Early Alert Programs: A Closer Look

A Dissertation submitted to
the Graduate School
Valdosta State University

in partial fulfillment of requirements for
the degree of

DOCTOR OF PUBLIC ADMINISTRATION

in Public Administration

in the Department of Political Science
of the College of Humanities & Social Sciences

March 2020

Jessica M. Velasco

M.S., Texas A&M University, 2001
B.A., Texas A&M University, 1998

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This dissertation, "Early Alert Programs: A Closer Look," by Jessica Velasco, is approved by:

Dissertation Committee Chair

Jim Case, Ph.D.
Professor of Political Science & Public Administration at Sul Ross State University

Committee Members

Sarah Kuck, DPA
Associate Professor of Political Science at Albany State University-West

Patricia Hinton, DPA

Associate Provost for Graduate Studies and Research

Becky K. da Cruz, Ph.D., J.D.
Professor of Criminal Justice

Defense Date   3/12/2020

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Abstract

Retention continues to be a challenge for institutions of higher education around the world. Over the last few decades, many universities have turned to early alert programs to address retention issues. These programs involve identifying and notifying at-risk students and offering various intervention options in an attempt to reduce failure and attrition. However, research on these programs has only recently started to emerge. Studies thus far often fail to provide a clear picture of the effects of early alert programs, and there is a significant deficit of information on student and faculty perspectives. In addition, the focus on potential retention gains overshadows questions about suitability of early alert programs in meeting other higher education goals. This study provides an analysis of existing studies, as well as a comprehensive, mixed-method evaluation of the early alert program at a small public university in the southwestern region of the United States. Although the classroom study and student perspectives offered some support for early alert programs, faculty responses and program data in general did not provide compelling evidence that early alerts are effective for reducing course failure or attrition. The overall design of this study was intended to serve as a template for early alert program evaluation in higher education, including how to study the effects of early alerts and how to appropriately use and interpret program data.

Keywords: early alerts, higher education, retention, college students, faculty, data analytics

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Acknowledgements

I considered pursuing a doctorate many times throughout early adulthood, and there was always something that delayed pursuing that goal. In hindsight, I realize that having embarked on this journey at any of those points would have likely prevented me from finding the right program, advisors, committee, and support team to reach this important and final step of the process. It is with great humility that I find myself writing this acknowledgment page and reflecting on all of the wonderful and supportive people that have helped me get to this point. First, I want to acknowledge Dr. Gerald Merwin, my advisor for the program. Not only did he help guide me carefully through the academic program requirements, but he also provided humor and encouragement at all of the right times throughout the last several years. I also want to acknowledge my amazing committee. Drs. Jim Case, Patricia Hinton, and Sarah Kuck—truly a dream team of responsiveness, thoughtfulness, and support. A special note of thanks goes to Dr. Case for taking on the additional challenge of being my chair. I am honored to have each of your names on my dissertation.

My academic and professional colleagues also deserve my gratitude. My VSU DPA cohort—Laney, Marlon, Julie, Justin, Candice, James, Brian, Jen, Selina, Gary, Elizabeth, Tracy, and Rebecca—it felt like a family, and I already miss the regular interactions we had through class. My SRSU colleagues were also incredible—Dr. Saka, the entire BASS family, and all of the faculty members who supported me and my research, especially those who completed the survey and let me interrupt your classes for the student survey. My gratitude also goes to the many scholars and practitioners who have published studies on retention and early alert programs. They provided the foundation of this study.

I would also like to acknowledge my friends and family. I am blessed to have so many amazing friends who have supported me and cheered me on from near and far. I am also grateful for my mother and mother-in-law, who prayed for me and helped watch (spoil) the kids when we left for residency weekends in Valdosta. And, I am eternally grateful and supremely blessed by amazing husband, Dr. Joseph Velasco, and precious children, Landon, Isla, and Willow. They were my ultimate cheerleaders every step along the way, and we have shared and rejoiced together in every step of this journey.

Dedication

I dedicate this to my Joey, Landon, Isla, and Willow. Y'all are my world.

Chapter I

Introduction

Early Alert Programs: A Closer Look

The benefits of a college degree have been well established. In the United States, the value of a college degree over the course of one's life is estimated to be around $2.8 million (Carnevale, Rose, & Cheah, 2011). Individuals with college degrees are more likely to have the tools that lead to healthy and satisfying lives (Baum, Ma, & Payea, 2013). They are more likely to participate in civic and volunteer activities and to create opportunities for their own children (Baum et al., 2013). They also pay more in taxes and are less likely to commit crimes, be unemployed, or rely on public financial support (Baum et al., 2013; Pew Research Center, 2014). In addition, educated citizens support a democratic society (Brubacher & Rudy, 1968). In short, the benefits of a college degree are felt on both the individual and societal levels.

Unfortunately, institutions of higher education, the providers of college degrees, are facing significant obstacles, especially those in the United States. The Pew Research Center recently reported that 61% of Americans believed that the higher education system in the United States is generally going in the wrong direction. The main reason given was that "tuition costs are too high" (Parker, 2019).

Frustration with tuition costs is not surprising. Between 2006 and 2012, government support for higher education decreased by an average of 26.28% per full time

equivalent (FTE) student. This decline caused institutions of higher education to place increased emphasis on funding from other sources such as fundraising, auxiliary services, and grants (Delta Cost Project, 2012). However, even with a heightened focus of drawing in funds from other revenue sources, universities have struggled to fill the void left by the government funding reductions, forcing universities to raise tuition. Consequently, tuition rates increased by 212% over the 30-year period between 1987 and 2017, with the average annual cost of attendance at public, 4-year universities increasing from $3,190 to $9,970 (in 2017 dollars) (College Board, 2017).

Higher education costs and the staggering student debt levels associated with them have been at the center of criticism of higher education for years, making further tuition increases, although often necessary, increasingly difficult (and often limited by state legislatures). Although enrollment and retention started gaining more attention from higher education administrators following declining enrollment after the 1970s (Lee, 2011), the focus has intensified due to these challenges. Enrolling and retaining higher numbers of students helps offset some of the effects of government funding loss. Of the two solutions, retaining students is more cost effective than recruiting new students (Bean, 1990; Schuh, 2005).

In an attempt to attract and retain more students, many institutions have added new residence halls, recreational facilities, and other structures. The average citizen, unaware of funding challenges faced by public institutions, sees the new construction and the rising tuition rates and assumes the former is the cause of the latter, even though only about 6% of tuition increases from 2001 to 2011 are attributable to construction costs (Desrochers & Hurlburt, 2015). Nonetheless, such activities have fed the belief that

administrators of higher education are not being good stewards of public funds, which has increased demands for accountability and transparency from parents and students, as well as contributed to the growing customer-service mentality toward higher education (McPherson & Schapiro, 2003; Newfield, 2010; Oblinger, 2012).

In addition, although funding from state and federal government has decreased, the demand for accountability has increased from these government entities as well (Ball, 2016; Doyle & Delaney, 2009; McGlynn, 2015; Morris, 2017). Between 1990 and 2001, 23 states enacted performance-based funding systems for institutions of higher education, following the lead of Tennessee and Connecticut, which were the first states to enact such policies, in 1979 and 1985, respectively (McLendon & Hearn, 2013). The design, popularity, and stability of these performance-based funding approaches have varied by state. However, scholars now recognize a resurgence in the popularity of performance-based funding, with a heightened focus on production of degrees and workers who have skills to match current and projected state needs (McLendon & Hearn, 2013). In some cases, lawmakers have even shifted funding away from 4-year universities to increase funding for community colleges, who are seen as focusing on "creating jobs of the future" (as quoted in Kelderman, 2010).

One of the problems with using workforce outcomes for measuring university performance or return on investment (ROI) is data. Although other researchers (e.g. Moret, 2016; Mullin, 2012) have been developing various ways to explore education-related workforce metrics, tracking students and their career paths after graduation is difficult. Furthermore, although there is general consensus around the need for more focus on degrees in science, technology, engineering, and mathematics, there is less

agreement about career-specific skill vs. soft skill development overall. As pressure for performance in work-related outcomes continues, more methods for assessment in this area are likely to be developed and used to assess performance in higher education.

In general, retention rates and graduation rates have been, and continue to be, the most commonly used performance indicators for institutions of higher education (Campbell & Hussey, 2015; SRI International, 2012; Weiss, 2014). Because of this, retention is one of the most studied topics in higher education (Vlanden & Barlow, 2014). An effort to review the literature available on this topic has even been referred to as "Herculean" (Reason, 2009).

Some of the most notable work on the topic of retention comes from Astin (1984) and Tinto and Cullen (1973), who developed theories regarding student engagement, integration, and persistence. They and other researchers have helped focus attention on variables that affect student success at the college level. Among these are academic preparedness (Beaver, 2010; Daley, 2010; Lassibille & Gómez, 2008), self-knowledge (Daley, 2010), and campus engagement outside of the classroom (Kinzie, Gonyea, Shoup, & Kuh, 2008). Other research has focused on the importance of faculty–student interaction in college student success (Kezar & Maxey, 2014; Kinzie et al., 2008).

The growing body of research continues to fuel the development of robust student activities departments and other such services on college campuses. These include programs such as living–learning communities, recreational clubs, and other types of campus organizations. Campuses also offer a wide variety of services and programs to help students with various needs and academic challenges, some of which include counseling, health services, tutoring, services for students with various disabilities, and

support services for students who identify as lesbian, gay, bisexual, trans*, intersex, queer, or other nonbinary gender identities. In addition, research has promoted a shift to a student-centered teaching approach, with an emphasis on incorporating technology and experiential learning activities (Nilson, 2010).

Higher education research has also helped uncover other student characteristics that increase dropout risk. Such characteristics include low socioeconomic status (Beaver, 2010; Johnson, 2012) and low parental educational attainment (Johnson, 2012). The primary mechanism to address these challenges has been federal grant-supported programs. One of the most significant is the Federal Pell Grant, which provides college funding support for low-income families. Other programs supported by federal grants include Upward Bound, Student Support Services, and the Ronald E. McNair Scholars Program. These programs provide support services to help students transition to college, graduate, and seek advanced degrees.

Studies have also shown that the first year of college is the year of highest attrition risk (Allen, Robbins, & Sawyer, 2010; Delen, 2011; Stewart, Lim, & Kim, 2015). The year-to-year retention rates after the first year tend to level out at most universities (Delen, 2011; Stewart et al., 2015). Other studies have shown that higher first-year college grade point averages (GPAs) are associated with lower attrition risk (Ishitani & DesJardins, 2002). For these reasons, many universities have an office or at least one professional staff member dedicated to the development of orientation, advising, and transition training for first-year students. In addition, many universities have special seminars for first-year students. Studies have shown that certain components of such programs (study skills, academic engagement, and health education) have

"substantial" impacts on retention (Robbins, Allen, Casillas, Akamigbo, Saltonstall, 2009, p. 103).

Retention is also affected by changing attitudes about the value of education. The second most common reason given for the opinion that higher education is going in the wrong direction in a 2019 Pew Research Survey was "students are not getting the skills they need to succeed in the workplace" (Parker, 2019). This result is reflective of the growing shift to assign the value of higher education relative to its relationship to the labor market. With such a focus and reports of college students graduating without skills deemed necessary for the workforce (Caplan, 2018), it is easier for students to opt out of college or drop out when struggling, especially as tuition continues to rise.

To increase the number of students who may persist and graduate, many universities now offer admission to more students (Conley, 2019; Simons, 2011), which has inevitably led to the lowering of admissions standards in some cases and the increase in the number of students who are not college ready (Butrymowicz, 2017; Reisberg, 1999). In universities that offer remediation, students who fail to exhibit college readiness are placed in remedial courses. A longitudinal study of withdrawals, failures, and repeats found that a high number of these outcomes are concentrated in remedial coursework (Adelman, 2004). Failing, withdrawing from, and repeating a course, especially a course that does not count for college credit, only further delays college graduation and decreases likelihood of persistence (Adelman, 2004). Current trends in this area include removing remedial courses altogether (Mangan, 2019) and pairing remedial coursework with college-level coursework (e.g. Texas HB 2223). In some cases, such changes have been initiated by universities or departments within universities. However, in some states

with performance-based funding models, funding levels are impacted by institutional completion levels in remedial and college-level courses.

Studies of corequisite models have become more common over the last several years, and Logue (2018) asserted that there is now "extensive evidence" showing that corequisite remediation increases student success. However, critics assert that corequisite models place pressure on faculty to lower standards, and caution against the focus on short-term results when long-term effects are still uncertain (Mangan, 2019; Newman, 2019).

Between 2000 and 2016, overall enrollment of 18 to 24-year-olds went from 35% to 41% (National Center for Educational Statistics, 2018a). However, the average 6-year graduation rate for 4-year institutions is 60% (National Center for Educational Statistics, 2018b), and many universities struggle to reach this level, which is skewed by the results of the most popular universities and colleges. Although finishing a degree may lead to higher levels of earning, starting college and dropping out can leave a person in a more negative situation than they would have been had they not attended at all, especially in their personal finances (Kirp, 2019). Attrition rates can also have a substantial and negative effect on the state. According to a study released in 2010, students who did not persist to the second year of college cost states $6.2 billion of lost appropriations (American Institutes for Research, 2010).

Overall, despite decades of research and new programmatic approaches, retention continues to be a challenge for colleges and universities across the globe, which has prompted institutions of higher education to focus on more direct ways of intervening with students who are at risk. Identifying these students is important, as students who

exhibit at-risk attributes tend to remain at risk throughout their college careers (Clark, 2016). Academic success coaching is one of the programs universities have turned to in this area. In 2000, a company called InsideTrack introduced this concept, which involves pairing students with academic success coaches who provide regular contact via phone (Robinson, 2015). Institutions of higher education were quick to adopt this new trend. Currently, InsideTrack services over 350,000 students from over 100 institutions (Robinson, 2015). Universities unable to afford this service from outside providers have developed their own internal coaching programs. A 2013 study linked higher GPAs and graduation rates to students who have academic success coaching (Barnhart & LeMaster, 2013). However, evidence-based support for the effectiveness of these programs has been slow to develop. The wide variety of program approaches, design, and titles have presented a challenge for researchers studying these programs (Robinson, 2015). Also, concerns about overlap with other available support services have growing strength due to shrinking institutional budgets.

Another, increasingly common direct intervention program is the early alert program. Early alert programs are programs that identify at-risk students, notify them, and attempt to intervene with them before they fail or drop out. According to Simons (2011), these programs were first developed in the 1970s and referred to as "early warning systems." The term was gradually replaced with "early alert programs," as this was perceived to be more positive (Simons, 2011).

Initially, early alert programs were most commonly found in small, private colleges and colleges with low admission standards (Simons, 2011). There are mixed reports of the current extent of their presence in institutions of higher education. Noel-

Levitz (2013) reported that over 90% of private and public 4-year institutions offered some version of an early alert program. However, in 2016, the Education Advisory Board (2016) reported that 74% of public universities, 78% of private universities, and 68% of community colleges use early warning systems. Either way, it is clear that early alert programs have spread significantly since their initial inception.

Given the focus on retention and persistence, the prevalence of early alert programs in institutions of higher education is not surprising. What is surprising, however, is the speed at which higher education administrators adopted these programs for their campuses without research-based evidence of their effectiveness, appropriateness, and broad applicability to different campus environments. The literature base in this area has grown over the last several years, especially studies that have answered the questions of *what* and *how* (what students are making in the classes, how many alerts are created). However, existing studies fail to appropriately address the *whys* (why alerts are or are not producing desired results, why alerts tend to result in course failure or withdrawal, why faculty members do or do not use them in their courses). This is especially true in reference to faculty and student perspectives. Despite repeated acknowledgement of the absence of these voices, they continue to be neglected in published studies. This paper sought to remedy this and other gaps.

The overarching questions this study sought to answer were as follows:

RQ: Are early alert programs effective? What is the best way to evaluate their effectiveness?

These questions were addressed by first reviewing existing studies and noting their contributions and limitations in early alert program knowledge development. The

questions were then addressed through a comprehensive, mixed-method evaluation of the early alert program at a small, public university in the southwestern region of the United States. The evaluation is broken into six parts, each with its own set of research questions.

Program Data

Program data offer an important starting point for evaluation. Based on the data collected and available at the study site, the following questions were explored:

RQ: What are the most common course outcomes for students who receive alerts? Do men and women receive alerts in proportion to their enrollment? Which classes are the source of the highest number of alerts? Does predictor score have a relationship to course outcome for alerted students? What is the relationship between the timing of the alert and the course outcome? Is there a difference in course outcome of alerted students based on gender or cumulative GPA?

Classroom Study

A true control group is not possible for assessing the effects of early alert notifications and interventions. However, in the Spring 2019 semester, a quasi-experimental study was conducted in six classes taught at the study site. The results of this study were analyzed to answer the following questions:

RQ: Is there a difference in course outcome between students who receive an alert and those who do not? Is there a difference in response to instructor outreach vs. early alert peer mentor outreach?

Faculty Survey

In order to understand how faculty members perceive the early alert program at the study site, a faculty survey was conducted. The following questions were explored:

RQ: How do faculty members perceive early alert programs? What are the reasons some professors choose not to submit alerts? Does instructor gender make a difference? What behaviors, characteristics, and attitudes are most commonly associated with a positive perception and use of early alert programs? Does a faculty member's perception of students affect his or her perception and use of early alert programs?

Student Survey

In order to understand how students perceive the early alert program at the study site, a student survey was conducted. The following questions were explored:

RQ: How do students perceive early alert programs? Do different types of students respond differently to the alerts? What factors influence a student's likelihood of having a favorable response to the alert? Do early alerts support feelings of autonomy, competence, and connectedness in students? How do levels of academic control affect perception of and response to early alerts? When and how do students want to receive alerts?

Faculty vs. Students

Understanding how faculty and students perceive the early alert program at the study site is important, but it is also important to understand the similarities and differences between their responses to similar questions about the program. Therefore, the following research question emerged:

RQ: How do faculty and student responses to questions about the early alert program compare?

Overall Impact

Even if early alert programs create positive course outcomes and are perceived positively by faculty and students, it is important to evaluate the extent to which these programs support other higher education goals. Through the survey responses, the following questions were analyzed:

RQ: What do faculty members and students view as the goal of higher education and ideal relationship between institutions of higher education and students? Do they think early alert programs support the most commonly perceived goal?

Answering all these questions in one study was an ambitious goal. However, the problem with existing studies is the failure to provide a comprehensive evaluation of the effectiveness and appropriateness of early alert programs. Although it would not be realistic to address *all* of these questions for *all* universities in one study, it *was* possible to address all the questions in the context of one university setting. Doing so allowed all pieces of the study (program data analysis, classroom study results, faculty responses, and student responses) to come together and provide a complete picture of the early alert program at the study site, providing more meaningful findings. Universities similar to the study site should be able to use findings as basis of comparison, and all universities could use this approach as a template for their own early alert program evaluations.

Importance of the Topic

The benefits of a college degree are both personal and societal. As retention continues to be a challenge for institutions of higher education, it is expected that there will continue to be new and innovative ideas to address this challenge. Although the temptation is great for institutions to quickly adopt programs that may assist in retention efforts, it is important for them to take the time to assess the effectiveness of such programs, especially as they relate to their unique university populations.

Early alert programs are common at universities across the nation and globe and have been around for over a decade. However, research on their effectiveness and broad applicability has only recently started to develop. In addition, existing research has failed to give voice to the main users (faculty) and beneficiaries (students) of these programs. It has also failed to adequately assess the overall appropriateness in supporting one of the main goals of higher education: producing educated and responsible citizens. This study sought to fill these gaps in the literature by summarizing existing research, particularly more recent studies, and offering a multidimensional, mixed-method evaluation of the early alert program at a small, public university in the southwestern region of the United States. Such additions enable institutions of higher education to more appropriately assess and compare their own programs to make adjustments. As funding, time, and human resources on college campuses exist in shorter and shorter supply, it is important that universities invest their resources in programs that work and provide the most desirable outcomes for students and society. Not only will this study provide a template for evaluating early alert programs and other similar programs geared toward student

success, it could also strengthen existing arguments about the necessity of assessment and program evaluation.

Chapter II

Review of Literature

Historical Context

The relationship between institutions of higher education and students has evolved, so understanding the history of this relationship is essential for understanding the current expectations and perceptions of institutions of higher education. Until around the 1960s, the courts and society applied the *in loco parentis* doctrine to the university–student relationship. In this earlier stage of higher education history, colleges were expected to exercise broad authority over the personal and academic lives of students. Students were not viewed as adults or entitled to the same rights as their nonstudent peers. Universities were also smaller, with administrators and faculty having close, personal relationships with students (Lee, 2011). Access was based mainly on both merit and ability to pay (Koch & Gardner, 2014).

Several factors and events set the stage for the transition away from the *in loco parentis* relationship. These included the Vietnam War and the Civil Rights Movement, both of which triggered increases in student activism and their demands for constitutional rights (Patel, 2019). A series of court cases also contributed to the dramatic shift in the university–student relationship (Lee, 2011). One example is Dixon v. Alabama State Board of Education, 294 F.2d 150 (2d Cir. 1961), which established students' due process rights in campus disciplinary proceedings,

By 1971 and the ratification of the 26th Amendment, *in loco parentis* was considered dead. Universities entered the bystander era. During this time, which lasted until some point in the 1980s, universities were no longer seen as responsible for student behavior, especially any area outside of the academic realm. Numerous court cases during this time reinforced the perspective that students were adults, and the university was not responsible for "babysitting" them (Lee, 2011).

This era did not last long. Although courts recognized college students as adults, there was reluctance by some to release universities from complete responsibility for managing foreseeable risks and dangers in the college environment. This perspective guided universities into the current period, the facilitator era. In this era, universities have been charged with creating safe environments for students while also respecting their autonomy and ability to make decisions as adults within those environments (Patel, 2019). The university provides the opportunities, but students are responsible for capitalizing on those opportunities and taking responsibility for their own learning (Lee, 2011). Courts continue to put more emphasis on student responsibility in court cases. However, most universities, especially following serious or high-profile incidents, have elected to take a more involved facilitator role than had previously been taken in the bystander era (Lee, 2011).

As summarized above, the two primary shifts (from *in loco parentis* to bystander, from bystander to facilitator) were guided by historical events and court cases. They were also guided by some other important factors, changing enrollment demographics and government funding support. Over time, campus populations have grown in size and demographic complexity, which has also changed the nature of the student–university

relationship. With smaller campuses and more homogenous student bodies, it was easy for university staff and faculty to have close relationships with students, serve their needs, and monitor them. However, as campus populations grew, it became less realistic for faculty, staff, and administrators to have personal relationships with students and to manage their behaviors (Forrest, 2013).

The increase in access and campus size has placed additional demands on universities over time. Addressing varied levels of college readiness and a wide range of personal and physical challenges that students bring to campus has changed the university–student relationship.

Funding changes have also significantly altered the relationship between students and the university. In earlier times, when university funding was not contingent on performance metrics, the facilitator mindset was more reasonable. However, the heightened focus on performance-based funding based on enrollment and retention may be pushing universities to adopt a new, possibly intrusive posture with students to try to *ensure*, not *guide,* students toward completion of a college degree (Patel, 2019).

This pressure is coming from all sides. On one side, the state and the federal government is asking for more proof of university performance to justify funding. On another side, there are parents and students who have increasingly adopted a consumer attitude toward higher education as tuition rates go higher (Patel, 2019). In addition, as the number of institutions has grown over time, competition for students has increased, making universities work harder to attract and retain students.

