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A Study of Customer Relationship Management and Undergraduate Degree Seeking Student Retention

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A Study of Customer Relationship Management and Undergraduate Degree Seeking Student Retention

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Dissertation submitted to the Faculty of the College of Education

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Abstract

This dissertation explores the use of Customer Relationship Management (CRM) technologies and processes in a large Midwestern undergraduate public Institution of Higher Education. CRM systems and processes have operated in business and industry for some time, but only more recently are CRM systems being adopted and used for undergraduate student retention in colleges and universities. The purpose of this research study is to examine and describe how a CRM system is being implemented for undergraduate degree-seeking student retention at a large Midwestern undergraduate public IHE. CRM technology has been used for undergraduate student recruitment, but its application for undergraduate student retention is still unclear. The scholar-practitioner approach was used to research this academic issue that is important to practitioners in higher education. A qualitative methodology using a single case study design was used. The primary sources for data included interviews with nine IHE stakeholders and the examination of CRM and student retention documents at this IHE. The major findings of this study identified four main themes that emerged from the data analysis: CRM Implementation, Multi-level Decision-making, Interdepartmental Communications and Interactions, and Student Retention Information and Results. The relationships among these themes illustrate the main findings of this research. Implications and recommendations for future research and practice are discussed.

Keywords: Customer Relationship Management, undergraduate student retention, Institution of Higher Education, case study

Dedication

This dissertation is dedicated in memory to my parents Ray and Jane Beloin who valued life-long learning, pursuing a college education, and the simple enjoyment of life. To my wife, Dr. Kim Kimmes Beloin and our children Melinda, Barbara, Steven, and Christa, I offer my thanks for your patience, encouragement, insights, and inspiration that brought me to the successful conclusion of this degree.

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Chapter 1: Introduction

Introduction to the Problem

Undergraduate degree-seeking student retention remains a significant challenge for institutions of higher education across the United States. A large number of degree-seeking undergraduate students, especially freshmen, drop out from college and university campuses each year. In the United States alone, nearly half of all students withdraw or flunk out of college for academic or non-academic related reasons (Ackerman & Schibrowsky, 2007; Anderson, 2005; Bosco, 2012; Brown, 2015). Nationally, there are approximately 38,000,000 working-age adults who have taken college courses, but did not remain in college to complete a degree (Wildavsky, 2012). Even though the total number of undergraduate college and university degrees awarded has increased, only 59% of students attending a four-year undergraduate institution in 2005, earned a degree after six years of enrollment (Snyder & Dillow, 2013). Those who withdraw from college before earning a degree are often left with other negative repercussions, such as significant student loans to pay and less than anticipated job opportunities.

Institutions of Higher Education (IHEs) are negatively impacted by these low undergraduate student retention rates. Recruiting new students to re-establish current enrollment or increase undergraduate enrollment is costly. Lower undergraduate student enrollments often result in cuts to programming and staff at these IHEs. Furthermore, prospective undergraduate students and their families consider the institution’s degree completion rate when choosing a college or university to attend. If degree completion rates are low at an IHE, prospective students may choose another IHE for which they believe their chances are better to complete an undergraduate degree.

In an effort to improve undergraduate degree-seeking student retention, IHE administrators are looking for possible solutions and technologies that are effectively used in business and industry. The use of Customer Relationship Management (CRM) systems, which are widely accepted and successful in private business and industry, is gaining more appeal and acceptance for use in colleges and universities (Ariffin, 2013; Gholami, Saman, Sharif & Zakuan, 2015). The use of CRM systems is a relatively new undergraduate student retention approach for IHEs. Although Grant and Anderson (2002) began writing about CRM system use in higher education approximately 15 years ago, little is known on how these CRM systems are actually used on college campuses with regard to undergraduate degree-seeking student retention. In particular, CRM system use at IHEs is typically focused on the retention of new students. This study seeks to examine and describe how a large Midwestern undergraduate institution, uses a CRM system for undergraduate degree-seeking student retention. Throughout this study, undergraduate student retention refers to those undergraduate students who are seeking an undergraduate degree at the conclusion of their enrollment at the university.

Background, Context, History, and Conceptual Framework

Customer Relationship Management systems have been around for several decades and are used by business and industry to build sales, increase customer retention, and strengthen bonds between the organization and its stakeholders (Ariffin, 2013; Baer & Duin, 2014; Bowden, 2011). Business and industry stakeholders include those customers, employees, governments, communities or other entities that the business depends on for its survival and continued success (Hult, Mena, Ferrell, & Ferrell, 2011). After successfully serving these stakeholders in business and industry, CRM systems are being considered for their potential use at IHEs.

More specifically, CRM systems are increasingly being considered by colleges and universities for the purpose of managing prospective student recruitment and communications as well as undergraduate student enrollment and retention (Ariffin, 2013; Gholami et al., 2015; Hrnjic, 2016; Rigo, Pedron, & De Araujo, 2016; Seeman & O'Hara, 2016). When considering the adoption or a CRM system, IHE administrators must evaluate the cost of purchasing and implementing this technology (Karakostas, Kardaras, & Papathanassiou, 2005). Due to the substantial investment of purchasing and using CRM systems in IHEs, university stakeholders are interested in understanding how these CRM systems are being used on typical university campuses. Furthermore, how are CRM systems being used for freshman student retention? This research study will focus on how CRM systems are used at a large Midwestern undergraduate institution for undergraduate student retention.

