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Student Engagement and the Impact of Successful Completion in a Virtual Alternative Program

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by

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A Dissertation submitted to the Education Faculty of Lindenwood University in partial fulfillment of the requirements for the degree of

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This Dissertation has been approved as partial fulfillment

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Lindenwood University, School of Education

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Declaration of Originality

I do hereby declare and attest to the fact that this is an original study based solely upon my own scholarly work at Lindenwood University and that I have not submitted it for any other college or university course or degree.

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Abstract

The focus of this study was to examine the correlation between student engagement and successful completion of online alternative courses during the summer session from June 2022 through July 2022. The research questions focused on the difference in engagement levels between students who completed the course and those who did not complete the course. The study was motivated by the growing importance of alternative online programming in education. This study also aimed to fill gaps in existing research that failed to directly connect student engagement to the success of online programs. The findings provide valuable insights for school leaders, teachers, counselors, families, and students in developing and implementing effective online alternative programs for at-risk students. The research also contributes to identifying potential barriers to learning and student success in online settings. The findings of this study assist in changing current practices for alternative online programming to better meet the needs of struggling or credit-deficient students. Overall, the study highlights the importance of student engagement in online learning and its role in promoting student success and improving graduation rates.

Key Terms: Alternative Online Programming, Credit Deficient, Credit Recovery, Student Engagement

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Chapter One: Introduction

Students across the country, now more than ever have a variety of ways to complete their schooling (N. Lemmon, personal communication, February 7, 2022). Traditional K-12 school has changed over the years and virtual online programs have been around for over two decades, as Liu (2010) noted, "The United States has experienced an extraordinary growth in online education at the K-12 level since its emergence in the late 1990s: from single online course offerings to large virtual schools today" (p. 13). The first two virtual schools in the United States started in 1997. The two schools were the Virtual High School (VHS) and Florida Virtual School (FLVS) (Barbour & Reeves, 2009). The United States Department of Education reported online education in the K-12 sector grew by 65% between 2002 and 2004 (Means et al., 2009, p. xi). In 2020, Landrum discussed the increase in the participation of online courses saying, "as online courses continue to proliferate, with nearly a third of higher education students in 2017 taking at least one online course and over 15% of those students enrolled exclusively in online classes" (p. 129). Lemmon (personal communication, March 10, 2022) stated, "Virtual education is an opportunity to fill in the gaps, something that seated education cannot always do."

Student engagement is a critical component in a student's educational career, Bernstein (2021) believed, "studies show that student engagement is a necessary ingredient to fulfill the educational mission" (para. 10). Motivation is critical in learning and according to Knapp (1999), "motivation refers to the fact that a learner has an actualized wish or intention to engage in a specific learning activity" (p. 27). This definition is no less true in online learning (Carpenter & Cavanaugh, 2012). Student

motivation differs depending on the student's post-secondary plans, as stated by Powell et al. (2015) who explained that "the pressure to 'do something' conflicts with the need to arm students with the skills they need to achieve success in post-secondary education or work" (p. 9). Motivated students do not always engage in learning (Keller, 2008). "Individual students need to be motivated, organized, and supported" (Black, 2021, p. 119). What makes students learn is their mindful engagement in learning activities because "engagement leads to outcomes such as achievement" and "motivation underpins engagement" (Martin, 2012, p. 305). As Krause and Coates (2008 as cited in Kahu & Nelson, 2018) argued, when students have a vested interest in their learning their engagement level may increase. Educational practitioners understand that student engagement is paramount for the success of students.

Background of the Study

Online programming has been in the spotlight since March 2020 due to the Coronavirus pandemic, as Dhawan (2020) determined, "this tragedy has also shaken up the education sector, and this fear is likely to resonate across the education sector globally" (p. 6). "On 11th March 2020, the World Health Organization (WHO) declared the COVID-19 caused by the 2019 novel coronavirus (2019-nCoV) a pandemic" (Kaup et al., 2020, p. 1220). Tate and Warschauer (2022) stated, "by April 2020, the activity relation to school-and parent-centered online learning resources had roughly doubled relative to pre-pandemic levels" (p. 200). The Corona Virus pandemic forced educators to think differently about schooling for all students because "in early 2020, a global pandemic led elementary, secondary, and undergraduate schools in the United States to an unprecedented, widespread adoption of online learning as an alternative to face-to-face

classes" (U.S. Department of Education, 2021). Tang et al. (2021), argued that "in response to the coronavirus outbreak, remote learning seems to be the only solution for the education sector" (para 5). Draymont et al. (2011) stated, "The dramatic growth in online courses suggests that no longer can courses without a face-to-face component be viewed primarily as an option of last resort by students who cannot attend class meetings" (p. 157). There are a number of factors that can attribute to why a student may pursue the non-traditional path of virtual education, as Zepke and Leach (2010) acknowledged there are a "variety of non-institutional factors that impact on students' willingness and ability to engage, for example, health, childcare, family support and community responsibilities" (p. 174). Black et al. (2021) stated, "Research supports that online learning can be a more suitable solution than attending a face-to-face school, especially when a student may experience frequent absences due to illness and/or frequent visits for chronic health management" (p. 119). In consideration of the factors mentioned above, the convenience and flexibility offered through online courses, which are not offered in a traditional setting is especially important for those learners balancing work, school, and family (Kaufmann, 2015). Pettyjohn and LaFrance (2014) reported:

> Advances in technology allow at-risk learners multiple opportunities to receive credits to graduate on time, as well as provide them with different avenues to learn and have their learning assessed. Existing virtual learning programs differ from traditional education in a number of significant ways, one of which is the range of students served. (p. 206)

Serving students in multiple capacities to meet their needs can assist them on the path toward graduation, as believed by Frost (2016) who stated that "multiple pathways are an

important element of personalized learning environments because they create distinct, equally-rigorous paths for students to pursue their interests and gain the real-world skills and experiences they need to be successful after high school" (para. 1).

There can be many factors that contribute to a student's successful completion of alternative online programming, as proposed by Stark (2019) when he found that many students sought the flexibility that online courses offered in lieu of the traditional in-person option. "Flexibility is another interesting aspect of online learning; a learner can schedule or plan their time for completion of courses available online" (Dhawan, 2020, p. 6). Tate and Warschauer (2022), stated that "online credit recovery seemed to improve class passing and graduation rates" (p. 195). Teachers feel that self-discipline is a necessary skill that students need to have so they can be successful in their online courses (Landrum, 2020, p. 130). Martin et al. (2020) determined that, "Researchers have attributed self-regulated learning, self-directed learning, locus of control, and academic self-efficacy as student-related factors that play an important role in student performance and readiness in online learning" (p. 42).

Students who have acquired self-regulatory, motivation, and high self-efficacy skills may be more successful in online classes and McMahon and Luca (2001) believed that a "student's ability to use self-regulatory skills is becoming increasingly important with the advent of the World Wide Web-based learning" (p. 427). Self-efficacy is important in both understanding the course content and dealing with the technology associated with participating in and completing the online course (Wang & Newlin, 2002). Motivation is an important factor, as it relates to students being successful in online programs (Martin, 2012).

Conceptual Framework

Two conceptual frameworks were considered when planning this study. The concepts included Self-Determination Theory and student engagement. Self-determination theory (SDT) states there are three psychological needs that all humans have: autonomy, competence, and relatedness (Luo et al., 2021, Deci & Ryan 2011; Ryan & Deci, 2000). As one of the frameworks, "Self-determination theory describes the process through which motivation develops and how it influences human behavior and wellbeing" (Vasconcellos et al., 2020. p. 1445; Deci & Ryan, 1985; Ryan & Deci, 2000a, 2017). To help determine if students can find success in an online course, "perceived competence involves the knowledge of expectation and the relevant skills needed to succeed" (Jacobi, 2018, p. 2; Ryan & Deci, 2000a; Ryan & Deci 2000b).

The SDT, by Deci and Ryan (1985, 1993), has been applied in many research fields as an approach to human motivation and personality (as cited in Bowerman et al., 2018; Ryan & Deci, 2017). While SDT has a primary focus on increasing face-to-face learning, "SDT has been largely overlooked in online learning research in K-12 settings" (Chiu, 2022; Chen & Jang, 2010; Hsu et al., 2019, p. S15). The gap in research highlights the need to explore the potential applications of SDT in online learning environments for K-12 settings.

Hsu (2019) examined the SDT model in an online learning context and articulated the importance of student achievement and meeting course objectives. Hsu (2019) aimed to use the three psychological factors of autonomy, competence, and relatedness of SDT through the online virtual programming lens. By investigating these factors, the study

sought to gain a deeper understanding of how those factors influence student engagement and success in online learning environments.

Student engagement is one factor that can attribute to student success, as Lei et al. (2018) stated:

> this engagement not only appears to affect school changes directly, such as, teacher's professional identity, and a school's positive atmosphere but also seems to lead to improvement in academic achievement of students whose grades have been poor and lowering level of student dissatisfaction and dropout rates. (p. 1)

Bond and Bedenlier (2019) believed "the concept of student engagement has become somewhat of an enigma for educators and researchers, with ongoing discussion about its nature and complexity, and criticism about the depth and breadth of theorizing and operationalization within empirical research" (p. 12).

The goal of the study was to determine if students are motivated and engaged in their coursework, is there a correlation in successfully completing an online alternative course? When humans have autonomy, competence, and relatedness; those three psychological needs lead to motivation. When students are motivated, does the level of student engagement have an impact in successfully completing an online alternative class?

Statement of the Problem

While there is research on student engagement and alternative programs, as well as online learning, the research lacks clarity on how student engagement in online learning leads to success in an alternative program. Hussain et al. (2018) stated, "in web-based systems, student data represents the only source through which instructors can

assess student performance and engagement (p. 1). This study investigated how one urban school district has examined student engagement as a focal point for student success in an alternative online program. As school districts continue to utilize alternative online programs, the level of student engagement could have an overall impact on student success. O'Byrne and Pytash (2015) stated, "Hybrid learning models are expanding as many educators are creating online environments for their students" (p. 138). Educators need to continue to find ways to achieve balance in the educational setting, as Lucas et al., (2020) explained that "teachers are in regular contact with, on average, 60 percent of their pupils. However, on average, less than half of pupils (42 percent) returned their last piece of work" (p. 3). Krause and Coates (2008, as cited in Kahu & Nelson, 2018) determined that educational practitioners understand that student engagement is paramount for the success of students.

Purpose of the Study

The investigation examined if student engagement has a direct difference in a student's successful completion of the online alternative course. Havik and Westergard (2019) stated, "student engagement predicts enhanced student achievement, retention and graduation from high school" (p. 489). The topic was chosen because alternative online programming is becoming a high-priority topic in the education world due to the heightened attention to graduation rates, as Kumi-Yeboah et al. (2017) detailed that "in the United States, all 50 states now offer some form of K-12 online learning opportunities that range from supplemental classroom instruction to enrolling students in full-time programs" (p. 1). Nourse (2019) stated, "school districts, under pressure by federal and state mandates to improve test scores and raise graduation rates, found credit recovery to

be a cost-effective option to fulfill both needs" (para. 5). The completion rates of alternative online classes during the summer sessions of June 2022 through July 2022 were investigated for this study.

Research Questions

1. What is the difference between the level of student engagement of students who successfully completed an alternative online program and students who did not?

$H1_a$: There is a difference between the level of student engagement of students who successfully completed an alternative online program and students who did not.

2. What was the level of engagement for students who successfully completed an online alternative program?
3. What was the level of engagement for students who did not successfully complete an online alternative program?

Significance of the Study

In the past, traditional education was viewed as students attending seated schooling, however "the online learning regulation is in force to all education institutions. It is undertaken the learning from traditionally face-to-face approaches to remotely digital platforms" (Gustiani, 2020, p. 23). Powell et al. (2015) stated, "according to the National Center for the Education Statistics, 88% of school districts offered some form of credit recovery courses in the school year 2009–2010" (p. 9). The former research was intended to determine to what extent student engagement connects to students completing alternative, online programs of study. In existing research, student engagement, opportunities, and development in online learning were outlined but were not directly

connected to student engagement and the success of online programs, as Lee et al., (2019) argued:

> several studies have examined engagement in e-learning environments, they are also limited in that the level of student engagement is mostly measured by behavioral indicators, such as the number of logins, the number of questions asked, lectures taken, article that are posted on the bulletin board, and the times that they have participated in online discussions. (p. 2)

This research was conducted to highlight the connection of student engagement in online learning to aid current and future school leaders, teachers, counselors, families, and students in developing and implementing effective online alternative programs for students. Moreover, this study was designed to add to the current depth of research in determining effective strategies for at-risk students in an online setting as "students enrolled in credit recovery courses are generally identified as "at-risk" (Nourse, 2019, para. 9). This research may spark inquiry into how current alternative online programs could be used to determine the needs of future students as well as identify potential barriers to learning and student success and inform the development of effective educational interventions.

As landmark policies and legislation continue to gain importance at all levels of government, it is important to have research on programs that emphasize student outcomes for those who may need an alternative route to graduation. Most notably, as the emphasis is placed on school leaders and districts to show growth in areas such as graduation rates, it is imperative that research projects effectively demonstrate student success as well as offer potential areas of improvement. A critical focus is closing the

achievement gaps that exist in education for those from diverse backgrounds and those from underrepresented student populations, as Bransberger et al. (2020) highlighted that "although improvements in graduation rates are certainly a good news story, much more remains to be done, particularly to continue improvement in serving students of color" (p. 4). An aspect of online alternative programs is the inherent ability to learn anywhere and at any time, effectively adjusting to the different needs of students and families that may not be able to engage in learning within the traditional school day. As the development of learning has an added piece of online instruction, it is important to look into the shifts in thinking about what schools can offer students and how this project can add to the body of current research, addressing gaps in the connection between student engagement and online learning specifically.

Virtual alternative online programming has provided an additional path to graduation for struggling or credit-deficient students, as confirmed by Powell et al. (2015), who emphasized districts are beginning to develop online and blended learning to enhance the options for students to stay on track for their targeted graduation date. Rickles et al. (2018) suggested, "Many states, districts, and schools use online courses to allow students to retake failed classes in an effort to help get students back on track and keep them in school" (p. 481). Students who do not graduate high school may have more struggles in life and "according to the United States Department of Labor (2016), over 50 percent of individuals ranging from 20–24 years old who do not hold a high school diploma or have passed their GED, are working jobs that are low-paying unstable jobs or unemployed" (Brown, 2019, p. 817; Brown, 2016). Rickles et al. (2018) noted, "the wide array of socio-emotional, behavioral, and academic supports students with prior academic

struggles may need to be successful" (p. 482). Heinrich and Darling-Aduana (2021) stated:

> given that a high school degree is generally required to enroll in postsecondary education program, online credit recovery courses that enable or support high school degree completion could open opportunities that might not otherwise be available for student postsecondary education pursuits. (p. 2)

The results of this study may assist in changing the current practices for alternative online programming to better meet the needs of students and allow students to find a path to graduation.

Definition of Key Terms

For the purpose of this study, the following terms are defined:

Alternative Online Instruction

Alternative Online Programming is defined as students taking a credit recovery online course as it relates to the purpose of this study.

Asynchronous Online Instruction

Pettyjohn and LaFrance (2014) stated, "Asynchronous online instruction occurs at different times and different places, where learners choose when and where to access instruction materials" (p. 205).

Asynchronous Online Learning

Asynchronous online learning "allows students to view instructional materials each week any time they choose" (Ohio State University, 2021, para. 2).

Credit Deficient

Credit deficient refers to students who are in danger of not graduating with their four-year cohort due to having insufficient credits (National Center for Education Statistics, 1992).

Distance Learning

Distance Learning is **"**a formal education process in which the student and instructor are not in the same place" (Parsad & Lewis, 2008, p. 1).

Hybrid Courses Hybrid Courses are courses where a portion of the learning activities have been moved online and time traditionally spent in the classroom is reduced but not eliminated (Ranganathan et al., 2007, p. 179).

Online Learning

Online learning "is education in which instruction and content are delivered primarily over the Internet" (Powell et al., 2015, p. 5).

Student Engagement

Martin and Bollinger (2018) defined student engagemen**t** "as the student's psychological investment in an effort directed toward learning, understanding, or mastering the knowledge, skills, or crafts that academic work is intended to promote" (p. 206).

Delimitations, Limitations, and Assumptions

The scope of the study was bounded by the following delimitations:

Time Frame

Students who participate in alternative online programs during the school year typically have one school year to complete their course. For purposes of this study, the data collection period was during the summer session of June 2022 through July 2022.

Location of the Study

Data were collected from students attending a high school in a Midwest state who were enrolled in a virtual online program.

Sample

The participants in the study were from all genders and these students were in grades 10–12. The sample size was significantly fewer students enrolled in high school online alternative programs during the summer.

Criteria

Students enrolled in an online alternative program have previously failed the course they are completing.

The following limitations were identified in this study:

Sample Demographics

The focus of this study was on students who were enrolled in one alternative online program during the summer session of June 2022 through July 2022. The limitation of the study was that there were fewer students enrolled in an online alternative program during the summer session. Due to lower enrollment in the summer session, the sample size may be lower than desired. There was a significant amount of research in the area of school districts utilizing credit recovery courses as a means to assist students on a

graduation path. However, there is limited research on student engagement in relation to online alternative programming.

Instrument

A secondary data set was used in this study to examine student engagement. This data set was chosen because the researcher was involved in the program.

The following assumptions were accepted:

1. The responses of the participants were offered honestly and willingly.
2. Students who are more engaged in their coursework will have a higher completion rate in their alternative online courses.
3. Students who are enrolled in an online course over the summer are choosing to take the course or have a significant reason as to why they are taking a course in the summer.