Although retaining and graduating students have always been important to institutions of higher education, all these pressures have placed universities at a critical

point. In order to survive, they must attract as many students as possible, serve the varied needs of those students, retain them, and graduate them. Many of the programs that have been implemented so far at least appear to support the overall mission of higher education. However, the pressure to compete and also focus on enrollment, retention, and customer service has greatly increased the speed of program adoption. The pace of these activities often prevents adequate program evaluation. Questions about how a program relates to the overall mission of higher education and the university–student relationship are often overlooked.

The effects of early alert programs on the university–student relationship have not been studied. However, what have become common are studies about the effects of helicopter parenting on college students. In the parent–child relationship, helicoptering includes removing obstacles and intervening before a child can fail (Von Bergen & Bressler, 2017). In general, studies of helicopter parenting support the need for universities to provide opportunities for students to become autonomous and to avoid behaviors commonly associated with helicoptering (Darlow, Norvilitis, & Schuetze, 2017). Could the actions taken as part of the early alert program (identification, notification, intervention) be considered helicoptering by universities? Are they perceived that way by faculty and students? If so, does that perception change the nature of the relationship between the university and the student in ways that are favorable to society?

Summary

The university–student relationship has gone through several different periods of transition. Each transition has been guided by historic events and existing economic and social conditions. One of the most significant transitions occurred when the *in loco*

parentis perspective was replaced by a view that college students are adults with responsibility over their own behaviors. However, as economic and social conditions have placed higher demands on universities to prove their value, administrators in higher education have scrambled to find the best way to retain and graduate students. Whether or not current efforts to retain students, specifically early alert programs, are changing the university to student relationship is unclear.

Early Alert Program Components and Design

Early alert programs are formal, structured programs to notify students who are at risk and to intervene to try to prevent course failure or university departure. Early alert programs include three main components: identification, notification, and intervention. Each of these components can vary widely, depending on the institution, target audience, and other unique, campus attributes. Programs also vary in training approach, promotion, integration levels, scope, and evaluation. In order to understand early alert programs in higher education, it is important to understand the diversity in program approaches and design.

Identification

The first step of the early alert programs is the identification of students at risk. The main sources of identification are predictive analytics of preenrollment data, learning analytics of current student classroom data, self-assessments, and faculty identification.

Data analytics using preenrollment data. Over the past several decades, discussions of big data and its uses have been at the forefront of most policy discussions, and higher education is finally getting on the bandwagon. Institutions collect a great deal of data even before a student steps foot on campus via contact forms and application

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forms. Many universities use this data to identify students who may struggle once they begin classes. Some variables are commonly used in predictive analytics (i.e., high school GPA and standardized test scores). However, most universities have their own set of variables used in predicting student outcomes. Also, universities update their predictive variables at different intervals, which may make some more effective than others (Ekowo & Palmer, 2016).

Learning analytics using classroom data and behaviors. At some universities, attention is given to actual course activity and performance. The type of data gathered includes logins to the course module, the amount of time spent in different course content areas, and grades on assignments. These variables are then analyzed to determine which students may be at risk for not completing a course (Brooks, Erickson, Greer, & Gutwin, 2014). Sometimes, these data are analyzed by software, and a list of students who are potentially at risk is provided to professors automatically, allowing faculty members to determine whether an alert is needed (Casey & Azcona, 2017). Other times, the professors have access to the data and use it, in addition to what they know from interactions with students, to determine whether an alert is needed. Such measures can be especially useful in online classes. These tools have also been found to be more useful than preenrollment variables for universities that are very selective (Aguiar, Ambrose, Chawla, Goodrich, & Brockman, 2014).

Self-assessments. Many universities administer special assessment tools to new students to identify high-risk students. The College Student Inventory, Student Success Inventory, and the Student Readiness Inventory are some examples. Sometimes, students whose results place them in high-risk categories are contacted and encouraged to use

appropriate campus resources. This contact typically comes from early alert program staff or first-year seminar instructors (Robbins et al., 2009).

Faculty identification. Many early alert programs rely on faculty to identify at-risk students. Faculty identify students based solely on academic indicators or both academic and social/emotional indicators (e.g., family issues, alcohol use, drug use, etc.). Such programs take two primary forms. One approach involves an online form that a faculty member can submit for specific students, one at a time. The other method consists of having faculty members identify students via the learning information system (LMS) all at one time, by course. At some universities, faculty members are given a specific window to submit alerts; at others, the alert system is always available. Also, notification by faculty is voluntary at some campuses, whereas it is mandatory at others. Mandatory participation usually applies to specific, lower-level and high-risk courses (those with historically high numbers of drop, fail, withdraw rates) or for particular populations of students (e.g., student-athletes or first-year students). Community colleges are more likely to require full participation by faculty due to the high number of at-risk students at these institutions (Ball, 2016; Pfleging, 2002).

The early alert referral form options vary in design and specificity. Also, programs vary in actions required by professors before submitting an alert. In some cases, professors are expected to have reached out to a student a certain number of times before sending an alert (Ball, 2016). In others, there is no requirement for outreach before alert submission. Also, some early alert programs (e.g., Starfish) allow for the creation of both positive alerts to praise positive performance and concern alerts. Attendance issues are the most commonly used indicator of academic struggle (Hanover Research, 2014).

Campus-wide referrals. At some universities anyone in the university can submit alerts, typically with an online referral form. Research suggests that larger institutions (those with greater than 10,000 students) are more likely to use faculty-only referral systems and to focus on academic-only referrals (Hanover Research, 2014).

Timing. As mentioned above, the submission time frame of the alert can vary, and a consensus around appropriate timing for "early" alerts has not been established. However, Tinto (1993), and Upcraft, Gardner, and Barefoot, (2005) suggested that the "critical window" (Simons, 2011, p. 23) is the second to sixth week of classes, which is the most common window used. However, 18% of the responding institutions in a 2012 study by the Gardner Institute for Excellence reported institutional monitoring only at or after midterm (Barefoot, Griffin, & Koch, 2012). Also, some programs encourage submission *by* the early window, and some programs have all professors submit *during* a specific week.

Notification

When preenrollment variables are the primary source of identification for an early alert program, the notification can involve contacting students directly upon enrollment to meet with an advisor or academic success staff member to discuss challenges and direct students to specific services (Naidoo & Lemmens, 2015). Sometimes, this process involves a contract and commitment to the program and resources (Jayaprakash, Moody, Lauría, Regan, & Baron, 2014), although contract or voluntary sign-ups for early alert programs are rare (Barefoot et al., 2012).

When faculty identify students for early alert programs, there are a couple of different formats for the notification. The first, most common way, is the automated

generation of emails to the students from the information faculty provide in the LMS-connected programs (Jayaprakash et al., 2014). Although the email template is generic, most allow for personalization by the faculty member. Another common format is a form letter students receive in the mail. Student response to the intervention is not usually mandated, and the reported response rate at many institutions of higher education is less than 50% (Hanover Research, 2014).

Some systems, such as Course Signals at Purdue University, provide alerts that students can see when they log into the course (red, yellow, and green lights) (Baer & Norris, 2016).

Interventions

Interventions vary and depend on both the specific situation the student is in and the campus resources available. Generally, academic challenges will have interventions such as tutoring or meetings with faculty. Other interventions are tailored to the unique needs of the student (e.g., personal counseling, financial aid information, and job search assistance). However, response to the early alert notification is not mandated by most universities. Only 39% of universities require students (usually specific subpopulations such as student-athletes) to take the suggested action or actions (Hanover Research, 2014).

Training and Promotion

The success of early alert programs has been found to be linked to the level of training for the faculty and program staff. It has also been related to how widely the program is promoted across the campus (Unicon, 2014). However, these aspects look different at each campus as well. Some universities send out emails with instructions for

using the early alert system or portal to faculty. Some provide YouTube tutorials for faculty. Others have full, in-person training sessions with the entire faculty and academic administrators.

Training for the early alert staff, including peer mentors, is usually more formal and involved. Training for the general, student population often does not take place, except for universities that use preenrollment data to identify students and contracts with students that want to be part of the program (Unicon, 2014).

Based on the programs researched for this study, it appears that most universities do not advertise the program to the general campus. Most treat it as an internal tool for faculty use when needed vs. a program that students should see as a direct resource on campus.

Integration

Different alert programs involve different levels of campus-wide integration. Fully integrated systems provide networked connections between all of the key players, the alert system, and the student LMS at a campus. These allow alerts to be visible to any faculty or staff member that is part of a student's support network (advisor, coach, residence hall director, professors). Such systems also allow for updates to be posted and sent by any of the support team members as well. Nonintegrated systems utilize separate systems for the alert that do not connect to other systems, making cross-campus communication and updates much more difficult and time-consuming.

Scope

Early alert programs also vary in program scope. These programs can be applied to single courses, a specific population of students, or the entire campus. The scope tends

to vary based on the size of the university, selectivity level of admissions criteria, and available campus resources (Hanover Research, 2014). The effectiveness of a small, targeted program focus vs. a campus-wide approach is debated (Nora, Barlow, & Crisp, 2005). For campuses that focus on specific populations, the most common groups are first-year students, student-athletes, and "students with demonstrated academic difficulties" (Hanover Research, 2014, p. 3).

Evaluation

A logical piece of any program cycle is evaluation. However, in descriptions of early alert program components, the evaluation step is noticeably missing, further promoting what has been referred to as the "perpetual pilot program" (EAB, 2016, p. 6) in higher education. In a 2011 study of 4-year institutions, 29% of respondents reported not having the data to say whether or not contacted students had responded to the notification from the program data they had collected. This study also reported that 40% of respondents defined program goals very broadly, referring to student retention and success, without specific programmatic goals. Furthermore, the most common reported approach for assessing program success was looking at the number of alerts, not the number of those actually reached or the number of students who passed the course or persisted to the next semester (Simons, 2011).

Summary

Although early alert programs at institutions of higher education share the common components of identification, notification, and intervention, there is great diversity within each of these components. There is also diversity in training, promotion,

integration levels, scope, and evaluation in these programs. Each of these differences can impact the overall effectiveness of early alert programs with the populations they serve.

<div align="center">**Previous Studies**</div>

Course-Specific Studies

There has been a range of different studies on the effects of early alert programs. Some studies report findings of programs tested in specific courses before going campus wide. One study of a large gateway math class found a positive correlation between students who received a personalized alert from instructors and help-seeking behaviors (Cai, Lewis, & Higdon, 2015). Another study used a quasi-experimental design with an introductory economics class. Those who were reported for an early intervention received a final course grade that was an average of 4.27 points higher than those that did not (Campbell & Hussey, 2015). In a gateway physics class at another university, students who had lower predictive scores were emailed at the beginning of the semester and given a chance to take part in an online student support system. Those who used the system performed better than expected (Wright, McKay, Hershock, Miller, & Tritz, 2014).

Overall, these studies show positive relationships between alerts and course outcomes in course-specific early alert programs. A flaw with each of these studies is their reliance entirely on quantitative program data to make assumptions about students and faculty members. Such an approach does not provide a clear connection between the program and the student behaviors. It also does not provide information about faculty perspectives of the program.

Campus-Specific Studies

Many campuses do in-house research on their programs. However, access to these studies is limited, as they often lack the scientific rigor necessary for publication (Simons, 2011). Despite this, the published research base in this area is growing. Although single campus studies limit generalizability, they offer meaningful contributions to the general body of early alert research. Given the diversity of college campuses and the student populations they serve, single campus studies may be what is most appropriate. What is notable about many of the single campus studies is how many of them are first-time evaluations of early alert programs that have been around for years. The findings of campus-specific studies have been mixed. The following section provides an overview of several of these studies.

A 2013 study of the Early Alert Referral System at the University of North Texas included an analysis of the program data at the end of its first term of use. Tampke (2013) found that men were alerted at proportionally higher numbers respective to their percentage of representation in the general student population. Even though over 70% of the students persisted to the next term, 64% of those alerted either failed or dropped the course (43% failed, 21% dropped) they were alerted about. The most common reason given for submitting a referral was "poor class attendance" (56.5%). Tampke also found a positive association between personal contact with faculty and early alert staff and term GPA. However, there were no results reported for the relationship between type of contact and course outcome.

Tampke (2013) explained the involvement of the faculty stakeholders in the design of the Early Alert Referral System program in the introduction to the study, but he

did not include their feedback in the evaluation of the program. Student input was neglected as well, although he did recommend a qualitative approach to understanding student responses in the recommendations section. Tampke also recommended a quasi-experimental approach with matched pairs in different sections of the same course to better assess the impact of the early alert.

A study of an unidentified community college looked at the personal characteristics of a random sample of students who had received an alert from 2009–2015 ($N = 3,873$). The only variable found to have a significant relationship to the early alert outcome was race/ethnicity (Ball, 2016). The most common result for those receiving alerts was failing the course. However, this study only used quantitative program data and did not have a control group. Therefore, it is difficult to know the level of impact the alert actually had on the student's decision and behaviors. Although a majority of those alerted failed, it is hard to know what would have happened to those students who passed if they had not received an alert. Another limitation of the study is the characteristics of the students: most were female and not first generation (Ball, 2016).

The program at Western Oregon University was evaluated in 2015. Although the university involved various stakeholders, including faculty, in the pilot program in Winter 2013, the program evaluation was not conducted until after the Spring 2014 semester (Poole, 2015). This program involved staff or faculty submitting an alert, which created an automated email to the student. The email informed them that a faculty or staff member was concerned about their academic progress and provided information about tutoring services and important withdrawal deadlines and encouraged students to set up an appointment with the student success specialist. In this study, Poole (2015) divided

students into two groups for analysis—those who had responded and received the intervention and those that had not responded. He also provided criteria for defining the student outcome as successful, not successful, or neutral. He analyzed the results by term and overall. Overall, the success rate difference between students who did and did not receive interventions was 8%. However, in the pilot semester, those that received the intervention had a 15% higher rate of negative progress than those who had not received the intervention. Also, students who did not receive an intervention were twice as likely to be in the "neutral" category (meaning their academic progress status remained consistent to the previous semester) than those who had received the intervention.

With this approach, the division of the students into responders/received intervention vs. nonresponders/did not receive intervention helps to assess the effectiveness of the intervention but provides less information about the effect of the notification. Without surveying all students directly about their perceptions and feelings after receiving the initial notification, it is difficult to know what the effect of the alert itself was. Even though some students did not respond and did not set up an appointment, the alert notification itself may have prompted a change in their behavior or affected their confidence level. Other research (e.g., Jayaprakash et al., 2014) has shown a connection between simple notifications and a change in student behaviors.

Multiuniversity Studies

In the last decade, there have been a handful of notable, multiuniversity studies on early alert programs in higher education. Each of these is highlighted below, including contributions and limitations.

Simons. In 2011, chief academic officers (CAOs) at 4-year institutions across the country were surveyed about their early alert programs. The purpose of the study was to "inventory, categorize, and describe early alert programs by organizational structure and conceptual design" (Simons, 2011, p. 5). The study helped provide information about the age, design, and structural elements of early alert programs across the survey sample.

This study exposed some significant weaknesses of many institutions with early alert programs. Many programs failed to define specific, measurable goals for the program and consistently collect data. In addition, output measures (number of alerts created) instead of outcome measures (e.g., number of students who passed the course alert was created for, number of students who were retained the term after the alert was sent, etc.) were commonly used for evaluating program effectiveness. Furthermore, 29.4% of respondents reported being uncertain about how many students even responded to the alert.

In general, Simons's (2011) study provided a better understanding of the pervasiveness of early alert programs, their design characteristics, and how CAOs (or those designated to complete the survey in their place) felt about them. As Simon acknowledged in her limitations section, however, missing from the study was the perspective of students, as well as more case study research that evaluates individual programs more completely. In addition, it is possible that the CAO or their designee did not provide an accurate depiction of the viewpoints of other key stakeholders, including faculty, at the university. Furthermore, there was self-selection bias present in this study, and the responding participants may not truly reflect the 4-year institution population.

Fletcher. A year later, Fletcher (2012) decided to use the same survey questions used by Simons (2011) with CAOs at public, nonprofit, 2-year institutions of higher education. From a list of 780 valid email addresses for chief academic officers, there were 145 survey responses (21% response rate). After receiving the survey responses, Fletcher did a follow-up interview with fourteen respondents who had either indicated satisfaction and retention increases or a lack of both as a result of the early alert program.

Fletcher (2012) found many similarities between the responses from participants in the public, 2-year study, and the study Simons (2011) conducted with 4-year institutions of higher education. These similarities included how programs are structured and funded, the predominance of reactive programs, communication methods with students, and satisfaction levels. In addition, respondents in both studies expressed difficulty in getting students to respond to alert notifications. Effective assessment was also a shared challenge.

Fletcher's (2012) study had the same limitations as the Simons (2011) study. Follow-up interviews helped provide more information than was provided in the surveys alone, but they were only conducted with fourteen individuals who were on either end of the spectrum in perceived results and satisfaction. Therefore, it is hard to generalize their perspectives.

A notable contribution from Fletcher's (2012) study was the increased focus on faculty in the conclusion and findings of the study. Fletcher recommended further research that incorporates their perspectives and experiences (as well as students). However, the focus was on teaching faculty to use early alert programs and designing a program with their busy schedules in mind. Fletcher offered no suggestion to include

faculty in the actual design process, which would be the most logical recommendation given their role in the program. In addition, the comments about faculty in the paper were speculative and unsubstantiated.

Gardner Institute. In the same year Fletcher completed his study, Barefoot et al. (2012) of the John N. Gardner Institute for Excellence in Undergraduate Education published the results of a 2010 national survey of 4-year colleges and universities that focused on seven student success initiatives, including early alert programs. For the study, surveys were sent to 1,373 chief academic officers, and they had a 38.4% response rate (527 responses), the best response rate of the three large-scale studies mentioned. Like the Simons (2011) study, Barefoot et al.'s survey asked about various characteristics of early alert programs such as the age of program, program scope, indicators used, method of outreach, timing, personnel involved, goals, and outcomes.

The findings of the study were in line with the results of Simons (2011). However, Barefoot et al. (2012) were more specific with questions about program scope. They requested data about which institutions used early alert programs for which categories of students for each year cohort of students (first year, second year, etc.), as well as transfer students. They found that campus size was related to the scope of the program, with larger campuses being more likely to limit the scope than smaller campuses. First-year students were the most common focus group throughout. However, students on academic probation, student-athletes, and those in specific programs (e.g., TRIO programs) were likely to be included in early alert programs in all years.

Another difference between the Simons (2011) survey and that of the Gardner Institute was the inclusion of a question about outreach in the residence halls as part of

the early alert process. Of the respondents, 39% reported having this as a characteristic of their program. Outreach to students who live on campus is a logical means of contact. It is interesting that Simons did not include this characteristic in the survey.

Also, although Simons (2011) asked about satisfaction levels and funding/resource support for early alert programs, Barefoot et al. (2012) asked about perceived cost effectiveness. There were no relationships found between institutional size and satisfaction levels. In general, most respondents indicated at least a medium level of satisfaction, although 6.7–9.7% (broken down by institution size) expressed that they were "uncertain" about satisfaction with the program. They could have selected this option for many reasons. High among those possible reasons is the uncertainty about how much the benefits of the program offset the costs.

Overall, this study achieved a better response rate than the other multi-university studies and added some more specific details about individual program components. However, there was a lack of any solid evidence about early alert program effectiveness. A missed opportunity by Barefoot et al. (2012) was the failure to analyze the connection between different program components and responses for cost-effectiveness, program outcomes, and other items on the survey.

Other Studies

Some early alert studies focus on specific groups of students or areas not typically representative of the average student. Although they add to the overall body of knowledge for early alert research, they do not offer results that are generalizable to the college students that most universities serve. For example, there have been studies of early alert programs for engineering students at Notre Dame, medical school students

(Winston, Van der Vleuten, & Scherpbier, 2014), and gifted students (Schumacker, Sayler, & Bembry, 1995). These studies were considered and reviewed but ultimately not selected as essential parts of this analysis as such studies do not represent studies on the typical, undergraduate student.

Summary

Over the past few years, the amount of published research and unpublished dissertation work on early alert programs has increased. Many course-specific studies have shown some positive early alert program outcomes. However, campus-specific and multiuniversity studies have had mixed or neutral outcomes. In general, existing studies have been deficient in student and faculty perspectives and limited by methods used, creating a void in solid support and appropriate evaluation approaches for early alert programs.

Faculty Perceptions

Most early alert programs involve faculty in some way, usually significant, especially in the identification component of the program. As primary users and drivers of the program, it is logical that faculty perspectives and input would be considered in all stages of program development, implementation, evaluation, and revision (EAB, 2016). The importance of faculty engagement has been supported in multiple studies (Ball, 2016; Bentham, 2017). Without this support, programs are unlikely to get high or appropriate use by faculty. A lack of widespread use across the campus makes it difficult for early alert programs to be evaluated for effectiveness with a particular student and campus population (EAB, 2016).

Many existing studies, instead of asking faculty directly for input, offer speculations about faculty perceptions and behavior. For example, faculty have been portrayed as lacking awareness of the impact of their classroom behaviors. This sentiment is evident in a quote from a dean of a large public university: "Right now, faculty do not clearly see the correlation between what happens to a student in their classroom and what happens to that same student at the institution. That is a gap we have to fix" (EAB, 2016, p. 8)

Some speculate that faculty members perceive early alerts as another administrative task, one that could create perceptions of poor instruction or inappropriate levels of rigor for courses with high numbers of submitted alerts (EAB, 2016). The latter was echoed in an institutional case study report of West Virginia University. In this report, one of the institution's administrators also asserted that faculty members were more likely to be reactive in alert submission than proactive, meaning faculty members were submitting alerts when a student was already failing the course (Jungblut, 2015). Other studies suggest that faculty members lack a full understanding of the importance of early alert programs or lack empathy for the challenges that students face (Bentham, 2017).

Although not specifically focused on early alert programs, the Faculty Survey of Student Engagement (FSSE) allows institutions to gather information about faculty perceptions of students, faculty perceptions of institutional goals, faculty instructional methods, and how faculty use time. For universities that administer the FSSE, the gathered information can help in the design process of a new program that involves faculty. It can also potentially help to explain faculty response to programs. For example,

if the several questions about perceptions of student behaviors (e.g., amount of time spent reading and preparing for class, frequency of doing their best work) compared to faculty expectations of students in each of those areas are out of balance, it could be an indication that faculty members view students as not doing their part to succeed. Faculty members with these views may be less supportive of programs that involve more work on their part to encourage student success. The responses to the second question: "How important is it to you that your institution increase its emphasis on each of the following?" may also provide some insight. Faculty members who place little importance on "providing support to help students succeed academically" or "helping students manage their non-academic responsibilities" may also be less supportive of programs like early alert programs (Indiana University, 2019a). In addition, if institutions view results over time, they could be indirectly used to gauge the effects of new programs. However, without asking questions about early alert programs specifically, the information in the FSSE alone is insufficient to assist in early alert program evaluation.

According to a study using data from the Delta Cost Project, as of 2013 contingent faculty accounted for over 50% of faculty for all campus types (Hurlburt & McGarrah, 2016). This is an important consideration when designing and evaluating early alert programs and other programs in higher education. Contingent faculty members often spend less time on campus and often have less access to and knowledge of campus resources and programs. If there is a significant difference in the level of awareness of and use of programs such as early alert programs among contingent faculty members, these programs are less likely to be successful. If early alert programs are effective tools for improving student retention and contingent faculty are not using them, universities

with high numbers of at-risk students are more likely to experience negative effects, as the universities with the highest shares of contingent faculty also tend to have the highest shares of at-risk students (Hurlbut & McGarrah, 2016). Where the perspectives of faculty members, in general, have been neglected, the perspectives of contingent faculty are likely to be completely disregarded. Efforts must be made to incorporate the perspectives of all faculty members if optimal and meaningful results are desired.