With only some IHEs recently purchasing and using CRM systems in higher education for undergraduate retention purposes, the literature on how CRM systems are used for student retention is minimal. The adoption of CRM technology for new student recruiting is more prevalent than the use of CRM technology for undergraduate student retention (Gholami et al., 2015; Rigo et al., 2016; Seeman & O'Hara, 2016). The challenges of using CRM systems for undergraduate student retention include CRM technology being limited to sending outgoing student e-mails only, resistance from faculty and staff in using CRM systems, lack of knowledge and poor training on how to best use the technology, and lack of sufficient support from administrators (Ariffin, 2013; Klie, 2013). The combination of these factors can slow the implementation of CRM systems for student retention and affect its potential. Limited literature was found that pertains to the adoption of CRM systems for undergraduate student retention. Therefore, there have only been a few studies that have been done regarding the practices of using CRM systems and processes for undergraduate student retention.

In support of the literature base on undergraduate student retention, there is research showing that operating successful retention programs are expensive, but those retention programs are likely to pay for themselves if more students persist at the IHE. This is important because each student retained at the IHE is potentially worth an additional $10,647 in revenues to the institution

(Ackerman & Schibrowsky, 2007). While little is known about the use of CRM systems for undergraduate student retention, there are some CRM processes which may help undergraduate student retention efforts. First, the use of CRM systems may contribute to retention-related programming, which may build student satisfaction levels. Next, CRM technology, when used for customer-oriented functions, can identify and assist at-risk students and also reduce the number of student dropouts as a result of increased specialized attention (Hrnjic, 2016; Rigo et al., 2016; Seeman & O'Hara, 2016).

Increased undergraduate student satisfaction levels can have a positive influence on undergraduate student retention rates. On average, a 1% increase in customer satisfaction is associated with a 2.37% increase in return-on-investment (ROI), while a 1% decrease in undergraduate student satisfaction can result in a 5% decrease in ROI (Anderson & Mittal, 2000). As a result, boosting student satisfaction through the use of CRM systems may generate positive retention and financial results for IHEs.

With database sorting capabilities, CRM systems and processes may also identify new data points and alternative solutions which may aid the retention of undergraduate students. These systems can leverage an organizational data base, enabling the identification of individual students and groups of students, so that individual services and customized communications can be coordinated to those target markets (Xu, Yen, Lin, & Chou, 2002). It is not yet known if the automation aspects of CRM systems and technology reduce staff time while providing customized communications and needed services for undergraduate students.

The literature base is minimal regarding the use of CRM technology and systems for undergraduate student retention. Therefore, research opportunities exist for examining and describing how CRM systems are used for undergraduate student retention. More specifically, it is important to look closely at the retention of freshman students since this group of student has a higher rate of attrition (Ackerman & Schibrowsky, 2007; Anderson, 2005; Bosco, 2012; Brown, 2015). A qualitative methodology is one reasonable way to conduct an in-depth study on how CRM systems are currently being used at typical IHEs for undergraduate retention (Yin, 2009).

Statement of the Problem

The research problem is that little is understood and shared regarding how CRM systems are used for undergraduate student retention in IHEs (Garrido-Moreno, Lockett, & Garcia-Morales, 2015; Cuseo, 2005; Duhaney, 2005; Xuereb, 2014). This study was designed to examine and describe the use of CRM systems and technologies for the undergraduate retention of students at a large Midwestern undergraduate institution.

Purpose of the Research Study

The purpose of this research study was to gain a greater understanding of how a large Midwestern undergraduate institution is using a CRM systems and CRM technologies for undergraduate student retention. The research objective was:

Objective: To examine and describe how a large Midwestern undergraduate institution uses a CRM system for undergraduate student retention.

Given the more recent adoption of CRM systems and processes for undergraduate student retention in IHEs, as well as the limited literature on this topic, college and university stakeholders are interested in how CRM systems are currently being used. Examining and describing how a large Midwestern undergraduate institution uses a CRM system can be very beneficial to colleagues at other IHEs who want to improve upon their current CRM system practices or are considering using CRM systems for their undergraduate student retention plans. In other words, the findings from this study will contribute to the current understanding regarding how CRM systems and technologies are used and therefore may guide future actions that IHEs may take in the adoption and implementation of their own CRM systems. The study results may also guide future research in the use and application of CRM systems in higher education, in general. Finally, this study may prompt further similar studies that describe the implementation of CRM systems for undergraduate student retention at other IHEs.

Research Question

The research question for this study was: How does a large Midwestern undergraduate institution use CRM systems for undergraduate student retention?”

Rationale, Relevance, and Significance of the Proposed Study

The results of this study may benefit university administrators and other university stakeholders including CRM practitioners in IHEs, and stakeholders in the undergraduate student retention field. This study is significant because this is an area of research in higher education where little is known about how CRM systems are used for undergraduate student retention, especially at the freshman level where the dropout rate is typically the highest. An Association of College Registrar’s survey showed that while the percentage is growing, only 14% of IHEs are currently adopting and integrating CRM technology for undergraduate student retention purposes (Klie, 2013). With the majority of IHEs just beginning to use CRM systems for undergraduate student retention, this study serves to fill a gap in the literature base and inform IHEs of the potential benefits and challenges of using CRM systems for undergraduate student retention.

The potential benefits of using CRM systems and technologies hold promise to assist IHEs with their undergraduate student retention efforts. Undergraduate students leave college for many reasons, including those which are not academically related (Anderson, 2005; Goldrick-Rab, 2010). The use of CRM systems may help IHE staff and faculty identify potential undergraduate student issues before it results in a student’s decision to withdraw or an IHE’s decision to terminate a student. This is important because nearly half of all students drop out of college (Ackerman & Schibrowsky, 2007; Anderson, 2005; Bosco, 2012; Brown, 2015). This high rate of withdrawal is costly for individual students, their families, the institutions of Higher Education, and society at large. The potential impact of using CRM systems to assist in student retention may result in more successful students and more financially stable and successful IHEs.