Summary

One purpose of online alternative programming is to fill the gap in opportunities in a traditional seated learning environment compared to the prolific response of the modern-day learner as "online credit recovery courses seemed to improve class passing and graduation rates" (Tate & Warchauer, 2022, p. 195). One great necessity in education is centered on student engagement to ensure the desired outcomes are attained as student engagement "protects against risky adolescent behaviors such as truancy, dropout, gang involvement and delinquency" (Havik & Westergard, 2020, p. 490). Heinrich and Darling-Aduana (2021) presented evidence "that metropolitan school districts such as Nashville, Los Angeles, and the District of Columbia, have likewise seen dramatic increases in their high school graduation rates (of more than 15–20 percentage points)

after introducing online credit recovery programs" (p. 2). With the continued growth of online learning opportunities for all students, educators need to continue to find ways to meet the needs of their students.

Chapter One looks into the significance of alternative online learning, and its effects on student success. In the chapter, the ability of schools to adapt to the COVID-19 pandemic was reviewed as a central piece of understanding where schools are falling short of providing opportunities for diverse, online learners and where research lacks clarity in the effectiveness of student engagement on student success in an online, alternative setting. Moreover, the chapter outlined where technology plays a role in the opportunities of learners in an autonomous structure, where students are able to earn credits for graduation requirements outside of the traditional school setting. The flexibility of scheduling, the autonomous structure of learning, and addressing credit-deficient students were all pillars of information in how schools can meet the needs of students in an alternative, online setting.

In addition to determining the needs of students in the present, the significance of the study in Chapter One also outlines the possibilities for growth in online learning, and the potential allocation of resources to address the needs of these students. The chapter reviews historical growth of online, alternative learning, how this growth preceded the COVID-19 pandemic, and how the growth increased during, and after the health emergency. The significance of the study outlines the lack of clarity in how student engagement in online learning effects student success in online, alternative programs, and how the research questions seek to find to what extent student engagement effects success in these programs through the research project.

Chapter Two will outline the two frameworks utilized to support the implementation of this study: the conceptual framework of self-determination theory and student engagement. The introduction to the study, background information, and the conceptual framework that will guide this research is provided in Chapter One. The conceptual framework of Self-Determination Theory (SDT) and student engagement are referenced throughout the study. The goal was to determine if there is a difference between students who successfully completed an online alternative program (Completers) and their engagement and students who did not (Non-Completers).

In Chapter Two of this study, a review of literature includes: (a) the conceptual framework; (b) history of online learning; (c), growth of online learning; and (d) student engagement online. The review of literature in Chapter Two provides an understanding of the conceptual framework and delves into the aspects of student engagement online. This foundational knowledge sets the stage for the subsequent chapters of the study.

Chapter Two: Literature Review

Introduction

Chapter Two outlines the historical development of online learning, highlighting its beginning to the current status. In Chapter Two, how online learning has adapted and responded to the changing educational landscape over the years is examined. Specifically, Chapter Two will investigate how online alternative programming impacted the growth of online learning and how alternative online learning provided opportunities for students in diverse settings.

Furthermore, Chapter Two explores the growth of online learning and the expansion of course offerings, highlighting how online learning has benefited students in both rural and urban communities. The impact of online learning on student engagement is examined, with particular emphasis on the extent to which engagement may affect student success. Additionally, the development of online programming and the changes online programming has undergone from various perspectives were analyzed.

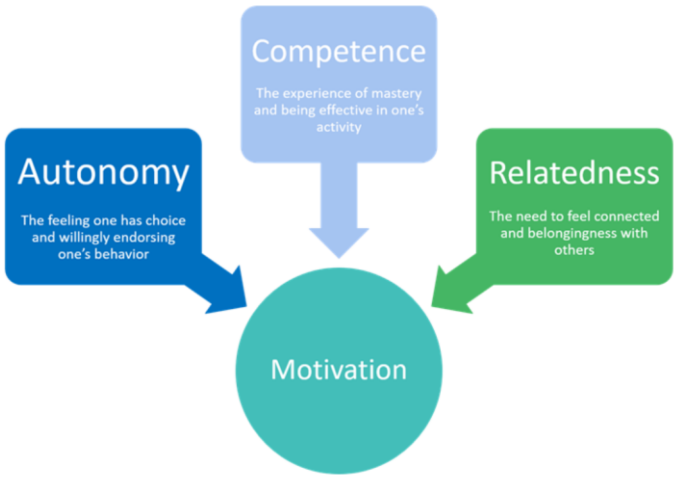
The first section of this chapter is focused on the history of online learning, providing insight into the milestones that shaped the development of this mode of education. This is followed by an exploration of the growth of online learning, including innovative ways in which online learning has adapted to meet the unique needs of learners in diverse settings. Finally, the section on student engagement and online programming includes the challenges and opportunities presented by online learning and highlights the ways educators can optimize student engagement to achieve desired outcomes.

Conceptual Framework

Two frameworks were utilized to support the implementation of this study: the conceptual framework of self-determination theory and student engagement. Self-determination theory (SDT) states there are three psychological needs that all humans have: autonomy, competence, and relatedness. (Luo et al., 2021, Deci & Ryan 2011; Ryan & Deci, 2000). As one of the frameworks, "Self-determination theory describes the process through with motivation develops and how it influences human behavior and wellbeing" (Vasconcellos et al., 2020. p. 1445; Deci & Ryan, 1985; Ryan & Deci, 2000a, 2017)

Figure 1

Self-determination Theory



Note: Self-Determination Theory (Deci and Ryan, 1985; Ryan and Deci 2000) posits that fulfillment of three basic innate, human psychological needs (autonomy, competence, and relatedness) is necessary for optimal human functioning. Reprinted with permission.

Whether students are in a virtual or traditional educational setting their needs need to be met "as classrooms that support these three psychological needs are more likely to

engage students in learning" (Chiu, 2022; Reeves, 2013, p. S15). Autonomy provides the online student the ability to complete their learning at their own pace and at times that work best for their schedule, as supported by Daniel (2017) who stated, "flexibility is a defining element of online learning" (p. 16). Students who participate in an online alternative program may seek to find the competence needed to be awarded the credit in the class and demonstrate an understanding of the course requirements. To help determine if students can find success in an online course, "perceived competence involves the knowledge of expectation and the relevant skills needed to succeed" (Jacobi, 2018, p. 2; Ryan & Deci, 2000a; Ryan & Deci 2000b).

In alternative online courses, students have the ability to relate to the material of the previously exposed curriculum and have the instruction provided to earn credit in the course as "schools often turn to online learning to recover credit failed in a traditional in-person learning environment" (Borup et al., 2020, p. 824). The SDT, developed by Deci and Ryan (1985, 1993), has been applied in many research fields as an approach to human motivation and personality (Bowerman et al., 2018; Ryan & Deci, 2017). While SDT has a primary focus on increasing face-to-face learning, "SDT has been largely overlooked in online learning research in K-12 settings" (Chiu, 2022; Chen & Jang, 2010; Hsu et al., 2019, p. S15).

Hsu (2019) examined the SDT model in an online learning context and articulated the importance of student achievement and meeting course objectives. Hsu (2019) aimed to use the three psychological factors of autonomy, competence, and relatedness of SDT through the online virtual programming lens. By investigating these factors, the study

sought to gain a deeper understanding of how those factors influence student engagement and success in online learning environments.

Student engagement is one factor that can contribute to student success, as Lei et. al (2018) stated:

> this engagement not only appears to affect school changes directly, such as teacher's professional identity, and a school's positive atmosphere but also seems to lead to improvement in academic achievement of students whose grades have been poor and lowering level of student dissatisfaction and dropout rates. (p. 1)

Bond and Bedenlier (2019) believed "the concept of student engagement has become somewhat of an enigma for educators and researchers, with ongoing discussion about its nature and complexity, and criticism about the depth and breadth of theorizing and operationalization within empirical research" (p. 12).

As the research on student engagement has continued to grow, so have the concerns of student engagement, or lack of student engagement, in alternative online programs for the modern-day learner, in part because "in web-based platforms, there are not face-to-face meetings, and it is difficult to determine student engagement levels in online activities such as participating in discussion forums or watching videos" (Hussain, et al., 2018, p. 1). Student engagement is a critical piece that is lacking in the field of inquiry as it relates to online education, as reiterated by Chiu et al. (2021):

> Although applying various motivational theories to traditional face-to-face environments has proven to be a productive undertaking (e.g., Lazowski & Hulleman, 2016), little attention has been paid to how existing motivational

> theories can be adapted to understand how to optimize online learning or student engagement within technology infused learning contexts. (p. 187)

Research on student engagement is multifaceted, with different schools of thought about its true form, yet the constant focus on student engagement has largely been focused on the traditional learner in the traditional setting, as Luo et al. (2021) confirmed, "from the perspective of technology use, only a handful of studies have examined the SDT-model for online learner's motivation to continue using e-learning tools" (p. 1384).

According to Bond and Bedenlier (2019), many contextual factors impact and influence student engagement, and all must be explored to understand the significance of its importance. The school building is largely a focal point on logistics, adherence to policies, and protecting the instructional time in the classroom as Grissom et al. (2013) supported, "given the significant time constraints under which principals operate, critical examination of how they can best use their time to promote school success is essential" (p. 17). Online alternative programs are not bound by a school day, a bell system, or other logistical equation and provide the flexibility that is "based on the recognition of differences among students, which are addressed by providing varying degrees of choice to learners regarding what, where, when, why and how to learn" (Bergamin et al., 2012; Collis & Moonen, 2002; Hill, 2006; Soffer et al., 2019, p. 203). As illuminated by Bond and Bedenlier (2019), "institutions that develop a culture of student success, with high expectations of both students and staff, and invest in support services and infrastructures, such as reliable internet connections and technology, are far more likely to promote positive student engagement" (p. 3). Alternative online programs may provide an invaluable route for students in their pursuit of a high school diploma as they offer a

different path for students and families, as Atwell et al. (2019) presented, “while credit recovery courses have long been in existence to help students failing core coursework to graduate, the advent of computer technology has allowed credit recovery courses to help more students earn their diploma in a timely manner” (p. 39). Heppen et al. (2017) suggested, “Although national graduation rates have been ticking upward in recent years, the high school dropout problem remains a national crisis” (p. 1). It is important to understand that not all students will complete a traditional path to graduation as “credit recovery is essentially a fix for the problem of high school students lagging in their accumulation of credits needed for graduation” (Heinrich & Darling-Aduana, 2021, p. 2). Once this is accepted, resources can and should be allocated for students on this path. According to Bond and Bedenlier (2019), “enhanced student engagement through using technology can lead to a number of short and long-term academic and social outcomes” (p. 7). Enhanced student engagement may be of particular importance for district administrators when looking into online alternative programs and the completion of graduation requirements**.**

History of Online Learning

The world wide web is over 30 years old, beginning in 1989, and changing throughout the decades with the goal of sharing information (CERN Website, 2023). Carmago et. al. (2020) stated,

> distance learning has been available for more than a century through printed manuals, and subsequently, at the beginning of the 20th century, through radio, audio, and video tapes. However, only at the end of the 20th century did the educational modality spread with the advent of the World Wide Web. (p. 1)

Harasim (2000) reported that the "21st century begins with a paradigm shift in attitudes towards online education" (p. 42). School districts have new ways in which to provide a learning environment and essential skills, as Harasim (2000) articulated this point by explaining that online education "will alter global civilization as educators and learners worldwide adopt and adapt networked collaborative learning" (p. 46).

The evolution of online learning is a critical piece of the educational opportunities school districts can provide, as reported by Park and Shea (2020) when they argued that learners who have conflicts that prevent them from attending classes in person have an opportunity to continue learning through a virtual learning program. One of the benefits of alternative online programming flexibility is because "flexibility as a feature of online education might seem widely beneficial given its aims at broadening access" (Houlden & Veletsianos, 2019, p. 3). Learning environments are not defined by the school walls anymore, as they have adapted to the needs of students, as Park and Shea (2020) presented evidence of the change in online learning and stated:

> Moving on to the late twentieth and the early twenty-first centuries, the emergence of new technology and the Internet accessed through the World Wide Web facilitated the two-way online communication between instructors and students via email, computer conferencing, and synchronous and asynchronous discussions. (p. 226)

Communication in the online platform, as it is in the seated platform, has become a more attainable attribute of online learning, as described by Park and Shea (2020). The ability to have synchronous and asynchronous learning presents various opportunities for students and families. School officials may not have to choose one option of seated vs.

online learning, as Park and Shea (2020) argued that “blending online and face-to-face learning offered students more fruitful channels of getting linked with peers and instructors” (p. 226).

Growth of Online Learning

The development of online learning has been a critical piece of educational learning opportunities. As reported by Park and Shea (2020), “the internet played a significant role in facilitating learners’ ubiquitous learning, along with their cognitive improvement in both formal and informal learning environments” (p. 239). Kumi–Yeboah et al. (2017) articulated that:

> The rapid growth in K–12 online education has been attributed to several factors, including advances and availability of educational technology at the K–12 level, a growing number of students seeking to use online courses for credit recovery, and students taking advance, honors, or dual enrollment in courses that are not available as traditional courses. (p. 2)

The internet allowed humans to share information across the planet as “today, digital information is everywhere and available to almost everyone” (Pei & Wu, 2019, p. 1). Education fundamentally revolves around the dissemination of knowledge, and the convergence of education and the internet holds significant potential to transform traditional classrooms (N. Lemmon, personal communication, March 10, 2022). If education is anything, it is the sharing of information. The two powerful forces of the internet and education can redefine a classroom. As online learning has changed, it is important to understand the development of the pedagogy that has adapted as Hasan and Khan (2020) stated, “understanding students’ practicalities and their preferred way of

learning online helps us to align technology and pedagogy in tun with students' interests and learning preferences" (p. 203). Park and Shea (2020) reported that "without decent pedagogy for learning and teaching, the effectiveness of using educational technology will be diminishing" (p. 239). With regard to pedagogy, it has to be impactful, from the tools and materials required to the delivery of the learning and it has to have a connection to students, as provided by Park and Shea (2020) the inability to produce effective learning, even with the appropriate materials and technology required, may diminish.

The growth of online learning provides important insight into the development of programming. First, and foremost, online education is not new and has been around for decades as "the earliest examples of K-12 schools in the United States using the World Wide Web to deliver instruction date to the mid-1990s" (Schwirzke et al., 2018, p. 7). As Farmer and West (2019) detailed, "online K–12 education continues to grow rapidly in the United States. During 2013-2014, 2.2 million part-time and full-time K–12 students were enrolled in nearly 4/5 online courses" (p. 98). As school districts started to offer online courses as an option for students, "online learning has drawn praise for its promise to close or narrow achievement gaps, improve student progress toward subject matter proficiencies, increase graduation rates, and improve the distribution of high-quality teachers for students, regardless of geography or distance" (Rice & Deschaine, 2020, p. 115). Simanmora (2020) found:

> Online learning has become popular due to its perceived potential to supply more flexible access to content and instruction by 1) increasing the supply of learning experiences for those that cannot or chose not to attend traditional schools, 2) assembling and disseminating instructional content more efficiently, and 3)

> increasing student-instructor ratios while achieving learning outcomes adequate to those of traditional classroom instruction. (p. 88)

In 1997, the first two virtual schools were created: Florida Virtual School and Virtual High School (Barbour & Reeves, 2009). This was four years before the passing of the *No Child Left Behind Act* in 2001 under President George W. Bush (Klein, 2015). In the decades that followed, education adapted learning to incorporate online courses as "the growth of online enrollments in the United States has increased f^{or} the 14th consecutive year irrespective of an expanding or shrinking economy and rising or declining overall college enrollments" (Palvia et al., 2018, p. 235). Barbour and Reeves (2009) reported that the "National Education Association predicted that by 2006, a majority of American high school students will have completed at least one online course before graduation" (p. 404).

Student Engagement Online

Bolliger and Halupa (2018) explained, "student engagement is important in order to prevent online learner isolation and dropout (p. 3). Wang and Hofkens, (2020), argued that "the underlying assumption of research and theory is that student engagement contributes to achievement; therefore, more engagement is better" (p. 8). "As we continue to build our virtual systems and solutions for kids, engagement has to be at the table as part of the conversation. But we cannot continue to have seated expectations on fully virtual students" (N. Lemmon, personal communication, March 10, 2022). The type of engagement may be different in online alternative programs, but it stands to reason that engagement should still be prevalent, especially with the many options of communication tools available to support students on this platform such as email,

announcements that are posted within the Learning Management System (LMS), texting, and chat features (Ng, 2018). N. Lemmon (personal communication, March 10, 2022) stated:

> In a traditional seated setting, when a student misses a class, the teacher will be able to touch base with the student the next time they are present in class or when the teacher may see the student in the hallway. The teacher can help and ensure that they understand what content was missed in their absence. In a virtual setting, the teacher may not have the opportunity to ever see the student face-to- face. . . Commonly, many districts have placed their most at-risk students online as "credit recovery represents one of the fastest-growing areas of online K-12 education" (Tate & Warschauer, 2022, p. 195).

As student engagement in a virtual setting continues to lead conversations the way that systems are put in place in a seated world to set students up for success the same conversations need to also take place to allow for learning to be restructured for a virtual environment as it is imperative for "instructors who can accurately gauge the time their online students will spend engaging and assimilating content can promote high expectations and ensure students are not set up for failure" (Bolliger & Halupa, 2018, p. 4).