Summary

Overall, speculations about faculty attitudes and behavior are common. However, research on faculty perspectives of specific student programs, including early alert programs, is lacking. For this reason, including their feedback in this study is a significant contribution.

Student Perceptions

The primary beneficiary of early alert programs, aside from the university and society, is the student. For this reason, student perspectives must be considered when planning, implementing, and evaluating early alert programs. Unfortunately, researchers and administrators continue to use quantitative program output data to speculate about student perspectives and behaviors rather than ask them directly. The most common area of speculation concerns the student response to alert notifications. Eimers (2000) suggested that low response rates may stem from poor-performing students, who feel discouraged when receiving an alert of poor performance. Karp (2014) speculated that students could also perceive alerts as a "reprimand rather than an opportunity." Simons (2011) hypothesized that the form of contact may be the issue. She also questioned the way adult students perceive "seemingly forced campus intervention" (p. 119). Either

way, without directly asking students, it is difficult to know how students feel. Without knowing, evaluating program effectiveness or appropriateness is challenging. As Karp (2014) pointed out, there needs to be a shift to an "end-user culture" that colleges are currently neglecting.

Currently, there are only a few studies that include student feedback in the assessment of program effectiveness. These studies, as well as their findings and limitations, are summarized below.

Eimers's (2000) study of early alert students at a 4-year midwestern university contained a control group, a sample size of 816 students, a survey of students, information on the behavioral/action response taken by the student after receiving the alert, and the final course outcome. In this study, the control group (students at risk of failing who had not received an alert) had significantly higher grades than those who did receive an alert. However, the survey failed to include a question asking how the alert made students feel and how it related to any behavior modifications after receiving the alert. Failing to ask this question left the study author speculating that the surprising study findings were caused by what could be "fragile" (Eimers, 2000, p. 12) academic egos of high-risk students.

Pfleging's (2002) study about the early alert program at Columbia College, a 2-year college in California, involved surveys sent to all students who were in classes in which at least one alert had been created during the semester. From the information gathered in the surveys, the program was found to be effective in two stages of the overall process—identifying and notifying students at risk. However, the study results found the program to be lacking in the final stage, the intervention stage, as many of

those alerted failed to use the appropriate support services on campus after receiving the alert. Pfleging also found that students who received alerts had lower GPAs than those who did not receive alerts. The most common response to receiving an alert was dropping the class. Although dropping the course may be an appropriate response to prevent damage to GPA for students who are in situations where grade improvement is not possible in a course, this finding is very concerning and worthy of further research. If early alerts are designed to reduce course failure and prevent attrition, a high number of course drops by students as a response to early alerts runs counter to that goal.

The phrasing of a few of the questions in the survey instrument created a weakness in overall findings. Rather than asking participants how the alert was related to their choice of using any services or changing specific behaviors, it asked which services they had used and which ones they had trouble using. Without asking, it is unclear the extent to which the alert had anything to do with the choice to use the services. Asking how the alert made them feel would have also added more depth to the data and results.

Students often have a difficult time accurately assessing where they stand academically, and at-risk students are particularly challenged in this regard (Kinnear Boyce, Sparrow, Middleton, & Cullity, 2008). In the Pfleging (2002) study, student self-perception data were compared to the final class grades (aggregate, not by a person). At least in this context (and in aggregate), self-perceptions of class performance were not accurate. This is an important addition to the literature, as it speaks to underlying assumptions about student academic control variables. If students do not accurately perceive their class performance, more faculty involvement may be needed to increase awareness. Early alerts may be one way to address these errors in performance

perception. The early alert outreach approach may be additionally beneficial even to at-risk students who are aware of their own academic performance issues but struggle to ask for help (Kinnear et al., 2008).

Atif, Bilgin, and Richards (2015) collected data about student preferences of early alerts using online surveys at one university in Australia, and 10% of respondents said they would not want to be contacted or alerted at all. However, other students had a positive attitude toward early alerts and wanted to be alerted as soon as possible. Most preferred email first, followed by in-person and phone outreach. Students also preferred receiving alerts about low assessment scores and missing assignments over alerts about absenteeism, class behavioral problems, or other issues. In addition, participants demonstrated a low level of awareness of support services on campus and expressed expectations that courses would be easy and require minimal work.

The generalizability of the Atif et al. (2015) findings is significantly limited by the sampling method and the small number of completed surveys (56). The study also failed to connect student perceptions to other variables of importance, as well as neglected to question students about the connection between behavior change and the alert.

The most compelling study of student perceptions of early alert programs came out in the same year as Atif et al.'s (2015) study. This campus-wide study solicited student feedback about the early alert program, Starfish, at East Carolina University. Study questions were based on Tinto's theory of student development and Astin's theory of student engagement and were used to look at differences in perception among different types of students. The results indicated a positive relationship between the program and

the various facets of the two theories applied to the study. Specifically, Asby (2015) found early alerts to have a positive impact on college satisfaction, motivation to utilize campus resources, connection with university representatives, and overall sense of campus connectedness.

As is the case with single campus studies, the results of this study were limited in generalizability. However, the most significant limitation of Asby's (2015) study is related to the design of the Starfish program. Many early alert programs focus only on alerting students who are showing signs of academic struggle. However, Starfish allows faculty and staff to send positive alerts as well. Because the survey instrument does not ask the student to offer distinct responses for positive performance and academic concern alerts, it is impossible to know which answers are related to each. It is logical to assume that positive alerts would have a positive response from students. However, it is important, from a program evaluation perspective, to know how students perceive each type of alert.

Asby (2015) did report that earlier in-house pilot studies of the program distinguished between those who received positive performance notifications and academic concern notifications. However, he did not distinguish between the two types of alerts and was left to speculate that the 50% of student respondents who took no action in response to the alert were students who had received positive performance notifications instead of academic concern notifications.

Other Related Studies

Many universities make use of various student self-assessment tools such as the National Survey of Student Engagement (NSSE), the College Student Inventory (CSI), or

the Student Adaptation to College Questionnaire. These assessments ask questions in similar categories: student demographics, student academic behaviors inside and outside of the classroom, student attitudes and motivation about college, student personal behaviors attitude toward seeking help, abilities, and support networks. The NSSE is the lengthiest of the group. It also includes questions about expectations and perceptions of faculty and other students, as well as the level of campus involvement (Indiana University, 2019b). These questions can be useful in helping administrators design programs, including early alert programs, to suit the needs and attitudes of their students. Results could also be used to indirectly measure the impact of various programs introduced on college campuses over time. However, aside from those uses, these assessment tools and the types of questions are not designed to be utilized for measuring the impact of specific programs.

Because growing numbers of universities use data analytics as part of their early alert programs, studies of student perceptions of data analytics can aid in understanding the early alert response. Roberts, Howell, Seaman, and Gibson, (2016) conducted a study utilizing a series of focus groups involving 38 students from a large metropolitan university in Australia. The groups included first-year psychology students (first group), second-year psychology students (second group), third-year psychology students (third group), and a mix of majors and classifications (final group). Students were provided with basic information about learning analytics and shown a movie with more details. They were then given a description of how analytics was used on their campus and asked to respond to questions and discussion prompts. Although students recognized the benefits of feeling like "more than a number" (Roberts et al., 2016, p. 5), some expressed

concerns about the extent of data surveillance and usage, as well as being "babied" (p. 7) and trained to be dependent on systems that would not be available at their places of employment after graduation. They also expressed concerns about potential bias from professors who might treat students differently if analytics showed them to be high risk or likely to fail.

In addition to the issue of not focusing on early alerts specifically, the generalizability of Roberts et al.'s (2016) study is limited by using only psychology students from one campus in Australia. However, the findings are still meaningful, as they offer some insight into student attitudes of data analytics and early alert programs.

Summary

Research on student perspectives of early alert programs is limited and results are mixed. Inclusion of their perspectives in this research study is an important contribution to early alert research, and it will be especially meaningful in the interpretation of program results at the study site.

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Theory

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To fully understand and evaluate the human response to different programs offered in any area of public administration, the use of theories is beneficial. Although many possible theories could have been applied to this study, self-determination theory (SDT) and attribution theory were used to explore the *whys* in early alert programs. The relevance of both theories in studies of college students has increased over time as their application to these populations has evolved.

Self-determination Theory

SDT was developed by Edward L. Deci and Richard M. Ryan from the University of Rochester in 1985. SDT provides a framework for understanding human motivation based on feelings of autonomy, competence, and relatedness. Deci and Ryan (2000) considered these intrinsic needs of all humans. If early alert programs support these intrinsic needs, it is logical to assume that they would be effective in motivating students to make changes that may improve their chances of success.

The satisfaction of autonomy, competence, and relatedness can be viewed from different levels when using SDT. The *global* level looks at all of an individual's experiences. The *contextual* level gives focused attention to experience and activities that take place at or within a particular setting. The *situational* level looks at specific activities at a specific time (Beck & Davidson, 2019).

For this study, the contextual level is most appropriate, as it looks at how autonomy, competence, and relatedness of college students are affected by early alerts within the college environment (Jacobi, 2018). In this context, autonomy is the ability to make decisions and have control over one's actions in the college environment. Competence is knowing the expectations and having the skills to be successful in reaching those expectations. Relatedness, in the college environment, is feeling a sense of belonging to the university, classmates, and peers (Jacobi, 2018).

In design, early alert programs appear to support at least two of the basic needs—competence and relatedness. Assuming a student receives an alert, responds to the alert, and follows through with the suggested activities or behavioral adjustments, their level of competence in certain subjects or skills could be improved. In addition, the alert may

increase feelings of relatedness if the alert makes the student feel like others in the university care about them and want to help them

However, early alerts may have the opposite effect on students. Receiving an alert may make a student feel incompetent or embarrassed. The feeling of incompetence may only deepen if the student opts to drop the class rather than seek out additional tutoring. Depending on the approach and nature of the alert, it is possible that a student could feel that they are being scolded, which reduces feelings of relatedness. Without asking students directly, it is difficult to draw solid support for such speculations.

It is also difficult to know how early alerts impact feelings of autonomy. On the one hand, an alert may be perceived as a subtle nudge to get a student on the right track. On the other hand, an alert may be perceived as an intrusion on a student's ability to act appropriately and learn from their own mistakes. In this case, the response to the alert could reduce motivation and cause a negative result. The best way to understand autonomy is to ask students how they attribute the outcomes of situations, which is where attribution theory becomes useful.

Attribution Theory

Fritz Heider (1958) is acknowledged as the creator of the theory of attribution. However, Bernard Weiner (1985) and others are credited with the development of the theoretical framework for applying attribution theory. This theory explains human responses to situations based on the way individuals attribute the outcomes of those situations. In general, the theory suggests that individuals who attribute results to fixed, external factors are less successful than those who attribute outcomes to controllable, internal factors. This theory has been applied to understanding the human response in

various contexts. In the context of learning environments, a learner's perceived academic control is the focus (Demetriou, 2011). Previous studies have used academic control measures to identify attribution issues and retrain learners to perceive challenges differently in order to overcome educational struggles.

Elements of attribution theory are present in some of the various student self-assessments universities conduct. However, these assessments are broad, preventing the connection to specific program evaluation and use. Even though this theory has a logical connection to early alert program outcomes, no existing study applies attribution theory to the assessment of early alert programs. Knowing how students perceive outcomes and to what they attribute outcomes should be instructive to higher education administrators in interpreting early alert program results and designing appropriate intervention strategies. Students that attribute course outcomes to external, fixed factors (e.g., luck, instructor) may respond differently to early alert notifications and interventions than those who attribute results to internal, controllable factors (e.g., time spent studying, amount of effort), even if they perceive the program itself to be positive. In these cases, rather than offering more subject matter tutoring or sending students to various workshops, attributional retraining may be more helpful. However, without asking students about how they perceive challenging situations, it is difficult to know what is most appropriate.

With attribution theory it is also important to understand expectations. When a person expects certain things from their environment, they are more likely to attribute negative outcomes to external factors if expectations are violated. For example, if a student expects professors to post constant reminders and reach out to them when they

are not doing well, they may perceive negative course outcomes to be the fault of professors, even if they identify with high levels of autonomy.

Attribution theory can also be applied to the faculty response to early alert programs, as it is also used to explain how individuals attribute the behaviors of others (Yang, 2009). For example, some faculty members may perceive student struggles to be related mostly to internal factors such as failure to study and lack of effort. These professors may have a different attitude toward using early alerts than professors who perceive academic struggles of students to be mostly related to external factors in student's environment.

An important consideration when applying attribution theory to program evaluation is cultural differences. Individualistic cultures like those in the United States and Europe promote a more individualistic mindset. Individuals from these cultures are more likely to attribute personal successes to internal factors. They are also more likely to attribute personal failures to external factors as a self-esteem enhancing tactic (Yang, 2009). Collectivist cultures are the opposite, as they tend to attribute failure to internal factors to protect the group (Crystal, 2000; Yang, 2009). Campuses with diverse campus populations will need to be mindful of these differences when applying theory to all stages of program development and evaluation.

Summary

Together, self-determination theory and attribution theory can be helpful for understanding student and faculty response to early alerts and for designing appropriate interventions. Applying both theoretical lenses to program data and response will help guide institutions of higher education to more meaningful program evaluations.

Chapter 3

Methodology

Focusing only on the program output and outcome data or a classroom study or perspectives of one group on campus does not offer a complete enough picture to fully understand the effectiveness of early alert programs. This study involved a comprehensive, mixed methods evaluation of the early alert program of a small, public university in the southwestern region of the United States. It included an analysis of the program data, a quasi-experimental classroom study involving six courses, a faculty survey, and a student survey. Taken together, these pieces provide a more comprehensive understanding of the early alert program at the study site and can serve as a template for early alert program evaluation at institutions of higher education.

Even though a single campus focus limits the generalizability of findings, such an approach is more than appropriate considering the variety and diversity of institutions and populations they each serve. It also supports published research that encourages institutions of higher education to focus on their unique campus populations when addressing campus challenges (Swail, 2006).

Study Site Information

The study site was a small, public 4-year university in the southwestern region of the United States offering bachelor's and master's degrees in a variety of academic disciplines. The average enrollment from Fall 2013 to Spring 2018 was 1809 students.

Based on 2018 enrollment data, 48% of the students were male, and 52% were female.

See Table 1 for breakdown of race/ethnicity.

Table 1

Student Demographics at Study Site

	Study Site
Hispanic	51%
White	35%
Black	7%
Other	7%

Note. Data from Office of Institutional Research at study site

Based on 2018 data from the Texas Higher Education Coordinating Board, 55% of enrolled students received a Pell Grant and 44% had first generation status. Based on institutional data, the average fall-to-fall retention rate for entering students from 2009 to 2017 was 51.32% (same institution). The average 6-year graduation rate from 2009 to 2017 was 23.19% (same institution) and 29.32% (same or other institutions) (Texas Higher Education Coordinating Board, 2019). Table 2 shows how the study site compares to other institutions.

Table 2

How Study Site Compares to National Averages

	Study site	National average	4 yr. public	4 yr. private NP	4 yr. for profit	2 yr. public
Year-to-year retention	51%	60%	69.8%	74.4%	47.5%	48.1%
6-year graduation rate	23.19%	60%	60%	66%	21%	25%*

Notes: Year-to-year retention rates are from 2009–2016 (National Student Clearinghouse Center). Six-year graduation rates are from 2018 data (National Center for Education Statistics). *2-year public graduation rates are reported as percentage of those who graduated within 3 years

Currently 89 faculty members teach at the university, including both part-time and full-time faculty. For the purposes of this study, faculty members at the sister campuses were not included, as the early alert program has not been accessible to those campuses. Of the courses currently offered, 84% are offered in the face-to-face format, and 16% are offered online.

Early Alert Program Information for Study Site

Identification

Although the study site contracts with a data analytics company to analyze enrollment data and provide persistence predictions for incoming students, these data have not been used to identify students for the early alert program or to evaluate program response differences.

After the first few weeks of classes, a full-time staff member who works with the early alert program emails faculty members the link for early alert submissions. Faculty then submit individual forms for each student. The form is available throughout the entire

semester. On the form, faculty can provide suggested actions for students: meet with professor, start coming to class, or drop the course. Faculty use their own methods and criteria to determine which students need alerts. Faculty are not required to submit early alerts.

Notification

Once the form is received, a peer mentor attempts to contact the student via email then by phone. If the student does not respond, the process ends and no other notification attempts are made.

Intervention

If a student does respond to the email or phone call, the peer mentor or program staff member makes them aware of the concerns submitted by the faculty member. In addition to a discussion of the suggested actions from the professor, an attempt is made to identify other resources and actions that may help students positively progress.

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Program Data

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The early alert program at the study site started in the Fall 2015 semester. Since that time, the responsibility for the program has changed hands multiple times, which resulted in the loss of data from the Fall 2017 and Fall 2018 semesters. This study included data from the Fall 2015, Spring 2016, Fall 2016, Spring 2017, Spring 2018, and Spring 2019 semesters.

Although a few of the semester data sets had information about students who had dropped or withdrawn from a course that they had received an alert for, other outcome data had not been recorded in the early alert spreadsheets. During the Spring 2019 semester, all the data sets were updated to include final grade in the course alerted for,

current enrollment status, number of hours completed, cumulative GPA, and Ruffalo-Noel Levitz (RNL) predictor scores. RNL scores at the study site are calculated by Ruffalo-Noel Levitz using an algorithm. They are based on a student's high school GPA, Texas Success Initiative (TSI) scores, level of financial need, hometown distance from campus, major, and number of days the student was in the applicant pool. The TSI includes separate tests for reading, writing, and math and is used to determine college readiness in these areas.

Some data were removed from the data set: graduate course alerts, alerts without specific courses referenced (alerts from coaches or other university staff members), and alerts from the university. Without specific courses referenced, outcome analysis was not possible. In addition, multiple alerts for the same student in the same course in the same semester were counted as a single alert, so that one alert was associated with one outcome. These were rare occurrences in the data. With a larger data set and more occurrences, researchers could explore the effects of multiple alerts for the same student (in the same class or in different classes in the same semester).

Once the data set was created, student identifiers were removed and replaced with participant numbers. However, the email addresses for all students were kept in a separate list for use in the student survey portion of the study. The email list does not contain any other information about the students.

Method

The following descriptive data are provided in the results: total number of alerts, group percentages of early alert students who dropped or failed the course and persisted to the next semester and next year, the number of male vs. female alerts, percentage of

alerts that come from remedial education, first-year seminar, and upper-level courses, cumulative GPA, number of hours completed, and number of professors who submitted alerts.

Based on existing research, the following hypotheses were applied to the program data:

H_1: The most common course outcome for alerted students will be dropping or failing the course.

H_2: Males will represent a higher proportion of alerted students.

H_3: The number of alerts for remedial education courses will be higher than other types of courses.

A chi-square analysis was also conducted to analyze the relationship between the independent variable, RNL predictor score (independent variable), and course outcome (dependent variable). Although the RNL predictor score is not currently used as part of the early alert program at the study site, knowing its usefulness in predicting specific course outcomes may provide support for its use in the future. Students were be coded based on the following scale:

Retention predictor score between 0–.25 (highest risk of dropping out): 1

Retention predictor score between .26–.50: 2

Retention predictor score between .51–.75: 3

Retention predictor score between .76–100 (lowest risk of dropping out): 4

For course outcome (dependent variable), codes were coded as 1 = pass and 0 = did not pass. For this analysis, only those students who had retention predictor scores assigned were included. A $p < .05$ level was used to assess significance.

A correlation analysis was also conducted, coding RNL predictor score and course outcome as continuous variables. Predictor scores were coded to reflect their original values from 0–1. Course outcomes were coded as follows: A = 95, B = 85, C = 75, D = 65, and F = 55. The "W" course outcomes were not included, as there is no suitable numeric value to substitute for them.

H4: There is a positive relationship between a student's risk category and the course outcome after receiving an alert.

H0: There is no relationship between a student's risk category and the course outcome after receiving an alert.

Another chi-square analysis was conducted to look at the relationship between timing of the alert and course outcome. Each course outcome was coded as pass (1), failed (2), or withdrew (3), and the date of each alert will be coded for the month it was created (first month = 1, second month = 2). Alerts without date information were excluded. A $p < .05$ level was used to assess significance.

H5: There is a significant relationship between the timing of the alert and the course outcome.

H0: There is no relationship between the timing of the alert and the course outcome.

Aside from course-specific information, only gender and college cumulative GPA (current cumulative GPA) of each student were included in the program data. Given the coding options available for these variables, a t test and chi-square analysis were used to look at the course outcome and gender variables, and a chi-square analysis and correlation analysis were used for the course outcome and cumulative GPA variables. For

the chi-square analyses, the course outcome was coded as 1 = pass or 0 = failed or withdrew. For the *t* test and correlation analysis, the course outcome was given a numeric value as described above, and all "W" outcomes were dropped from the analysis.

H$_6$: There is significant difference in the course outcomes based on gender and cumulative GPA.

H$_0$: There is no difference in the course outcomes based on gender and cumulative GPA.

Classroom Study

Knowing how an individual's outcome would have been different without receiving the benefits or services of an existing program is an important aspect of evaluating program effectiveness. In the context of early alert programs, it is possible to ask students what they think would have been the course outcome if they had not received an alert, and this question was included in the student survey. However, quasi-experimental classroom studies that involve matching students who did and did not receive alerts can more reliably estimate the alternate outcomes.

Participants

During the Spring 2019 semester, six classes were identified for inclusion in an Institutional Review Board (IRB)-approved classroom study, three courses with two sections taught by the same professor. One section of each was designated as the treatment group (faculty member submitted early alerts or send outreach email for students in this class), whereas the other one was designated as the control group (faculty member did not submit early alerts or send outreach emails for this class). The use of two

treatments was intended to assess student response to notifications from a peer vs. the course instructor.

For two courses (Federal Government and State Government), the treatment was faculty outreach via email when students missed two classes in a row and/or had missed assignments.

In the other course (History), the early alert system was used for notifying students when they had met the conditions above. To keep in line with the "early" in early alerts, the alerts were sent up until midterm.

Method

At the end of the semester, the predictor score for all students who received an alert in the treatment classes was retrieved from the RNL database. In the control class, all students who were identified as needing an alert (but not receiving one) were connected with their predictor scores as well. Each student who received an alert was paired with a student in the control class who would have received an alert based on predictor score. An attempt was made to match as closely as possible.

An obstacle that emerged in the pairing process was the absence of predictor scores for all students who had received alerts. Students missing RNL scores may have either transferred in from another university or applied to the university after the data were sent to Ruffalo Noel Levitz late in the summer. Because deleting these students from the study would have resulted in the loss of 11 of 34 pairings, an effort was made to find another reliable way of matching the students. Based on multiple studies, including the 2004 ACT Policy Report on college retention, high school GPA is the strongest academic predictor of retention (Lotkowski, Robbins, & Noeth, 2004). High school GPA

is one of the factors used to calculate the predictor score for each student at the study site. Therefore, high school GPAs were used for the alerted students and remaining, nonpaired students in the control group that would have received alerts. In the end, three total pairings were removed from the study. Two were removed due to the absence of a predictor score and reported high school GPA. Another was removed based on the absence of a suitable pairing in the control group. All of the deleted pairings came from one class, the state government class.