In addition to the previous reasons referring to the relevance and significance of this research study, a number of IHEs do not attain desired results in maintaining consistent undergraduate enrollment levels and student diversity goals in order to meet their revenue and student population targets. The retention of undergraduate students helps IHEs maintain financial stability and sustain academic programs because the cost to recruit a new student to a campus exceeds the cost of retaining a current undergraduate student (Fike & Fike, 2008). Over a decade ago, Ackerman & Schibrowsky (2007) calculated that each retained student can be worth an additional $10,647 in revenues, demonstrating back then that successful retention programs could pay for themselves. Consequently, this study examines how a large Midwestern undergraduate institution uses a CRM system to improve undergraduate retention rates.

Definition of Terms

Researching and describing how CRM systems are used in a large Midwestern undergraduate IHE requires the use and description of some key terms. The key terms used in this research study with their corresponding descriptions are located in Table 1.

Table 1

Descriptions of Key Terms

Term	Description
Case	An Institution of Higher Education that serves undergraduate students and currently uses a CRM system for student retention purposes (Cresswell, 2013).
Customer Service Management	Methodologies, software, and Internet capabilities that help an institution manage customer relationships, provide service, and automate processes in an organized way (Xu, 2002).
Institution of Higher Education	A public or private college or university.
Relationship Marketing	Attracting, maintaining, and enhancing customer relationships by building ties with existing customers to strengthen customer relationships with the intent to retain customers (Ackerman & Schibrowsky, 2007).
Retention	The rate (expressed as a percentage) at which students persist in their educational program at an IHE (U.S. Department of Education, ttp://nces.ed.gov/ipeds/glossary/, 2016).
Undergraduate Student Retention	Freshman-to-sophomore retention rate which measures the percentage of first-time, full-time students enrolled at an IHE the following semester (Noel-Levitz, 2008).

Assumptions, Limitations, and Delimitations

Assumptions.

There are several assumptions that are critical to this study. First, it was assumed that the case site selected would remain committed to using a CRM system for undergraduate student retention and would continue to use a CRM system and technologies while the study was being implemented. This research relied heavily on this assumption. Second, this study relied primarily on two main data sources for answering the research question: individual interviews with university stakeholders and review of CRM-related and retention-related documents. It was assumed that the nine stakeholders being interviewed would answer the questions honestly given that their confidentiality would be protected and they had a vested professional interest in the findings. Third, it was assumed that this IHE would be using their CRM system for the purpose of communicating with and retaining currently enrolled students. Finally, it was assumed that the researcher-designed interview protocol and documents selected for review would capture the critical information needed in order to answer the research question. The interview protocol had been field tested with one IHE, which provided a basic level of credibility for using this tool. There is not a CRM retention interview protocol to use from a previous study because the use of CRM systems for undergraduate student retention in IHEs is relatively new and data collection tools have not yet been developed and used in previous research. These were the main assumptions for this research study.

Limitations.

There are limitations that affect or restrict any study, including this study. First, the interview protocol was developed and piloted with only one undergraduate IHE. The interview protocol has not been used extensively with multiple case examples. Second, a small number of individuals (nine key stakeholders) provided the majority of CRM and undergraduate freshman retention information for this study. Third, this study is limited to understanding the use of the CRM system from the perspective of those stakeholders who are most involved with the CRM system from the planning, implementation, and evaluation stages of the CRM system plan. Faculty perspectives are not represented unless the key stakeholders are also faculty. Individual undergraduate student perspectives are not represented since they are not planning, implementing, or evaluating the CRM system. Fourth, the sampling methods used for this study are based on criterion sampling, typical case sampling, and convenience sampling methods. The sample was drawn from a pool of a large Midwestern undergraduate institution. Using these sampling methods presents limited transferability to other IHEs, such as private colleges or larger level one and level two research universities. Fifth, there is a chance that researcher experience may have affected the stakeholder responses. Given these limitations and potential limitations, this research is still valuable and useful for those HEs who are using CRM systems or are considering investing time and money in CRM technologies to use with their undergraduate student retention plans.

Delimitations.

As with all studies, this research also limits the scope and boundaries of the study. Delimiting factors included the following. The research question limits the number of cases that can reasonably be examined and described for a manageable study. This research study focused on a single case. This study does not include graduate student retention, nor does it address the prospective and new student recruitment process, despite the potential use of CRM systems and processes for the retention of student populations that are not undergraduate students. In addition, examining IHEs in other geographical regions or private sectors presented a variety of confounding factors which were outside the scope of this study. This research focused on one typical large Midwestern IHE. Finally, those being interviewed were limited to those directly responsible for or involved in the CRM system implementation and evaluation processes. Student and full-time faculty perspectives on how the CRM system is being used at this IHE were not included since they have a more peripheral involvement with the CRM system. These delimitations were set because the purpose of this research study is to examine and describe how a typical, mid-size public IHE is using a CRM system for undergraduate student retention.

Chapter 1 Summary

This research study uses a qualitative approach for examining and describing how Customer Relationship Management (CRM) systems are used for undergraduate student retention in a large Midwestern undergraduate IHE. Due to the limited literature base on using CRM systems in IHEs and the different ways in which CRM technologies can be used in undergraduate student retention, a single case design was best used for this research study.