The pinnacle of student learning is engagement, a connection to curriculum and instruction in the hope that the information learned will become of both beneficial use to the person learning it and to others the person interacts with, continuing the learning process. With regard to online learning, the world has changed, seemingly to an incalculable degree in recent History. as Ng (2018) affirmed that, "Online courses have

become more and more popular over the past several years due to the technological advances and the desire of many students to seek greater flexibility in their course schedules" (p. 1). Singh (2021) stated, "Flexibility, ability to work at your own time and pace, engaging learning experience, self-directed learning, cost effectiveness, and ability to produce in-depth discussion are some of the most widely cited benefits of online learning" (p. 143). It is important to note that "Flexibility approaches to online learning research purported to be democratizing and liberatory, broadening access to higher education and enabling learners to participate in educational endeavors at 'anytime' from 'anyplace' (Houldren & Veletsianos, 2019, para. 1). Students, parents, and guardians want diversified opportunities outside of the school walls, that are not dependent on where the student lives, schedules, and are taught by high-qualified educators as "many online students struggle to follow a regular study schedule due to the challenges of balancing work, family and study" (Farrell & Brunton, 2020, p. 4). Reinholz et al., (2020) noted that "a student's home context becomes particularly relevant in online learning. Some students may balance conflicting priorities: sharing space with others, taking care of children or elderly family members or lack of safe space to engage" (p. 2). While the process of learning has developed, so have the modalities of providing said instruction as there are now many opportunities provided to students and families to be homeschooled with a teacher if that is what their family desires. (N. Lemmon, personal communication, March 10, 2022).

As student enrollment in online courses continues to increase each year, current legislation in the state of Missouri has targeted funding sources for public schools. In 2022, House Bill 1903 was presented to modify provisions related to the virtual school

program. If passed, this bill would require students to enroll in a virtual attendance center instead of their resident district. Students would be considered residents of the virtual school program and their resident district would not be able to claim the Average Daily Attendance (ADA) of the student. Statewide in Missouri, school districts not operating a full-time virtual program under The Missouri Course Access and Virtual School Program (MOCAP) will no longer pay full-time virtual provided directly, as those districts will no longer receive state funding for the student (House Bill 1903, 2022). This legislation has the potential for public school districts to lose funding from the state and local tax dollars from Missouri.

In 2022, Missouri House Bill 1552 passed, which states, "any student under the age of twenty-one in grades kindergarten through twelve who resides in this state shall be eligible to enroll in the Missouri course access and virtual school program" (H.B 1552, p. 8). With the passing of HB1552, any Missouri student is allowed to enroll in the school district of their choice to access virtual programming. If the student resides in one district but enrolls in another district, the home school district will lose state funding for their student as "for purposes of calculation and distribution of state school aid, students enrolled in the Missouri course access and virtual school program shall be included in the student enrollment of the school district in which the student is enrolled in" (H.B. 1552, p. 8)

Redmond et al. (2018) presented evidence that "students who choose to study online are inclined to do so because it provides flexibility, enabling them to balance external commitments with their studies" (p. 185). If online learning is anything, it is flexible. Houlden and Veletsianos (2019) stated that, "in the case of online education,

central to its appeal of flexibility is that it would seemingly undo some of the structural limitations imposed by face-to-face instruction" (p. 5). Online learning has the ability to educate outside of traditional school hours and provide diverse learning plans for students throughout high school and in the post-secondary arena as "online delivery provided students flexibility and convenience, cited as important by 74% of students in a 2016 survey" (Tate & Warschauer, 2022, p. 193). If education is to be personal, it needs to be adaptable to the changing world, as "online instructors are expected to diminish this psychological isolation and to create opportunities for communication with their students" (Kim & Kim, 2021, p. 2). The educational arena is adapting as the rest of the world has, by asking questions about what constitutes student choice and what modalities are needed to provide a choice in education for students, families, and school districts.

Student engagement is a focal point of learning and research has continually rediscovered learning changes, but the need for engagement remains the same. An education that prepares students for the skills and competencies needed to succeed in their life is paramount. Schools exist to serve students and communities by addressing areas of need, whether it be academic, social, or economic. The inability of a school to guarantee effective learning and not meeting the needs of students is tantamount to missing the mark on the mission and vision of the school, as Heinrich and Darling-Aduana (2021) noted that "delivering poorer quality digital instruction also abdicates the moral imperative of education to support student's intellectual development and raises equity considerations, given that the students assigned to these courses are frequently from predominantly marginalized groups" (p. 3).

In alternative methods of instruction, as in traditional seated classes, educators must account for time on task to help quantify student engagement. Halverson and Graham (2019) stated the completion of learning expectations for blended learning courses could replace seat time expectations for traditional courses. To further expand on this idea, the intensity and rigor of online learning may have a direct benefit for student engagement in the virtual setting, as seat time and engagement does in the traditional modality. Darling-Aduna et al. (2019) argued that "despite trends of technology-based instruction replacing several of the central tasks traditionally assigned to teachers, some research suggests that online learning programs that incorporate live instructors contribute to better student outcomes" (p. 2).

Online learning can be an important aspect of alternative programs, especially with regard to recovering credit and staying on the path to graduation as "research focusing specifically on online course-taking shows that a large share of high schools adopt online course instruction primarily for credit recovery and realize relatively low rates of course completion, generally in the range of 30% to 55%" (Heinrich et al., 2019, p. 5). School districts across the nation have looked into avenues for students to get back on track, both in rural and urban districts and in all levels of socio-economics. Heppen et. al. (2017) reported "the relationship between credit attainment and graduation is so strong that for Chicago Public Schools (CPS) students, each semester course failure in ninth grade is associated with a 15-percentage-point decline in four-year graduation rates" (p. 273).

Students who have participated in online summer credit recovery programs have proven to stay on track for graduation (Bentley, 2019) as the importance of graduation

cannot be overstated as it is a measure of a school's effectiveness and an ultimate goal of the K-12 educational system. Additionally, as reported by Bentley (2019), "the National Center for Education Statistics (NCES), reported that graduation rates across the country are the highest in history at 86%" (p. 2). There are, however, subgroups that have shown a significant disparity in achievement as stated by Bentley (2019), the "most recent U.S. data for the 2011–12 school year indicates a 34-point 4-year graduation rate group gap for students with disabilities" (p. 2). This disparity is a reminder of the differentiation needed for all students to succeed, as reminded when Tate and Warschauer, (2022), stated, "equitable learning occurs when every learner belongs, contributes, and thrives regardless of race/ethnicity or socio-economic status" (p. 192). School districts have followed the *Individuals with Disabilities Education* Act (originally known as the *Education of Handicapped Children Act* passed in 1975) to provide due process, ensure that guardians are involved in their child's education and that students with disabilities are provided free and appropriate education (Adler-Greene, 2019). As educational policies continue to evolve, the need for school districts to expand a student's right to include virtual settings is imperative (Basham et al., 2015). To help the increasing numbers of special needs students in online schools succeed, educators must understand and prepare to meet these students' needs (Rice et al., 2019). Additionally, the importance of preparing students to graduate on time and with an adaptable skillset is important to the development of the students. It is also important to understand that school districts must seek to find ways in which to close achievement gaps. The flexibility of online alternative programs has been a focal point in offering educational opportunities to students.

Is online learning a viable avenue for students in alternative routes to graduation and students that may be credit-deficient? Darling-Aduana (2019) reported that "U.S. school districts are increasingly turning to online courses to educate students, with lower achieving and historically underserved student populations often assigned to online versus traditional, face-to-face instruction for purposes such as credit recovery" (p. 1). If the path to graduation is not going to be achieved in the traditional format, school staff adjust what is offered in the hopes the changes will benefit the targeted students. Moreover, it is important to understand the reality of the modern world of technology and be able to utilize avenues available for growth, as well as to engage students outside of the school building in learning. When students engage in their education by going to class, completing their homework, and actively participating in their learning, the research indicates that these behaviors are correlated to learning outcomes (Darling-Aduna, 2019). Typically, learning loss, academic and behavioral norms, and engagement is usually seen before a student enters high school. Additionally, students on different levels of intervention from middle school may have already been targeted for intervention strategies before they enter their ninth-grade year (N. Lemmon, personal communication, February 7, 2022). A reason why this is important is for students and families to understand what supports are available for them, the avenues to graduation outside of the traditional path, and to keep the focus on achievement and ultimately graduation. Engagement in learning is a critical piece of development, from the beginning years of education until graduation (Havik & Westergard, 2019). Darling-Aduana (2019) stated, "Behavioral engagement, including attendance and out-of-school learning, is a critical mediator to achievement, particularly in an online course setting where students, versus

teachers, dictate how much time students spend logged in and engaged in learning-related activities" (p. 2). Students in the online setting have a unique learning environment in that each student spends time on his or her own learning and dictating how much engagement is used (Heinrich et al., 2019). As this can be highly significant, positively, or negatively, it stands to reason that student-led engagement can have substantial outcomes, wherein the student is able to design his or her education around his or her personal life as Hart et al. 2019, found that:

> Individual pacing may help slower learners by allowing them to repeat confusing material until they master it and it can help faster learners by allowing them to move on when they master the material, without requiring them to sit through repetitious explanations. (p. 1)

A focal point of online learning and alternative routes of graduation is flexibility when the traditional path of graduation is not feasible or is not working. As a tool for schools, an alternative online platform can provide opportunities to counselors, teachers, and administrators to address student needs and provide resources for students and their families.

Online alternative education courses have provided an opportunity for students to have the flexibility and convenience of taking previously failed courses in an effective manner (Rickles et al., 2018). While a key to learning may be engagement, it also stands to reason that flexibility and student choice are also important key data points in graduation, and that is why the inequities in the graduation rate of students based on race and ethnicity will be reviewed in this research. A focal point of subgroup achievement has been the access to highly effective learning that engages students of all backgrounds.

Rickles et al. (2018) illuminated data that show discrepancies in graduation rates by explaining that “while 88% of White high school students graduate within four years, only 75% of Black and 78% of Hispanic high school students graduate on time” (p. 481). In reviewing needs in education, it is important to keep all students in mind, especially those that may have had historical struggles in certain areas of success, such as graduation rates. It is the moral responsibility of public schools to address inequities and work to diversify learning experiences for all students. To that end, schools are researching ways to make learning more adaptable and flexible for students in the modern world of diverse technology. With alternative programs, the focal point is on closing gaps in achievement while also working to address students who may be credit deficient or require an alternative path to graduation. Online alternative programs may be an avenue in alternative programs used to bolster graduation rates and focus on student choice.

Student engagement is difficult to measure, as there are many different theories on what constitutes engagement; there is a behavioral lens, a motivational lens, a connection lens, and a practical lens. With nearly all engagement theories, a focal point is motivating students to complete necessary tasks to earn skills related to earning credits to graduate or completing programs of study (Havik & Westergard, 2019). Kahu and Nelson (2018) reported that “student engagement is a black box and draws on a metaphor of quantum mechanics to argue the complexity of student engagement is such that we cannot measure or map all of its properties” (p. 1261). Student engagement is difficult to measure as exact science because each student is an individual and has unique learning and motivational needs. The flexibility of learning that alternative programs create may

be an avenue that fills a gap. Learning can and does occur outside of the school walls and outside of the school day. Callahan and King (2017) explained that "in some states (e.g., Florida), students must complete at least one online high school course to earn their diploma" (p. 22). Not all online or alternative programs are used for struggling students, but rather to offer flexibility in learning that is not defined by what a building can provide within the school day. For instance, if a student wants to take an upper-level foreign language course that his or her school does not have, that student is limited in what educational opportunities are available. Conversely, if a student wants to control his or her own pace of learning, the rigidity of the school day may restrain learning opportunities. Where and when learning can occur has changed in the modern world. While the Covid-19 Pandemic may have exacerbated the process of needing flexibility in learning, the key to student choice remains the same.

Alternative Online Programming

The ability of learners to learn outside of the school day and at their leisure is important for the understanding of alternative, online platforms. Hart et al. (2019) argued that "virtual classes may allow students to work at a more individualized pace" (p. 1). Hart, et al. (2019) reported:

> the individualized pacing may help slower learners by allowing them to repeat confusing material until they master it, and it can help faster learners by allowing them to move on when they master the material, without requiring them to sit through repetitious explanations. (p. 1)

As presented by Hart et. al., (2019) the pacing of the courses may directly benefit students in the ability to have student-centered learning plans, where inherently each student chooses his or her pace of learning.

Heppen et. al. (2017) reported that "credit recovery is one of the fastest growing areas of K-12 online education and credit recovery is one of the most common purposes that school districts use for online courses" (p. 274). The United States Department of Education (2018) reported that, "during the 2014–2015 school year, 63% of U.S high schools provided online credit recovery courses and 41% of high schools provided a blended model or credit recovery" (Rickles et al., 2018, p. 1). Alternative online programming can be used for multiple students, even for credit recovery, according to Heppen et. al. (2017), and may be one of the most prolific:

> All indications are that states and districts will continue to make significant investments in infrastructure to provide online courses to students in the K-12 setting, yet rigorous evidence of the impact of online credit recovery on student learning and later academic outcomes is distinctly lacking. (p. 275)

In the era of accountability, schools need to find ways that provide alternative routes to graduation for students who may fall short of the finish line, as Dessoff (2009) presented the following information about offering students second chances by arguing, "there is more pressure today than ever to help students stay in school and graduate on time" (para. 1). The focus on schools has shifted towards other areas to improve in recent years as presented by Malkus (2019), "the gauging of high school quality remains narrowly focused on two available measures: test scores and high school graduation rates" (p. 3).

Graduation rates have increased and according to Malkus (2019), this connects, at least in part, to the rise in credit recovery programs as “these programs provide makeup courses, often involving online instruction, that allow students who have fallen behind or failed a high school class to earn credits and get back on track to graduate” (p. 3). The importance of keeping students on track to graduate has been a focal point of local, state, and national measures and policies. The onus on schools to show increased graduation rates has been a focal point of school districts and research, as reported by Malkus (2019) who explained that “between 2011 and 2017, U.S. graduation rates rose from 79 to 84 percent, an all-time high and the fifth record in a row since the federal government redefined how graduation rates are calculated and reported” (p. 3).

The impact of student choice in learning continues to be a focal point of alternative, online programs. While it is important as a mark of accountability, it is also important to understand that each graduation statistic represents students and their ultimate goals and successes. As school districts work to adapt to learning and offer alternative platforms and opportunities to earn credit, it stands to reason that a focus of the research should review how current students feel about their alternative, online programming and what could be improved upon as teachers, counselors, and school leaders review the data as reflective practitioners.

As education continues to find ways to meet all student needs, virtual education and alternative online programming need to be at the forefront of the conversation, as “We need to look at it as what are all of the ways that we can meet kids' needs and it does not have to be one mode or the other” (N. Lemmon, personal communication, March 10, 2022). As online opportunities continue to grow in all education sectors, alternative

online programming has been a necessary solution for students to find success in high school and stay on track to graduate. As the research has reviewed graduation rates and schools are held accountable to graduate, it can stand to reason that alternative online programming will continue to be a solution to close the gaps in credit-deficient students. School districts are not limited to ensuring that student learning comes from paper and pencil. Online learning provides needed opportunities for students to learn from anywhere and not be limited by the student's zip code.

As the needs of students continue to develop, it stands to reason that engagement in an alternative online program may be sufficient enough to produce student ownership of learning. The importance of quantifying the impact of engagement in online learning as engagement relates to course completions and impactful strides towards graduation is critical. Students in these programs have already demonstrated struggles due to failing courses and falling behind their graduation cohort. The importance of staying on track to graduate cannot be overstated, as the graduation rate directly impacts both a school district's report card and significantly impacts the post-secondary opportunities for students.

Summary

Chapter Two centered on the history of online learning, the growth of online learning, online student engagement, and alternative online programming. Through these lenses, the research was reviewed to determine what effect student engagement has on the success of online programs. The information was gathered from peer-reviewed sources and it will be used, along with the information from Chapters Three and Four, to answer the research questions.

Educational institutions are created to provide a service to the community, including providing considerable support in various areas of need for students the institutions serve. As the development of online learning has progressed, a focal point has been accessing the curriculum and instruction. In 2022, Missouri House Bill 1552 was passed which states, “any student under the age of twenty-one in grades kindergarten through twelve who resides in this state shall be eligible to enroll in the Missouri course access and virtual school program” (H.B 1522, 2022, p. 8). This is not just a shift in educational pedagogy, but rather a comment on equitable access to online learning; regardless of where a student may reside in the state of Missouri, he or she should be able to access learning online. The following paragraphs will introduce the information that will be reviewed in Chapter Three.

Chapter Three aims to investigate to what extent, if any, student engagement in online learning benefits students. Moreover, how the levels of engagement in online learning programs affect student success in the programs, or program completion is studied. By exploring these aspects, the information may provide valuable insights into the correlation between online learning engagement and student outcomes, in order to inform educational practices and improve student success in digital learning environments.

Alternative online programming, as previously mentioned, has become a focal point of research, looking at what opportunities are available for students and what opportunities may be available for students in the future. Moreover, what gaps in learning can be addressed through alternative programming? Chapter Two reviews student engagement, the growth of online learning, and the history of online learning. Student

engagement was measured in this research project through the use of embedded surveys of students and the completion rates of students in credit recovery programs. Chapter Three will explain the methodology of the project and the specific measures used to address the research questions. An important aspect of the project connects student engagement with course completion to determine to what extent student engagement affects course completion in the alternative online programming. Chapter Three analyzes student input regarding their successes in online learning, surveying students with specific questions to determine engagement levels. This allows for student voice in the research project.

Chapter Three: Methodology

This study used quantitative measures to collect data which was analyzed through correlational analysis to determine to what extent student engagement correlated to positive student outcomes or completion of the course. Mohajan (2020) stated, “the word ‘quantitative’ means quantity or amounts (how many) information collected in the course of the study and is in quantified or numeric form” (p. 2). Creswell and Creswell (2018) stated, “Quantitative data are used to test a theory by specifying narrow hypotheses and collection data to support or refute hypotheses” (p. 17).