In order to determine whether there was a statistically significant mean difference between the course outcome scores in the treatment and control groups, a paired-samples t test was used. Unfortunately, the necessity to have all course outcomes (dependent variable) in continuous form made it necessary to remove all pairings with students that did not have numeric course outcomes (F, FX, or W). This resulted in the removal of nine more pairings, leaving 22 pairings for the analysis. Including only the pairings in which both students passed the course biased these results. However, the analysis is still important, as there is a substantial difference between a 65 and a 95. A $p < .05$ level was used to assess significance.

In order to capture information about the effect of alert and alert type on course outcome without discarding the nonnumeric course outcome data, a series of chi-square analyses were used. The first assessed the association between receiving an alert and passing the course. The alert variable was coded as 1 = received and 0 = not received.

Two other chi-square analyses were conducted. In the first, the coding approach for alerts was by class: 1 = history treatment, 2 = history control, 3 = state government treatment, 4 = state government control, 5 = federal government treatment, 6 = federal

government control. In the second, coding approach for alerts was by type. The alerts submitted to the early alert program were coded as 1, and the faculty outreach alerts were coded as 2. The coding for course outcome in both: 1 = passed, 0 = failed or withdrew.

H_7: Students who receive an alert from the professor or from a peer through the early alert program have better course outcomes than their matched counterparts in the control group who do not receive an alert.

H_0: There will be no difference in course outcomes between those who do and do not receive alerts, regardless of type.

Faculty Perceptions

Soliciting feedback from faculty across all institutions of higher education would be ideal. However, without putting this feedback in the context of each member's unique university environment and early alert program, the information would be less meaningful. Therefore, the study focused on the faculty members at the study site. To achieve the goal of a 95% confidence level with +/- 5 confidence interval, responses were needed from 72 professors. At the time of the survey's closure, 74 faculty members had responded (see Table 3).

Participants

Table 3

Descriptive Faculty Data

	Number	Valid Percentage
Male	41	53.9%
Female	33	43.4%
Transgender Female	0	0
Transgender Male	0	0
Other	2	2.9%
Full-time Faculty	60	81.1%
Part-time Faculty	12	16.2%
Teach mostly undergraduate	43	58.1%
Teach mostly graduate	4	5.4%
Teach a mix of undergraduate and graduate	26	35.1%
Teach mostly online	12	16.2%
Teach mostly in-person	59	79.7%
Total number of completed responses	74	

On each question in Table 3, faculty members were given the option to skip the question

or select "prefer not to answer." Also, a few faculty members answered only these

questions and stopped the survey.

Method

Instrumentation and participant recruitment. Faculty surveys were created in

Qualtrics (Appendix A) and approved by the Valdosta IRB (Appendix B). Faculty

participation was solicited in a several ways. First, each faculty member received a

printed letter in their personal campus mailbox with a request for participation in the

faculty survey and assistance with the student survey (Appendix C). To facilitate access

to the surveys, faculty members were provided with a shortened web address for the

surveys and a QR code for each. Small snacks were attached to each letter as a thank you. The printed letter was followed by an email to the faculty listserv (Appendix D). A few weeks later, a follow-up email was sent (Appendix E). In addition, notes and candies were placed on the tables for the final Faculty Assembly meeting of the semester on November 12, 2019 (Appendix F). In the last week of the survey, individual emails were sent to specific faculty members to request participation, as well as in-person requests by the lead researcher. No paper surveys were used at any point in the survey collection process.

The survey incorporated questions from validated instruments and studies. Questions come from the following: Steven Asby's 2015 early alert study questions, the perceived academic control scale (Respondek, Seufert, Stupnisky, & Nett, 2017), the Autonomous Learning Scale (Macaskill & Taylor, 2010), the Helicopter Parenting Scale (Love, 2016), and the Atif et al. (2015) student survey. It was reviewed by faculty members not associated with the university before the study launched to ensure comprehension, ease of completion, and average length of time required. Suggestions were incorporated into the final survey.

The Valdosta State University IRB also recommended that respondents be given the option to skip or select "Prefer not to respond" to each question on the survey. These recommendations were incorporated into the survey. To ensure an expedited IRB review process, faculty members were not asked to provide information that made them identifiable to the lead researcher. Details of the study were provided for all participants via the informed consent information that was provided as the first screen of the online survey (Appendix A).

The approach to analyzing the survey responses is explained below in reference to specific research questions posed by this study.

RQ1: How do faculty members perceive early alert programs?

Method. The 10 prompts provided in two different Likert-type scale question sets were associated with attitudes toward early alerts. One prompt, "The use of early alerts encourages dependence, making students less prepared for the real world," was reverse coded. All others were associated with the following response codes: 1 = Strongly Agree, 2 = Agree, 3 = Neither Agree or Disagree, 4 = Disagree, and 5 = Strongly Disagree. The scores from all 10 items were added together to create an early alert attitude score for each respondent. Although all faculty members had the same set of prompts, they were ordered differently, because skip logic was applied in the survey after Question 8: "Have you ever heard of the early alert program?" In order to make the early alert attitude score one variable for all respondents, the scores were created and then combined. With 10 prompts and five different options, the range for this attitude score was 10–50, with scores on the lower end of the spectrum being associated with more positive attitudes toward early alerts and higher scores being associated with less positive attitudes toward early alerts. The mean and median score for faculty as a group was calculated, as well as an average score per response item.

The response to Question 14: "Thinking back to your experience as a college student, how do you think you would have felt if you had received an early alert notification about performance concerns in a class?" was also included in the analysis for this question.

RQ2: What are some of the reasons faculty members choose not to submit alerts?

Method. An answer for this question was sought through using the responses from Questions 8–11 (Question 8: "Have you heard of the early alert program?;" Question 9: "Have you ever submitted an alert notification for a student?;" Question 10: "Do you still use early alerts?;" and Question 11: "If not, why not?"). The final question listed, Question 11, was an open-ended question. A thematic analysis was performed on the responses to this question. An inductive and semantic approach was used. The most common themes and their frequencies were reported.

The responses to Question 16 were also included in the analysis. The text of the question read: "Some universities require faculty to submit early alerts for certain groups or courses. Please check for which groups you would support mandatory participation."

RQ: Does faculty member gender make a difference?

Method. To assess the differences between males and female faculty members in early alert attitude scores, a *t* test was used.

RQ: What behaviors, characteristics, and attitudes are most commonly associated with the positive perception and use of early alert programs?

Method. To look at the effect of various variables and early alert attitude score, a multiple regression was performed, using the early alert attitude score as the continuous dependent variable, and answers to questions about gender, teaching status, attendance, teaching format, midterm grades, ease of knowing grade in the class, and teaching level as categorical, independent variables. Dummy variables were created for variables that had more than two categories.

RQ: Do faculty perceptions of students affect faculty perception and use of early alerts?

Method. There were 10 prompts provided in a Likert-type scale question set related to perceptions of student autonomy and student academic behaviors (Question 22). Faculty were asked to select how many students they associated with each prompt. Two prompts were reverse coded: "Frequently find excuses for not getting down to work" and "Rely on their parents to help them make most decisions." All others were associated with the following response codes: 1 = All Students, 2 = More than half of the students, 3 = Half of the students, 4 = Less than half of the students, and 5 = No Students. With 10 prompts and five different options, the range for this attitude score was 10–50, with the lower end of the spectrum being associated with perceiving higher amounts of autonomy from students and the higher end being associated with perceiving less autonomy from students.

To provide more in-depth understanding of the faculty responses, the responses were also broken up by item.

A Pearson's product-moment correlation was run to assess the relationship between perceived student autonomy and attitude toward early alerts. Seventy-one faculty responses were included in the analysis. In all cases, a $p < .05$ significance level was used.

To answer the second part of the question about the extent to which perceptions of student autonomy and early attitudes toward relate to the choice to submit alerts, a binomial logistic regression was performed. The independent variables were the autonomy and early alert attitude scores, and the dependent variable was whether or not a

faculty member had submitted an alert before, coded as 1 = yes, 0 = no. This information

was taken from the response to Question 9: "Have you ever submitted an alert before?"

Hypotheses

Program data provide evidence of number of alerts submitted and involvement

levels of faculty only. Speculation about attitudes toward and reasons for using or not

using early alert programs would not be appropriately supported by existing studies.

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Student Perceptions

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Soliciting feedback from students across all institutions of higher education would

be less useful for the reasons cited above for faculty. Therefore, for this portion of the

study, a convenience sample was used, consisting of students from the study site.

Originally, the Office of Institutional Research was going to identify large lecture classes

that represent campus demographics for student survey distribution. However, because

the Core Alcohol & Drug Survey was being administered to courses in this manner and

also at the same point in the semester, the lead researcher opted to request volunteer

participation from faculty members who were willing to give 15–20 minutes of class time

for the lead researcher to come in and introduce and administer the survey. Although the

lead researcher had loaner laptops, all willing students were able to use their phones or

the computers in the classrooms to complete the study through the shortened survey web

address or QR code. No paper surveys were used. Between October 29, 2019 and

November 20, 2019, the lead researcher administered the student survey to 24 different

classes directly. A list of classes is included in Appendix G. After a brief introduction,

students were given a paper with the shortened web address for the survey and the QR

code (Appendix H). The paper had a small snack attached as an upfront incentive to participate, and some faculty members offered extra credit for participation.

Even though students were given the option to abstain from participation, administration of the survey during scheduled class time made students less likely to opt out of participation. This also reduced the voluntary response bias generally associated with online surveys. Several faculty members also promoted the survey directly to their students by either passing out notes and treats from the lead researcher or by posting the link to the survey on Blackboard.

In addition to the convenience sample, a strategic sampling approach was used to reach out to all students who had received an alert to ensure the sample included students who had received alerts through the early alert program. Many of the emails to these students returned undeliverable, specifically those that a university email address listed as their primary or secondary email address.

With a verified enrollment of 1651 students for the Fall 2019 semester, responses were needed from 312 students to achieve the goal of a 95% confidence level with +/-5 confidence interval. The total number of respondents was 386. Eighteen of those were under 18 and were prohibited from answering more than the first two questions. In addition, because students were given the option to skip questions per the IRB recommendations, the number of responses per question varied. Most questions, including the very last set of questions had over 320 respondents. This excludes the questions that were only asked of those who had received an alert.

To ensure an expedited IRB review process, students were not asked to provide information that made them identifiable to the lead researcher. Details of the study were

provided for all participants via the informed consent information that was provided as

the first screen of the online survey (Appendix I).

Participants

Table 4

Descriptive Student Data

	Number	Valid Percentage
Male	167	48.1%
Female	174	50.1%
Other	6	1.8%
Current classification		
First year	152	41.1%
Second year	95	25.7%
Third year	64	17.3%
Fourth year	45	12.2%
Graduated	5	1.4%
Not currently enrolled	6	1.6%
Age		
18–24	324	87.3%
25–34	20	5.4%
Older than 35	8	2.1%
Estimated GPA-mean	3.24	
Estimated GPA-median	3.2	
Ethnicity		
Hispanic or Latino	203	59.7%
Not Hispanic or Latino	130	38.2%
Race		
White	252	76.1%
Black or African American	37	11.2%
American Indian or Alaska Native	11	3.3%
Native Hawaiian or Pacific Islander	5	1.5%
Asian	4	1.2%
Other characteristics		
Student Athlete	153	39.8%
First-generation college student	143	37.2%
Live off-campus	110	28.6%
Transfer student	51	13.3%
English as a second language	50	13%
Enrolled in Remedial Classes	45	11.7%
Physical or Diagnosed Learning Disability	22	5.7%
Parent/caregiver with child under 18	15	3.9%
International student	4	1%
Caregiver of elderly relative	1	.3%

Note: On each question above, students were given the option to skip the question or select "prefer not to answer."

For the survey, the race and ethnicity questions were based on the suggested model from the United States Department of Education (2008). Because the study site approaches race and ethnicity data as one variable, comparing the demographics information in this area was not straightforward. Comparing the institutional, demographic data to the student respondent demographics, makes it clear that the sample was similar but more racially diverse, and there were a higher percentage of athletes in the sample than in the general student population at the study site.

Other descriptive information gathered from the students included number of enrolled hours, number of work hours per week, and number of online classes. Nearly three quarters (73%) of students in the sample were enrolled in at least 13 hours of coursework, and 61% of students had only face-to-face classes. Over half (56%) of students reported having a job—36% worked less than 20 hours a week, 20% worked more than 20 hours, and 44% did not work. The nonworking student group was likely made up of student athletes who are not able to work due to practice and game schedules.

Method

Instrumentation and participant recruitment. Student surveys were created in Qualtrics (Appendix I) and approved by the Valdosta IRB (Appendix B). The survey incorporated questions from validated instruments and studies. Questions come from the following: Steven Asby's 2015 early alert study questions, the perceived academic control scale (Respondek et al., 2017), the Autonomous Learning Scale (Macaskill & Taylor, 2010), the Helicopter Parenting Scale (Love, 2016), and the Atif et al. (2015) student survey. It was reviewed by individuals not associated with the university before

the study launched to ensure comprehension, ease of completion, and average length of time required. Suggestions were incorporated into the final survey.

The Valdosta State University IRB also recommended that respondents were given the option to skip or select "Prefer not to respond" to each question on the survey. These recommendations were incorporated into the survey.

The approach to analyzing the survey responses is explained below in reference to specific research questions posed by this study.

RQ1: How do students perceive early alert programs?

Method. There were 10 prompts provided in a Likert question set that were associated with attitudes toward early alerts (Question 17). One prompt, "The use of early alerts encourages dependence, making students less prepared for the real world," was reverse coded. All others were associated with the following response codes: 1 = Strongly Agree, 2 = Agree, 3 = Neither Agree or Disagree, 4 = Disagree, and 5 = Strongly Disagree. The scores from all 10 of these items were added together to create an early alert attitude score for each respondent. With 10 prompts and five different options, the range for this attitude score was 0–50, with scores on the lower end of the spectrum being associated with more positive attitudes toward early alerts and higher scores being associated with less positive attitudes toward early alerts.

Students who received alerts answered one set of prompts that were framed to have them evaluate responses based on their experience having received an alert (Question 39). Students who had not received alerts were given an early alert program description and asked to respond to the same set of prompts, adjusted to frame the response based on not having received an alert. Note: During analysis of these variables,

it was discovered that the students who had not received the alert had different Likert scale options: "Somewhat disagree and disagree" were collapsed in the same category and both coded as 4, except for the one prompt that was reverse coded, where they were both coded as 2. Descriptive statistics were run before and after this change was made, with were only slight changes to the data emerging, as "somewhat disagree" and "disagree" were rarely selected options with the respondents. To provide more in-depth understanding of the student response to early alerts, student responses were broken down by item as well.

The responses to Question 10: "When you received an alert, how did you feel?" were also used in responding to this research question. Only students who received alerts were asked this question. In addition, a Mann-Whitney U test was used to assess differences between students who had and had not received alerts.

RQ2: Do different types of students respond differently to the alerts? What factors influence a student's likelihood of having a favorable response to an alert?

Method. In order to see the effects of multiple, independent variables on one, continuous, dependent variable, a multiple regression was used. Several of the independent variables (e.g. classification, ethnicity, gender, race) were categorical variables with more than two categories. For each of these variables, it was necessary to recode and create dummy variables in order for them to work in multiple regression. For example, with ethnicity, the options were "Hispanic or Latino" or "Not Hispanic or Latino" or "Prefer not to answer." Originally, these were coded as 1, 2, and 3, respectively. They were recoded to be 1, 0, 0, which translates to "Hispanic or Latino" and "Other." Given that there were so few students who selected a race that was not

"White" or "Black or African American," it was decided that only those race categories would be recoded. The multiple response question, Question 6: "Other characteristics/attributes" was also recoded with the 1 = selected, 0 = not selected approach to make them appropriate for analysis as well.

A Mann-Whitney U test was also run to determine if there were differences in the responses to individual items between those who did and did not identify as Black or African American.

RQ3: Do early alerts support feelings of autonomy, competence, and connectedness in students?

Method. To answer this question, the responses to specific survey items were analyzed. For autonomy, the response to the Likert-scale prompt, "The use of early alerts encourages dependence, making students less prepared for the real world" was analyzed, as well as Question 28: "Which relationship do early alert programs best support?" For competence, the following prompts were analyzed: "The early alert program can help students succeed" and "If I received an early alert, it would build my academic confidence." For connectedness, the following were used: "If I received an alert, it would make me feel more connected to campus" and "If I received an alert, it would increase my motivation to remain enrolled."

RQ4: How do perceived levels of autonomy affect perception of and response to early alerts?

Method. In order to analyze how levels of academic control/autonomy relate to early alert attitudes, an autonomy score was created by adding the individual scores to each of the Likert scale prompts for the academic control section. Scoring for each item

was done by using the following coding approach: 1 = Strongly agree, 2 = Somewhat agree, 3 = Neither agree or disagree, 4 = Somewhat disagree, 5 = Strongly disagree. Several items were reverse coded. These include: "No matter what I do, I don't seem to do well in my courses." "How well I do in my courses is often the luck of the draw." "My grades are basically determined by things beyond my control, and there is little I can do to change that." "I frequently find excuses for not getting down to work." "I rely on my parents to help me make most decisions." "Professors should post regular reminders to help students remember course assignments."

The autonomy score, like the early alert attitude score, reflected higher rates of autonomy with the lower score. Therefore, both scores were set up to be directionally similar. Once two score were available for each student, one for early alert attitudes and one for autonomy, a scatterplot was created. This revealed outliers in the two scores, so it was decided that Spearman's correlation would be used.

In order to analyze the effects of autonomy score and early alert attitude score on response to early alerts/action take as result of receiving an alert, a binomial logistic regression was used. Early alert attitude score and autonomy scores were the continuous, independent variables, and positive action was the dichotomous, dependent variable. The early alert attitude score and autonomy score were already computed from the scaled question responses. For the dependent variable, positive action, responses to Question 37: "As a result of the alert notification, what did you do?" was used. Only students who marked "yes" or "unsure" to the question of whether they had received an alert were asked this question in the survey. For the analysis, only the students who marked "yes"

were included ($n = 33$). Students who expressed uncertainty about receiving an alert were unlikely to remember how the alert made them feel.

Each option given was coded as a positive or negative response. All positive responses were given a 1 as a value. These included "responded via email to the person who sent the alert," "made an appointment with my instructor," "communicated with my instructor in person," "submitted missing assignments," "altered my habits (e.g. started attending class)," and "visited the Tutoring and Learning Center." All negative responses were given a "-1" as a value. These included "dropped the course," "changed my major/minor," and "took no action." A composite "action score" was then created by adding the values of all selections for each student. This inclusion then allowed for a dichotomous positive/not positive action variable to be created. Each student with a positive composite action score was coded as 1 for positive action. Students with a negative composite action score were coded as 0 for not positive or negative action. In all cases, a $p < .05$ significance level was applied. A thematic analysis was applied to the responses given in the text box for this question.

RQ: When and how do students want to receive alerts?

Method. Responses to Questions 18, 40, and 45 were used to answer this question. Question 18 asked students about preferred method of contact (e.g. email, phone, mail, or text). Question 40 asked students to give their preference for who notified them during the alert process. Question 45 asked students for what reasons they would want to receive alerts. They were given the option to select as many of the following options as applicable: missing class, missing assignments, or missing exams. They could also select "I would prefer not to receive alerts," or add a response into the text box.

Hypotheses

Although a solid foundation of literature in this area does not yet exist, it was possible to make some hypotheses about the possible results based on the results and conclusions of previous studies.

H_8: Students will feel that early alerts support feelings of autonomy, competence, and connectedness.

H_9: Students with higher academic control scores and responses related to self-determination theory (autonomy, competence, and connectedness) are more likely to feel motivated to positive action by early alert notifications.

H_0: There will be no relationship between these scores and motivation to positive action.

<div align="center">Faculty vs. Students</div>

Method

RQ1: How do student and faculty responses compare?

Method. Many of the student survey questions mirrored the questions in the faculty survey to allow for ease of comparison. In addition, several faculty questions asked them to respond based on their perception of students. Answers to questions about feelings about receiving an alert, best way to submit an alert, who students would like to receive alerts from, top challenges students face, and student autonomy were compared in order to illustrate the extent to which faculty and students agreed in each of the areas. This comparison also helped clarify the extent to which faculty members accurately perceived the students at the study site, which was important in the overall design of effective teaching and intervention strategies.

Because the response "somewhat agree" lacks certainty, only "strongly agree" responses by students were considered in the response comparisons.

Hypotheses

None. The research questions are exploratory in nature and no hypotheses are needed.

<div align="center">

Overall Impact

</div>

Method

RQ: What do faculty members and students view as the goal of higher education and ideal relationship between institutions of higher education and students? Do they think early alert programs support the most commonly perceived goal?

Method. These questions were answered by looking at the responses to Questions 25, 26, and 28 for faculty and students. In addition, the responses to the prompt in Question 17 and 39: "The use of early alerts encourages dependence, making students less prepared for the real world" were used. Answers were analyzed by group and between groups (faculty and students).

Hypotheses

None. No published studies have posed questions about how early alert programs impact student development and the relationship between universities and students. Therefore, the questions are exploratory in nature and no hypotheses are needed.

<div align="center">

Data Access, Handling, and Storage

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The study was approved through the Valdosta State University IRB with a letter of cooperation from the study site, and all survey participants were provided informed

consent via the first screen in the online survey. Access and permission to use the data

needed was granted to the lead researcher from the study site prior to beginning the study.

Data were stored on a password-protected computer and encrypted to prevent misuse. In

addition, any printed information was stored in a locked office in the lead researcher's

home residence. All data and data sets will be securely stored for three years or per

duration recommended by the study site's and VSU's IRB.

Chapter IV

Results

The results are presented in the order in which items were presented in the methods section. The program data and classroom study analysis results will go first, followed by the results of each of the other areas of the study.

Program Data

Descriptive information for the submitted alerts at the study site is in Table 5.

Table 5

Descriptive Alert Data

	Number	Percentage
Alerts for male students	245	70%
Alerts for female students	104	30%
Course outcome—passed (A–D)	75	21%
Course outcome—failed or withdrew	274	79%
Failed the course	143	41%
Withdrew from the course	131	38%
Still enrolled at the university	57	16%
Not still enrolled	279	80%
Graduated	13	4%
Remedial education alerts	74	21%
First year seminar alerts	66	19%
3000–4000 level alerts	25	7%
RNL predictor score (average)	.37	
RNL predictor score (median)	.35	
Cumulative GPA (average)	1.37	
Cumulative GPA (median)	1.41	
Hours completed (average)	29	

Hours completed (median)	19
Number of participating professors*	51

*This is total number of professors who participated in all semesters included in the analysis. Over one quarter (27%) of all alerts came from two professors (16% and 11% each).

Descriptive Data

Descriptive data in Table 5 reveal that 79% of the students failed or withdrew from the course for which the alert was created, and males received 70% of the alerts. In addition, alerts for remedial education courses represented 21% of all alerts submitted.

Result: These findings support all of the first three hypotheses.

RNL Predictor Score and Course Outcome

A chi-square test of independence was conducted between course outcome and retention predictor score. Three cells had an expected count less than 5. These were all in the .76–.1 category, so the variable was recoded into three categories to include all RNL scores from .51 to 1. This coding eliminated the expected cell count issue, but there was no statistically significant association found between course outcome and retention predictor score, $x^2(4) = 4.641$, $p = .326$, *ns*. The association was not strong (Cohen, 1988), Cramer's V = . 155. The null hypothesis was not rejected based on these findings.