This research is important because a large portion of information on CRM systems and applications comes from business and industry, which is outside of the academy. However, colleges and universities increasingly are viewed as businesses by politicians, students, and the general population. As a result, more IHEs are using CRM systems that have typically been implemented in business and industry. Therefore, many colleges and universities across the United States are faced with the decision to purchase and implement costly CRM systems while lacking knowledge on how the interdependencies between the student, institution and technology will impact the retention and advancement of their undergraduate students. This is the situation at this large Midwestern undergraduate IHE. A significant amount of time and energy has been invested in a CRM system at this undergraduate institution for the purpose of improving undergraduate student retention. Due to substantial investment in the purchasing, training, and setting-up and implementing a CRM system, it is important to examine and describe how the CRM system is being used. It is also important to discern what can be learned from using the CRM technologies for the retention of undergraduate students, especially the retention of freshman students where the dropout rate is highest.

In order to examine and describe the use of a CRM system in this large Midwestern undergraduate institution, it was important to look in-depth at this IHE. Consequently, this study used a single case study design approach to examine and describe how the CRM system is being used.

This chapter discussed the research problem, background context, conceptual framework, research question and objectives, scope and limitations, and the significance of the study. Chapter

2 provides a conceptual framework, comprehensive literature review of Customer Relationship Management (CRM) systems and undergraduate student retention in institutions of higher education. Chapter 3 focuses on the research methodology, purpose and design, sampling procedures, data sources, instrumentation, data collection and analysis procedures, validation methods and expected findings. Chapter 4 provides a detail explanation of the findings. Finally, Chapter 5 discusses the implications and recommendations of the research findings. The research base on how CRM systems are used for undergraduate student retention in higher education settings is in its infancy. Therefore, the time was right for a study of this kind.

Chapter 2: Literature Review

Introduction to the Literature Review

Some institutions of higher education (IHE) in the United States are experiencing significant challenges with maintaining or growing undergraduate student enrollment and retention rates. Current high school graduates have more choices than ever, including employment, travel, armed services, technical college, on-line programs, and private or public undergraduate colleges and universities. The number of traditional-aged high school students available to attend college varies by state, and is declining in some states. Many public IHEs are faced with declining state support, while attempting to expand their mission and scope of operations. Because the largest source of operating income for colleges and universities is student tuition and fees, managing student enrollment and retention rates can play a significant role in the ongoing operation of undergraduate colleges and universities. Once students are enrolled, it is most cost effective for undergraduate IHEs to provide effective supports and regular communications with the student in order retain those students. As described in the previous chapter, one of the main issues with student retention is that a large number of undergraduate students, especially freshmen, drop out of college each year. Nearly half of all undergraduate students in the United States withdraw at some point during their college experience (Ackerman & Schibrowsky, 2007; Anderson, 2005; Bosco, 2012; Brown, 2015).

In an effort to increase undergraduate student enrollment and retention, some IHEs are expanding the use of technology in the enrollment management process. Business and industry organizations have already adopted technology into their business plans. Customer Relationship Management (CRM) systems, have been widely accepted and successful in private sector business and industry for attracting and retaining a loyal customer base. These CRM systems are now gaining more appeal and acceptance for use in colleges and universities for undergraduate student enrollment and retention (Ariffin, 2013; Gholami et al., 2015). Because using CRM systems is a more recent undergraduate retention approach for IHEs, little is known regarding how these CRM systems are used on typical campuses, especially for retaining first-year students where the dropout rate is typically the highest. An Association of College Registrar's survey showed only 14% of IHEs are using CRM technology for undergraduate student retention purposes (Klie, 2013). With the majority of IHEs not using CRM systems for undergraduate student retention, little is understood and written regarding how CRM systems are used for undergraduate student retention in IHEs (Garrido-Moreno et al., 2015; Cuseo, 2005; Duhaney, 2005; Xuereb, 2014). This study was designed to examine and describe the use of CRM systems and technologies for the retention of undergraduate students at a large Midwestern undergraduate institution.

This chapter describes the conceptual framework for this research study. Following the conceptual framework is a review of the research literature on undergraduate student retention in IHEs, the role of CRM systems, and the connection between CRM system use and improving undergraduate student retention programming. These are the main tenets of this study. A review of methodological issues with regard to the study of undergraduate student retention is also addressed. Finally, a synthesis of current research findings, particularly on undergraduate student retention, is provided.

Conceptual Framework

Conceptual frameworks serve as an argument regarding why a topic of research matters and why the means to study it are appropriate and rigorous (Ravitch & Riggan, 2012). When considering the use of CRM technology to address the challenges of retaining undergraduate students, it is first necessary to look at it through the context of undergraduate retention in American colleges and universities. Extensive research into undergraduate retention issues, concerns, and possible solutions has been explored (Barefoot, 2004; Kuh, 2009; Pascarella &

Terenzini, 2005; Tinto, 2006). While the dilemma of student attrition has not been solved, student engagement with the institution plays a partial role in a student's decision to remain in college and make sufficient academic progress. CRM systems can potentially be a tool to foster the student's engagement with the faculty, staff, and overall college experiences at the IHE.