Students who participated in online alternative programming during the summer session completed an engagement survey at the end unit of each course. The students were asked specific questions regarding their engagement levels while completing the coursework. The results of their answers assisted in determining if there was a correlation between a student’s engagement level and the successful completion of an online alternative program. Previous research has shown that “students who are more engaged do better academically and show more favorable psychological adjustment” (Fredricks et al., 2019; Li & Lerner, 2011; Reeve, 2013; Wang & Peck, 2013). While many students were working on an alternative online program during the summer session, not all completed the class. Two days before the end of the summer session, all students who started the course received an engagement survey. The questions in both surveys were identical. The only difference in the surveys was the introductory paragraph. Some of the students were at the end of the course and other students, who started the course with only two days left to complete the course, did not finish.

To find to what extent student engagement in online alternative programs benefits students, the research was conducted during the summer session. There are two forms of data to ensure the correlations are illuminated. To begin, the students completed a survey that is part of the coursework of the class. The survey results provide quantitative data for the research. Additionally, an analysis of the data on student completion in the program provided the quantitative data required to determine the connection between student engagement to course completion.

Problem and Purpose Overview

The problem being analyzed is to determine to what extent, if any, student engagement leads to the successful completion of an online alternative program. Bond (2022) presented, "Enhancing and maintaining student engagement is an important goal of educators, given its link to improved persistence, achievement, and retention" (p. 2). The issue that arises is a lack of clarity in how engagement connects with the completion of programs with foci on both the number of students completing the program and the feedback from students on how their engagement in the learning added to their successful completion of the programs. In the research project, there are five levels of engagement, ranging from one to five, with five being the most engaged students, based on the number of engagements students had with their educator. Chapter Three will illuminate the extent to which engagement in the course led to course completion of the aforementioned scale.

The purpose of the study was to shed light on current research regarding both student engagement and alternative programs while connecting them to the research project in the district of study. The current gaps that exist in research about how the level of student engagement aids in the completion of programs from the students' perspectives

will be addressed in the research. The information is important to the educational field of research and the current and future teachers, counselors, and leaders of online, alternative programs of study. The focal point of the study was student engagement and completion of the online program.

Research Questions and Hypotheses

1. What is the difference between the level of student engagement of students who successfully completed an alternative online program and students who did not?

$H1_0$: There is no difference between the level of student corona of students who successfully completed an alternative online program and students who did not.

2. What was the level of engagement for students who successfully completed an online alternative program?
3. What was the level of engagement for students who did not successfully complete an online alternative program?

Research Design

The research project used a quantitative method to provide data regarding the number of successful student program completions in the online alternative program being reviewed. This information was publicly reported and does not reveal any identifiable information about students or staff. Students enrolled in their online alternative programming which started the Spring semester of 2022. Participants' online alternative programming start[ed] June 6th and ende[d] July 29th. Alternative online education programming students could enroll in the course at any time unti[l] July 27th (N. Lemmon, personal communication, February 7, 2022). Online alternative education programming is mastery-based and students could complete courses at any time

throughout the session. When students were at the end of the course, the students were asked to complete an engagement survey that was part of the course. The engagement survey was voluntary and did not have any impact on the student's coursework if the student chose not to complete the survey. Two days before the course closing, any student who had started but not completed the course received an engagement survey.

The information provided to students regarding their engagement in the course was embedded into the course upon completion as feedback for the program and was data used in this current research. The information that was attained was then deidentified and no student names or identifying information were used for this study. Students were assigned unique identifiers which the program director validated for completion or non-completion of the course.

Population and Sample

A random sample size of at least 50 participants allowed for accurate data to be collected to determine if there was a difference between the levels of student engagement and the successful completion of an online program. Participating students were enrolled in school districts in Missouri. Participants could have been from multiple school districts across the state of Missouri and were enrolled through their district of attendance. Determining the adequate sample size in quantitative research is ultimately a matter of judgment and experience in evaluating the quality of the information collected against the uses to which it will be put, the particular research method and purposeful sampling strategy employed, and the research product intended (Sandelowski, 1995).

All students completed the same survey questions. When the students had one unit left to finish the program, they were provided the Secondary Data Survey-Completer

(Appendix A) in which the students provided feedback regarding their experiences in the course. Two days prior to the close of the summer session, the Secondary Data Survey-Non-Completer (Appendix B) was sent to all students who had been involved in the program, but who had not finished the course. The purpose of this survey, sent to all students, was to get feedback from those who completed the course(s) and to determine possible reasons students did not complete the requirements for recovering the credit previously lost.

Instrumentation

The survey questions were created for this study to determine levels of engagement from the students' perspectives and if the supports offered by the teacher impacted the students' completion of the program. The questions were created to identify all of the supports offered by teachers currently in the online alternative program. These included but were not limited to scheduled live zoom sessions, varied types of apps for communication with students, parents, and guardians, and a Google resource document created by the teacher. There were also open-ended questions used to allow students the opportunity to provide feedback as to what additional resources were needed to help them be successful.

The data from the surveys were used to determine to what extent the levels of engagement of students led to completing the course. There were two groups, those who did and those who did not complete the course. For purposes of the study, the students will be referred to as "Completers" and "Non-Completers." The data were used to determine to what extent the levels of engagement of the two groups impacted the percentage of course completions. Moreover, the data will be used to determine if

students on lower levels of engagement completed the course at the same percentage rate as those on the higher levels of engagement.

Reliability

Sürücü and Maslakci (2020) stated, "Reliability is an indicator of the stability of the measured values obtained in repeated measurements under the same circumstances using the same measurement system" (p. 2695). The surveys were completed within the course through Watermark Course Evaluations and Surveys. The surveys could help to ensure the information was credible and pertinent to the research project while protecting the confidentiality of students. As the surveys were a part of the program itself, the information was an integral aspect of the feedback provided by students for the improvement and analysis of the alternative online program. The survey results did not have any identifiable student information. All students were assigned a unique identifier through the virtual program.

Validity

Creswell (2014) stated, "If themes are established based on converging several sources of data or perspectives from participants, then this process can be claimed as adding to the validity of the study" (p. 201). Lewis (2022) asserted, "Validity describes the extent that available evidence supports the use and interpretations of the data collected. Validation is the process of collecting and compiling this evidence" (para. 2). The district where the research was completed provided its approval of the project in accordance with the granted permission of the administrator over virtual learning. The information from the surveys sent to students was checked for common themes and to eliminate any possible biases. Surveys were provided and recurring themes were

examined from data drawn from the survey instrument. The survey data from students completing courses were reviewed by an external auditor to ensure an accurate interpretation of data findings.

Another strategy to ensure the validity of this study was to triangulate the data. The cooperating district provided approval for the study and a district official to review the data to ensure valid results. The study supervisor and a district representative reviewed the research outcomes to ensure validity. The data were analyzed by the administrator over virtual learning in the cooperating district, as a representative of the district where the data were collected.

Descriptive Data

There were two separate surveys for Completers and Non-Completers, and all students were given unique student numbers. For Completers, students were given an identifier with an "S" and then a student number (e.g., "S12"), while Non-Completers were given a "SS" and then a student number (e.g., "SS4"). This was provided by the online provider (Launch), to both be able to track the students' successes and to ensure student information was confidential. Launch ensured the data were reliable to guarantee the accuracy of representation of the program and to be able to share this data with stakeholders. In this study, the two central research questions are to be answered with the aforementioned data. Research question two was to determine the level of engagement for students who successfully completed an online alternative program and research question three was to determine the level of engagement for students who did not successfully complete an online alternative program. The Completers and Non-

Completers were given separate surveys to determine the differences in engagement of the two groups and to ensure the data were reliable.

Data Collection

Students were enrolled in an online alternative program during the summer session of June 6, 2022, through July 29, 2022. Students may have been enrolled in more than one alternative online class at a time. For students who were enrolled in more than one course at a time, the student had the option of working on one course at a time or working on all courses simultaneously. It was a common practice for many students to start one course and finish the course before starting another course. This was especially true when students were taking the semester 1 and semester 2 courses in an alternative online course based on a previously failed class. As students worked through their course, they completed units based on a mastery path. When a student who had been working on the course was at the end of the unit, the student was prompted to complete the *Student Engagement— Survey - Completers (*Appendix A*)*. The answers were collected through the school district and disaggregated to ensure that all identifying student information was removed and student responses remained anonymous. Two days before the end of the summer session, all students who made at least one submission in a course but did not complete the course were asked to complete the *Student Engagement— Survey - Non-Completers* (Appendix B). During the time frame that the student engagement surveys were to be given, surveys were paused from June 13, 2022, to June 20, 2022. This was due to the Attorney General request through Sunshine Law for all engagement surveys that were sent out to guardians and/or students.

Data Analysis

All student survey responses were stored in the Learning Management System and results were compiled on a spreadsheet. Responses were reported as individual responses. Students may have had more than one response due to being enrolled in more than one alternative online course at a time. Data were analyzed as related to the research questions of the study to ensure the information was reliable and valid. The themes of the surveys were noted for common data points and to create a clearer picture for the research. For course completions, the information was publicly available and did not include any identifying information about students or staff. The data were simply the number of course completions in the online alternative program in a set period, as previously mentioned.

Student levels of engagement were placed into five levels of support, with level one being the lowest level of engagement wherein students did not use any supports offered by the teacher. The next four levels are broken down by the number of supports accessed: from level two, meaning a student accessed one support; to level three, meaning a student accessed two supports; to level four, meaning a student accessed three levels of support; and finally, in level five, where students accessed four supports. The percentages of Completers and Non-Completers were broken down as found respectively, to show the success rates of each group by level of engagement.

Ethical Considerations

All student information was kept confidential and no identifiable records were used in the study. The school district and the administrator over virtual learning were provided with the protocols of the study and the agreement that all records would be

confidential. The school district provided its approval of the study in accordance with the policy that outlines the specifics of ensuring the confidentiality of the participants in the study. Students were provided the opportunity to provide feedback on the course regarding its effectiveness and the student's engagement in the course. Specific quotes of responses from the survey were coded to further ensure participants or their responses are not identified. The information will follow the format of "Student (S)" and a number after.

Summary

The research methodology design utilized for this study was presented in Chapter Three. The problem and purpose of the study were introduced as well as the research questions and hypotheses. The sample population used for this study was presented along with the reasoning behind why a quantitative study approach was utilized as well as the instrumentation and data collection process. The analysis of data was outlined in this chapter. The validity and reliability of the instruments used in the process of the research project were explained, indicating a review of the cooperating district's officials, and the adherence to sound practices as outlined previously to ensure the project addressed the research questions.

In Chapter Four the analysis of data from the individual student responses is presented. Individual student responses to the open-ended questions are also provided. Overall correlative data are presented in Chapter Four. In Chapter Five, a summary of the findings and conclusions are discussed.

Chapter Four: Analysis of Data

The purpose of this study was to investigate if student engagement has an impact on a student's successful completion of an online alternative course. The topic was chosen because alternative online programming is becoming a high-priority topic in the education world due to the heightened attention to graduation rates. As Atwell et. al., (2019) stated, "while credit recovery courses have long been in existence to help students failing core coursework to graduate, the advent of computer technology has allowed credit recovery courses to help more students earn their diploma in a timely manner" (p. 39). In this study, the completion rates of alternative online classes during the summer sessions of June 2022 through July 2022 were examined.

In Chapter Four, data analyses are reported by individual student responses from the Student Engagement Survey. The quantitative data used for the purposes of this research was secondary data from credit recovery courses. The credit recovery courses were designed on a mastery path. The credit recovery students had previously taken the course and had been exposed to the curriculum. The credit recovery classes were divided into units. Each student took a pre-test for each unit. If a score of 80% or above was earned, the student moved to the second unit. If the student did not score an 80% or above, then the student needed to complete all assignments in the unit at 80% or above.

Two surveys with the same questions were given during the summer session due to the nature of the credit recovery course. The different surveys were based on whether a student had completed the credit recovery course or had started the coursework but did not finish. The first survey was sent to students when they were at the end of their course. The virtual program provided certification that all 305 students who took the first survey

completed the course (Completers). The survey was sent and the students had the option of completing the survey. With two days left in the summer session, any student who started but had not completed the course was sent the second (Non-Completers) survey. The survey questions for the two surveys were identical, but the introduction paragraphs were different.

A quantitative research design was utilized in this study. The results of this study were used to determine if there were gaps when addressing support and student needs in the alternative online programming. Loewenberg (2020) stated, “when implemented well, online credit-recovery can be a lifeline to struggling students, providing personal learning experiences and a path to graduation” (p. 50). Students also had an opportunity to provide responses to specific questions. These responses were categorized into themes for the purposes of this study as “themes pertain to a shared topic with regard to area of focus rather than summaries of data domains” (Braun & Clarke, 2019; Wu & Zammit, 2020, p. 2).

Organization of Data Analysis

The purpose of this chapter was to present a summary of the data that were collected regarding student engagement in an online alternative course. The goal was to identify if student's level of engagement affected their course completion. Moreover, the purpose was to determine if students with higher levels of engagement had higher completion percentages than students with lower levels of engagement. Two separate surveys were provided to the two groups, Completers and Non-Completers, to ensure data were connected to each group specifically, and to ensure the reliability of the data.

The reliability of the data was also ensured by the Launch program in the urban district where the research was completed.

Data were collected at two different times from June 2022 through July 2022. A student engagement survey was sent to students who had one unit left to complete in their alternative online program. This first survey yielded 305 responses from online learning students. When there were two days left in the summer session, students who had completed at least one assignment, but would not complete the course, were given the same survey. The only difference between the two surveys was the introduction paragraph. The second student engagement survey yielded 50 responses. Both surveys consisted of 10 questions.

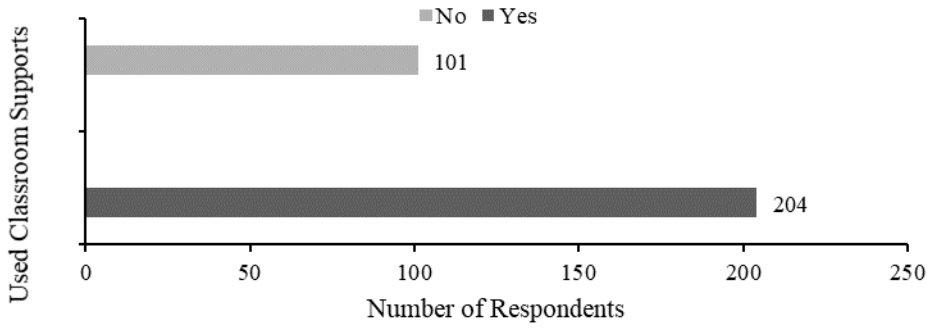
Survey Question Response-Completers

Survey Question One: "I used support offered by the classroom teacher to complete the course."

This question yielded 305 responses. Of the 305 student responses, 204 students (66.89%) reported that they used support offered by their classroom teacher, while 101 students (33.11%) reported that they did not use the support offered by their classroom teacher (see Figure 2). Students who responded "No," to the questions were given an opportunity to explain why they did not use the support offered by their teacher. The response rate for question one was 100% with 305 out of 305 responses.

Figure 2

Survey Question One-Support Offered by Classroom Teacher



Open Student Responses to Question One. In the first question of the survey the students were asked to respond to: "I used support offered by the classroom teacher to complete the course." Of the 305 responses, 101 students replied, "No," to question one. Students who responded, "No," were then prompted to explain why they did not use any support offered by their classroom teacher. Eighty-three students provided a response to this question. The responses were categorized into four themes: *I did not need help/had prior knowledge of the content; Everything I needed was provided in the course; I had support from home or school to help me;* and *Other*.

I Did Not Need Help/Had Prior Knowledge of the Content. Of the 83 students who provided a response, 48 students (57.8%) provided a response that they did not use the support offered by the classroom teacher because they did not need any help or they had prior knowledge of the content. Responses ranged from but were not limited to, "I already had the knowledge to complete my first two pretests' and didn't need assistance" (Student S1), "I knew what I was doing" (Student S6), and "didn't need" (Student S31).

Everything I Needed Was Provided. The second theme that emerged was students did not use the support that was offered by the classroom teacher because everything they needed was already provided. Of the 83 students who provided a response, nine students (10.8%) provided responses that ranged from but were not limited to, “I understood what she wanted based on her instructions” (Student S142), “It was explained well enough” (Student S240), and “I had the help that was needed in the classroom” (Student S91).

I Had Support at Home or School. The third theme that emerged from the student responses, from those who were taking the online class, was getting support at home or from their home school. Of the 83 students who provided responses, 16 students (19.2%) provided responses that ranged from but were not limited to, “My parents helped” (Student S123), “I had my counselor work with me” (Student S64), or “I had a private tutor” (Student S232).