Table 6

RNL Predictor Score and Course Outcome

RNL Score	Passed	Failed	Withdrew	Total
0–.25	7	14	13	34
.26–.50	23	57	32	112
.51–.75	8	8	9	25
.76–1	0	0	2	2

Using the numeric values assigned to grades A through F, a correlation analysis was also attempted. However, the coding of all "F" course outcomes created a straight horizontal line at the 55 mark. Even throwing out these values left a scatterplot that

reflected no or a very low association between RNL predictor score and course outcome. The null hypothesis was also not rejected by this approach.

An analysis of the frequency table (Table 6) revealed that the highest number of alerts came from students in the .26–.50 predictor score range, which is in the lower end of the range.

Result: The null hypothesis was not rejected. There was not a statistically significant relationship between a student's risk category and the course outcome after receiving an alert.

Table 7

Number of Alerts and Course Outcome by Month

	Month 1 of semester	Month 2	Month 3	Month 4
Passed with grade of A, B, C, or D	30	28	17	1
Failed Course	68	54	21	0
Withdrew/Dropped from Course	82	33	7	0

Timing of Alert and Course Outcome

A chi-square test of independence was conducted between course outcome and timing of alert. Because only one alert was submitted in Month 4, this alert was excluded from the analysis to reduce the likelihood of violating the minimum expected cell frequency assumption. All other expected cell frequencies were greater than 5. There was a statistically significant association between course outcome and the timing of the alert, $x^2(4) = 20.89$, $p < .0005$. The association was not strong (Cohen, 1988), Cramer's V = .175, but it still allows for the rejection of the null hypothesis.

Result: The hypothesis was supported. There was a significant relationship between the timing of the alert and the course outcome.

Course Outcome and Gender

There were 162 men and 56 women who received alerts. A chi-square test of independence was conducted between course outcome and gender. All expected cell frequencies were greater than 5. There was a statistically significant association between course outcome and gender, $x^2(2) = 10.35$, $p < .005$. The association was weak (Cohen, 1988), Cramer's V = . 174, but it still allows for rejection of the null hypothesis.

A *t* test was also conducted to look at the difference in course outcomes between males and females with course outcomes as numeric values. The course outcome was higher for females (*M* = 67.86, *SD* = 15.10) than for males (*M* = 62.22, *SD* = 12.52). The assumption of homogeneity of variances was violated, as assessed by Levene's test for equality of variances (*p* = .001). There was a statistically significant difference in course outcomes between males and females, with females scoring higher than males, *M* = -5.64, 95% CI[-10.10, -1.17], *t*(82.662) = -2.510, *p* = .014. However, it is important to note that course outcomes that were "withdrawal" were not included in the analysis. Also, the same letter grade to numerical score conversion described above was used. There are flaws to this approach, as all letter grades have a 10-point range, and an "F" can be anything from a "0" to a 59. However, completely removing all failing grades from the analysis would bias the results, especially because all "W" outcomes were already removed.

Course Outcome and Cumulative GPA

The chi-square test of independence conducted between course outcome and cumulative GPA violated the assumption for minimum cell frequency. In addition, before

attempting a correlation analysis, a scatterplot revealed that there was no relationship between the two variables.

Result: There was a statistically significant relationship between course outcome for alerted students and gender, but there was not a statistically significant relationship between course outcome and cumulative GPA.

Classroom Study

History Classes With Early Alert Treatment.

Six students received alerts based on meeting conditions established at the beginning of the study (missed two classes in a row and/or had missed assignments). Of these students, three students passed (grades: B, D, D), two failed, and one withdrew from the class.

The difference between the students whom an alert was created for in the treatment class and those who would have received an alert in the control class (paired by RNL score) is shown in Table 8.

Table 8

Difference Between Paired History Students

Student Pair	Treatment Student RNL	Final Grade	Control Student RNL	Final Grade
1	.31	66(D)	.38	72(C)
2	.51	82 (B)	.49	73 (C)
3	.59	67(D)	.58	53(F)
4	.6	FX*	.64	41(F)
5	.63	F	.67	61(D)
6	.3	W	.23	60 (F)

*FX indicates that the student failed the class but never attended or attended only a few times and then stopped. **This student did not have an RNL score. Most likely, this indicates that the student applied late in the summer, after enrollment data was sent to RNL for analysis.

Government Classes With Faculty Email Treatment.

In the state government treatment class, 13 students received at least one email from the professor for missing two classes in a row and/or missing an assignment. Of these students, eight passed the course (2 As, 3 Bs, 1 C, 2 Ds), one student dropped, one student failed, and three students were dropped for excessive absences by the professor, resulting in a 62% completion rate. The difference between the students who received an email from the instructor in the treatment class and those who would have received an email in the control class (paired by RNL score) is shown in Table 9.

Table 9

Difference Between State Government Paired Students

Student Pair	Treatment Student RNL	Final Grade	Control Student RNL	Final Grade
1	2.35*	W	No suitable match	N/A
2	1.58*	W	1.51	75(C)
3	No GPA or RNL	65 (D)	N/A	N/A
4	3.345*	68 (D)	4.0	73(C)
5	3.0*	74 (C)	2.7	74 (C)
6	No GPA or RNL	83 (B)	N/A	N/A
7	.29	W	.21	60 (D)
8	.46	28 (F)	.46	23 (F)
9	.47	W	.53	78 (C)
10	.51	94 (A)	.54	65 (D)
11	.6	99 (A)	.58	51 (F)
12	.69	86 (B)	.64	80 (B)
13	.79	80 (B)	,75	55 (F)

*FX indicates that the student failed the class but never attended or attended only a few times and then stopped. **This student did not have an RNL score. Most likely, this indicates that the student applied late in the summer, after enrollment data was sent to RNL for analysis.

In the federal government treatment class, 16 students received at least one email from the professor. Of these students, 10 passed the course (3 As, 5Bs, 2 Cs), one student dropped, three students failed, and two students were dropped for excessive absences by the drop deadline for professors (after a final email was sent; 63% completion rate). The

difference between the students who received an email from the instructor in the treatment class and those who would have received an email in the control class (paired by RNL score) in shown in Table 10.

Table 10

Difference Between Federal Government Paired Students

Student Pair	Treatment Student RNL	Final Grade	Control Student RNL	Final Grade
1	2.35*	W	2.7	W
2	2.86*	36(F)	2.79	81(B)
3	3.35*	54 (F)	3.13	72 (C)
4	3.81*	87 (B)	3.7	65(D)
5	3.3*	90 (A)	3.0	24(F)
6	.26	76 (C)	.31	73 (C)
7	.33	84 (B)	.35	77 (C)
8	.35	83 (B)	.36	86 (B)
9	.4	90 (A)	.41	74 (C)
10	.42	W	.43	78 (C)
11	.54	80 (B)	.44	45 (F)
12	.56	FX	.48	48 (F)
13	.58	71 (C)	.52	70 (C)
14	.64	W	.53	W
15	.65	90(A)	.65	65 (D)
16	.79	84 (B)	.91	70 (C)

*This student did not have a predictor score assigned, and high school GPA was used for pairing instead.

Paired Samples *t* Test.

A paired *t* test was conducted to analyze the difference in course outcomes for the pairings. Two outliers were detected that were more than 1.5 box-lengths from the edge of the box in a boxplot, and they were kept in the analysis after reviewing the data to ensure there were no errors in data entry. The assumption of normality was not violated, as assessed by Shaprio-Wilk's test ($p = .540$). Students in the treatment group had higher course outcomes ($M = 75.80$, $SD = 17.538$) than the control group ($M = 64.56$, $SD = 16.627$), a statistically significant mean increase of 11.236 points, 95% CI[1.243,

83

21.2229], $t(21) = 2.338$, $p = .029$), $d = .5$. It is important to note that there were two nonextreme outliers to the data and to remember that course outcomes that were nonnumeric were excluded.

Alert and Course Outcome (General)

A chi-square analysis was conducted to see if there was an association between treatment and course outcome (general, unpaired). All expected cell frequencies were greater than 5. However, there was not a statistically significant association between receiving an alert and course outcome, $X^2(1) = .226$, $p = .634$.

Alert and Course Outcome (By Class).

Two other chi-square analyses were conducted. The first one explored the association between class (of six in the study) and course outcome. The second one analyzed the association between type of alert (early alert or faculty outreach).

In both cases, there were multiple cells with counts less than 5, and the associations were not significant in either: $X^2(5) = .743$, $p = .981$ and $X^2(1) = .302$, $p = .583$

Result: The hypothesis was supported. Students who received an alert from the professor or from a peer through the early alert program had better course outcomes than their matched counterparts in the control group who did not receive an alert.

Faculty Perceptions

Perception of Early Alert Programs

Faculty early alert attitude scores were created by adding the scores to the early alert responses from Question 17 to create an early alert attitude score ranging from 10–50. Lower scores were associated with higher levels of early alert program support,

whereas higher scores were associated with lower levels of early alert program support. Of the 73 responses included in this analysis, the minimum was 10 and the maximum was 42 (*M* = 27.48, *SD* = 6.04). The median score was 28.

To provide more in-depth understanding of the faculty response to early alerts, the average score per item is included in Table 11.

Table 11

Faculty Response to Early Alert Average Score by Item

	Average	Top response & percentage
I believe the early alert program helps students succeed	2.56	NA or DA, 42.5%
Students would be more satisfied with their education if early alerts were used in every class	3.11	NA or DA, 41.7%
Receiving an alert makes students feel more connected to campus	2.79	Agree, 39.7%
Receiving an alert helps build student confidence	3.19	NA or DA, 41.7%
Receiving an alert motivates students to seek assistance from their professor or advisor	2.59	Agree, 54.8%
Alerts motivate students to use the recommended support services	2.74	Agree, 41.1%
Receiving the alert increases student motivation to remain enrolled	2.88	NA or DA, 50.7%
Instructors who use early alerts care more about their students	2.99	NA or DA, 27.4%
Professors should reach out and help those that are struggling in class	1.90	Strongly Agree, 39.7%
The use of early alerts encourages dependence, making students less prepared for the real word.	2.85	NA or DA, 36.1%

Note. "NA or DA" stands for "Neither Agree or Disagree"

The item that received the highest amount of support was "Professors should reach out and help those that are struggling in class," showing that professors do not think struggling students should be left to figure it out on their own. On the opposite end, the average score on the prompt, " Receiving an alert helps build student confidence," had the least amount of strong support from faculty.

Personal and Perceived Feelings Related to Receiving Alerts

The responses to Question 14: "Thinking back to your experience as a college student, how do you think you would have felt if you had received an early alert notification about performance concerns in a class?" and Question 15: "How do you think students feel when they receive alerts?" are included below. Faculty members felt they would have felt "happy that someone cared" to a greater degree than current students. They also felt that students are more likely to feel indifferent to alerts than they would have felt to receiving them.

Table 12

Feelings Related to Early Alerts (Based on Faculty Perceptions)

	Self	Students
Surprised	14(19.2%)	14 (19.2%)
Scared	19(26%)	12(16.4%)
Discouraged	3 (4.1%)	2(2.7%)
Happy that someone cared	22 (30.1%)	8(11 %)
Indifferent	3(4.1%)	26 (35.6%)
Other	12(16.4%)	11 (15.1%)

Reasons for Not Submitting Alerts

Results for Questions 8, 9, and 10 are reported in Table 13. Fifteen faculty respondents (21%) faculty respondents had not heard of the early alert program. None of these faculty members had submitted alerts.

Of those who had heard of the program, 40 (70%) had submitted an alert, and 26 (63%) were still submitting alerts. Of those who had submitted alerts, only 9% felt that alert helped the student passed the course. The others felt that the alert had either not helped (44%) or they were unsure if it had helped (48%).

Table 13

Early Alert Knowledge & Perceptions

	Number	Valid percentage
Have heard of the early alert program	58	79.5%
Have not heard of the early alert program	15	20.5%
Have submitted an early alert	40	70.2%
Have not submitted an early alert	17	29.8%
Still use early alerts	26	63.4%
Do not still use early alerts	15	36.6%
Feel alerts helped students pass their course	5	9.1%
Do not feel alerts helped	24	43.6%
Unsure if alerts helped	26	47.3%

An inductive, thematic analysis was also performed on Question 11. The most common themes and their frequencies are reported in Table 14. As reflected in the table, the most common theme was the preference by faculty members to contact students directly or to make referrals directly to support services on campus (counseling, coaches, etc.) rather than using the early alert system. The next most common themes were "lack of results" and "time consuming." The "time consuming" theme captures comments related to the amount of effort required to submit alerts. The "lack of need" refers to the lack of need to submit alerts for students that the faculty respondent typically teaches.

This was a common response for faculty who mentioned they did not teach core classes and/or in-person courses.

Table 14

Reasons for Not Using Early Alerts

Theme	Frequency
Prefer personal approach	11
Lack of results	7
Time consuming	6
Lack of need	6
Lack of knowledge of how to use	2

Support for Mandatory Participation

The highest level of support for mandatory early alert submissions was for first-year students (28 responses), students on academic probation (27 responses), and students in remedial courses (26 responses). Eighteen professors did not support mandatory participation for any groups or courses.

Gender and Attitude Toward Early Alert

A *t* test was used to assess the difference in early alert attitude scores between male and female faculty members. There were only three outliers, as assessed by inspection of a boxplot for values greater than 1.5 box-lengths from the edge of the box. There were 40 male faculty members and 31 female faculty members included in the analysis. Based on averages, female faculty members have early alert attitude scores that are slightly more favorable ($M = 27.29$, $SD = 5.68$) than male faculty ($M = 27.38$, $SD = 6.42$). There was homogeneity of variances, as assessed by Levene's test for equality of variances ($p = .380$). However, the difference was not statistically significant, $t(69) = .058$, $p = .954$.

Table 15

Attendance and Grades Data

	Number	Percentage
Take attendance in all classes	46	62.2%
Do not take attendance in all classes	19	25.7%
Only take attendance in core classes	5	6.8%
Post midterm grades for all students	33	44.6%
Only post midterm grades for certain students	10	13.5%
Do not post midterm grades	29	39.2%
Think it is easy for students to know where they stand in the class	71	95.9%
Do not think it is easy for students to know where they stand in the class	2	2.7%

On each question above, faculty members were given the option to skip the question or select "prefer not to answer."

Factors Affecting Early Alert Attitude

To look at the effect of various variables and early alert attitude score, a multiple regression was performed, using the early alert attitude score as the continuous dependent variable, and answers to questions about gender, teaching status, attendance, teaching format, midterm grades, ease of knowing grade in the class, and teaching level as categorical, independent variables (see Table 15 for breakdown of attendance and grades data). There was independence of residuals, as assessed by a Durbin-Watson statistic of 2.355. There was also freedom from multicollinearity. The R^2 for the overall model was 8.2% with an adjusted R^2 of -1.7%, showing insignificance of explanatory variables. Gender, teaching status, types of courses taught, taking attendance, and posting midterm

grades did not statistically significantly predict early alert attitude score, $F(7, 65) = .837$,

$p = .565$.

Table 16

Multiple Regression for Early Alert Attitude

Variable	ß	SEB	ß	Sig.
Intercept	21.813	5.026		.000
Gender	.101	.814	.017	.901
Teaching status	-.530	1.648	-.042	.749
Level of courses taught	-.078	.799	-.013	.922
Type of courses taught	2.164	1.697	.157	.207
Taking attendance	.884	1.057	.131	.406
Posting midterm grades	1.057	.804	.171	.193
Student ease of knowing grades	-1.195	2.625	-.056	.651

Notes. ß = unstandardized regression coefficient; SEB = Standard error of the coefficient; ß = standardized coefficient, and Sig. = Significance

Perceptions of Students and Early Alert Attitude

Scores were created for each faculty based on responses to the series of prompts related to student autonomy. Of the 71 responses included in this analysis, the minimum was 20, and the maximum was 40 ($M = 30.89$, $SD = 3.67$). The median score was 31.

To provide more in-depth understanding of the faculty responses, the responses are broken up by item in Table 17.

Table 17

Faculty Perception of Student Autonomy

	Average	Top response & percentage
Feel control of their academic performance	3.03	Half, 36.2%
Are willing to accept help that is offered to them	2.7	More than half, 49.3%
Seek out help when they need it	3.54	Less than half, 60.6%
Even when tasks are difficult, try to stick with them	3.2	Less than half, 42.3%
Are good at meeting deadlines	3.08	Half, 38%
Frequently find excuses for not getting down to work	3.1	Less than half, 42.3%
Are willing to make changes to their personal life and behaviors in order to be successful	3.11	Half, 40.8%
Are aware of how well they are doing in their classes	2.56	More than half and Half, both 40.8%
Rely on their parents to help them make most decisions	3.12	Less than half, 36.2%
Are comfortable with failure	3.67	Less than half, 48.6%
Professors should post regular reminders to help students remember course deadlines*	2.6	Agree, 34%
Students today need more guidance to be successful in college than those of 10 years ago*	2.44	Agree, 37%

*These prompts were included in the first set of Likert scale questions, using the scale 1 = Strongly Agree to 5 = Strongly Disagree. These were included as they are more relevant to perceptions of student autonomy than to general perceptions of early alerts.

Perceived Autonomy and Early Alert Attitude

A Pearson's product-moment correlation was run to assess the relationship between perceived student autonomy and attitude toward early alerts. Seventy-one faculty responses were included in the analysis. Preliminary analysis showed the relationship to be linear with both variables normally distributed, as assessed by Shapiro-Wilk's test ($p > .05$). However, there were some outliers, and the correlation was not statistically significant, $r(69) = .16$, $p = .182$.

Attitude, Autonomy, and Likelihood of Submitting.

A binomial logistic regression was performed to determine the effects of early

alert attitude and perceived student autonomy on the likelihood that someone has

submitted an alert. Linearity of the continuous variables with respect to the logit of the

dependent variable was assessed via the Box-Tidwell (1962) procedure. A Bonferroni

correction was applied using all five terms in the model resulting in statistical

significance being accepted when $p < .01$ (Tabachnick & Fidell, 2014). Based on this

assessment, all continuous independent variables were found to be linearly related to the

logit of the dependent variable. However, the logistic regression model was not

statistically significant, $x2(2) = 5.498$, $p = .064$.

Table 18

Logistic Regression Predicting Likelihood of Submitting Alert

Variable	ß	SEB	Wald	df	Sig.	Exp (ß)	95% C.I. for EXP(B) Lower/Upper
Autonomy score	-.209	.097	4.676	1	.031	.811	.671/.981
Early alert attitude score	.053	.059	.798	1	.372	1.054	.939/1.1.83
Constant	3.928	2.899	1.836	1	.175	50.797	

Results. The responses indicate a moderate or neutral response to early alerts by

faculty members, with no variables having a statistically significant effect on their

attitudes toward them.

Student Perceptions

Knowledge of and experience with alerts. Responses to Question 8 and Question 36 about knowledge of the early alert program and whether or not a student had received one are in Table 19.

Table 19

Student Early Alert Responses

	Number	Percentage
Have heard of the program	53	15%
Have not heard of the program	294	85%
Have received an early alert	33	10%
Have not received an early alert	235	68%
Not sure if they have received an alert	77	22%

Early alert attitude scores. There were 108 valid responses to the questions for students who selected "yes," "unsure," or "prefer not to answer" to the question, "Have you ever received an alert notification?" Of these responses, the minimum early alert attitude score was 2, and the maximum score was 33 ($M = 20.24$, $SD = 6.58$). The median score was 21. These scores indicate a positive response, on average, to early alerts by this response group.

There were 230 valid responses to questions for students who had not received an alert. Of these responses, the minimum score was 10, and the maximum score was 41 ($M = 17.87$, $SD = 5.711$). The median score was 17. These scores also indicate a positive response to early alerts by this response group.

The data revealed a difference in the mean and median early alert attitude scores between those who had and had not received alerts. The significance of this difference was explored. A boxplot revealed eight outliers, none of them extreme. However, a

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Shapiro-Wilk test showed a significant departure from normality for both variables,

W(.971) = 107, *p* = .019 for "yes" and W(.929) = 230, *p* = .000 for "no" responses. This

departure made the Mann-Whitney U test more appropriate to determine if there were

statistically significant differences in early alert attitude scores between those who had

received an alert and those who had not. Distributions of the attitude scores for both

groups were similar, as assessed by visual inspection. Median attitude score was found to

be statistically significantly different between those who had and had not received alerts,

U = 8816, z = -4.196, *p* < .001.

To provide more in-depth understanding of the student response to early alerts,

data per item is included in Table 20.

Table 20

Student Response to Early Alert Average Score by Item

	Average Y/N	Top response & percent Y/N
I believe the early alert program helps students succeed	1.69/1.54	SA, 45%/SA, 59%
I would be more satisfied with my education if early alerts were used in every class	1.78/1.68	SA, 43%/SA, 52%
Receiving an alert makes me feel more connected to campus	2.09/1.84	A, 41%/SA, 44%
Receiving an alert helps me build confidence	2.14/2.03	A, 43%/SA, 37.1%
Receiving an alert motivates me to seek assistance from their professor or advisor	2.04/1.56	A,43%/SA, 59%
Alerts motivate me to use the recommended support services	2.28/1.71	A, 39%/SA, 48%
Receiving the alert increases my motivation to remain enrolled	2.32/1.94	NADA, 39%/SA, 39%
Instructors who use early alerts care more about their students	2.01/1.59	A, 44%/SA, 60%
All instructors should use the early alert program	1.86/1.58	A,43%/SA, 63%
The use of early alerts encourages dependence, making students less prepared for the real word.	2.83/2.40	NADA, 41%/NADA 50%

Each prompt was worded slightly different, depending on whether students had or had not received alerts. Students who had not received an alert had lower scores than those who had received an alert. This reveals that these students had more positive attitudes, on average, than students who did receive alerts.

Feelings after receiving an alert. The responses to Question 10: "When you received the alert notification, how did you feel?" are reflected in Table 21 below. Only students who selected "yes" or "unsure" to receiving an alert responded to this question.

Table 21

Feeling After Receiving the Alert

	Students
Surprised	24 (23%)
Scared	7 (7%)
Discouraged	2 (2%)
Happy that someone cared	17 (16%)
Indifferent	19 (18%)
Other*	36 (34%)

Note. Out of the typed in comments, 35 of 36 mentioned that the student was not sure if they had received an alert. The other comment said, "It's a good system."

Factors affecting early alert attitude. A multiple regression was run to predict early alert attitude score from ethnicity, race, classification, gender, and whether or not a student had the following other characteristics: transfer, remedial coursework, athlete,

off-campus housing, first-generation, English as a second language, and a physical or learning disability. There was independence of residuals, as assessed by a Durbin-Watson statistic of 2.011. None of the independent variables had correlations that were greater than .7. However, the tolerance values for two variables, first year and second year, were less than .1, indicating a possible collinearity problem. The decision was made to drop all classification variables from the analysis.

With the exclusion of classification, there was also independence of residuals, as assessed by a Durbin-Watson statistic of 2.013. There was no evidence of multicollinearity, as assessed by tolerance values greater than .1. There were no leverage values greater than 0.2 or values for Cook's distance above 1. The assumption of normality was met, as assessed by a Q-Q Plot. The multiple regression model statistically significantly predicted early alert attitude score, $F(11, 332) = 2.359$, $p = .008$, adj. $R^2 = .043$.