While there are many studies exploring undergraduate student retention, less attention has been given to the use of CRM systems and methods for monitoring and managing retention efforts within higher education settings (Baer & Duin, 2014; Bowden, 2011; Trocchia, Finney, & Finney, 2013). The more recent entrance of CRM processes for undergraduate student retention encourages rethinking how institutional processes can be modified to serve students more effectively. As institutional processes are examined, opportunities for improvements may surface. For example, students may interact individually with several IHE departments over a period of time, including admissions, advising services, career and job placement, and financial aid offices. However, the institution may lack an interconnected way of tracking these interactions to build a more comprehensive view for identifying and responding to the student's needs or for identifying individual potential problems and solutions. A college counseling services office may be unaware that a student is going through significant personal problems because another department did not make a referral to counseling services for that student. Critical information explaining why students become dissatisfied or drop out of college may be lost between campus departments if this information in not collected and shared with stakeholders. This study uses of Bogdan and Biklin's (1992) organization of information under 10 broad schemes to begin identifying a more comprehensive view for identifying these important needs and interconnections. The 10 categories are: setting/context; definition of situation; perspectives; ways of thinking about people & objects; process; activities; events; strategies; relationships and social structure; and methods.

While CRM systems are still evolving, some IHEs have begun using CRM systems for building, maintaining and tracking relationships throughout the undergraduate student's lifecycle, from the beginning of a student's freshman year of college to well after graduation as an alumnus (Xu et al., 2002; Yim, Anderson, & Swaminathan, 2004). If the successful use of CRM systems in non-academic settings offers any insight, it is possible that the strategic use of CRM technology in higher education settings can help colleges and universities improve student satisfaction and this achieve higher rates of student retention. It is also possible that the CRM technology will not show a direct link to improvements in undergraduate student retention. Rather, the use of CRM technology may help to coordinate communications and interactions between the undergraduate students and various IHE departmental staff which may result in a more successful student experience in other ways. The direct or indirect links of using a CRM system for undergraduate student retention need to be explored.

Little is currently known or written about how CRM systems are being used for student retention in higher education. CRM systems have traditionally been developed for and used in business and industry and not in educational settings. As IHEs are increasingly being viewed as a business, CRM systems are more likely to be adopted and employed in universities for student retention purposes. Given this recent trend, this use of CRM systems in higher education for undergraduate student retention is still in its infancy and therefore, it is important to research how these CRM systems are actually being used within the academy. In order to study the use of CRM systems for student retention, it is important to examine and describe how these systems are operating at typical IHEs. Implementation of a CRM system at a typical public IHE has the potential for some transferability to other IHEs that may be smaller, larger, or private undergraduate institutions.

As a foundational starting point, this research study aimed to examine and describe how CRM systems are being used for undergraduate student retention at a large Midwestern undergraduate institution. An appropriate approach for researching this purpose is through a single case design study. The methodology for this single case study is described in detail in chapter 3.

The rest of this chapter provides the evidence-base that supports this conceptual framework and grounds this research study within the larger bodies of research that have been done on CRM systems and undergraduate student retention in IHEs. The review of literature focuses on undergraduate student retention in IHEs, the evolution and common use of CRM systems, and finally the connection between CRM system use and undergraduate student retention.

Review of Research Literature on Undergraduate Student Retention

Increasing undergraduate student retention rates can help institutions achieve enrollment and revenue target goals, which is of interest to many administrators at IHEs. Student retention trends and withdrawal patterns from college have been extensively researched, yet increasing the rate of undergraduate student retention continues to be a challenge for many IHEs (Kuh, 2009; Pascarella & Terenzini, 2005; Tinto, 2006). Students encounter situations or events which impact their undergraduate success and overall retention. Once students arrive on a university campus, it can be a considerable challenge to keep them there (Cleary, 2011; Seeman & O'Hara, 2006). Tinto (2006), a conceptual framework leader in the field of retention studies, and other researchers, identify a number of factors which affect undergraduate student retention, including: academic failure, student behavior, finances, gender, race and social status (Bensimon, 2007). In addition to the student-related factors, Tinto's (2006) student integration retention model, and Ackerman & Schibrowsky (2007), place attention on faculty, who play an important role in student success. While individual student decision-making is the most important factor in student retention, other contributing factors can certainly influence the student retention process.

Many IHEs have an interest in keeping undergraduate students enrolled and working towards their completion goals. Barefoot (2004) describes evidence of IHE interest in the thousands of student retention-related programs that are designed to keep undergraduates busy and occupied in meaningful connective activity by increasing their level of student engagement on campus. Retention initiatives can require significant investments in resources, including additional staffing and specialized campus programming, especially during the first year of college when undergraduate freshmen are most likely to drop out (Bosco, 2012; Tilghman, 2012). Undergraduate students who have higher levels of institutional satisfaction, and who are integrated into campus social life, are less likely to withdraw. Therefore, retention-related programming can promote student engagement through clubs, organizations, expanded campus orientations, community services, convocations, cohort classes, residential programs, and school spirit building events (Matoush, 2003; Zhao & Kuh, 2004; Rowley, 2003). If undergraduate students are most at-risk for withdrawing during their freshman year of college, then focusing on keeping them engaged with positive and timely interventions, motivate these first year students to persist by returning to the campus in future semesters.

Marketing and Customer Relationship Management Development

Customer Relationship Management developed many of its roots from the field of marketing, and from a more recently developed subcategory called “relationship marketing” (Mateo, 2015; Ngai, 2005). According to The American Marketing Association (2013), marketing is “the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large.” Relationship marketing is a transactional process. Like marketing, CRM systems are a vital link between organizations and customers. CRM processes actively interact with customers, coordinate communication, and deliver information which offers transactional value to the stakeholders.

Initially created to meet the needs of business and industry seeking to sell more products and track customer activity, CRM has evolved, but is underpinned by the belief that customer relationships can be developed and managed (Guay, 2017; Yim et al., 2004). CRM systems are used by marketing and customer service departments to track customers' interactions with the organization including customer calls and interactions, past sales, service records, competitor offerings, and other records so that companies can respond with the best service possible (Nguyen, Sherif, & Newby, 2007).