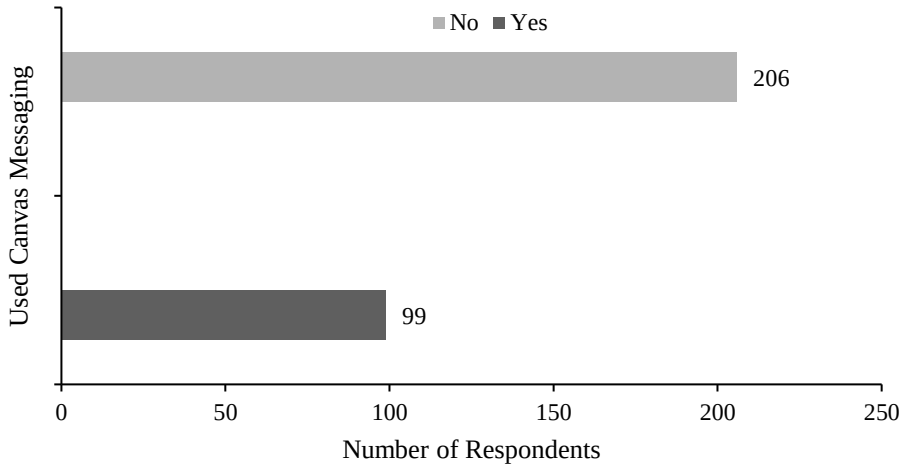
Other. The fourth theme that emerged from the student responses fell into the category of *Other*. These students’ responses did not provide any additional insight as to why the supports offered in the classroom were not used. Of the 83 student responses, 10 students (12%) provided responses that ranged from but were not limited to, “I am an online student” (Student S126), “I wasn’t in the classroom” (Student S174), and “I was in a hurry” (Student S209).

Survey Question Two: “I sent my teacher a Canvas Inbox message(s) to ask for help on at least one assignment.”

There were 305 student responses for question two. Of the 305 student responses, 99 (32.46%) students answered ,“Yes,” and 206 (67.54%) students responded, “No,” (see Figure 3). The response rate for question two was 100%, with 305 out of 305 responses.

Figure 3

Survey Question Two- Canvas Inbox message(s) Sent for Help



Open Student Responses to Question Two. Students who responded, "Yes," to question 2 were given an option to provide a response to the question, "How did Canvas messaging your teacher assist you?" Of the 99 who responded that they sent a Canvas message to their teacher, 40 students (40.4%) provided a response. Responses were categorized into four themes: *To get more attempts on a test; To get help from my teacher/ask question; I did not need help*, and *Other*.

To Get More Attempts. Nine students (22.5%) responded that they sent a Canvas inbox message to their teacher to get more attempts on a pre- or post-test. Student responses ranged from but were not limited to, "He let me have three more attempts on my final test/assignments so I correct my mistakes on previous tries" (Student S5), "To unlock a post-test for me" (Student S38), and "I was really close on one of the post-tests and she gave me another chance" (Student S149).

To Ask the Teacher Questions/Get Help. Of the 40 students who responded to why they sent their teacher a Canvas inbox message, 17 students (42.5%) responded they needed to ask their teacher for help or to get assistance with an assignment. The responses from the students ranged from but were not limited to, "It helped me finish my assignments" (Student S194), "Just needed to figure out if I was supposed to complete an assignment module" (Student S292), and "I asked my teacher if I had any other assignments to do after finishing all the pre-test and units" (Student S117).

I Did Not Need Help. Of the 40 students who responded to question 2, nine students (22.5%) provided a response that they did not need any help. The responses from the students ranged from but were not limited to, "My parents helped" (Student S123), "I understand the subject" (Student S24), and "Did not need it" (Student S154).

Other. Five students (12.5%) who responded to question 2 provided an answer that did not provide additional details on how sending a Canvas inbox message assisted the student with the class. Students' responses ranged from but were not limited to: "Just let them know I could not go to a zoom meeting" (Student S87), "Because my stepmom gave me the help I needed" (Student S236), and "It helped me understand" (Student S153).

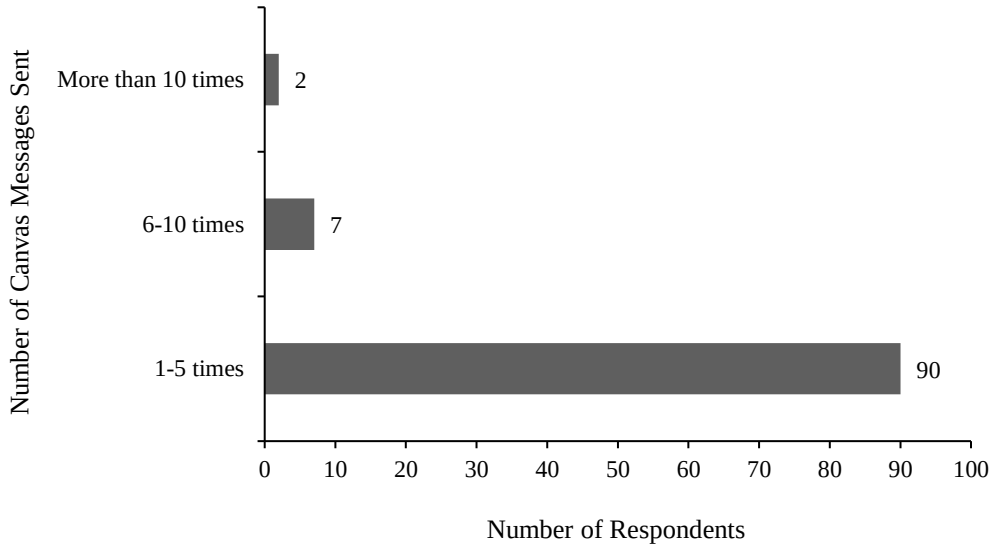
Survey Question Three: "How many times did you send your teacher a Canvas Inbox message to ask for help?"

Question three yielded 99 student responses. Students were able to choose from the following options: 1–5 times, 6–10 times, or more than 10 times. Of the 99 student responses, 90 (90.91%) students chose that they reached out to their teacher 1–5 times, seven (7.07%) students responded that they reached out to their teacher 6–10 times, and

two students (2.02%) responded that they reached out to their teacher more than 10 times (see Figure 4). The response rate for question three was 32.46% with 99 out of 305 responses.

Figure 4

Survey Question Three- The Number of Times You Sent a Canvas Inbox Message

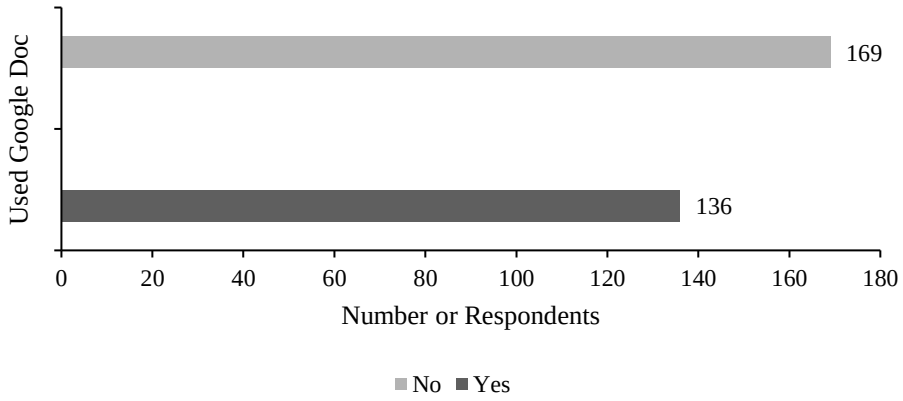


Survey Question Four: "I used the Google Doc resource provided through my teacher's announcements to get assistance on at least one assignment."

Student engagement question four generated 305 student responses. Of the 305 student responses, 136 (44.59%) students responded "Yes," and 169 (55.41%) students responded, "No" (see Figure 5). The response rate for question four was 100% with 305 out of 305 responses.

Figure 5

Survey Question Four- I Used the Google Doc Resource Provided

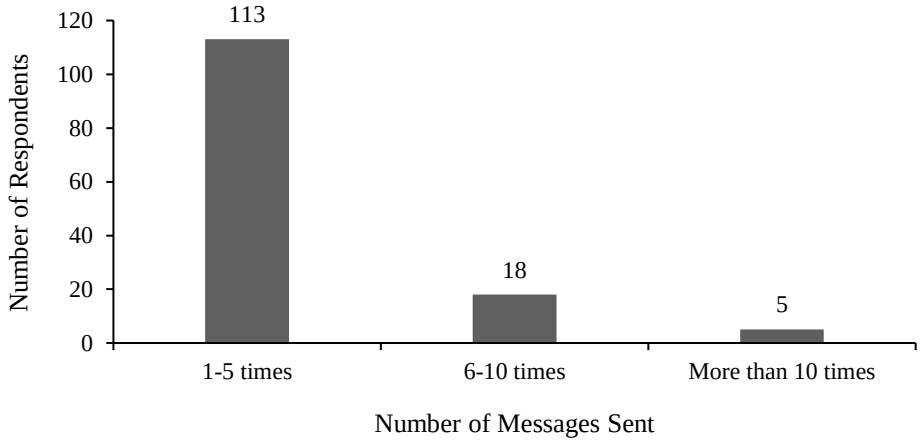


Survey Question Five: "How many times did you use the Google Doc resource provided through your teacher's announcements?"

Student engagement question five allowed students to choose from the following options: 1–5 times, 6–10 times, or more than 10 times. There were 136 student responses to question five. Of the 136 responses, 113 (83.09%) students responded that they used the Google Doc 1 to 5 times, 18 (13.24%) students chose 6—10 times, and five (3.68%) students chose more than 10 times (see Figure 6). The response rate for question five was 44.59% with 136 out of 305 responses.

Figure 6

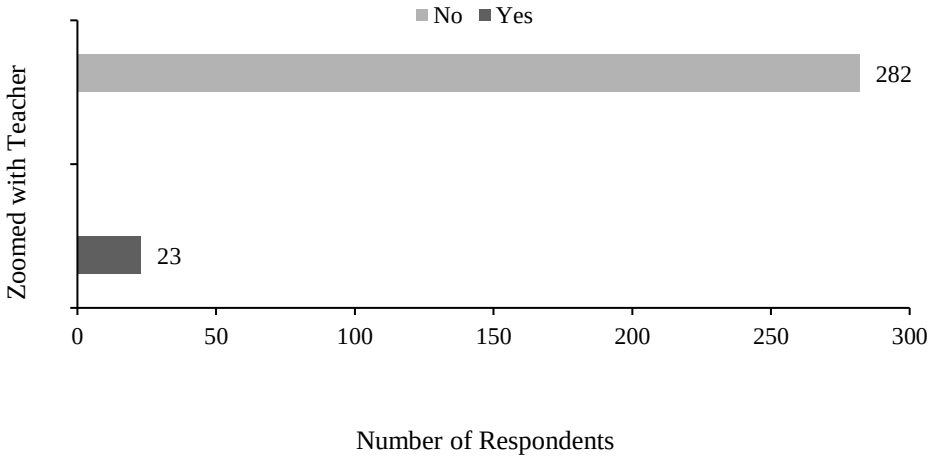
Survey question Five- How many times did you use the Google Doc Resource



Survey Question Six:" I zoomed with my teacher to get help on at least one assignment."

Figure 7

Survey Question Six- I Zoomed with my Teacher.



Question six of the student engagement survey yielded 305 student responses. Twenty-three (7.54%) students responded "Yes," and 282 (92.46%) students responded, "No"

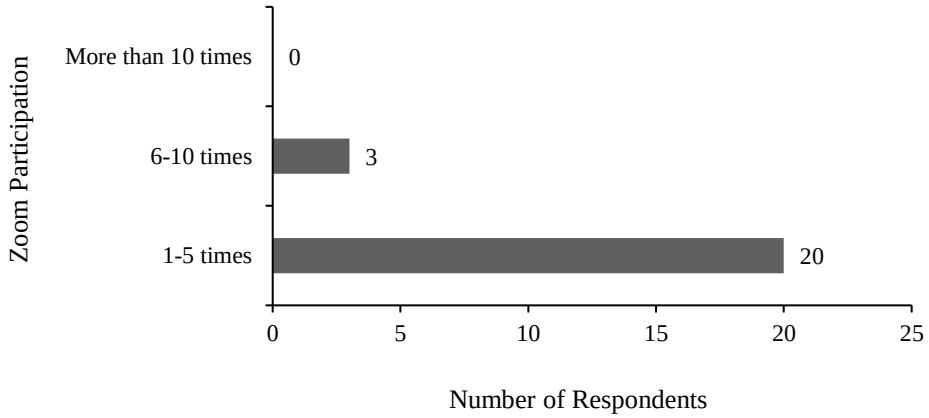
(see Figure 7). The response rate for question six was 100% with 305 out of 305 responses.

Survey Question Seven: "How many times did you zoom with your teacher?"

The 23 students who responded, "Yes," to survey question six were given the following options to choose from 1–5 times, 6–10 times, and more than 10 times. Twenty (86.96%) of the students reported that they zoom with their teacher 1–5 times, three students (13.04%) responded that they zoom with their teacher 6–10 times, and zero (0%) students responded that they zoomed with their teacher more than 10 times (see Figure 8). The response rate for question seven was 7.54%, with 23 out of 305 responses.

Figure 8

Survey Question Seven- Number of Times you Zoomed with Your Teacher



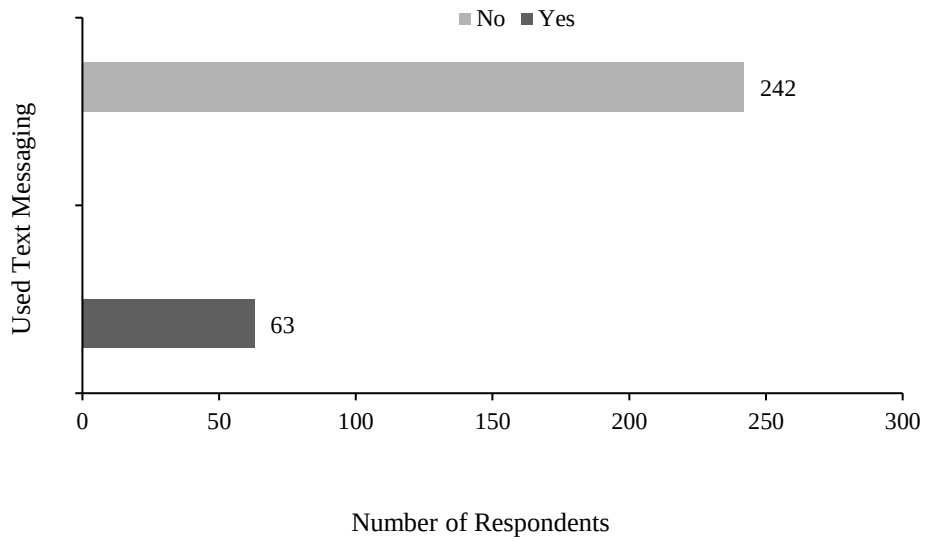
Survey Question Eight: "I sent a text message to my teacher to get help on at least one assignment."

Student Engagement Question Eight yielded 305 student responses. Of the 305 student responses, 63 (20.66%) students reported, "Yes," and 242 (79.35%) students

responded, “No,” (see Figure 9). The response rate for question eight was 100% with 350 out of 350 responses.

Figure 9

Survey Question Eight- I sent a Text Message to My Teacher

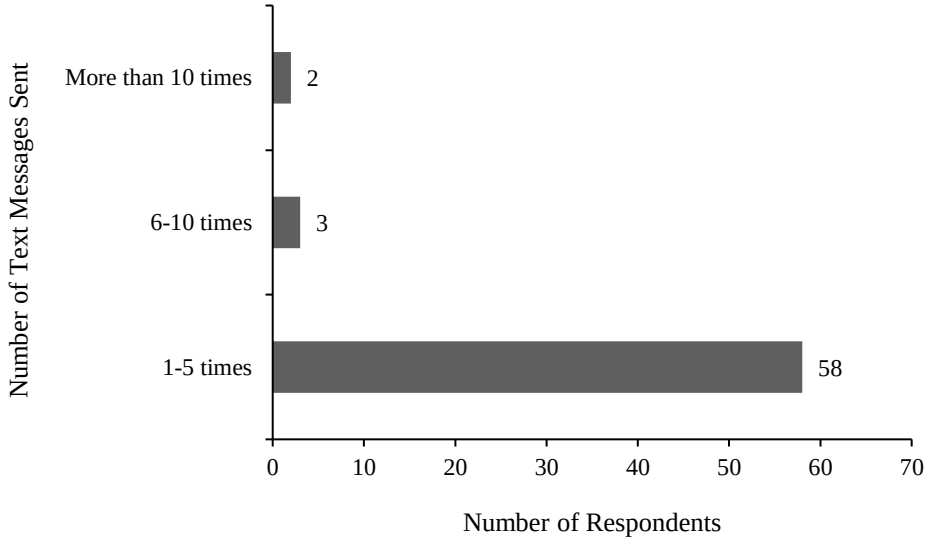


Survey Question Nine: “How many times did you send your teacher a text message to get help on an assignment?”

The 63 students who responded, “Yes,” to student engagement survey question eight were asked how many times they zoomed with their teacher. The students could choose from the following options: 1–5 times, 6–10 times, or more than 10 times. Fifty-eight (92.06%) students reported that they zoomed with their teacher 1–5 times, three (4.76%) students reported they zoomed 6-10 times, and two (3.17%) students reported they zoomed with their teacher more than 10 times (see Figure 10). The response rate for question nine was 20.66% with 63 out of 305 responses.

Figure 10

Survey Question Nine- How Many Times Did You Send a Text Message



Survey Question Ten: "Are there any resources you wish were available to you to complete your course that Launch did not provide?"

Student responses for survey question 10 were open-ended questions. Students had the opportunity to write in any additional resources that they wished were provided to assist them with their course. This question yielded 179 responses with a response rate of 58.69%.

Open Student Responses to Question Ten. Question 10 of the survey asked the students, "Are there any resources you wish were available to you to complete your class that Launch did not provide?". There were 179 students (58.6%) that responded to question 10 out of 305 students. The responses can be categorized into five themes: No, additional tools (calculator, magnifying glass), additional support on assignments, being able to see the answers that students answered incorrectly, and other.