Only two variables, race and athletic status, added statistically significantly to the prediction, $p < .05$. Students who identified as Black or African American had predicted early alert attitude scores 4.367 points higher than predicted for students in other races. Students who identified as athletes had predicted early alert attitude scores 1.618 points less than that predicted for nonathletes. Because lower early alert scores correspond with more favorable attitudes toward early alerts, identifying as Black or African American has a predicted negative effect on attitudes, whereas being a student athlete has a predicted positive effect on attitudes toward early alerts. Regression coefficients and standard errors can be found in Table 22 (below).

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The Mann-Whitney *U* test revealed that there were a few response items where there was a statistically significant difference among students who identified as Black or African American and those that did not, using an exact sampling distribution for *U* (Dineen & Blakesley, 1973). Among those who had received alerts, these included "I would be more satisfied with my education if early alerts were used in every course" (*U* = 805, *z* = 2.02, *p* = .037), "Receiving an alert made me feel more connected to campus" (*U* = 782.5, *z* = 2.585, *p* = .010), "Receiving an alert increased my motivation to remain enrolled at SRSU" (*U* = 801.5, *z* = 2.692, *p* = .007), and "All instructors should use the early alert program in their classes" (*U* = 693, *z* = 2.145, *p* = .032).

Among those who had not received alerts, only one prompt had a statistically significant difference, "If I received an alert, it would motivate me to use the recommended support services" (*U* = 2,751.5, *z* = 2.404, *p* = .016). In all cases, the difference indicated a more negative attitude toward early alerts.

Table 22

Multiple Regression for Early Alert Attitude

Variable	ß	SEB	ß	Sig.
Intercept	20.968	1.559		.000
Ethnicity	-.228	.751	-.018	.762
Race—White	1.095	.922	.080	.236
Race—Black or African American	4.367	1.468	.210	.003*
Enrolled in remedial classes	-1.241	1.008	-.067	.219
Student athlete	-1.618	.730	-.132	.027*
Living off-campus	-.045	.748	-.003	.952
Transfer student	-.830	.958	-.048	.387
First-generation student	-1.372	.704	-.111	.052
English as a second language	-.184	1.006	-.011	.855
Physical or learning disability	1.006	1.348	.041	.456
Gender	-1.267	.696	-.104	.070

Note. *p* < .05; ß = unstandardized regression coefficient; SEB = Standard error of the coefficient; ß = standardized coefficient, and Sig. = Significance

Autonomy, competence, and connectedness. For autonomy, the average response to the final prompt leans to the "disagree" side of the scale, which indicates that students, on average, do not feel that early alerts interfere with their independence. However, in response to Question 28—"Which relationship do early alert programs best support?", 112 students (34%) selected the "parent and child" relationship option. This creates a more ambiguous result for the response to autonomy as it relates to the early alert program.

Items related to competence had an average score of 1.69/1.54 and 2.14/2.03, which are both in the agree category.

Items related to connectedness had an average score of 2.09/1.84 and 2.32/1.94, which are also both in the agree category.

Perceived autonomy vs. early alert attitude. After a scatterplot revealed outliers in the two scores, it was decided that Spearman's correlation would be used. The analysis revealed that an increase in autonomy score was weakly associated with an increase in early alert attitude score among the student respondents, rs(325) = .342, $p < .001$, meaning feeling less autonomy or academic control is weakly associated with lower levels of support for the early alert program.

Scores and action taken after alert. A binomial logistic regression was performed to ascertain the effects of early alert attitude and autonomy on action taken after an alert was received. Linearity of the continuous variables with respect to the logit of the dependent variable was assessed via the Box-Tidwell (1962) procedure. A Bonferroni correction was applied using all five terms in the model resulting in statistical significance being accepted when $p < .01$ (Tabachnick & Fidell, 2014). Based on this

assessment, both continuous variables were found to be linearly related to the logit of the dependent variable. The model was not statistically significant, $X^2(2) = 2.845$, $p = .241$. There was no relationship found between these variables and action taken in response to the alert.

Action taken in response to alert. Students who received alerts were also asked what they did in response to the alert, what the course outcome was, and if they think there would have been a different outcome without the alert (Questions 37, 38, and 13). To the first question, students were allowed to select multiple options from the list of possible responses. The 20 students who wrote in comments in the "Other" box were all commenting that they had not received an alert or unsure if they had. Aside from that, the top responses were "took no action" (30 students), "communicated my instructor in person" (21 students), "submitted missing assignments" (18 students), and "altered my habits (e.g. started attending class)" (16 students). With the exception of three students, remaining selections were all in positive action categories.

Course outcomes after alert. When asked about course outcomes, 36 students said they passed the course with a C or better, 30 students said they did not remember, and 27 students did not answer. The remaining eight students passed with a D, failed, or withdrew (four students, three students, and one student).

Outcome without alert. When asked how the course outcome would have been different without the alert, 65 students were unsure, 19 students answered "no," and 17 students said "yes." Students who answered "yes" were asked to explain their answer. Of the 17 responses, 14 were focused on potential negative outcomes without the alert or

how the alert helped them. In three of the responses, the focus was on what students would have done on their own to improve their grades.

Results

The first hypothesis was mostly supported. Students agreed that early alert programs support feelings of autonomy, competence, and connectedness. However, the feelings about autonomy were made less clear by the responses to the final question of the survey.

The second hypothesis was supported by the weak but statistically significant relationship between autonomy score and early alert attitude score.

The final hypothesis was not supported. There was not a statistically significant relationship found between the autonomy or early alert scores and positive action by those who received alerts.

Faculty vs. students. The results of the comparison of student and faculty responses are described in the sections below.

Feelings after receiving an alert. The side-by-side comparison of feelings after receiving an alert are included in Table 23. The feelings with the biggest discrepancies were "scared," "happy that someone cared," and "indifferent."

Table 23

Feelings Related to Early Alerts

	Faculty of self	Faculty of students	Students of self
Surprised	19.2%	19.2%	23%
Scared	26%	16.4%	7%
Discouraged	4.1%	2.7%	2%
Happy that someone cared	30.1%	11 %	16%
Indifferent	4.1%	35.6%	18%
Other	16.4%	15.1%	34%

Knowing where they stand in class. There were two areas where faculty were given the opportunity to give feedback about how they perceived student awareness of where they stood in class. When asked, "Do you think it is easy for students to know where they stand in your classes?", 96% of faculty said "yes." However, when responding to the prompt about how many students are aware of how well they are doing in each of their classes, the top responses were "more than half" and "half."

In response to the prompt, "I am aware of how well I am doing in each of my classes," 50% of the students selected "strongly agree" and 36% selected "somewhat agree."

Best way to alert. When faculty and students were asked, "What is the best way to alert students?", texting was the most common response, with 40% of faculty selecting this option and 64% of the students. This was followed by using email (29% for faculty and 17% for students). In the open comments for both, a combination approach was listed, as well as in-person contact by the professor. Contact by mail was not selected by any students or faculty members.

Alert originators. Faculty members were asked who they thought students prefer the alert comes from, 51% selected "the professor of the class." They were right—64% of the student respondents selected this option. The second most common selection for faculty members (16% of respondents) was "a full-time university staff member." Only 5% of students selected this option. The second most common response for students was "It doesn't matter." This was the selected by 27% of the student respondents. Unfortunately, due to an oversight by the lead researcher, faculty members did not have "it doesn't matter" as an option.

Top challenges. Both faculty members and students were asked to offer a response to a question about factors related to student struggles (Question 23). For the faculty members, the prompt stated: "Please select the THREE items you perceive to be the biggest obstacles to your students' success." The student prompt stated: "When you have struggled in a class in the past, what is the reason? Please select the top THREE reasons." The options available for both were family responsibilities, emotional health, physical health, financial issues, lack of preparation, communication skills, issues with faculty members, lack of academic support, religious commitment or activities, problems with daily travel, work commitments, poor personal choices (e.g. lack of studying, poor attendance, failure to turn in assignments), and prefer not to answer. The top three choices for faculty by percentage of overall selections were "poor personal choices" (60%), "lack of preparation" (20%), and "financial issues" (15%). The top two choices for students were the same as faculty, "lack of preparation" (19%) and "poor personal choices" (19%), with "lack of preparation" having four more students selecting that

option. The third top selection for students was "emotional health" (14%). "Financial issues" only accounted for 7% of the total selections for students.

Autonomy perceptions comparison. Faculty perceptions in each area were in line or close to the student responses when the "strongly agree" responses were used (see Appendix J for results). The prompts with the largest discrepancies were those that asked how many students "are good at meeting deadlines," "rely on their parents to help them make most decisions," and "are comfortable with failure."

Overall Impact

Goal of Higher Education

Students and faculty members were given a set of four goals and asked to rank them. The results are reported in Table 24 below.

Table 24

Goal of Higher Education

	Faculty Rank	Student Rank
To help students develop into educated citizens with the skills to tackle today's problems	1	1
To ensure that students graduate	3	2
To make sure that students and their parents are satisfied with the service that is provided	4	4
To help students get jobs	2	3

Notes. The scale is most important to least important (1–4).

Ideal Relationship Between University and Student

The response with the highest percentage for both groups was "facilitator and adult learner," with 76% of students selecting this option and 93% of faculty members selecting this option.

Relationship at Study Site

When asked to characterize the relationship between the university and students at the study site, the highest percentage for both groups (students, 54%; faculty, 51%) was again "facilitator and adult learner." The second highest was different. For the students, "bystander and adult" received the second highest (26%), and "parent and child" received the second highest (32%) for faculty.

Relationship Promoted by Early Alert

For the final question—"Which relationship do early alert programs best support?"—there was again agreement among the two groups. The "facilitator and adult learner" was the most common response, selected by 57% of students and 49% of faculty. The second most common response was "parent and child" with 34% from students and 42% from faculty.

Chapter V

Discussion

Early alert programs became a part of the higher education scene several decades ago and quickly spread throughout to higher education institutions across the country and globe. Although the research base for these programs is growing, the growth has been slow. The overarching goal of this study was to answer questions of whether or not early alert programs are effective and what is the best way to study them.

In Chapter 1, the extent of the problem and importance of this study were explained, as well as the several categories of research questions that would be explored. In Chapter 2, more historical context on the relationship between institutions of higher education and students was provided. The evolution of early alert programs was also described, including the various studies that have been completed and their limitations. In Chapter 3, a thorough explanation of the methodology was provided, including the various hypotheses that were tested and participants that were included in each part of the study. In Chapter 4, the results of each analysis were presented, as well as frequency tables and response summaries for the various parts of the study. This final chapter offers an analysis of each area of the study, as well as final thoughts on the implications for the overall findings. In addition, in each section of discussion, limitations and recommendations for future research are provided

Program Data

Even though it is in line with previous findings, the number of alerts that resulted in a student failing or withdrawing from the course is concerning (Ball, 2016; Eimers, 2000; Pfleging, 2002; Tampke, 2013). Without specific goals for the early alert program at the study site, it is difficult to say whether such results reflect enough effectiveness to rule the program worthy of continuation. Administrators at the study site will need to assess these numbers in comparison to other student success initiatives to make this determination.

Gender

In response to the difference in course outcome between males and females, a logical explanation could be that male students do not perceive early alerts as favorably as female students. However, gender was not found to be a statistically significant predictor of early alert attitude in the survey sample. Also, because the program data did not include whether or not a student actually responded to the alert, it is hard to know where the difference originates from the programmatic standpoint.

Even without a significant difference in course outcomes between alerted males and females, there should still be a concern about the higher numbers of alerts for male students in the data set. In earlier stages of higher education history, the number of males attending college outnumbered females, but this has changed. Fifty years ago, men represented 58% of the college population. Women now represent 56% (National Center for Education Statistics, 2019), and this trend has naturally extended to the workforce. The Pew Research Center recently reported that the proportion of college-educated women now exceeds that of college-educated men in the workforce (Fry, 2019).

At the study site, males and females represent 48% and 52%, respectively. If early alerts are an indication of struggle, the program data indicates that males are struggling at a disproportionately higher rate at the study site. With the percentage of male enrollment already decreasing in higher education as a whole, this deserves further attention.

Musser, St. Pierre, Wilson, and Schwartz (2017) asserted that males are at a higher risk of dropping out due to the societal gender roles that make it difficult for males to show weakness. They claimed that early alert systems help identify men who are struggling, but they failed to offer a solution. They asserted individualized advising that does not threaten an individual's personal ideas about masculinity is needed. Institutions of higher education, including the study site, should pay attention to these studies and incorporate the necessary changes, as appropriate, to improve outcomes of male students.

Alert Timing

A significant relationship was found between the timing of the alert and the outcome. In order to understand what these results mean for early alert programs, it is necessary to look at the frequency table for course outcome and timing of the alert (Table 7). The assumption would be that earlier alerts would result in more positive outcomes than alerts later in the semester (based on one's definition of "earlier" and "later"). The assumption would also be that successful completion of the course is the desired outcome. However, the data reflected a different reality. The earliest alerts, those submitted in the first month, were the most likely to result in a student dropping or being dropped from the class. In the second month, still within the early alert window used by most universities, the most common outcomes were failing the course and withdrawing from the course.

Recommendations are difficult without more information to determine at which stage of the alert the issue arose. Did students not receive the alerts at all, did they receive them but fail to make necessary changes, or did they drop the course because of the alert? Institutions, including the study site, that seek more complete answers to these questions will need to collect more data.

The program data from the study site did not offer evidence support that supports the existence of a "critical window" for helping students (Simons, 2011, p. 23). Failing or withdrawing from the course was likely, even when the alert was submitted earlier in the semester. In addition, at the study site, faculty members submitted most alerts within the "early" window of the semester that is recommended by student success administrators and theorists. This reduces the amount of program failure that can be attributed to faculty members, who have been accused of being slow or too reactive in alert submission (Jungblut, 2015).

Predictor Score

There was not a significant relationship found between predictor score and course outcome for alerted students. This finding may indicate that predictor scores have no relationship to individual course outcomes, in general. Because students progress through college one course and semester at a time, the lack of relationship between predictor score and individual course outcome could signal their lack of usefulness on a more general scale for each student. With numeric grades for each student and an appropriate numeric value for dropped courses, the analysis could provide more reliable information.

Determining the usefulness of the predictor score is especially important at any institution where a vendor is paid to calculate the scores. At the study site, the mean and

median predictor scores for students receiving alerts were low (mean = .37, median = .35), meaning students that were in the higher risk categories made up a large amount of those receiving alerts. Therefore, the scores may be useful in helping predict who may receive an alert. However, even with further research and better data collection, predicting a response will be impossible. Furthermore, the use of predictor scores for proactive interventions through early alert or other programs could result in Type 1 error, whereby a student is identified as needing assistance who does not really need it. This identification alone could trigger feelings of doubt that negatively impact student success.

Additional Considerations

Other program data provided important information as well. Because course outcome data results were less meaningful due to coding challenges, the information about a student's persistence may ultimately be the most important factor. There are many reasons a student may choose to stay or leave a university, but having data on retention postalert is important, especially in current age of retention-heavy focus. The low number of students retained and graduating after the alert at the study site does not provide support for early alerts as a retention strategy. However, the value of early alerts as a retention strategy depends on how the numbers are interpreted. In a campus as small as the study site, a program that is positively related to retaining even small numbers of students may be viewed as worthwhile. This reinforces the importance of setting specific and measurable goals for early alert programs and other student success initiatives.

In addition, knowing the courses and professors is important, although one has to be careful with these assessments. On one hand, a high number of alerts for a class could mean a professor is especially proactive or there are a high number of struggling students

in the class (e.g. remedial education classes). However, these data could be misinterpreted to reflect teaching weaknesses. In this particular case, the total number of professors who have submitted alerts during the semesters studied at a site that does not require participation is impressive (70%).

The high number of alerts for remedial courses is in line with previous studies (Adelman, 2004). However, because these courses are gateway courses for credit-bearing courses, negative outcomes are more significant. Driven by legislative directive, the study site is now incorporating a cocurricular model to remedial education. Future research of alerts submitted for these courses is warranted and recommended if the early alert program is continued.

The highest level of attrition risk is in the first year of college (Allen et al., 2010; Delen, 2011; Stewart et al., 2015). Because all first-year students are required to take the first-year seminar at the study site, it is natural that there would be a high number of at-risk students in these courses. However, the first-year seminar is designed as an extension to the orientation process, intended to help offer the skills to assist students in making the transition to college and learning the skill necessary to be successful. Studies have shown that first year seminars can have "substantial" positive effects on retention (Robbins et al., 2009, p. 103). The high percentage of alerts in this course deserves further scrutiny and may indicate a need for course redesign. In addition, the use of the online option for repeaters may be ill-advised, as 28 (42%) of the 66 alerts for this course came from the online section of the course.

In general, analysis of program data is an important component of early alert program evaluation and can highlight areas that need more attention, but it does not

provide enough information alone for drawing conclusions about effectiveness. This insufficiency is especially true when there are no clear, measurable goals and when data collection is not complete nor consistent. Overall, the weaknesses of the study site in these areas are consistent with many other institutions with early alert programs (Simons, 2011). Many universities need to work on data collection that includes both output and outcome measures.

Limitations

The program data set was incomplete and did not include data from all semesters the early alert program was in existence. The data set also did not include many demographic details for analysis. The biggest limitation in the analysis of the program data was the inability to assign a numeric course outcome for each alert.

Classroom Study

The findings of this aspect of the study are in line with previous course-specific studies, which usually have more positive results with early alert usage (Cai et al., 2015; Campbell & Hussey, 2015). However, other studies using a quasi-experimental design to analyze the effects of early alerts have been focused in STEM-related courses such as math, economics, and physics (Cai et al., 2015; Campbell & Hussey, 2015; Wright et al., 2014). The use of non-STEM classes in this study may provide support for alert usage in more diverse course settings.

The classroom study results provide support for the use of course alerts. What is difficult to discern is the extent to which type of alert mattered. Based on the student responses to the survey, most students prefer contact from their instructor, and a large

number have no preference. A repeat study with more balanced numbers of students for both types of alerts is recommended.

Overall, it is not surprising that course-specific programs and studies have better results. Their focused nature allows for more customization by the professor(s) involved, promoting a higher level of investment and commitment to the program and outcomes.

Limitations

The scope of the study was limited to only six classes taught by two professors. Also, even though predictor scores capture information on several variables for each student, it is difficult to know if its use was appropriate for pairing. In addition, missing predictor scores for several alerted students necessitated a pairing approach that only utilized one variable (high school GPA). Pairing was also limited by the availability of students in the control group that were identified as needing an alert.

Students who received alerts through the early alert program received an email request to complete the survey. Students who received faculty outreach may have been enrolled in one of the classes where the survey was administered. However, there was no direct follow-up with the students in the classroom study to know their actual reactions to the alerts.

Even though the paired students had the same professor for the same course, it is possible that there were teaching differences between the sections.

The inability to assign a value to the non-numeric course outcomes was another limitation.

Faculty Perceptions

Overall, faculty members at the study site expressed moderate feelings toward the early alert program. Many had not heard of the program and some did not use due to the time-consuming nature of the submission form. In general, they felt it was important to reach out and help struggling students, but they wanted to do it in their own way, as many expressed that this was more efficient and had better outcomes than working through the early alert system.

If the program is to be continued at the study site, better efforts need to be made to incorporate faculty input in all stages of the program design, development, and evaluation. Based on the feedback from the survey participants, making changes to improve the ease of submission and the quality of follow-up with faculty members could improve program results and faculty response.

Of the various data collected about faculty characteristics and teaching approaches and behaviors, none of them had significant explanatory value when it came to early alert attitude score. At the study site, the nature of the small campus population and faculty size may create a more homogenous response to students. More research on faculty perspectives at the study site and other institutions of higher education is needed to explain and evaluate these results.

The number of faculty members who were unsure about the program effectiveness mirrors findings from studies of chief academic officers (Fletcher, 2012; Simons, 2011). This similarity is not entirely surprising as faculty members are unlikely to spend extra time at the end of the semester assessing the outcomes of students who

received versus did not receive alerts. To improve awareness, program administrators should communicate program results to the campus community.

Limitations

The surveys were completed by current faculty members, whereas the program data came from prior semesters. It is likely that many of the respondents attended the university during previous semesters, but it is difficult to know the extent of the overlap.

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Student Perceptions

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Given the results of the program data showing that most students (percentage) who have received an alert at this university are no longer enrolled, it is not surprising that so few students have heard about or received an alert. It is surprising, however, that so many respondents were unsure about whether or not they had received an alert. This indicates a need for more active promotion of the program to the students.

Students who had not received an alert responded more positively to early alert prompts than students who have received an alert (or who were unsure if they had or not). This distinction warrants further research to determine if there is a point of the early alert process that triggers a less than positive response from students.

The results to the question about why students want to receive alerts deserves attention. As pointed out earlier in this paper, attendance issues are the most commonly used indicator of academic struggle by faculty (Hanover Research, 2014). However, many of the student participants indicated they did not prefer to be alerted about attendance issues. Faculty members at the university will need to be informed of this information to better approach use of time when it comes to outreach and/or use of alerts.

More research should also be done to determine how the reason for alert submission relates to the response by the student.

The finding that Black or African American students have predicted early alert attitude scores that are higher than those who identify from other races is a concerning finding, as higher scores mean less favorable attitudes toward these programs. Other studies have looked at the relationship between course outcome and ethnicity for alerted students (e.g., Ball, 2016; Tampke, 2013). However, results have been mixed and the studies have not usefully explained attitudinal response differences among students with different races and ethnicities.

The Mann-Whitney U results for the individual prompts provide some insight regarding the difference in early alert attitude scores between those who do and do not identify as Black or African American. However, more research is needed to more fully understand these results, especially because students identifying as Black or African American represent 7% of the current student population at the study site. Better data collection with the early alert program will also aid in this research.

With such a high number of student athletes at the study site, the finding that student athletes have predicted early alert scores that are lower than nonathletes (higher support) is positive. Student-athletes often struggle to balance academics and athletics. Although academic failure is difficult for all students, it is especially difficult for student-athletes who risk losing their athletic eligibility as well (Wolverton, 2008). Therefore, their positive attitude toward programs aimed to reduce failure is understandable. In addition, because most athletic programs, including the one at the study site, mandate the

use of academic support services by athletes, student-athletes already have some familiarity with the benefits of such services.

Emotional health, which was the third most common challenge selected by students, deserves more attention by administrators at the study site. According to the most recent report from the Center for Collegiate Mental Health (2018), the average rates of self-reported anxiety and depression among students continues to increase, and in the most recent Pulse Point Survey conducted by the American Council on Education, college presidents reported spending 72% more on mental health concerns compared to 3 years ago (Chessman & Taylor, 2019). Willingness to seek help is a positive trend (Center for Collegiate Mental Health, 2018); however, more willingness increases the demands on the resources of institutions of higher education. Some universities do not have the resources to meet these demands, and institutions of higher education will continue to be challenged by this growing issue and the ever-evolving list of accommodations (Dziech, 2019). Many institutions of higher education, including the study site, will have to decide how to prioritize the response to these needs among other current priorities and challenges.

Overall, students had a favorable opinion of the early alert program, including the areas related to self-determination theory (competence, connectedness, and autonomy), which means that early alerts have the potential to increase motivation in students. However, no relationship was found between the responses to each of the areas and action taken after alert submission among those who received an alert. More research with larger data sets and at different campuses is recommended to further explore this relationship.

