factor Loadings for PSM Motivation Subscale, East Asian Sample**

<table>
<thead>
<tr>
<th>PSM Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>psm_1</td>
<td>0.82</td>
<td>-0.01</td>
<td>0</td>
</tr>
<tr>
<td>psm_2</td>
<td>0.66</td>
<td>0.04</td>
<td>0.24</td>
</tr>
<tr>
<td>psm_3</td>
<td>0.84</td>
<td>-0.03</td>
<td>-0.03</td>
</tr>
<tr>
<td>psm_4</td>
<td>0.27</td>
<td>-0.15</td>
<td>0.4</td>
</tr>
<tr>
<td>psm_5</td>
<td>0.09</td>
<td>0.73</td>
<td>-0.2</td>
</tr>
<tr>
<td>psm_6</td>
<td>-0.07</td>
<td>0.6</td>
<td>0.11</td>
</tr>
<tr>
<td>psm_7</td>
<td>0.11</td>
<td>-0.02</td>
<td>0.72</td>
</tr>
</tbody>
</table>


Table 26

**Pattern Matrix of Item Factor Loadings for PSM Reasons Subscale, East Asian Sample**

<table>
<thead>
<tr>
<th>Items on the PSM</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
<th>Factor 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>psm_8</td>
<td>0.58</td>
<td>-0.21</td>
<td>0.00</td>
<td>-0.01</td>
<td>-0.30</td>
</tr>
<tr>
<td>psm_9</td>
<td>0.17</td>
<td>0.15</td>
<td>-0.10</td>
<td>0.02</td>
<td>-0.45</td>
</tr>
<tr>
<td>psm_10</td>
<td>0.44</td>
<td>0.10</td>
<td>0.10</td>
<td>-0.24</td>
<td>0.05</td>
</tr>
<tr>
<td>psm_11</td>
<td>0.78</td>
<td>0.05</td>
<td>0.03</td>
<td>0.03</td>
<td>0.01</td>
</tr>
<tr>
<td>psm_12</td>
<td>0.02</td>
<td>0.53</td>
<td>0.02</td>
<td>0.05</td>
<td>0.07</td>
</tr>
<tr>
<td>psm_13</td>
<td>0.57</td>
<td>0.00</td>
<td>-0.20</td>
<td>-0.03</td>
<td>-0.02</td>
</tr>
<tr>
<td>psm_14</td>
<td>0.13</td>
<td>0.36</td>
<td>-0.10</td>
<td>-0.02</td>
<td>-0.17</td>
</tr>
<tr>
<td>psm_15</td>
<td>0.17</td>
<td>0.17</td>
<td>-0.01</td>
<td>-0.20</td>
<td>-0.44</td>
</tr>
<tr>
<td>psm_16</td>
<td>-0.02</td>
<td>-0.04</td>
<td>0.01</td>
<td>-0.83</td>
<td>-0.10</td>
</tr>
<tr>
<td>psm_17</td>
<td>-0.01</td>
<td>0.67</td>
<td>-0.02</td>
<td>-0.16</td>
<td>-0.23</td>
</tr>
<tr>
<td>psm_18</td>
<td>0.17</td>
<td>0.14</td>
<td>-0.20</td>
<td>-0.58</td>
<td>0.24</td>
</tr>
<tr>
<td>psm_19</td>
<td>-0.03</td>
<td>0.01</td>
<td>-0.73</td>
<td>0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>psm_20</td>
<td>0.10</td>
<td>-0.09</td>
<td>-0.40</td>
<td>-0.30</td>
<td>-0.23</td>
</tr>
</tbody>
</table>

Appendix B

Permissions

Figure B1. Permission to use PSM in dissertation
Figure B2. Permission from publisher to use Table 1.
Figure B3. Permission from publisher to use PSM and Tables A2 – A7.
Appendix C

E-Mail Request to Participate in Survey

11/12/2016

Northeastern University Mail - Request for Dissertation Survey Participation

Jodie Banyas <banyas.j@husky.neu.edu>

Request for Dissertation Survey Participation

To: absherolincolnsolutions.org, amtko@lincolnsolutions.org, mstrehl@lincolnsolutions.org, rakapp@lincolnsolutions.org
Cc: Janeen Petroko <petroko@lincolnsolutions.org>

Good Evening, Managers,

As many of you may know, I am working on my doctorate through Northeastern University, and I would like to study online teachers’ perceptions of student motivation and perceived reasons for lack of motivation. Will you please help with this study?