No. One hundred fifty-five students (88%) responded, "No," or some variation of, "No," in response to whether the students wished any additional supports were provided. Student responses ranged from but were not limited to, "No, everything was self-explanatory" (Student S80), "Not really, everything I needed was there" (Student S185), and "None that I can think of" (Student S204).

Additional Tools. In response to asking if there were any additional resources that were offered, eight students (4.5%) referred to additional tools being available on the course. Student responses ranged from but were not limited to "Magnifying glass tool or tool to help read one line at a time; I unfortunately broke my glasses; and it was a struggle to read some questions and I got them wrong due to this" (Student S60), "Calculators" (Student S61), and "things to help read one line at a time" (Student S87).

Support on Assignments. Out of the 167 students who responded to question 10, three students (1.7%) responded that they wished that additional support with assignments was available. Student responses ranged from but were not limited to "A little more information about the test" (Student S57), "More things to help on the test because most of the stuff we didn't learn or remember" (Student S110), and "I wish the questions on the test matched the question on the videos we had to watch, like the same concept but not the same question" (Student S132).

Answers to Assignments. Two students (1.2%) responded that the additional support they wished was offered was providing answers to the questions they did not get correct. The two students' responses were "Answer sheets for every test and assignment" (Student S282) and "When we take the test, I wish I could've seen what I got wrong" (Student S64).

Other. Of the 176 students who responded to question 10, eight of the students (4.5%) provided responses that would be categorized as Other. The student responses ranged from but were not limited to, “Like a notebook talking about the times in history” (Student S190), “More websites that can help when teachers aren’t able to help” (Student S188), and “I wish there was at least one zoom meeting for the students to come all together to just say ‘Hi’ or to ask questions. It could also help with learning about a unit if a student did not understand the way it was taught one of the slides” (Student S117).

Student Survey Responses- Non-Completers

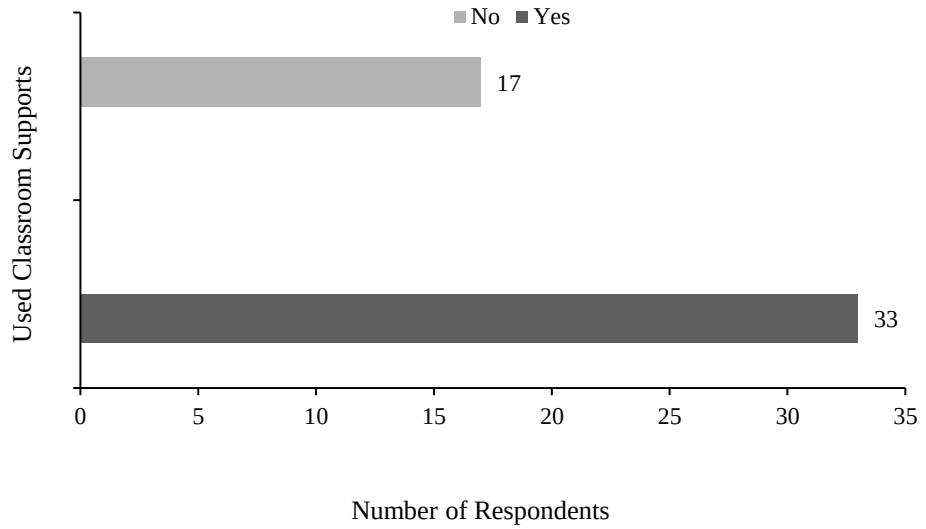
When there were two days left in the summer session, any student who had completed at least one assignment in the course was sent the End of Term Survey. This survey yielded 50 student responses. The survey questions were identical to the One Unit Left survey. The only difference was the introduction paragraph.

Survey Question One: “I used support offered by the classroom teacher to complete the course.”

This question yielded 50 responses. Of the 50 student responses, 17 students (34.00%) reported that they did not use the support offered by their classroom teacher. Students who responded, “No,” to the questions were given an opportunity to explain why they did not use the support offered by their teacher (see Figure 11). The response rate for question one was 100% with 50 out of 50 responses.

Figure 11

Survey Question One- Support Offered by Classroom Teacher



Open Student Responses to Question One-End of Term. There were 17 students who responded, "No," to question one. Those students had an opportunity to provide a response as to why they did not use the supports offered by their classroom teacher. Of the 17 students who could respond, 10 students provided a response. All responses could be put into two themes: The students did not need help or they had help from someone at school/home.

I Did Not Need Help. Eight of the 10 students (80%) provided a response that they did not need additional help. Student responses ranged from but are not limited to "Didn't feel the need to" (Student SS12), "I didn't need it. Everything is pretty straight forward" (SS17), and "I like independently working and I have anxiety so it makes me more comfortable to do things alone" (Student SS41).

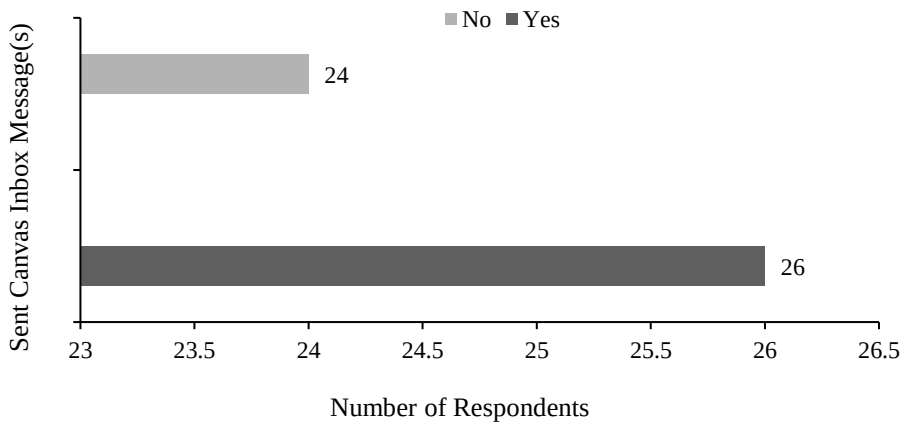
I Had Support from Home. Two students responded that they did not use the supports offered by the classroom teacher because they had support from home. Student SS20 stated, “I had some help from my friend — I was able to do the rest by myself” and Student SS30 stated, “I didn’t need help with most because I had help at home”.

Survey Question Two: “I sent my teacher a Canvas Inbox message(s) to ask for help on at least one assignment.”

There were 50 student responses for question 2. Of the 50 student responses, 26 (52%) students answered, “Yes,” and 24 (48%) students responded, “No,” (see Figure 12). The response rate for question two was 100%.

Figure 12

Survey Question Two: Canvas Inbox Message(s) Sent for Help



Open Student Responses to Question Two. Students who responded, “Yes,” to question two were given an option to provide a response to the question, “How did canvas Messaging your teacher assist you?” Twenty-six students responded, “Yes,” to question two. Of the 26 students who responded, “Yes,” eight students provided a

response as to why Canvas messaging their teacher assisted them in the course. The responses could be placed in two themes: Needed Additional Support or Other.

Needed Additional Support. Six of the eight students (75%) who provided a response could be themed as needing additional support or they had questions in the class. Student responses ranged from but were not limited to, “He is a very good teacher and the Canvas inbox message helped me through communication” (Student SS7), “Confused re login/questions” (Student SS13), and “My teacher converted Word documents to Google Docs so that I could do my assignments, my computer wouldn’t let me edit in Word” (Student SS41).

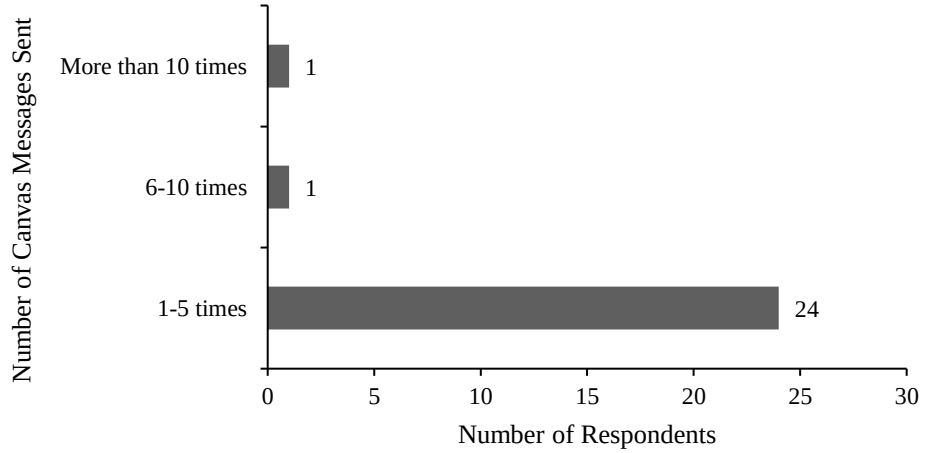
Other. Two of the eight students (25%) provided a response that would be categorized as Other. Student SS5 stated, “Because he never responded” and Student SS9 stated, “I would have passed this class if I did my final so I didn’t need help”.

Survey Question Three: “How many times did you send your teacher a Canvas Inbox message to ask for help?”

Question three yielded 26 responses. Students were able to choose from the following options: 1–5 times, 6–10 times, or more than 10 times. Of the 26 student responses, 24 (92.31%) students responded that they reached out to their teacher 1–5 times, one (3.85%) student responded that they reached out 6–10 times, and one (3.85%) student responded that they reached out more than 10 times (see Figure 13). The response rate for question two was 52% with 26 out of 50 responses.

Figure 13

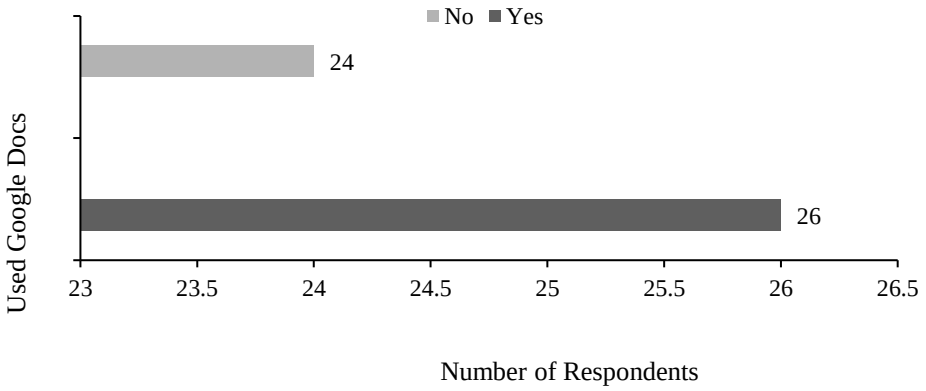
Survey Question Three- The Number of Times You Sent a Canvas Inbox Message



Survey Question Four- "I used the Google Doc resource provided through my teacher's announcements to get assistance on at least one assignment."

Figure 14

Survey Question Four: I Used the Google Doc Resource Provided



Student engagement question four generated 50 student responses. Of the 50 student responses, 25 (50%) students responded "Yes," and 25 (50%) students responded,

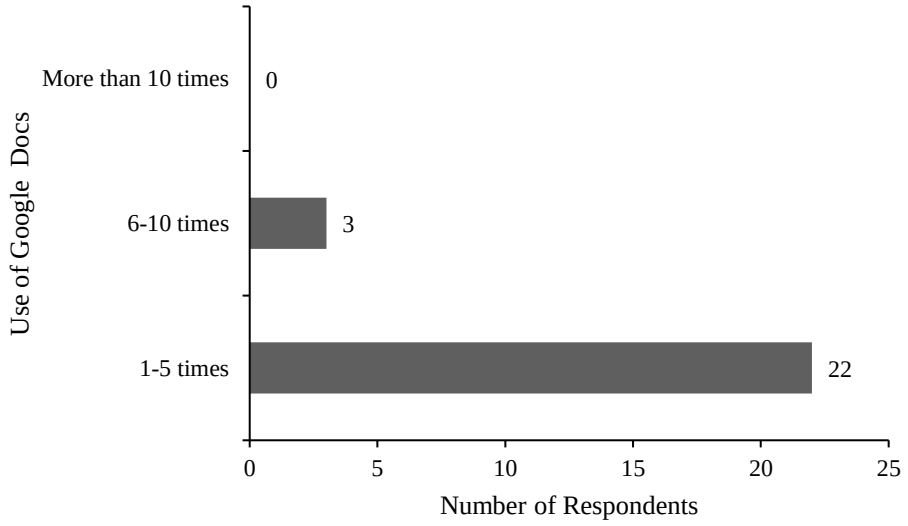
"No" (see Figure 14). The response rate for question four was 100% with 50/50 responses.

Survey Question Five: "How many times did you use the Google Doc resource provided through your teacher's announcements?"

Student engagement question five allowed students to choose from the following options: 1–5 times, 6–10 times, or more than 10 times. There were 25 students' responses to question five. Of the 25 responses, 22 (88%) students responded that they used the Google Doc 1–5 times, three (12%) students responded they used the Google Doc 6–10 times, and 0 (0%) students responded that they used the Google Doc more than 10 times (see Figure 15).

Figure 15

Survey question Five- How many times did you use the Google Doc Resource

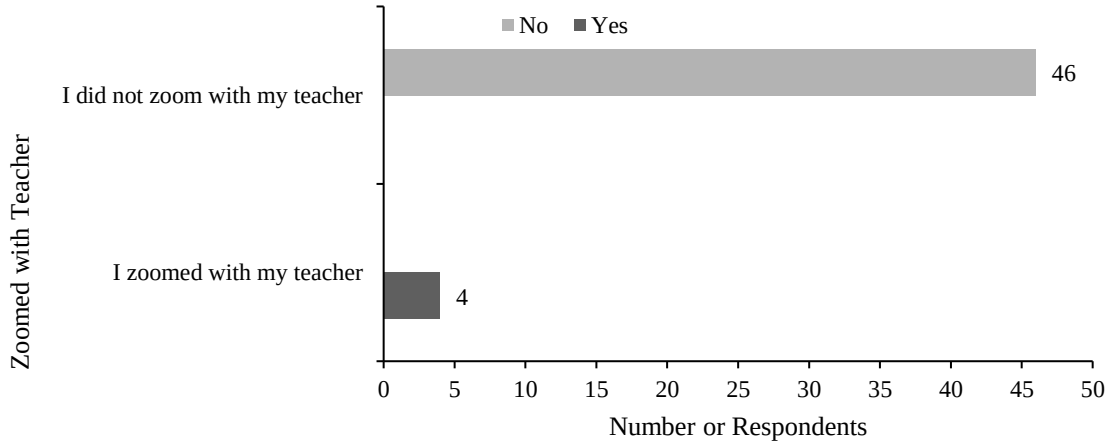


Survey Question Six: "I zoomed with my teacher to get help on at least one assignment."

Question six of the student engagement survey yielded 50 student responses. Four (8%) students responded, "Yes," and 46 (92%) students responded, "No," (see Figure 16). The response rate for question four was 100% with 50 out of 50 responses.

Figure 16

Survey Question Six- I Zoomed with my Teacher.

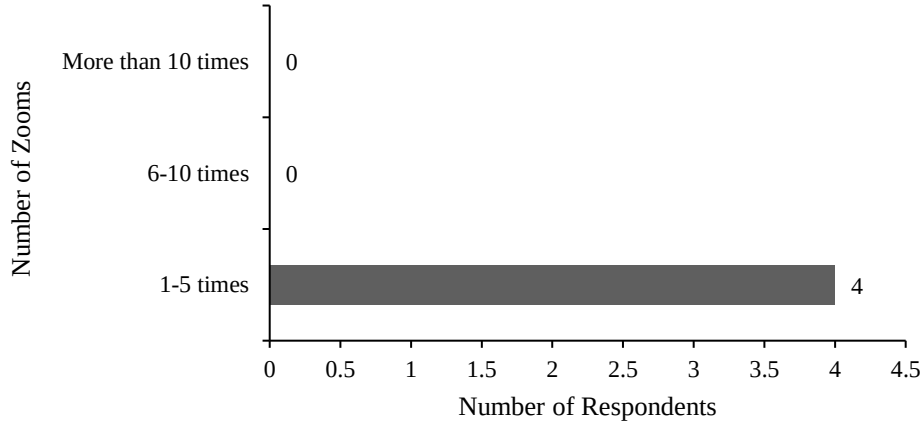


Survey Question Seven: "How many times did you Zoom with your teacher?"

Out of the 50 students who had the opportunity to answer this question, four students responded to question seven. The students were given the following options to choose from 1–5 times, 6–10 times, and more than 10 times. Four (8%) students responded that they zoomed with their teacher 1–5 times. The options of 6–10 or more and 10 times were not selected (see Figure 17). Question seven had an 8% response rate with four out of 50 responses.

Figure 17

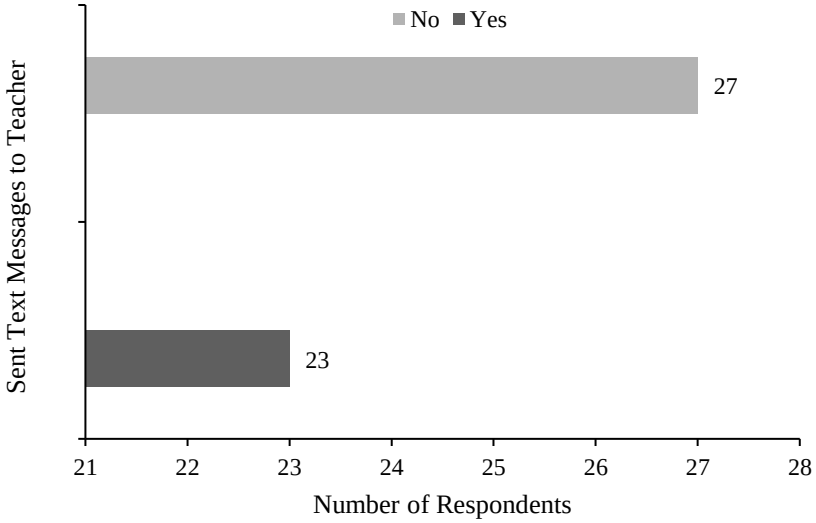
Survey Question Seven- Number of Times you Zoomed with Your Teacher



Survey Question Eight: "I sent a text message to my teacher to get help on at least one assignment."