In general, the students had low average scores for autonomy, which is associated with higher levels of perceived autonomy. This could reflect a high amount of perceived autonomy and academic control among the current campus population. Another possibility is the sample contained a higher percentage of higher performing students than the campus population. The mean and median reported GPA of the respondents was 3.24 and 3.2, respectively. However, of the 384 students who participated in the survey, only 289 filled in a numeric response to the GPA question (Question 33). Students with higher GPAs may have been more likely to know and feel confident with sharing their GPA. Therefore, the average may be positively skewed. In addition, students were allowed to write either their high school GPA (for first year students) or their college GPA. They were not asked to designate which one was recorded in the response. Because high schools use different grading scales, the average and median cannot be accepted with much confidence. Future studies should frame this question differently to gather accurate information that can be used to assess response differences based on academic performance.

Limitations

Ideally, there would have been a more equal distribution of students who had and had not received alerts in the survey responses. Also, surveys were completed by current students, whereas the program data came from prior semesters. Many of the respondents were at the university in previous semesters, but several were not. Future studies can avoid these limitations by surveying alerted students in the same semester after they receive alerts.

Faculty vs. Students

Based on comparison of the results from faculty and students, the perceptions held by faculty of the students at the study site are mostly accurate, especially in the autonomy responses.

Based on studies of early alert programs, the most common form of initial contact is email, and alerts often come from either peer mentors or other university staff members (Fletcher, 2012; Simons, 2011). At the study site, these are the approaches. However, faculty accurately perceived students as preferring text contacts from the professor of the class. . Professors not wishing to share their personal cell phone numbers could use apps such as the TextNow app, which allows for anonymous texting. Within Blackboard (and likely other learning management systems), students can also set up course text notifications that enable them to receive assignment due dates, exams, grades, and instructor-posted course announcements. Unlike phone calls that are often ignored when the number is unknown, a text message is sent and received in a way that requires little effort on the part of the student or faculty member.

Faculty perceived the students to feel less scared and less happy that someone cared and more likely to feel indifferent than they would have perceived themselves as feeling if they had received an alert as a college student. They were right about both. This again shows that the faculty at the study site perceive students accurately, making their perspectives even more meaningful.

The difference in the third most common reason for struggle warrants attention. Faculty perceived financial struggles as the third most common challenge creating difficulty for students. Some students selected financial struggles, but emotional health

issues were the third most common selection for students. Emotional health was the sixth most common challenge selected for faculty, behind communication issues and work commitments. This difference should be further explored at the study site to determine the basis of the discrepancy.

In previous studies, faculty members expressed hesitancy in reaching out when they perceived students to be struggling with emotional or mental health issues because they were worried that they were not appropriately qualified to handle the situation (Tampke, 2013). However, when faculty members at the study site were asked what support services they referred students to, counseling services was the second most commonly listed, and financial aid was only specifically mentioned by two faculty members. Also, when asked what services are lacking at the study site, only three faculty member listed mental health support, and only one mentioned financial aid assistance. From these results, one could speculate that faculty members do not perceive emotional health to be a large concern, because they assume students are getting their needs met through the referral. For financial aid, the hypothesis could be that faculty feel that students are maxing out the available resources but still struggling. However, more research is needed to enhance understanding of the responses to these areas.

Overall Impact

Overall, faculty and students agree on what the main goal of higher education is and is not, which is important in understanding perspectives related to the relationship of the university to the student, as well as the role of early alert programs. The difference in placement for ensuring students graduate may explain the higher level of support for early alerts from students than faculty. However, both of the middle options were close in

percentage within groups, meaning the ranking of the second and third options were not as clear as the selection for the first and last options.

Given the increased pressure to operate universities like businesses and treat students like customers, there has been concern over the loss of focus on the intrinsic value of a college degree and learning and growth that go along with it. From the responses, it seems that students at the study site understand this value. However, because much of the consumer attitude toward higher education has been driven in part by the cost of tuition (Patel, 2019), it is not surprising that students at the study site may be less inclined to rank the business-customer relationship highly. The study site has one of the lowest tuition rates in the state and it was recently ranked third in 20 best affordable colleges in Texas for a bachelor's degree (Hendryx, 2019).

Based on the responses, students perceive the university to be more hands-off, whereas the faculty perceive the university to be more hands-on. This could explain the more positive support for the early alert program by students and the more neutral response by the faculty. The current generation may also be less aware of a shift because they do not have the context of the overall history of higher education to use as a benchmark. This lack of awareness is similar to challenges in studying helicopter parenting based on perceptions of children. Perspective is based on the context one is in and his or her life experiences (Bartlett, 2017).

There was general agreement between faculty members and students at the study site about what the goal of higher education should be and the role of early alerts within that context. If early alert programs are not perceived as supporting the main goal of higher education, that does present a problem. Whether or not that is a problem worth

addressing will be up to the university administrators, who will have to decide which is more important. If a program is successful in helping more students graduate, that program may be deemed as worthy of continuation, even if "more" is a small number and even if some student autonomy is sacrificed in the process. This evaluation is especially likely if retention and graduation rates continue to be focal points in performance measures. A shift in performance and funding metrics would likely be required to inspire priority shifts. Future research could explore differences between perceived goals, the role of early alert programs, and institutional funding models.

General Limitations

Even though the study approach can be applied to any campus, the findings of this study are not generalizable to campuses that do not have similarities to the study site.

Theoretical Implications

Based on the response values to the appropriate questions, students perceive competence and connectedness to be supported by early alert programs. However, their feelings about autonomy and early alert programs is more challenging to assess. On one hand, disagreeing that early alerts create dependence presents the case for autonomy and early alert support. However, the responses to the final question about the relationship early alerts promote make those results less convincing. In future studies, knowing more about how students define the parent–child relationship will aid in understanding these results.

Faculty members accurately perceived that fewer than half of the students relied on their parents to help them make decisions. Only 15% of students had responses in the "agree" category on this item, meaning that most students do not rely on others already

and therefore may feel that the parent–child relationship is more guiding than hands-on, closer to the facilitator role that is ideal in higher education.

The ability to apply attribution theory in relation to faculty member response and use of early alerts was limited, because there was not a significant relationship found between perceived autonomy levels of students by faculty and faculty member attitude toward early alerts and likelihood of submitting an alert. This finding indicates that other reasons and variables (aside from perceptions of student autonomy) are more salient when exploring faculty response to early alerts at the study site.

The positive but weak relationship between autonomy and early alert attitude scores for students is logical and in line with the basic tenets of attribution theory. According to attribution theory, attributing negative outcomes to factors that are internal and changeable makes it easier for an individual to be motivated towards change. Even if students perceive themselves to be more autonomous than they are, the fact that they think they are in control of their academic outcomes makes them more likely to positively perceive early alerts and other student success initiatives. Their responses to the top challenges question confirm that the students at the study site felt in control and, for the most part, viewed failures as related to things that they could change. This makes intervention programs such as early alert programs more likely to positively impact the students at the study site.

Program Recommendations

If the study site (and other campuses) decide to continue using early alert programs, the following actions are recommended.

Involve Students and Faculty

Involving faculty and students throughout all stages of the program planning, implementation, and evaluation will help promote program success.

Establish Clear Program Goals and Objectives

Clear and measurable goals need to be established to facilitate program evaluation.

Maintain Consistent and Complete Data Collection for the Program.

Data collection should include whether or not the student responded to the alert, how the student responded, and course outcome information. A follow-up survey with each alerted student at the end of each semester or soon after the alert will help with the collection of this data.

Improve Campus Collaboration

It is common for professors to reach out to each other when a common student is missing class. Often a student not attending one class is not attending others. It would be logical, therefore, to have an alert system that allows for other current professors to know when an alert is created. Also, coaches usually have frequent (sometimes daily) contact with players and tend to have a high level of influence over players. At the very least, if coaches know when a student-athlete receives an alert, it will help. If not, it would probably be better for professors to send student-athlete alerts directly to coaches instead of through the early alert system. Finally, if a student is missing all their classes and failing to respond to contact attempts, the on-campus housing staff should be involved to follow-up with the student to see what further actions need to be taken.

Consider Voluntary Sign-Up

Some universities have students sign up for the early alert program, usually with a contract agreement. This may help with responsiveness to alerts. However, students who may benefit the most may be the least likely to sign up, and this may create redundancy with existing programs.

Promote Awareness

Increasing student and faculty awareness may improve program utilization and responsiveness. This could be done through various campus marketing tools such as emails, student and faculty handbooks, and orientation.

Switch to Text Alerts

Because emails seem to be less effective with this generation of students, and texts are preferred, it makes sense to adapt to a text alert using apps or the learning management system notification options.

Faculty Basic Mental Health Response Training

With more students identifying emotional health as a challenge to their academic careers, it is recommended that all faculty members receive training in basic mental health response to allow for earlier possible identification and referral.

Other Options

There are also options that can be used in addition to or in place of early alert programs that may have similar or better effects on course outcomes and retention.

Attendance Policies

University attendance policies specify the process for dropping students who have excessive absences. Rarely do they require that faculty take attendance. However, studies

have shown that mandatory attendance policies positively impact student attendance and overall classroom performance, especially for students with lower abilities (Dobkin, Gil, & Marion, 2010). Universities could improve student outcomes by promoting mandatory attendance policies. These policies will be maximized by appropriate scheduling of classes, because sleeping in is the top reason students cite for missing class in other studies of college student attendance behavior (Dobkin et al., 2010).

Instructor Support and Development

There is a rich body of research about various teaching strategies and approaches that contribute to student success. Even simple course design adjustments can help increase student success (Lang, 2016). This includes adjustments to lecture style, types of assignments, weight given to each assignment and exam, and opportunities for corrections (Franke, 2018; Nilson, 2010). Helping faculty members to be aware of these strategies and approaches can contribute to student success and retention.

Text Nudging and Other Tools.

According to the EAB (2019), "There is a clearly defined set of message types that students don't mind receiving via text: information about things that need to get done, reminders for those tasks, and prompts to finish incomplete tasks" (p. 11). If students prefer to receive alerts for missing assignments and tests, and they also want reminders about these things, it may make sense to make use of existing auto-reminder tools and notifications available in Blackboard and other learning management systems. These notifications are easy to set up and reduce the burden on faculty members to send out individual reminders and alerts. Once the course is set up, all students can set their preferences to receive the alerts automatically.

Basic Faculty Outreach

Many faculty members already reach out to students in various ways, including those who do use the alert system. Studies have shown that the most basic outreach by faculty can have a positive impact (Jayaprakash et al., 2014).

Midterm Grade Reporting in Core Courses

First year seminar instructors are required to report midterm grades at the study site. A similar requirement could be extended for all core courses. This could be adjusted to require the reporting only of grades for students who are failing to minimize the burden on faculty. At the study site, 44.6% of faculty reported that they post midterms grades for all students.

Other Areas for Future Research

The intent of the study was to be as comprehensive as possible in the assessment of the early alert program at the study site. However, there are some elements that were not included that deserve consideration as well.

This study did not distinguish alerts by class size, but this is an area that should be incorporated into future research. Certain early alert approaches may be less effective for larger size classes, especially programs that place a high burden on professors. Early alerts may also be less effective if classes are smaller than a certain size (Jayaprakash et al., 2014). In these cases, direct outreach by the faculty member would be the most logical approach.

The study also did not distinguish course alerts by course delivery format. Most undergraduate courses at the study site are taught in the face-to-face format. However, as that changes, this area will require greater attention, especially if emotional health issues

continue to be a top challenge for students at the study site. Monitoring classroom activities online can be helpful in identifying online students who are struggling academically, but the ability to identify online students who may be struggling with other issues is difficult. In addition, the ability to effectively intervene with such students is minimized in situations where online support structures are not in place (Barr, 2014). Most campuses provide all the appropriate services to students who are on campus, but services for students who are off campus are limited.

The early alert data in Asby's (2015) study included both positive alerts and academic concern alerts in the analysis. However, there was a not a distinct focus on the effects of the positive alerts. In the Spring 2020 semester, the study site added the option for positive alerts to be sent through the early alert system. This area deserves future research as universities add these types of alerts to their programs.

The financial cost of the early alert program was not included in the study, but it warrants further study given the current fiscal environment of higher education and the deficit of studies in this area. The cost of early alert programs can vary significantly due to variety of design options available. Universities that purchase campus-wide, integrated software/systems from an outside vendor and hire additional staff members for the program will have more expensive programs than those that create in-house systems that work with existing software and existing staff members. However, cost is relative to the size of campus, the effectiveness of the program, and other campus variables. If a program is effective in helping students successfully complete courses, program costs are potentially negated (depending on the number retained). Accurately comparing costs to benefits will be only be possible, however, with complete and consistent data collection.

Data use and privacy rights are other areas to incorporate in future research on early alert programs. The increase in the amount and types of data being collected is increasingly creating serious questions about privacy, especially when it is unclear whether or not students are aware of the extent of data being collected or how it is used. In addition, even if internal data use is allowable, data use by external vendors may create legal challenges and concerns.

Conclusion

Public administrators in all spheres of public service continually encounter "wicked" problems that require creative solutions. Often, solutions come in the form of new programs. Ideally, these programs are designed, implemented, and evaluated to promote the most effective use of resources and to create the most positive outcomes for the public.

Institutions of higher education across the globe are dealing with the "wicked" problems of declining enrollment and retention. Various programs and initiatives have been employed to address this challenge, including early alert programs. Existing studies have found mixed results with early alert programs, but they have also been limited in scope and focus, especially in the area of faculty and student perspectives.

The main goals of this study were to assess the effectiveness of early alert programs and provide a model for effective evaluation that could be duplicated at any institution of higher education. The study incorporated the program data, the quasi-experimental classroom study, faculty perspectives, and student perspectives to provide a more meaningful and complete evaluation of an early alert program.

Overall, the results of this study failed to provide compelling support for early alert programs, at least in the current form. Consistent with several other study findings, a majority of those who received alerts over the time period studied either dropped or failed the classes for which the alerts were created. The classroom study provided support for alerts, but it did not clearly establish a benefit for early alert usage over basic faculty outreach by email. Although students at the study site had overall positive attitudes toward the idea of early alerts, the program aspects that were most attractive to them (reminders about missing assignments and tests and faculty outreach) are not early alert program dependent. This study also revealed that faculty who have moderate feelings about the early alert program are already engaging in outreach efforts on their own, creating approaches that they have found to work best for them.

The results of the study revealed reasons why early alerts might not be working as well as intended. These include type of outreach, lack of knowledge of program by students, mismatch with student preferences for alerts, uncertainty about usefulness by faculty, emotional health concerns, and response by men and those who identify and Black or African American. All of these areas deserve increased attention from the study site if the program continues.

This study also provided general recommendations for improvement in the design, implementation, and evaluation of early alert programs. Given the broad and multifaceted design of the study approach, the results provided information that is useful, not only for assessing early alert effectiveness, but also for better understanding the students and faculty members at the institution.

Retention is a complicated issue. With declining enrollment and retention trends expected to continue well into the future, it is likely to that institutions of higher education will continue to try new approaches to recruit and retain students. Early alert programs may continue to grow and spread, or they may be replaced by the next retention trend. Hopefully, at some point, institutions of higher education will realize there is no "magic bullet" (York, Culpepper, Looney, Redd, Michaels, & Avery, 2017, p. 16) and will adopt an approach to program adoption and development that is sustainable, evidence-based, and in the best interests of the unique campus populations that institutions of higher education are designed to develop and support.

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Appendix A:

Faculty Survey

Faculty Survey

Q1 You are being asked to participate in a research study entitled "Early Alert Programs: A Closer Look," which is being conducted by Jessica Velasco, a Doctor of Public Administration student at Valdosta State University. The purpose of the study is to learn more about student and faculty perspectives of early alert programs. You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about how different faculty members perceive early alert programs and outreach efforts in university settings. There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life. Participation should take approximately 15 minutes to complete. This research study is anonymous. No one, including the researcher, will be able to associate your responses with your identity. Your participation is voluntary. You may choose not to participate or to stop responding at any time. You may also skip questions that you do not want to answer using the arrows at the bottom of the screen. You must be at least 18 years of age to participate in this study. Your participation serves as your voluntary agreement to participate in this research project and your certification that you are 18 or older.

Questions regarding the purpose or procedures of the research should be directed to Jessica Velasco at jmvelasco@valdosta.edu. This study has been exempted from Institutional Review Board (IRB) review in accordance with Federal regulations. The

IRB, a university committee established by Federal law, is responsible for protecting the rights and welfare of research participants. If you have concerns or questions about your rights as a research participant, you may contact the IRB Administrator at 229-253-2947 or irb@valdosta.edu.

Q2 To which gender do you most identify?

Male (1)

Female (2)

Transgender Female (3)

Transgender Male (4)

Gender Variant/Nonconforming (5)

Not listed (6)

Prefer not to answer (7)

Q3 What is your teaching status?

Full-time faculty (1)

Part-time faculty (2)

Prefer not to answer (3)

Q29 What types of courses do you teach?

Mostly undergraduate (1)

Mostly graduate (2)

A mix of undergraduate and graduate (3)

Prefer not to answer (4)

Q4 Do you teach mostly online or in-person classes?

    Mostly online (1)

    Mostly in-person (2)

    Prefer not to answer (3)

Q5 Do you take attendance in all of your classes?

    Yes (1)

    No (2)

    Only in core classes (3)

    Other (4) _____

    Prefer not to answer (5)

Q6 Do you post midterm grades?

    Yes, for all students (1)

    Only for certain students. Please explain: (2)

    _____

    No (3)

    Prefer not to answer (4)

Q7 Do you think it is easy for students to know where they stand in your classes?

Yes (1)

No (2)

Prefer not to answer (3)

Q8 The early alert program at this university is designed to help students who may be struggling in certain classes. Typically, a professor will submit an alert when a student's attendance or grades start suffering in a class. Once received, a peer mentor will attempt to contact the student by email and then phone to talk to the student about what resources may be needed to get the student back on track. NOTE: This is NOT the Lobo Alert program that is designed to alert students about emergencies and campus closures. Have you ever heard of the early alert program?

Yes (1)

No (2)

Skip To: Q14 If The early alert program at this university is designed to help students who may be struggling in... = No

Q9 Have you ever submitted an alert notification for a student?

Yes (1)

No (2)

Q10 Do you still use early alerts?

Yes (1)

No (2)

Q11 If not, why not?

_____

Q12 How many alerts do you submit per semester (estimate)?

_____

Q13 In your experience, has your use of the early alert program helped more students pass your course?

Yes (1)

No (2)

Unsure (3)

Q14 Thinking back to your experience as a college student, how do you think you would have felt if you had received an early alert notification about performance concerns in a class?

Suprised (1)

Scared (2)

Discouraged (3)

Happy that someone cared about me (4)

Indifferent (5)

Other: (6) _____

Q15 How do you think students feel when they receive alerts?

Surprised (1)

Scared (2)

Discouraged (3)

Happy that someone cares about them (4)

Indifferent (5)

Other (6) _____

Q16 Some universities require faculty to submit early alerts for certain groups or courses.

Please check for which groups you would support mandatory faculty participation.

☐ All students and all classes (1)

☐ All students in all core classes (2)

☐ Student athletes (3)

☐ First-year students (4)

☐ Second-year students (5)

☐ Students in remedial courses (6)

☐ Students on academic probation (7)

☐ I would not support mandatory participation (8)

☐ Other (9) _____

☐ Prefer not to answer (10)

Q17 Please rate your level of agreement with each of the following statements:

	Strongly Agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly Disagree (5)
I believe the early alert program helps students succeed (1)					
Students would be more satisfied with their education if early alerts were used in every course (2)					
Receiving an alert makes students feel more connected to campus (3)					

Receiving the
alert helps
build student
confidence (4)

Receiving the
alert motivates
students to
seek assistance
from their
professor or
advisor (5)

Alerts
motivate
students to use
the
recommended
support
services (6)

Receiving the
alert increases
student
motivation to
remain
enrolled at

SRSU (7)

Instructors who use early alerts care more about their students (8)

Professors should reach out and help those that are struggling in class (9)

Professors should post regular reminders to help students remember course assignments (10)

Students today need more

guidance to be successful in college than those of 10 years ago (11)

The use of early alerts encourages dependence, making students less prepared for the real world (12)

Q18 In your opinion, what is the best way to alert students who may be struggling in class?

Email (1)

Phone (2)

Mail/Postcard (3)

Text message (4)

I do not think we should send early alerts to students (5)

Other (6) _____

Q19 Who do you think students prefer the notification comes from?

A peer (1)

The professor of the class (2)

A full-time university staff member (3)

Other (4) _____

Q20 What support services do you commonly refer students to?

_____

Q21 Which support services, if any, are we lacking?

_____

Q22 How many students at this university do you think match the following statements?

	All students (1)	More than half of the students (2)	Half of the students (3)	Less than half of the students (4)	No Students (5)
Feel in control of their academic performance (1)					
Are willing to accept help that is offered to them (2)					
Seek out help when they need it (3)					
Even when tasks are difficult, try to stick with them (4)					
Are good at meeting					

deadlines (5)

Frequently find excuses for not getting down to work (6)

Are willing to make changes to their personal life and behaviors in order to be successful in college (7)

Are aware of how well they are doing in their classes (8)

Rely on their parents to help them make most decisions (9)

Are

comfortable

with failure

(10)

Q23 Please select the THREE items you perceive to be the biggest obstacles to your students' success:

☐ Family responsibilities (1)

☐ Emotional health (2)

☐ Physical health (3)

☐ Financial issues (4)

☐ Lack of preparation (5)

☐ Communication skills (6)

☐ Issues with faculty members (7)

☐ Lack of academic support (8)

☐ Religious commitment or activities (9)

☐ Problems with daily travel (10)

☐ Work Commitments (11)

☐   Poor personal choices (e.g., lack of studying, poor attendance, failure to

turn in assignments) (12)

☐   Prefer not to answer (13)

Q24 What is the goal of higher education? Please rank order the following, with "1" being the most important goal. Click on the statements to move them in the order you choose.

_____ To help students develop into educated citizens with the skills to tackle today's problems (1)

_____ To ensure that students graduate (2)

_____ To make sure that students and their parents are satisfied with the service that is provided (3)

_____ To help students get jobs (4)

Q25 What do you think is the IDEAL relationship between students and a university?

Parent and Child (1)

Facilitator and Adult Learner (Guide) (2)

Bystander and Adult (Hands-off) (3)

Business and Customer (4)

Other (5) _____

Q26 What do you think best describes the relationship between students and the university you work at?

Parent and Child (1)

Facilitator and Adult Learner (Guide) (2)

Bystander and Adult (Hands-off) (3)

Business and Customer (4)

Other (5) _____

Q28 Which relationship do early alert programs best support?

Parent and Child (1)

Facilitator and Adult Learner (Guide) (2)

Bystander and Adult (Hands-off) (3)

Business and Customer (4)

Other (5) _____

Q27 Please include any other comments you would like to add here:

_____

Q30 Some of the questions for this survey came from the following sources:

Asby, S. B. (2015). *Early alert and intervention systems and student persistence: An exploration of student perceptions* (Unpublished doctoral dissertation). East Carolina University, Greenville, NC.

Atif, A., Bilgin, A., & Richards, D. (2015). *Student preferences and attitudes to the use of early alerts.* Paper presented at Twenty-first Americas Conference on Information Systems, Puerto Rico.