A core focus of marketing is stimulating customers to adopt differentiated products or services, or even act on an idea or social activity (Kotler & Levy, 1969). Much of what goes into the field of marketing was described by Theodore Levitt, who offered transformational thinking about how marketing should be viewed and used. Levitt believed that satisfying the needs of customers should take precedence over placing and selling products (Grant, 1999). Historically, many marketers focused on product development and sales without much thought to what consumers actually wanted or needed.

Since the development of the marketing-mix called “the four Ps” (product, price, place and promotion) in the 1950’s, business and industry, and now even higher education institutions, have adopted the use of marketing in product and services promotions (Mateo, 2015; Gronroos, 1997). The combination of these four aspects enabled business managers to develop strategies which would encourage customers to seek out and purchase what met their needs, but often placed more emphasis on prompting a series of short-term exchanges, rather than an on-going long-term relationship. Nevertheless, the use of marketing concepts has become widespread across a wide range of for-profit and not-for-profit organizations, including IHEs.

Marketing theories and applications, used widely in the business sector, are now gaining acceptance and value within the higher education community. Many IHEs are seeking to achieve a competitive edge or protect or build their undergraduate student market share (Hemsley-Brown & Oplatka, 2006). Many universities have marketing, communications and social media staff, and even entire departments devoted to marketing functions. While there is still some debate as to whether the students are the product (with employers serving as the customer), or the institution's education offerings are the product (with students being the customer) of IHEs, the marketing concept has taken hold. A number of IHEs are developing the perspective that the student is the customer and they are linking student satisfaction and engagement activities to their undergraduate retention programming (Bowden, 2011).

While marketing has gained ground as a tool to develop and promote the institutional image, isolating the marketing influence of IHEs outside of other factors, can be difficult to do (Nguyen, Sherif, & Newby, 2007). Universities with stronger reputations, as measured through publications which rank IHEs and through general reputation, are likely to be reflected positively in student perceptions of the institution (Dennis, 2016). A strong positive reputation can add to the overall attractiveness of a campus, and marketing promotion of the IHE's reputation can play an important role in attracting and retaining undergraduate students (Chaney, 2017).

Customer satisfaction plays an important role in relationship marketing, where a base of clients may receive a high level of service, and thus form lasting strong relationships and commitment to a brand (Bowden, 2011; Hrnjic, 2016). Developing a set of strategies which use a relationship marketing approach offers a holistic perspective when retaining a customer (or student) and may inspire higher levels of satisfaction and loyalty, along with a lower desire to switch alliances to a competitor (Mateo, 2015; Rowley, 2003).

Customer Relationship Management Systems & Undergraduate Student Retention

According to Yim, Anderson, & Swaminathan (2004), there are three merging marketing pathways which may support CRM for undergraduate student retention. These are: (1) customer focused orientation centered on building value and satisfaction, (2) ongoing relationship marketing programming over transactional (one-time) interactions, and (3) database (technology-orientated) marketing. The combination of these elements, when implemented appropriately, offers the potential to improve communications and interactions between undergraduate students and IHEs. Customer knowledge is a critical asset is assessing satisfaction. Gathering, managing, and sharing customer knowledge is a valuable competitive activity for organizations, including IHEs (Garrido-Moreno et al., 2015). Consequently, promoting high levels of student satisfaction may play a similar role in higher education.

Because of their reliance on student e-mails, using CRM systems in higher education settings for undergraduate student retention can offer challenges. Those students in most need of campus intervention, due to academic or social problems, are often the students who are least likely to read their campus communications or take advantage of the help that is available (Bosco, 2012; Bragg, Bragg & Durham 2012; Capps, 2012; Rowley, 2003). Students interact with a wide variety of departments during their time at IHEs and sharing information or coordinating efforts between these departments can be difficult to manage or track. Consequently, even when CRM systems are used broadly across a campus, the responsibility to open and read helpful e-mails or accept available interventions is still ultimately up the individual student.

CRM system technology can include customized e-mail, one-to-one marketing, (where activities and communications are based on student specific data), data-base management, and customer tracking capabilities (Guay, 2017; Swift, 2001). As noted earlier, improving retention rates among undergraduate university students continues to be desirable for IHEs, and the use of CRM systems offers the potential to move IHEs forward with their undergraduate retention plans. Using CRM technology for retention purposes aligns with the goal of any enterprise, which is to attract, keep, and grow customers (Peppers & Rogers, 2011).

In business and industry, tracking customer information can be difficult across departments. With the ability to link stakeholders together, CRM systems offer the potential to track interactions as customers may interact with marketing, sales, management, customer support, billing, and a host of other departments (Garrido-Moreno et al., 2015; Guay, 2017). Previously, the vast span of these touchpoints with customers could be lost inside the organization to other departments who may not have access to this critical information. For example, in a typical business it may be hard to know to what extent the billing department knows what is happening in the sales or marketing division. It is possible that real-time information is not accessible or communicated consistently to other parts of the organization. On the other hand, CRM systems, similar to a paper-based Rolodex, may provide a larger picture of client and institution interrelationships. This allows managers to keep track of outgoing and incoming communications from multiple clients and departments, and serves customers by anticipating the next set of customer needs (Guay, 2017). Each division enters data into a centralized system, which can then be accessed by other parts of the organization when needed. Likewise, the tracking of student information across university departments can be challenging. CRM systems have the ability to coordinate and track critical student information, which is crucial to the retention of undergraduate students, especially at-risk students who could easily fall through the cracks.