Figure 18

Survey Question Eight- I sent a Text Message to My Teacher



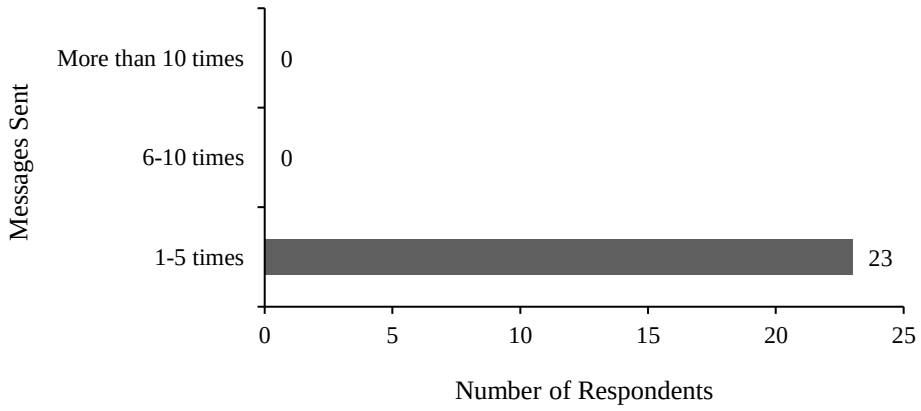
Student engagement question eight yielded 50 student responses. Of the 50 student responses, 23 (46%) students responded that they had sent a text message to their teacher and 27 (54%) students responded that they did not send a text message to their teacher to get help on an assignment (see Figure 18). Question eight of the End of Term survey yielded a 100% response rate with 50 out of 50 responses.

Survey Question Nine: "How many times did you send your teacher a text message to get help on an assignment?"

Out of the 50 students who had the opportunity to answer this question, 23 students responded to question seven. The students were given the following options to choose from: 1–5 times, 6-10 times, and more than 10 times. Twenty-three (100%) students responded that they zoomed with their teacher 1–5 times. The options of 6–10 or more and 10 times were not selected (see Figure 19). Question nine had a 46% response rate with 23 out of 50 responses.

Figure 19

Survey Question Nine- How Many Times Did You Send a Text Message



Survey Question Ten: "Are there any resources you wish were available to you to complete your course that Launch did not provide?"

Student responses for survey question 10 were open ended questions. Students had the opportunity to write in any additional resources that they wished, that were provided to assist them with their course. Question 10 yielded 22 responses with a response rate of 44%.

Open Student Responses to Question Ten. Question ten of the survey asked the students "Are there any resources you wish were available to you to complete your class that Launch did not provide?" There were 22 (44%) who responded to question 10 out of 50 students. The responses could be categorized into three themes: No, additional tools (computer, textbook), and other.

No, I Did Not Need Help. Seventeen (77.3%) students responded, "No," or some variation of, "No," in response to whether the students wished any additional supports were provided. Student responses ranged from but were not limited to, "No, I feel as if the resources were sufficient enough" (Student SS17), "No, not really. Everything was easy" (Student SS27), and "No, everything was okay" (Student SS45).

Additional Tools. In response to asking if there were any additional resources that were offered, two students (9.1%) referred to additional tools being available on the course. Student SS19 responded, "a textbook" and Student SS50 stated, "a computer".

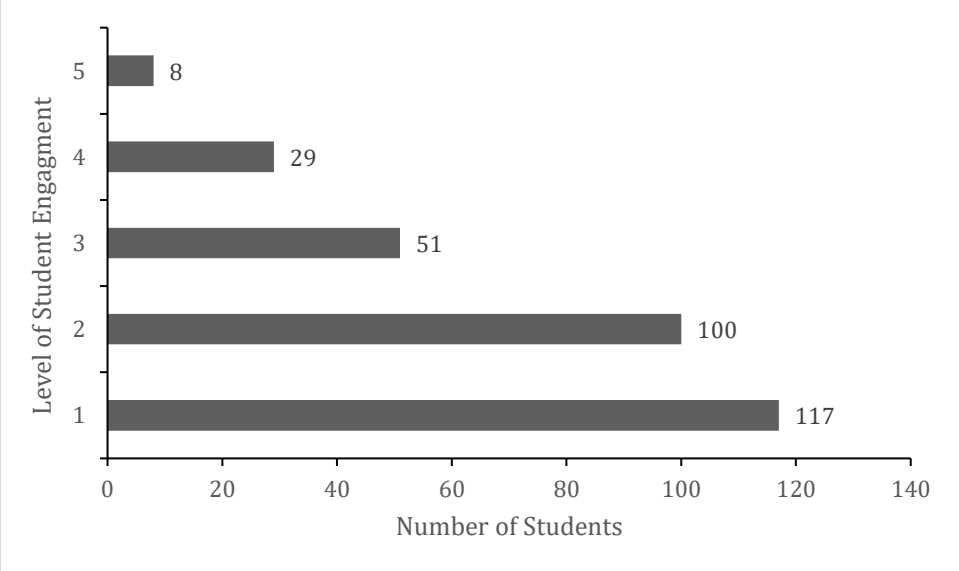
Other. Out of the 22 students who responded to question 10, three students (13.6%) provided a response that would be categorized as Other. Student SS14 stated, "Yes," but did not provide any further explanation. Student SS39 responded, "what answers I got wrong on the test so we can go back over and restudy it" and Student SS42

said, “there is a couple I wish actually told me what you got wrong instead of saying that you just got so many wrong”.

Figure 20 shows the number of students completing the online program compared to their levels of engagement, from level 1 to level 5. Student engagement levels were defined as Level 1: zero supports used; Level 2: one support used; Level 3: two supports used; Level 4: three supports used; and Level 5: four supports used. The supports that were offered in the online alternative course were as follows: text messages, zoom, Google Doc, and Canvas Inbox message. As Figure 20 shows, 118 students completed the online program on the lowest level of engagement, level 1, while eight students completed the program on the highest level of engagement, level 5. There is a total of 305 Completers represented in the data above, and of that total, 218, or 70.8% of the total, completed the program on the lowest two levels of engagement.

Figure 20

Level of Student Engagement-Completers

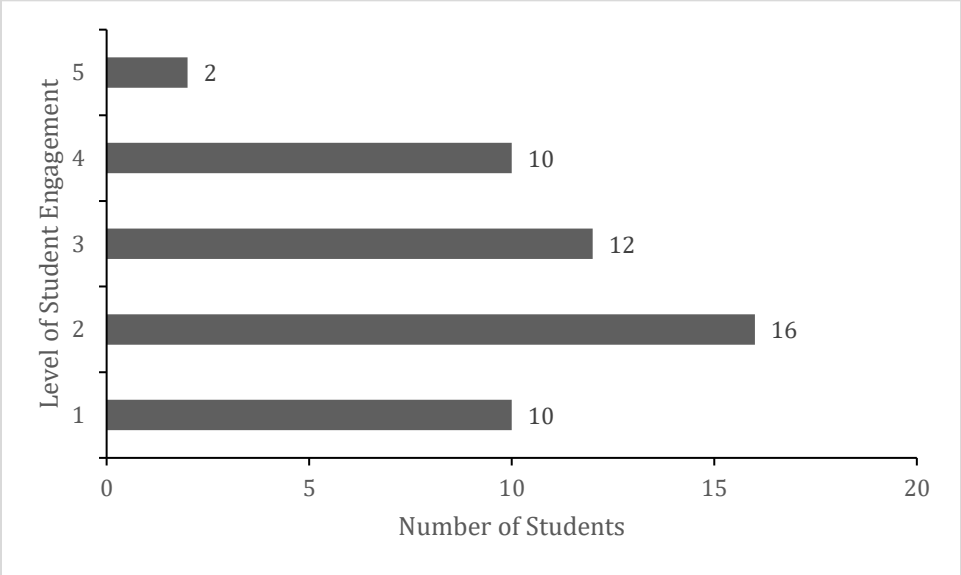


Conversely, the 37 total students on the levels of 4 and 5, of the Completer group, representing 12.1% of the 305-student total completed the program on the two highest levels of engagement. From the data, the students on the lowest two levels of engagement were the groups that had the most Completers with a total of 218 out of 305, while the middle level of engagement had 50 Completers, and the top two levels of engagement had 37 Completers.

The next data set represents the engagement levels of Non-Completers and is represented in Figure 21. Figure 21 shows the levels of student engagement for Non-Completers. The total number of students represented in this figure is 50. As the data show and as compared to the Completer group in Figure 20, the Non-Completer group has a higher percentage of students in the two highest levels of engagement, at 24% of the total, or 12 students.

Figure 21

Level of Student Engagement-Non-Completers



For the Non-Completer group, 12.1% of students on the two highest levels of engagement completed the online program. The two lowest levels of engagement had 26 students who did not complete the online program, which accounts for 52% of the total number. The middle level of engagement, level 3, had 12 students complete the program, which accounts for 24% of the total students.

Null Hypothesis Results

In order to examine the difference between the level of engagement of Completers and Non-Completers, a two-sample independent *t*-test unequal variances with $\alpha = 0.05$ was used to test if the level of engagement was significantly different between students completing the course and those not completing the course.

$H1_0$ Results

$H1_0$: There is not a significant difference between the level of student engagement for the Completers and Non-Completers.

The analysis revealed that the Completers Level of Engagement scores ($M = 2.05$) were significantly different than the Non-Completers Level of Engagement scores ($M = 2.84$). The mean level of engagement for Completers was 2.052, while the mean level of engagement for Non-Completers was 2.84. The sample size for Completers was 305, while the sample size for Non-Completers was 50.

The hypothesized mean difference was 0, indicating that there was no expected difference between the mean levels of engagement for the two groups. The two-tailed *p*-value was 2.70032E-06, or $p < .001 < .05$ (see Table 1). Therefore, the null hypothesis was rejected and it was concluded that there is a significant difference in the mean level of engagement between Completers and Non-Completers of the online alternative

program. Specifically, Completers have a significantly lower mean level of engagement compared to Non-Completers.

Table 1

$H1_0$ Completers and Non-Completers Results Two-Sample t-Test Assuming Unequal Variances

	Completers- Level of Engagement	*Non-Completers Level of Engagement*
Mean	2.052459016	2.84
Variance	1.168291631	0.994285714
Observations	305	50
Hypothesized Mean Difference	0	
df	69	
t Stat	-5.11388323	
P(T<=t) one-tail	1.35016E-06	
t Critical one-tail	1.667238549	
P(T<=t) two-tail	2.70032E-06	
t Critical two-tail	1.994945415	

Summary

During the summer session, two surveys were conducted to collect data from students: Completers and Non-Completers. The surveys were designed to gauge student engagement and determine the effectiveness of the support services offered. To ensure the anonymity of the participants, unique identifiers were used to remove any personal

information from the responses. A corresponding student number was assigned to the responses. The purpose of the student identifying number was to share the open student responses to specific questions in the survey. Students who had completed their coursework were assigned an “S” and then a number (e.g., S1). Students who had not completed their coursework were assigned an “SS” and then a number (e.g., SS1).

The first student engagement survey was given to students who had one unit left in the course (Completers). Three hundred and five surveys were completed. All 305 courses were completed during the summer session. The survey responses were categorized based on the support services utilized by the students. Additionally, the frequency of use of each support service was recorded to calculate the overall level of engagement of the students. The number of supports used was tallied to determine the overall level of student engagement of the students during the course.

The second student engagement survey was given to Non-Completers, students who had started but not completed their coursework during the summer session. Fifty responses were collected for the Non-Completers. The responses were categorized based on the support services utilized by the students and the frequency of use of each support service was recorded. These results of the survey helped to determine the level of student engagement for those students who did not complete the course. The number of supports used was tallied to determine the overall level of student engagement during the course.

The review in Chapter Five provides an overview of the different sections covered in this chapter. The purpose of the study is clearly defined. A summary of the findings is also provided, outlining the results of the study. Furthermore, the research questions are thoroughly reviewed, providing a clear understanding of the objectives of the study. The

limitations of the findings are also discussed, highlighting the areas where the research may have been limited and suggesting directions for future research.

The conclusion of the research finding is presented, summarizing the main findings of the study, and drawing conclusions based on the research objectives. The implications and recommendations for future research are discussed, providing insights into how the study could be improved or expanded upon in the future.

Chapter Five: Conclusions and Implications

The purpose of this study was to explore if a student's engagement level in an online alternative course had an overall impact on the student completing the course. To achieve this goal, students were asked to complete an engagement survey that provided insights into which support services the students had utilized during the course. In addition to the student engagement survey, the study also analyzed student responses to open-ended survey questions. These questions were designed to elicit qualitative data about why students did not utilize certain supports offered within the course. Additionally, to obtain a complete picture of the students' experiences, feedback was gathered from the students on what additional resources the students wished were provided within the course. This feedback was useful in identifying gaps in the supports provided to students and in developing recommendations for future implications.

Ryan and Deci's (1985, 2007, 2011, 2020) research on Self-Determination Theory and the conceptual framework of student engagement served as the foundation for this study. Ryan et al. (2021) stated, "SDT research concerns human motivation, and particularly autonomous motivation, which is characterized by people's full and willing engagement in an activity" (para. 3). As detailed by Ryan and Deci (2019), "SDT's basic needs are conceptually distinct from motives, as they represent a specification of what is required for integrative, truly self-regulated functioning" (p. 9). A review of current literature was provided on the history of online learning, growth of online learning, student engagement online, and alternative online programming.

For the purpose of this study, data collection included results from surveys given to high school students enrolled in an online program in the state of Missouri. Two

separate surveys were given to students. The surveys were given to students who had completed an online alternative course as confirmed by the program director, and students who had started the online alternative program but did not complete the course during the summer session as confirmed by the program director. Three hundred and five responses were collected from students who had completed the course and 50 student responses were collected from students who did not complete the course. The following research questions guided this study:

1. What is the difference between the level of student engagement of students who successfully completed an alternative online program and students who did not?

H1$_a$: There is a difference between the level of student engagement of students who successfully completed an alternative online program and students who did not.

2. What was the level of engagement for students who successfully completed an online alternative program?
3. What was the level of engagement for students who did not successfully complete an online alternative program?

Findings

The analysis of the data collected from the Completers and Non-Completers groups revealed interesting findings about student engagement levels and course completion rates. While the data from the Completer group did not show a significant difference between higher levels of engagement and higher percentages of course completions, the Non-Completer group had data provided a pattern. The engagement levels of the Non-Completers were more evenly distributed across the five levels of engagement, in contrast to the Completers group, where a majority of students fell into

the two lowest levels of engagement. Specifically, the lowest two levels of engagement in the Non-Completer group totaled 52% of the total population, compared to 71.3% of the Completer group. Also, the two highest levels of engagement of Non-Completers, levels four and five, totaled 24% of the total compared to 12.1% of the Completer group. The total number of students included in the research was 355, and 50 students of the total did not complete the program. In other words, 85.9% of students who took the survey were of the Completer group. Further research with a larger sample size could help confirm if there is a correlation between engagement and course completion rates in online alternative courses.

Overall, these findings suggest that engagement levels may play a role in course completion rates, particularly for students who are moderately or highly engaged. The relationship between course completion in online alternative courses may vary depending on factors such as the nature of the course content, instructional design, and individual student characteristics. Therefore, further research is necessary to comprehensively examine the impact of engagement on course completion in online alternative courses and identify effective strategies to enhance student persistence and success in their learning environments.

Conclusions

While the data from this project do not show a strong relationship between higher levels of engagement and higher percentages of course completions (see Figure 20), it stands to reason that, in light of research and best practices, engagement would have an effect on student success as “adolescents with higher engagement in class have better grades and aspire for education beyond secondary school” (Wang & Hofkens, 2020, p.

4). While the largest percentages of Completers were from the two lowest levels of engagement, the review of literature outlined the importance of student engagement in the success of a student in alternative programming, Bolliger and Halupa (2018) explained, “student engagement is important in order to prevent online learner isolation and dropout” (p. 3). Research suggests that student engagement is a critical component of effective teaching and learning and student engagement has been shown to be strongly linked to student motivation, interest, and achievement (Wang & Hofekns, 2020). Research has demonstrated that when students are highly engaged in learning, they are more likely to persist in their studies, achieve higher grades, and complete courses (Schnitzler et al., 2020). This is particularly true in online courses, where students may experience more challenges in staying motivated and connected to their learning due to the lack of face-to-face interaction with instructors and peers (Singh et al., 2021).

While this study provided valuable insights into the correlation between student engagement and course completion in online alternative courses, there are several limitations that should be noted. One limitation is the narrow timeframe of the study, which only included data from the summer session. The narrow timeframe of the study may have limited the generalizability of the findings to other semesters or the terms of a school year.

Additionally, the sample size of the study was relatively small, due to the fact that the summer session is made up of students who choose to enroll or are encouraged to enroll because they are credit deficient. Therefore, the number of students was limited compared to the regular school year. The small sample size may have limited the

statistical power of the student and prevented detecting more subtle correlations between engagement and course completions.