Will you and the teachers in your department please complete the online survey titled “Perceptions of Student Motivation (PSM)” and answer one open-ended question and four demographic questions? The survey was developed by researchers at the University of Oklahoma and asks for teachers’ understanding of their students’ effort, engagement, and interest, indicators of motivation in the online classroom. The survey also asks for teachers’ understanding of the reasons for lack of motivation, such as home factors, current relevance, aspirations/future utility, peer factors, and personal factors.

The survey is expected to take between 15 and 30 minutes. Participation is voluntary, and teachers may discontinue the survey at any time.

By participating in this study, teachers will not receive any direct benefit. However, by understanding teachers’ perceptions of online high school students’ motivation, teachers, administrators, and curriculum developers can determine the accuracy of such perceptions, develop appropriate practices, and modify behavior to positively influence student motivation and achievement.

If you or your teachers have any questions, please email me at banyas.j@husky.neu.edu only. I am happy to answer any questions that you may have.

If possible, will you please complete the survey within one week?

Thank you!

Regards,
Jodie Banyas

IRB# CPS18-09-08
Approved: 10/29/18
Expiration Date: 10/28/19

https://mail.google.com/mail/u/2?ik=9b432543&view=pt&search=all&permmsgid=msg-a%3A13c35657914371231563583&sf2=msg-a%3A13c3565791437...

Figure C1. E-Mail request to participate in survey
Appendix D

Survey

Perceptions of Student Motivation Questionnaire

Instructions: Consider your course with the highest enrollment. Then, for the following questions, please respond how true each statement is for the students in that. Indicate how true each statement is from your perspective, using the following scale:

<table>
<thead>
<tr>
<th>Not true at all</th>
<th>More not true than true</th>
<th>More true than not</th>
<th>Very much true</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>7</td>
<td></td>
</tr>
</tbody>
</table>

The questionnaire is below.

1. The students in this class really try to learn.
   1 2 3 4 5 6 7

2. My students work at learning new things in this class.
   1 2 3 4 5 6 7

3. The students in this class generally do class-related tasks and assignments willingly.
   1 2 3 4 5 6 7

4. The students in this class don’t put forth much effort to learn the content.
   1 2 3 4 5 6 7
5. In general, my students are genuinely interested in what they are asked to learn in my class.

6. Generally, my students are unmotivated because their parents don’t care about or value education.

7. When my students aren’t engaged in school, it’s because they don’t see the value of what they are being asked to learn.

8. If students aren’t motivated to learn in my class, it is often because they don’t have aspirations that connect to education, like plans to go to college.

9. Students often lack effort at school because they don’t have support at home.

10. If students don’t see the point of learning the content, then they aren’t motivated to learn it.
12. Most often, if students aren’t engaged in my class, it’s because they don’t see the relevance of the content in their world.

13. Some of my students aren’t motivated to work in school because education has no place in the futures they see for themselves.

14. Generally, the students in my class who are not interested in learning are that way because of peer pressure to devalue school.

15. Most often, if students aren’t working in my class, it’s because they don’t see how useful this information can be.

16. Negative peer pressure is one big reason why some of my students are not motivated to learn in school.
18. Some students in my class just don’t care about learning—period.

Not true at all  | More not true than true | More true than not | Very much true
---|---|---|---
1 | 2 | 3 | 4 | 5 | 6 | 7

Open-Ended Question

Please use the space below to provide any additional comments regarding your perceptions of student motivation and reasons for lack of motivation.

___________________________________________________________________________
___________________________________________________________________________

Demographics

The responses to the questions below will be analyzed in aggregate. Individual responses will not be identified.

Instructions: For question numbers 1 - 3, select your response from the dropdown menu. For question number 4, type in your response.