Many CRM methods pre-date the modern computer systems used today and can be described in a variety of ways, ranging from a general concept like one-to-one customer marketing, down to a set of specific processes, computer applications or programs (Guay, 2017; Krasnikov, Jayachandran, & Kumar, 2009; Nguyen, 2007). A standard definition on CRM is hard to find, but a good starting point is to describe the many views of what CRM systems are and what they can do (Swift, 2001). CRM system perspectives can differ. CRM can be viewed narrowly as a particular solution provided by technology, or as an integrated set of customer-oriented solutions, or finally, as a holistic approach to managing customer relationships (Payne & Frow, 2005). Each of these approaches can appeal to different parts of the organization. For example, the technology department might focus more on the database and computer aspects of how CRM systems operate as opposed to the leadership team, who may be more interested in how the various parts of CRM can be used to track customer behavior meet sales and revenue goals. Different stakeholders from different departments may hold different perspectives on the use and value of CRM systems within the larger organization.

Even with improving customer relationships as a core feature, there are numerous views on what should be included in a discussion of CRM operations (Klie, 2013; Nguyen, 2007). CRM systems, which may include e-mail, website, telephone, live chat, direct mail, marketing materials and social media, can be regarded as the practices, strategies, and technologies that are used to manage and analyze customer interactions and data throughout the customer life-cycle (Tech Target, 2017). A broader view of CRM systems includes the capability to capture, organize, connect and retain client information across all business functions, with the main goal of retaining satisfied customers and growing the organization (Karakostas, Kardaras, Papathanassiou, 2005).

In an Institution of Higher Education, students assume the primary customer role (Baer, 2014; Noble, Flynn, Lee, & Hilton, 2008; Pember, Owens, & Yaghi, 2014). Information is gathered into a master student information system, then organized and connected to various university functions such as registration processes, record keeping, advising and career services, and academic support services (Seeman & O’Hara, 2006). This information can be used by faculty, staff, and the students themselves to monitor individual student progress and conduct transactions. The CRM system helps students accomplish their goals, with some prompting from the CRM system itself (Yim, 2004). For example, students may receive an e-mail prompt when it is time to register for the next semester. For some students, these prompts are needed, and when acted upon, effectively lead to student persistence across semesters. While CRM systems can prompt action, ultimately, it is still up to the student to respond to the CRM technology and access the university supports available to achieve their academic goals.

Understanding the use and best practices of CRM can help college and university administrators who are seeking effective strategies, tools, and technologies for increasing student retention rates. Their goals include retaining current undergraduate students, providing needed services, and managing institutional budgets (Nguyen, 2007; Rigo, 2016). The application of CRM technology for undergraduate retention efforts in institutional settings is still early in its evolution and IHEs are exploring CRM integration into their current management information systems. Therefore, there remains a need to conduct research on the use and understanding of CRM systems in IHEs as a tool for retaining undergraduate students.

Synthesis of Research

Enrollment, retention, and fiscal challenges have prompted many American IHEs to explore ways for increasing enrollment and improving undergraduate student retention. Some universities have turned to CRM systems to manage student retention, improve services, and provide better lines of communication (Seeman & O'Hara, 2006). These systems combine student and faculty information with sophisticated software applications to both monitor and serve student populations. As described earlier, the best of these systems can anticipate student needs based on metrics which are programed to trigger notifications or warnings to faculty, staff and the students themselves.

While CRM got its start in business and industry, IHEs are adopting many of the CRM processes because building commercial friendships (where students perceive that faculty and staff take the time to know them individually), increasing customer satisfaction, and competing for customers is necessary in present day universities (Ariffin, 2013; Trocchia et al., 2013). CRM systems can connect students to essential communication and campus services, which can then impact undergraduate student retention efforts. Under the management of higher education professionals, students receive timely and pertinent information which can prompt positive student action. In order to make this happen, IHEs must develop in-depth knowledge about their students, use this knowledge to assess the state of relationships, extract a call to action and then prompt student action. CRM systems are increasingly being used in IHEs because they are showing the initial potential for reaching prospective students and retaining current undergraduate students in effective and efficient ways.

Undergraduate student retention efforts can be aided by CRM systems which allow for monitoring of student well-being, offer faculty the opportunity to provide early and ongoing feedback, and provide a way to reach out to students in a timely manner when intervention is needed. With the decline of *in loco parentis,* when universities exerted more direct control for behavior outside of the classroom, influencing rather than prescribing student decision making is more the norm today, but data is still needed to trigger appropriate and timely intervention (Christensen & Eyring, 2011). Institutions that can incorporate relevant student data into CRM system monitoring and communication programs will have an advantage in monitoring how undergraduate students are doing academically and socially. Early alert systems can provide university staff with opportunities to intervene, provide services, or inform students of their options before it is too late to act. All of these actions lead to improved student retention.

The net effect of CRM information and retention research is that most higher education institutions can develop their own infrastructure to influence students' academic and social experiences so that the students form stronger commitment to the institution. Students who have stronger institutional commitment levels are more likely to persist in college and complete their educational goals. These infrastructure strategies include first-year learning communities, residence life programming, tutoring, remedial assistance, student support services, student health programming, and many other operations and programs intended to help students be academically and socially successful and connected.

Much of the focus on CRM communication systems in IHE settings is based on an understanding of how institutions can positively affect undergraduate student retention rates. One critical piece connecting many of these efforts is the communication and infrastructure used to maintain contact with current student populations. Faculty has the ability to directly connect to students via regular class contact. Outside of the classroom, CRM systems can help the institution maintain a communication link so that students can be informed of issues or institution-wide programing and opportunities.