Another limitation of the study was the voluntary nature of the survey, which means not all students who participated in the online alternative program completed the survey. Due to the voluntary nature of the study, selection bias may have been introduced into the study and limited the application of the findings to the broader population of students in the program. Furthermore, self-selection bias resulting from incomplete survey responses may have affected the representativeness of the sample and potentially weakened the external validity of the study.

Finally, since the survey was completed voluntarily, students may have chosen to not complete the survey without penalty and still complete the program. This may have resulted in a biased sample of students who were more likely to be engaged and motivated to complete the survey, which may have skewed the results. This potential self-selection bias may have limited the generalizability of the findings to the larger student population, as students who were less engaged or motivated may have been underrepresented in the survey responses.

Despite these limitations, this study provides valuable insight into the importance of student engagement in online alternative courses. The study highlights the needs for instructors to prioritize engagement as a key component of the learning experience and to provide students with meaningful and relevant supports to help them stay engaged and motivated throughout the course. Future research in this area should aim to address some of the limitations of the study and explore the correlation between engagement and course completions.

Implications for Practice

Implication One - Equitable Access to Online Education

Access to high-quality education should not be limited by a student's zip code, and the flexibility of online educational programs should be readily available to all students (N. Lemmon, personal communication, February 8, 2023). The collaborative expectation of the internet has extended the opportunities for knowledge and has made education readily available to students across the world as "online learning is flexible and accommodating" (Houldren & Veletsainos, 2019, p. 3). Harasim (2000) articulated this point by explaining that online education "will alter global civilization as educators and learners worldwide adopt and adapt networked collaborative learning" (p. 46). The proliferation of online educators has not only increased access to educational opportunities but also fostered innovation and experimentation in pedagogy and curriculum design. As educators explore new ways of engaging students and promoting learning outcomes through online platforms, the potential for personalized and adaptive learning experiences is becoming increasingly possible. Additionally, the growing demand for flexible and affordable education options has spurred the development of online programs across a range of disciplines and fields, providing learners with the flexibility to tailor their educational paths to their unique needs and goals. This has led to greater support for online education from various stakeholders, including policymakers, employers, and educators alike, who recognize the online program's potential to expand across high-quality education and to increase workforce readiness.

Redmond et al. (2018) explained the reasons why students choose to study online and how it benefits them. According to Redmond et al. (2018), "Students who choose to

study online are inclined to do so because it provides flexibility, enabling them to balance external commitments with their studies" (p. 185). Choice comes with the ability to have a flexible schedule outside of the traditional, seated classroom setting "as online learning environments increases access to material and offer learners flexibility to learn at a pace, place and time suited for them" (Hasan & Khan, 2020, p. 204). This opportunity should be afforded to all students to ensure equitable learning (Reinholz et al., 2020). Effective classrooms are adaptable, and they provide learning experiences in a variety of modalities in order to fully address the needs of students. This has been a staple of differentiated lessons and a focus of research and practice for years. This idea can be adapted to the online setting. Since students are able to earn credits for graduation, online, throughout the school year and in the summer, the learning experience never really stops. Moreover, the ability to earn credits in an efficient and timely manner for online learners has also become the norm. The students in the online, alternative program examined were able to earn multiple credits in multiple subjects, depending on the pace of their own learning. It stands to reason that if a student was missing several credits to graduate, the expansion of equitable opportunities for classes should be a focal point in learning, moving forward. Therefore, providing students with diverse learning opportunities and expanding the availability of online classes should be a priority for promoting equitable education.

Implication Two - Growing Need for Online Programs

As with any educational endeavor, the question of need is paramount. How do school leaders, teachers, counselors, parents/guardians, and students determine what a school needs to be successful? School leaders, teachers, counselors, parent/guardians, and students all have a stake in ensuring schools provide the necessary resources and

programs to support student success. As outlined in implication one, the first step is removing barriers to learning and expanding programs. The fact continues to be evident that online learning is continuing in its growth, including the exponential growth of online learning during and after the COVID-19 Pandemic (Singh et al., 2021). While the COVID-19 emergency certainly increased the need for online learning, Liu (2010) noted, "The United States has experienced an extraordinary growth in online education at the K-12 level since its emergence in the late 1990s: from single online course offerings to large virtual schools today" (p. 13). The growth of programs continues to address the needs of online schooling, as the brevity of courses offered continues to expand (Hart et al., 2019). Students who take online courses have more flexible options in comparison to students in traditional schooling who may be limited by offerings in specific buildings, at specific times, and by the courses staff are certified to teach (Singh et al, 2021). In the researched district, the online provider, Launch, offered all of its courses with certified teachers in each domain. Additionally, each subject area has its own Professional Learning Community (PLC), in which each teacher collaborates and learns with colleagues. The development of teacher and staff support in Launch demonstrates a desire to provide learning opportunities for both students and staff.

Implication Three - Online Learning Addresses Graduation Needs

One of the most critical pieces of any secondary educational program is making sure that opportunities are available to increase graduation rates (Heinrich et al., 2019). Online alternative programming opens up the doors for students to recover credit and meet graduation requirements. Of the Completer group, 305 students completed their course/s to recover their credit. This has several positive effects on students and the

school district. To begin, students are able to stay on the path to graduation by recovering credits. Secondly, since students are able to recover credits of previously failed courses, the students do not have to take those courses again, allowing for school leaders to reallocate teacher resources in other areas of need instead of having to work to recover those credits. Next, it is important to mention that credits can be recovered very quickly as each credit recovery course contains a fraction of the material of a traditional course.

In credit recovery, if a student is able to earn an 80% or higher on a unit pretest in the class, he or she is automatically exempted from the additional coursework for that particular unit. The concept of mastery learning is based on the idea that students must demonstrate proficiency on a set of learning objectives before they can move on to the next unit. Students who take an online alternative course have already been exposed to the curriculum. The students have been presented the material previously and failed the course. There could be a number of reasons why the student previously failed the course and the lack of content knowledge may not apply in all situations. In the alternative online courses, if a student is able to achieve a score of 80% or higher on all pretests, it indicates that the student has already mastered the material covered in the course. This process allows students to complete the course more quickly than in a traditional seated environment.

As graduation rates continue to be a focus of schools across the country, it stands to reason that having an online, alternative programming system could benefit students and staff alike (Heinrich et al., 2019). Furthermore, the growing need of alternative programming, as mentioned in Implication Two, is an important part of the equation as well. As programs expand and opportunities and offerings online increase, students are

able to complete more or all of their education online, without needing to attend an in-person class within the traditional operating hours of schools. The removal of this time-constraint, especially with regard to recovering needed credits to graduate may continue to be an important aspect of a diverse learning experience.

Implication Four - The Need to Address Learning in Times of Emergency

The COVID-19 pandemic brought to light many needs across numerous areas from business, to healthcare, to education. For educational leaders and teachers, the pandemic brought up significant discrepancies in the ability of educational entities to offer alternative programming for students (Tate & Warchauer, 2022). How do schools offer a complete educational program without being physically open? What happens to learning when an in-person classroom is not available? The adaptability of schools is important, but it is just as important to be innovative and to see where potential issues may be. With regard to the Launch program, the online offerings and infrastructure of the entity propelled its ability to offer programming to school districts across Missouri. As with every disruption in learning, or change in the daily operations of a district, there is always something to be learned.

Online, alternative learning programs may be an avenue to explore and expand to address future disruptions in learning as well as general opportunities for students. Outside of emergencies, like the COVID-19 Pandemic, online learning may be used for any disruption in learning from inclement weather days or closures caused by facility failures or even staff shortages. Moreover, as some districts struggle to recruit teachers in certain certified positions, online learning with a content-certified person may be a way to address issues of classrooms not being taught by highly qualified educators.

Recommendations for Future Research

The review of literature and this research study identified gaps in the effect student engagement had on the completion of an online alternative program. To begin, from the data of those who completed the program, the largest percentage of Completer students had the least amount of engagement in the program, based on the five levels represented in Figure 20. For the Non-Completers represented in Figure 21 there was more variability in the data, with the students more equitably spread across the five levels of engagement. The lowest two engagement levels of Completers, levels one and two, had by far the highest levels of completions with 71.3% of the whole Completer population, while the highest two engagement levels, four and five, accounted for only 12.1% of the total Completers. This is in contrast with the review of literature, where sources explained that higher levels of student engagement positively affect student achievement (Bolliger & Halupa, 2018). More research is needed on how engagement affects course completion to determine the importance of student engagement in an online alternative program.

In future research, the timeframe of the study could be modified to encompass the traditional school year in addition to the summer session, as the current project focused solely on course completions during the summer term. The effect that the traditional school year, with traditional supports, has on course completion would be an important project as this would include students who were mandated to attend school during the school year as opposed to the students choosing to take courses over the summer break. Additionally, the course surveys were voluntary for students as a part of their coursework. Subsequent research could investigate the impact of mandating surveys for

all students in the program, which would result in a larger sample size and a more comprehensive set of student data.

For future research, the data could be different if conducted outside of a "pandemic-learning" era. Since the data were from the summer of 2022, there may be some residual effects on the data from the COVID-19 pandemic in several ways, from addressing real concerns of prior knowledge of students, to the feeling of uncertainty of students and staff as to how education evolves after the pandemic, to reinvesting students in the process of school and what it means to be an engaged student. If the research were conducted in the present time or in the future, the effects of the COVID-19 pandemic may not be as profound as they were in the school years shortly after the pandemic began. The transition from "pandemic learning" to the new normal may be an important aspect of future research.

Since many students are involved in the online alternative programming, with some students having multiple classes, a future research topic could include looking into specific classes, and if certain classes require more engagement to be successful. For instance, would students need more engagement in Algebra as compared to U.S. History or would more engagement be required in an English Language Arts course compared to Biology? Also, as programming is dependent on the needs of students, future research may be important in addressing students with exceptional needs, such as students with IEPs and 504 plans, English Language Learners, migrant learners, and students who are underrepresented or under-resourced. Specific research could delve into how most appropriately serve students with unique needs.

Summary

The research project and literature review aimed to determine the impact of student engagement on the academic achievement of students in an online alternative program. The literature review illuminated the importance of having high-quality programs for students needing an alternative education, while also explaining the importance of student engagement in connection with student achievement. However, the data from the research showed that the level of student engagement in the online alternative program was not aligned with completing courses, as evidenced by the fact that the lowest two levels of engagement accounted for the two highest completion rates at 38.6% and 32.7% for level one and two respectively.

The purpose of online learning is multifaceted. As stated previously, the alternative online programming provided an outlet for students to recover credit and stay on the path to graduation. Additionally, online courses broke down barriers to learning and student success by making the options for online learning more inclusive. Students across the state of Missouri and the rest of America worked to catch up from the pandemic and to return to a new normal of learning, where disruptions in the educational process could be addressed by innovation and better allocation of resources. Listening to student voices is critical to the educational system as teachers and leaders of districts are able to adapt learning opportunities for life in the post-pandemic era. Additionally, expanding learning programs to students addresses the needs of districts that may or may not be able to provide a multitude of opportunities to students.

A focal point of emergencies, like the pandemic, is the act of people coming together to do what is needed, to keep everyone safe, and to limit anxiety about the

unknown. Even years after the news broke of the pandemic and the schools closed, students, staff, families, and educational leaders talk about the effects of the pandemic on learning. Education topics discussed range from the changes in emotional health needs to the recovery of skills and credits for students. The central work for school districts is about coming together to learn professionally and to depend on one another to find real solutions to major issues. In the end, the work of school leaders is to address student and staff needs, and to remove barriers to learning, so that all students have an equitable opportunity towards betterment and to reach their maximum potential.

It is understood that the research may also be used by others to further expound the information provided by study. Any additional inquiry on the subject for the betterment of all students and to add to the data of research is welcome. As school districts continue to develop plans for online learning, the ability to provide alternative resources will be paramount to future planning. Additionally, it is important to understand the future of education before it becomes a reality. If the pandemic propelled anything in education, it was a certainty in offering diverse learning plans to students. As the technology continues to develop, and courses are transferable and blueprinted in accordance with state and national standards, it is important to look at what could be in education. What are some opportunities that school districts need to invest in for the future? What will students need in the next decades, which is not readily available now? Also, and possibly most importantly will schools be able to adapt in the future in times of uncertainty or the unknown?

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Appendix A

Congratulations! You have one unit left to complete in this course and then you will have completed your Credit Recovery class. Please complete the following questions to best describe your experience with this credit recovery course.

1. I used support offered by the classroom teacher to complete the course.
    a. Yes- answer the rest of the question
    b. No- explain why you did not need or use the support offered by the classroom teacher to complete your course.
2. I sent my teacher a Canvas Inbox message(s) the following times to ask for help on at least one assignment.
    a. No- I did not send a message
    b. Yes
        i. 1-5 times I sent a message to my teacher
        ii. 6-10 times I sent a message to my teacher
        iii. More than 10 times I sent a message to my teacher
            1. How did Canvas Inbox messaging your teacher assist you in this course?
3. I used the Google Doc resource provided through my teacher's announcements to get assistance on at least one assignment.

a. No, I did not use the Google Doc resources provided in my teacher's announcement.

b. Yes

   i. 1-5 times I used the Google Doc references

   ii. 6-10 times I used the Google Doc references

   iii. More than 10 times I used the Google Doc references

4. I zoomed one time with my teacher to get help on at least one assignment.

   a. No

   b. Yes

      i. 1-5 times I zoomed with my teacher

      ii. ii. 6-10 times I zoomed with my teacher

      iii. More than 10 times I zoomed with my teacher

5. I sent a text message to my teacher to get help on at least one assignment.

   a. No

   b. Yes

      i. 1-5 times I sent a text message

      ii. ii. 6-10 times I sent a text message

      iii. More than 10 times I sent a text message

Are there any resources you wish were available to you to complete your that Launch did not provide?

Please explain:

Appendix B

Please complete the following questions to best describe your experience with this credit recovery course.

1. I used support offered by the classroom teacher to complete the course.
    a. Yes- answer the rest of the question
    b. No- explain why you did not need or use the support offered by the classroom teacher to complete your course.
2. I sent my teacher a Canvas Inbox message(s) the following times to ask for help on at least one assignment.
    a. No- I did not send a message
    b. Yes
        ii. 1-5 times I sent a message to my teacher
        iii. 6-10 times I sent a message to my teacher
        iv. More than 10 times I sent a message to my teacher
            1. How did Canvas Inbox messaging your teacher assist you in this course?
3. I used the Google Doc resource provided through my teacher's announcements to get assistance on at least one assignment.
    a. No, I did not use the Google Doc resources provided in my teacher's announcement.
    b. Yes
        i. 1-5 times I used the Google Doc reference

ii. 6-10 times I used the Google Doc references

iii. More than 10 times I used the Google Doc references

4. I zoomed one time with my teacher to get help on at least one assignment.
    a. No
    b. Yes
        i. 1-5 times I zoomed with my teacher
        ii. 6-10 times I zoomed with my teacher
        iii. More than 10 times I zoomed with my teacher
5. I sent a text message to my teacher to get help on at least one assignment.
    a. No
    b. Yes
        i. 1-5 times I sent a text message
        ii. 6-10 times I sent a text message
        iii. More than 10 times I sent a text message

Are there any resources you wish were available to you to complete your that Launch did not provide?

Please explain:

Appendix C

On behalf of CSDT and Drs. Ryan and Deci, feel free to use that Nicole.

Shannon Hoefen Cerasoli, MPA

Director, Center for Self-Determination Theory

w: www.selfdeterminationtheory.org

JOIN US IN ORLANDO IN 2023

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From: "Welch, Nicole" <nwelch@spsmail.org>

Date: Monday, December 12, 2022, at 4:43 PM

To: Shannon Cerasoli <shannon@selfdeterminationtheory.org>

Subject: RE: [EXTERNAL] - Automatic reply: Permission for Image- Dissertation Research

Shannon,

The image I would like to use is:

Please let me know if there is anything I need to do. Thank you for your timely response.

Nicole Davis, Ed. S

Director of Alternative Education

Study Alternative Center, Principal

Responsibility | Consistency | Input | Arranger | Learner

Appendix D

To:

WELCH, NICOLE (Student)

tvest@lindenwood.edu

Thu 4/14/2022 10:25 AM

Apr 14, 2022, 12:25:48 PM CDT

RE:

IRB-22-89: Initial - Student Engagement and the Impact of Successful Completion in a Virtual Alternative Education Program

Dear Nicole Welch,

The study, Student Engagement and the Impact of Successful Completion in a Virtual Alternative Education Program, has been Approved as Exempt.

Category: Category 1. Research, conducted in established or commonly accepted educational settings, that specifically involves normal educational practices that are not likely to adversely impact students' opportunities to learn required educational content or the assessment of educators who provide instruction. This includes most research on regular and special education instructional strategies, and research on the effectiveness of

or the comparison among instructional techniques, curricula, or classroom management methods.

The submission was approved on April 14, 2022.

Here are the findings:

Regulatory Determinations

- This study has been determined to be minimal risk because the research is not obtaining data considered sensitive information or performing interventions posing harm greater than those ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests.

Sincerely,

Lindenwood University (Lindenwood) Institutional Review Board

Vita

Nicole Davis currently serves as the Director of Alternative Education in Springfield Public School overseeing multiple alternative programs in the school district. Prior to serving in administration, she taught in a Special Education classroom at Williams Elementary in Springfield Public Schools and Westridge Middle School in Lenexa, KS. She graduated from Southwest Missouri State University in 2001 with a Bachelor of Science in Education- Special Education. She graduated with a Master of Science in Education in – Special Education in 2006 and a Master of Science in Education- Educational Administration in 2009 from Missouri State University. She graduated with a Specialist in Educational Administration from Lindenwood University in 2021.