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Macaskill, A., & Taylor, E. (2010). The development of a brief measure of learner autonomy in university students. *Studies in Higher Education, 35*(3), 351–359. https://doi-org.wmlsrsu.idm.oclc.org/10.1080/03075070903502703·

Respondek, L., Seufert, T., Stupnisky, R., & Nett, U. E. (2017). perceived academic control and academic emotions predict undergraduate university student success: Examining effects on dropout intention and achievement. *Frontiers in Psychology, 8*, 243. doi:10.3389/fpsyg.2017.00243

Appendix B:

Valdosta State University IRB Approval

Institutional Review Board (IRB)
For the Protection of Human Research Participants

PROTOCOL EXEMPTION REPORT

Protocol Number: 03930-2019   **Responsible Researcher:**   Jessica Velasco

Supervising Faculty: Dr. Jim Case

Project Title: *Early Alert Programs: A Closer Look.*

INSTITUTIONAL REVIEW BOARD DETERMINATION:

This research protocol is **Exempt** from Institutional Review Board (IRB) oversight under Exemption **Category 2**. Your research study may begin immediately. If the nature of the research project changes such that exemption criteria may no longer apply, please consult with the IRB Administrator (irb@valdosta.edu) before continuing your research.

ADDITIONAL COMMENTS:

- *Upon completion of this research study all data (data list, email correspondence, Participant Payment log, etc.) must be securely maintained (locked file cabinet, password protected computer, etc.) and accessible only by the researcher for a minimum of 3 years.*
- *Gift certificates are considered an effective incentive for participation. The gift certificate recipients must sign the Participant Payment Log. The log is subject to audit; therefore, the log must be kept current.*
- *To maintain participant anonymity, it is recommended that the signatures be covered up to prevent others from reading names, or you can make copies of the payment log and provide each person with their own to sign.*

☒ *If this box is checked, please submit any documents you revise to the IRB Administrator at irb@valdosta.edu to ensure an updated record of your exemption.*

Elizabeth Ann Olphie   *10.08.2019*   ***Thank you for submitting an IRB application.***

 Elizabeth Ann Olphie, IRB Administrator   ***Please direct questions to irb@valdosta.edu or 229-253-2947.***

Appendix C:

Letter to Faculty

It may be a little cheesy, but I would be BERRY grateful for your help.

Fellow Faculty Members:

I successfully defended my dissertation proposal, and I am ready to collect data for my IRB-approved study on early alert programs in higher education.

My study involves two components that I need your help with—the faculty survey and the student survey. The mobile-friendly faculty survey can be found at
https://tinyurl.com/Velascofacultysurvey
You can also use the QR code at the bottom of this note.
It will take less than 10 minutes to complete, and all faculty members, **including adjuncts** are invited **and encouraged** to participate.
The mobile-friendly student survey can be found at: https://tinyurl.com/Velascostudentsurvey

At minimum, it would be very helpful if you could post this link in your Blackboard courses and encourage students to complete it. However, I would love the opportunity to come to your classes (with treats, of course) to introduce the study and ask for student participation directly. This may boost the number and quality of responses. The student survey takes about 15 minutes to complete.

I am hoping to get all data collected by Thanksgiving. My goal is **75 completed faculty surveys** and **310 completed student surveys**.

Please let me know if you are open to me taking a bit of class time to administer the survey to your students.

Thank you for your help!
Jessica Velasco
jessica.velasco@sulross.edu
505-362-0406

Faculty Survey QR Code   Student Survey QR code

Appendix D:

Email to Faculty

Fellow Faculty Members,

In your boxes, you will find a letter (and some small treats) inviting you to participate in my dissertation study on early alert programs in higher education. There are two parts I am seeking your help with—the student survey and the faculty survey.

The faculty survey will take less than ten minutes and can be found here: https://tinyurl.com/Velascofacultysurvey
The student survey takes about 15 minutes and can be found here: https://tinyurl.com/Velascostudentsurvey

I also included the QR code for each at the bottom of the letter in your boxes.

If you have time in any future classes for me to come in and talk to students directly, I would love that opportunity, as it will probably help the number and quality of responses from students. If you do not have time in any upcoming classes, if you could post the student survey link as an announcement in Blackboard and encourage students to take it, I would really appreciate it.

All adjunct and full-time faculty members are encouraged to fill out the survey. My goal is 75 completed faculty surveys. Please forward this message to any faculty members that may not be included in the list.

*Hopefully, I did miss anyone's mailbox. Faculty members in Graves-Pierce: I left your letters and treats at the front desk, as I was not able to locate boxes in another location. Faculty in ANRS: Hopefully, I didn't miss any of you. I walked around and put the invites in the door boxes.

Thank you in advance for your help in the final step of my doctoral journey.

Sincerely,
Jessica

Jessica Velasco
Instructor, Political Science & Public Administration
Behavioral and Social Sciences
jessica.velasco@sulross.edu
432-837-8742
LH 203

Appendix E:

Follow-Up Email to Faculty

Fellow Faculty Members,

I am so grateful for the response I have received from faculty so far. Thank you to all of you who have been able to make time for me to come to your classrooms and administer the student survey. I know that we are winding down the semester and there is precious little class time remaining.

With the classes I am scheduled to visit in the next two weeks, I will easily hit my student survey response goal.

However, **I am still needing more faculty respondents to the faculty survey.** With our small campus size, it will take a high percentage of faculty participation to hit my desired confidence level.

The **faculty survey** will take **less than ten minutes** and can be found here: https://tinyurl.com/Velascofacultysurvey

All adjunct and full-time faculty members are encouraged to fill out the faculty survey. My goal is 75 completed faculty surveys. Please forward this message to any faculty members that may not be included in the list.

Thank you in advance for your help!

Sincerely,
Jessica

Jessica Velasco
Instructor, Political Science & Public Administration
Department of Behavioral and Social Sciences
SRSU Pre-Law Coordinator
jessica.velasco@sulross.edu
432-837-8742
LH 203
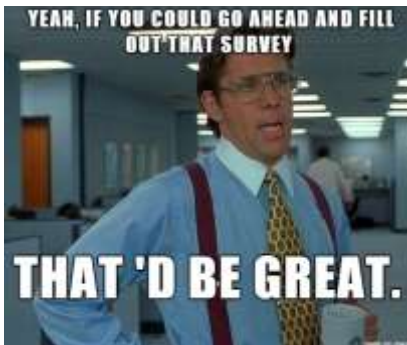
Appendix F:

Faculty Assembly Notes
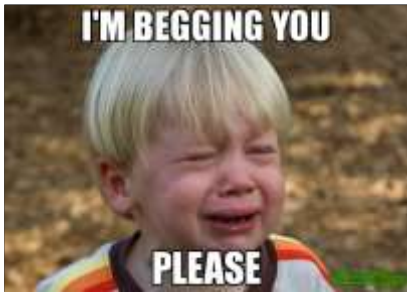
Please fill out my faculty survey:
https://tinyurl.com/Velascofacultysurvey

Please fill out my faculty survey:
https://tinyurl.com/Velascofacultysurvey

Please fill out my faculty survey:
https://tinyurl.com/Velascofacultysurvey

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Please fill out my faculty survey:
https://tinyurl.com/Velascofacultysurvey

Please fill out my faculty survey:
https://tinyurl.com/Velascofacultysurvey
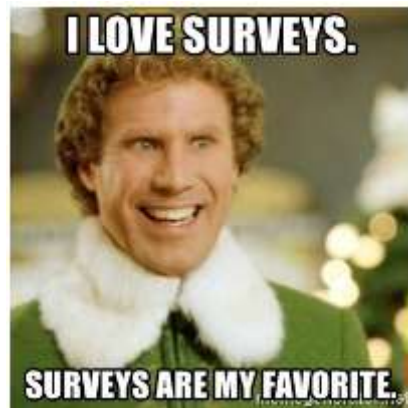
Please fill out my faculty survey:
https://tinyurl.com/Velascofacultysurvey

Appendix G:

List of Classes Visited to Administer Student Survey

List of Classes Visited to Administer Student Survey

Date & Time	Class or Discipline
October 29, 2019	
9:30 a.m.	Communication
11 a.m.	English
12:30 p.m.	Communication
1 p.m.	Spanish
October 30, 2019	
9 a.m.	State Government
10 a.m.	State Government
11 a.m.	Federal Government
11 a.m.	Public Policy
October 31, 2019	
9:30 a.m.	History
11 a.m.	Psychology
12:30 p.m.	Mexican American Studies
November 5, 2019	
11 a.m.	Federal Government
1 p.m.	First Year Seminar
6 p.m.	Business
6 p.m.	Federal Government
November 6, 2019	
1 p.m.	First Year Seminar
November 7, 2019	
12:30 p.m.	English
November 13, 2019	
12:30 p.m.	Psychology
November 14, 2019	
11 a.m.	Psychology
November 19, 2109	
8 a.m.	Communication
11 a.m.	Communication
November 20, 2019	
11 a.m.	Communication
12:30 p.m.	Communication
2 p.m.	Communication

Notes. Packets were also given to professors for distribution to three criminal justice classes, one first year seminar, one remedial math course, and two communication classes.

Appendix H:

Notes Attached to Snacks for Students

Students! I need your input!

Thank you for taking the time to provide high quality data that will help future SRSU students! ☺

Jessica Velasco
jessica.velasco@sulross.edu

Appendix I:

Student Survey

Student Survey

Q1 You are being asked to participate in a research study entitled "Early Alert Programs: A Closer Look," which is being conducted by Jessica Velasco, a Doctor of Public Administration student at Valdosta State University. The purpose of the study is to learn more about student and faculty perspectives of early alert programs. You will receive no direct benefits from participating in this research study. However, your responses may help us learn more about how students perceive early alert programs and outreach efforts in university settings. There are no foreseeable risks involved in participating in this study other than those encountered in day-to-day life. Participation should take approximately 15 minutes to complete. This research study is anonymous. No one, including the researcher, will be able to associate your responses with your identity. Your participation is voluntary. You may choose not to participate or to stop responding at any time. You may also skip questions that you do not want to answer using the arrows at the bottom of the screen. You must be at least 18 years of age to participate in this study. Your participation serves as your voluntary agreement to participate in this research project and your certification that you are 18 or older.

Questions regarding the purpose or procedures of the research should be directed to Jessica Velasco at jmvelasco@valdosta.edu. This study has been exempted from

Institutional Review Board (IRB) review in accordance with Federal regulations. The

IRB, a university committee established by Federal law, is responsible for protecting the

rights and welfare of research participants. If you have concerns or questions about your

rights as a research participant, you may contact the IRB Administrator at 229-253-2947

or irb@valdosta.edu.

Q31 What is your current classification?

First year student (1)

Second year student (2)

Third year student (3)

Fourth year or beyond (4)

Graduated (5)

Not currently enrolled (6)

Prefer not to answer (7)

Q32 What is your age?

Under 18 (1)

18–24 (2)

25–34 (3)

35–44 (4)

45–54 (5)

55–64 (6)

65–74 (7)

75 years or older (8)

Prefer not to answer (9)

Q2 To which gender do you most identify?

Male (1)

Female (2)

Transgender Female (3)

Transgender Male (4)

Gender Variant/Nonconforming (5)

Not listed (6)

Prefer not to answer (7)

Q33 What is your major?

_____

Q3 Ethnicity (mark only one)

Hispanic or Latino (1)

Not Hispanic or Latino (2)

Prefer not to answer (3)

Q29 Race (mark one or more)

    American Indian or Alaska Native (1)

    Asian (2)

    Black or African American (3)

    Native Hawaiian or Other Pacific Islander (4)

    White (5)

    Prefer not to answer (6)

Q4 What is your current cumulative GPA (second year students and beyond) or High School GPA?

_____

Q5 Are you currently enrolled in any remedial classes?

    Yes (1)

    No (2)

    Prefer not to answer (3)

Q6 Other characteristics/attributes: (Mark all that apply)

☐ Student Athlete (1)

☐ Live off-campus (2)

☐ Transfer student (3)

☐ Parent or caregiver of dependent children under the age of 18 (4)

☐ Caregiver of elderly relative (5)

☐ First-generation college student (neither of your parents have a college

degree) (6)

☐ English as a second language (7)

☐ International Student (8)

☐ Physical or Diagnosed Learning Disabilty (9)

☐ Prefer not to answer (10)

Q7 How many hours are you taking right now?

0–3 (1)

4–6 (2)

7–9 (3)

10–12 (4)

13–15 (5)

16–18 (6)

More than 18 hours (7)

Q34 How many hours do you work per week?

0 hours (1)

1-5 hours (2)

6–10 hours (3)

11-15 hours (4)

16–20 hours (5)

More than 20 hours (6)

Q35 How many online classes are you taking?

0 classes (1)

1 class (2)

2 classes (3)

3 classes (4)

All my classes are online (5)

Q8 The early alert program at this university is designed to help students who may be struggling in certain classes. Typically, a professor will submit an alert when a student's attendance or grades start suffering in a class. Once received, a peer mentor will attempt to contact the student by email and then phone to talk to the student about what resources may be needed to get the student back on track. NOTE: This is NOT the Lobo Alert program that is designed to alert students about emergencies and campus closures. Have you ever heard of the early alert program?

Yes (1)

No (2)

Q36 Have you ever received an alert notification?

Yes (1)

No (2)

Not sure (3)

Prefer not to answer (4)

Q10 When you received the alert notification, how did you feel?

Surprised (1)

Scared (2)

Discouraged (3)

Happy, because it felt like someone cared (4)

Indifferent (5)

Other (6) _____

Q37 As a result of the alert notification, what did you do? Mark as many as apply.

☐ Responded via email to the person who sent the alert (1)

☐ Made an appointment with my instructor (2)

☐ Made an appointment with my academic advisor (3)

☐ Communicated with my instructor in person (4)

☐ Submitted missing assignments (5)

☐ Altered my habits (e.g. started attending class) (6)

☐ Visited the Tutoring & Learning Center (7)

☐ Dropped the Course (8)

☐ Changed my major/minor (9)

☐ Took no action (10)

☐ Other (11) _____

Q38 What was the outcome for the course(s) you received the alert for?

Passed with a C or better (1)

Passed with a D (2)

Failed the course (3)

Withdrew from the course (4)

Professor dropped me from the course (5)

⬚ Don't remember (6)

Prefer not to answer (7)

Q13 If you had not received the alert, do you think there would have been a different outcome?

Yes. Please explain (1) _____

No (2)

Unsure (3)

Q17 Please rate your level of agreement with each of the following statements:

	Strongly Agree (1)	Agree (2)	Neither agree nor disagree (3)	Disagree (4)	Strongly Disagree (5)
I believe the early alert program helps students succeed (1)					
I would be more satisfied with my education if early alerts were used in every course (2)					
Receiving an alert made me feel more connected to campus (3)					
Receiving the					

alert helped
build my
academic
confidence (4)

Receiving the
alert motivated
me to seek
assistance
from my
professor or
advisor (5)

Alerts
motivated me
to use the
recommended
support
services (6)

Receiving the
alert increased
my motivation
to remain
enrolled at
SRSU (7)

Instructors who use early alerts care more about their students (8)

All instructors should use the early alert program in their classes. (9)

The use of early alerts encourages dependence, making students less prepared for the real world (10)

Q39 Please read the sample alert below before responding to the next series of questions:

Early Alert Program Description: Alerts are usually emails from peer mentors and student support staff on campus. An alert email might look something like this:

Hello Student, Professor Concerned noted that you've been either missing PS 2306001 or have been inconsistent with assignment completion since the beginning of the term. This is our first attempt to connect with you and get you back on the right track. We just wanted to check in with you to make sure that everything is okay and that you are transitioning to this semester well. Copied to this email, is your professor who has expressed concern. Please set up an appointment with Professor Concerned to talk about your grade and how you can successfully complete this course. We look forward to seeing your progress, Awesome Amy, Peer Mentor

	Strongly Agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Disagree (5)	Strongly disagree (6)
The early alert program can help students succeed (1)						

I would be more satisfied with my education if early alerts were used in every course (2)

If I received an alert it would make me feel more connected to campus (3)

If I received an alert, it would build my academic confidence (4)

If I received an alert, it would motivate me

to seek
assistance
from my
professor or
advisor (5)

If I received
an alert, it
would
motivate me
to use the
recommended
support
services (6)

If I received
an alert, it
would
increase my
motivation to
remain
enrolled at
SRSU (7)

Instructors
who use early
alerts care

more about

their students

(8)

All

instructors

should use

the early alert

program in

their classes.

(9)

The use of

early alerts

encourages

dependence,

making

students less

prepared for

the real world

(10)

Q18 In your opinion, what is the best way to alert students who may be struggling in class?

Email (1)

Phone (2)

Mail/Postcard (3)

Text message (4)

Other (5) _____

Q40 Who do you prefer the notifications come from?

A peer (1)

The professor of the class (2)

A full-time university staff member (3)

It doesn't matter (4)

Q45 For what reasons would you prefer to receive alerts? Mark all that apply.

☐ Missing class (1)

☐ Missing assignments (2)

☐ Missing exams (3)

☐ I would prefer NOT to receive alerts. NOTE: Selecting this option will not prevent instructors from submitting alerts for you. It is merely indicating your preference for study purposes. (4)

☐ Other (5) _____

Q41 How often do you check your university email account?

Several times a day (1)

Once a day (2)

Every few days (3)

Once a week (4)

Less than once a week (5)

Q42 When you are having a hard time in class, which is most likely to motivate you to do better?

Talking with my professor to work out a plan for improving my grade (1)

Meeting with a tutor (2)

Receiving a written plan on how to improve my grade from the professor (3)

Meeting with other students who are also having problems in the class to form a study group (4)

Talking with a counselor or support services about how to work through my problems (5)

Attending a workshop with other students with improvement strategies (6)

Getting an email or letter about how I am doing in class is enough (7)

Getting a phone call from a professor to help me work through my options (8)

Manage myself better (9)

Other (10) _____

Q20 Please name some of the services you are aware of on campus?

_____

Q21 Which support services do you use?

_____

Q43 Are there any services that are needed on our campus that we don't currently have?

Please list:

_____

Q44 Please rate your level of agreement with the following statements:

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
I have a great deal of control over my academic performance in my courses. (1)					
The more effort I put into my courses, the better I do in them. (2)					
No matter what I do, I can't seem to do well in my courses. (3)					
I see myself as					

largely

responsible

for my

performance

throughout my

college career.

(4)

How well I do

in my courses

is often the

"luck of the

draw" (5)

When I do

poorly in a

course, it's

usually

because I

haven't given

it my best

effort. (6)

My grades are

basically

determined by

things beyond

my control

and there is

little I can do

to change that.

(7)

I am willing to

accept help

that is offered

to me (8)

I seek out help

when I need

it. (9)

Even when

tasks are

difficult, I try

to stick with

them. (10)

I am good at

meeting

deadlines (11)

I frequently

find excuses

for not getting

down to work (12)

I am willing to make changes to my personal life and behaviors in order to be successful in college (13)

I am aware of how well I am doing in each of my classes (14)

Professors should reach out and help students that are struggling in class (15)

Professors should post regular

reminders to help students remember course assignments (16)

I rely on my parents to help me make most decisions (17)

I am comfortable with failure (18)

Q23 When you have struggled in a class in the past, what is the reason? Please select the top THREE reasons.

- [ ] Family responsibilities (1)

- [ ] Emotional health (2)

- [ ] Physical health (3)

- [ ] Financial issues (4)

- [ ] Lack of preparation (5)

- [ ] Communication skills (6)

- [ ] Issues with faculty members (7)

- [ ] Lack of academic support (8)

- [ ] Religious commitment or activities (9)

- [ ] Problems with daily travel (10)

- [ ] Work Commitments (11)

☐   Poor personal choices (e.g., lack of studying, poor attendance, failure to turn in assignments) (12)

☐   Prefer not to answer (13)

Q24 What is the goal of higher education? Please rank order the following, with "1" being the most important goal. Click on the statements to move them in the order you choose.

_____ To help students develop into educated citizens with the skills to tackle today's problems (1)

_____ To ensure that students graduate (2)

_____ To make sure that students and their parents are satisfied with the service that is provided (3)

_____ To help students get jobs (4)

Q25 What do you think is the IDEAL relationship between students and a university?

Parent and Child (1)

Facilitator and Adult Learner (Guide) (2)

Bystander and Adult (Hands-off) (3)

Business and Customer (4)

Other (5) _____

Q26 What do you think best describes the relationship between students and the university you attend?

Parent and Child (1)

Facilitator and Adult Learner (Guide) (2)

Bystander and Adult (Hands-off) (3)

Business and Customer (4)

Other (5) _____

Q28 Which relationship do early alert programs best support?

    Parent and Child (1)

    Facilitator and Adult Learner (Guide) (2)

    Bystander and Adult (Hands-off) (3)

    Business and Customer (4)

    Other (5) _____

Q27 Please include any other comments you would like to add here:

_____

Q30 Some of the questions for this survey came from the following sources:

Asby, S. B. (2015). *Early alert and intervention systems and student persistence: An exploration of student perceptions* (Unpublished doctoral dissertation). East Carolina University, Greenville, NC.

Atif, A., Bilgin, A., & Richards, D. (2015). *Student preferences and attitudes to the use of early alerts.* Paper presented at Twenty-first Americas Conference on Information Systems, Puerto Rico.

Love, H. (2016). A new approach to measuring helicopter parenting: The multidimensional helicopter parenting scale (Unpublished doctoral dissertation). Illinois State University, Normal, IL.

Macaskill, A., & Taylor, E. (2010). The development of a brief measure of learner autonomy in university students. *Studies in Higher Education, 35*(3), 351–359. https://doi-org.wmlsrsu.idm.oclc.org/10.1080/03075070903502703·

Respondek, L., Seufert, T., Stupnisky, R., & Nett, U. E. (2017). perceived academic control and academic emotions predict undergraduate university student success: Examining effects on dropout intention and achievement. *Frontiers in Psychology, 8*, 243. doi:10.3389/fpsyg.2017.00243

Appendix J:

Autonomy Response Comparison

Faculty and Student Autonomy Response Comparison

	Faculty Average	Top response & percent from faculty	Percentage of students who strongly agree/ somewhat agree
Feel control of their academic performance	3.03	Half	49%/42%
Are willing to accept help that is offered to them	2.7	More than half	58%/33%
Seek out help when they need it	3.54	Less than half	33%/36%
Even when tasks are difficult, try to stick with them	3.2	Less than half	47%/44%
Are good at meeting deadlines	3.08	Half	38%/44%
Frequently find excuses for not getting down to work	3.1	Less than half	12%/27%
Are willing to make changes to their personal life and behaviors in order to be successful	3.11	Half	54%/38%
Are aware of how well they are doing in their classes	2.56	More than half and Half	50%/36%
Rely on their parents to help them make most decisions	3.12	Less than half	4%/11%
Are comfortable with failure	3.67	Less than half	7%/14%

Note. Faculty responses were based on five-point scale, 1 = All students, 2 = More than half of students, 3 = Half of students, 4 = Less than hall of students, and 5 = No students. Student responses are reported as a percentage of each who "strongly agreed" or "somewhat agreed" to each of the statements, which were worded to make them first-person statements. Both "strongly agreed" and "somewhat agreed" are included for analysis.

Appendix K:

CITI Certificate

Completion Date 23-Aug-2018
Expiration Date 22-Aug-2021
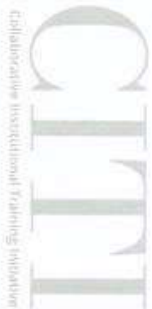Record ID 28219999

This is to certify that:

Jessica Velasco

Has completed the following CITI Program course:

Human Research (Curriculum Group)
IRB Basic (Course Learner Group)
1 - Basic Course (Stage)

Under requirements set by:

Valdosta State University

CITI
Collaborative Institutional Training Initiative

Verify at www.citiprogram.org/verify/?w00af8530-85cc-4a4c-82b0-e888ff1e3030-28219999