1. How many years have you taught with this company?
Answer choices: <1 year, 1 year, 2 years, 3 years, 4 years, 5 years, 6 years, 7 years, 8 years, 9 years, 10 years, -> 10 years, and Prefer not to answer

2. Select your current discipline.
Answer choices: Math, Science, Social Studies, English, Electives, Prefer not to answer

3. How many years have you taught in a traditional classroom?
Answer choices: Never, 5 or less, 6 – 10, 11 – 15, 16 – 20, 21 – 25, 26 – 30, > 30, Prefer not to answer

4. What is your age?
Appendix E
Consent Form

Northeastern University, Department of Professional Studies
Name of Investigator(s): Principal Investigator, Quannah Parker-McGowan, PhD, and Student Researcher, Jodie Banyas
Title of Project: A Descriptive Study: Online High School Teachers' Perceptions of Students' Academic Motivation in Online, Self-Paced, Asynchronous Courses

Request to Participate in Research
We would like to invite you to participate in a web-based online survey. The survey is part of a research study whose purpose is to describe teachers' perceptions of student motivation and perceived reasons for lack of motivation. This survey should take about 30 minutes to complete.

We are asking you to participate in this study because you are a teacher within Lincoln Learning Solutions. You must be at least 18 years old to take this survey.

The decision to participate in this research project is voluntary. You do not have to participate and you can refuse to answer any question. Even if you begin the web-based online survey, you can stop at any time.

The study site and participant data will remain confidential. Data will be aggregated at a summary level, and individual details will not be part of the analysis or published results. I will not publish or identify any individual participants, nor will I identify the research site. Login credentials will not be requested or collected.

There are no foreseeable risks or discomforts to you for taking part in this study.

There are no direct benefits to you from participating in this study. However, your responses may help us learn more about teachers’ perceptions of student motivation so that teachers, administrators, and curriculum developers can determine the accuracy of such perceptions, develop appropriate practices, and modify behaviors to positively influence student motivation and achievement.

You will not be paid for your participation in this study.

Your part in this study is anonymous to the researcher(s). However, because of the nature of web based surveys, it is possible that respondents could be identified by the IP address or other electronic record associated with the response. Neither the researcher nor anyone involved with this survey will be capturing those data. Any reports or publications based on this research will use only group data and will not identify you or any individual as being affiliated with this project.

If you have any questions regarding electronic privacy, please feel free to contact Mark Nardone, NU’s Director of Information Security via phone at 617-373-7901, or via email at privacy@neu.edu.
If you have any questions about this study, please feel free to contact Jodie Banyas, the person mainly responsible for the research, at banyas.j@husky.neu.edu. You can also contact Quannah Parker-McGowan, the Principal Investigator, at q.parker-mcgowan@northeastern.edu.

If you have any questions regarding your rights as a research participant, please contact Nan C. Regina, Director, Human Subject Research Protection, Mail Stop: 560-177, 360 Huntington Avenue, Northeastern University, Boston, MA 02115. Tel: 617.373.4588, Email: n.regina@northeastern.edu. You may call anonymously if you wish.

This study has been reviewed and approved by the Northeastern University Institutional Review Board (# CPS18-09-08).

By clicking on the “accept” button below you are indicating that you consent to participate in this study. Please print out a copy of this consent form for your records.

Thank you for your time.

Jodie Banyas
Appendix F

IRB Approval

Northeastern

Notification of IRB Action

Date: October 29, 2018     IRB #: CPS18-09-08

Principal Investigator(s): Quannah Parker-McGowan
                          Jodie Banyas

Department: Doctor of Education
           College of Professional Studies

Address: 20 Belvidere
         Northeastern University

Title of Project: A Descriptive Study: Online High School Teachers’
                 Perceptions of Students’ Academic Motivation in Online, Self-
                 Paced, Asynchronous Courses

Participating Sites: Lincoln Learning Solutions permission in file

Informed Consent: One (1) unsigned consent for online survey

DHHS Review Category: Expedited #6, #7
Monitoring Interval: 12 months

Approval Expiration Date: OCTOBER 28, 2019

Investigator’s Responsibilities:
1. Informed consent form bearing the IRB approval stamp must be used when recruiting participants
   into the study.
2. The investigator must notify IRB immediately of unexpected adverse reactions, or new
   information that may alter our perception of the benefit-risk ratio.
3. Study procedures and files are subject to audit any time.
4. Any modifications of the protocol or the informed consent as the study progresses must be
   reviewed and approved by this committee prior to being instituted.
5. Continuing Review Approval for the proposal should be requested at least one month prior to the
   expiration date above.
6. This approval applies to the protection of human subjects only. It does not apply to any other
   university approvals that may be necessary.

C. Randall Colvin, Ph.D., Chair
Northeastern University Institutional Review Board

Dion C. Regina, Director
Human Subject Research Protection

Northeastern University FWA #4630

Figure F1. IRB approval