Chapter 2 Summary

The focus of this research study was to examine and describe the use of CRM systems for undergraduate student retention, in particular for first year students. A review of the literature has shown that CRM systems have been used widely in the business sector, but there is limited information in the literature base examining how CRM systems are currently used in undergraduate retention efforts within IHEs. The approach to adopting CRM systems at an IHE requires a commitment for all stakeholders. Administrators need to think carefully about the intended and unintended consequences of adopting a CRM system within their institution. Best practices and procedures in CRM need to be explored before the adoption of a specific CRM system. Ultimately this research study contributes to the literature base by how CRM systems and technology are used for undergraduate student retention. The field of higher education is definitely in need of current and foundational research on the application of CRM systems.

Chapter 3: Methodology

Introduction to Chapter 3

This research study uses a qualitative approach for examining and describing how Customer Relationship Management (CRM) systems are used for undergraduate student retention at a large Midwestern undergraduate Institution of Higher Education (IHE). For this case, undergraduate student retention focuses on those undergraduate students who are seeking a degree at the IHE. Due to the limited literature base on using CRM systems in higher education institutions and the different ways in which CRM technologies can be used in undergraduate student retention, a single case study design is best used to gain an in-depth view regarding how CRM technologies are currently being used in a typical undergraduate IHE. For clarity in this study, the case is defined as: "An undergraduate Institution of Higher Education (IHE) that serves undergraduate students and currently uses a CRM system for student retention purposes."

This research is important because a large portion of information on CRM systems and applications come from business and industry, which is outside of the academy. Increasingly, colleges and universities are often viewed as businesses by politicians, students, and the general population. As a result, more IHEs are using CRM systems and technologies that have typically been implemented in business and industry. Therefore, many universities across the United States are faced with the decision to purchase and implement costly CRM systems, while lacking complete knowledge on how the interdependencies between the student, institution, and technology will impact the retention and advancement of their undergraduate students. This is the situation at the selected Midwestern undergraduate IHE. A significant amount of time and energy has been invested in CRM systems at some of the undergraduate IHEs for the purpose of improving undergraduate student retention, especially for first-year students, where the dropout rate is the highest. Due to the high cost of purchasing, setting up, and training for a CRM system, as well as the ongoing time invested by a variety of staff and faculty stakeholders, it is important to understand and describe how these CRM systems are being used. Furthermore, much may be learned from using these technologies for the retention of first-year students.

In order to examine and describe the use of CRM systems in a large Midwestern undergraduate university, it is important to look in-depth at this IHE. Consequently, this study will use a single case study design to explain how CRM systems are being used in one large Midwestern undergraduate IHE.

Research Question

The research question for this study is: "How does a large Midwestern undergraduate IHE use CRM systems for undergraduate student retention?"

Purpose and Design of the Research Study

Single case study. The purpose of this research study is to explain how CRM systems are being implemented for undergraduate student retention at a large Midwestern undergraduate IHE. CRM systems are costly and time-consuming to set up and maintain. Consequently, only some undergraduate IHEs are using CRM systems for student retention purposes. The CRM technology has not yet been adopted by all undergraduate colleges and universities. It will be important to understand how it is currently being used for undergraduate student retention purposes in this IHE where a CRM system is already in place.

Study design. A single case study design is most appropriate for answering the research question because this research will focus on one issue (i.e., how CRM systems are used for undergraduate student retention, especially for first-year students) at a large Midwestern undergraduate IHE. Case study research is best used to study one or more cases within a real-life context or setting (Yin, 2009). One case was selected in order to gain a more in-depth examination and understanding of how CRM systems are used at a large Midwestern undergraduate IHE.

One bounded case is reasonable for this study because it is enough to allow for some potential transferability, yet it is manageable for conducting in-depth interviews and reviewing necessary CRM system documents. Due to the low number of colleges and universities already implementing CRM systems for student retention, one typical in-depth case is a good representation of how CRM systems are currently being used. In addition, the use of case study design is most appropriate when the research focus is on identifiable cases with established boundaries (Cresswell, 2013). The case for this research study has been identified and has established boundaries. Furthermore, a single case study design approach will not only provide an in-depth understanding of this case, but it can also be used for a comparison of similarities and differences in similar cases. Embedded within the description of how CRM systems are used at a large Midwestern undergraduate IHE, is the collection of retention data for undergraduate students.

Replication Procedures

Replication is often used in case study design (Yin, 2009). Replication of the same interview procedures was used for each of the nine stakeholders that were interviewed. Replication in procedures leads to some generalizations that are not possible when only one interview is examined in-depth. In case study design, cases are chosen based on required criteria. For this research study, it was critical that a CRM system for undergraduate student retention was in place at the chosen IHE. In addition, the chosen undergraduate IHE case had CRM staff that was accessible, willing to be interviewed and willing to share needed information. These criteria were necessary for inclusion in this research study as well as for potential transferability and replication in another case study.

Research Population and Sampling Method

Data sources. The data sources used for this study include the following: Individual semi-structured tape-recorded and transcribed interviews, CRM system-related case documents (e.g., CRM communication and early alert plans), and undergraduate retention-related case documents (e.g., institution-wide undergraduate retention data). These data sources provided information on how this CRM system is being used with regard to undergraduate students at this IHE.

These are appropriate data sources for this case study research design because the identified stakeholders who were interviewed have the knowledge needed to provide information for the research question. Detailed and transcribed interview notes from recorded interviews were used to capture specific details on the use of this CRM system. The CRM system case documents were needed because these documents outlined how the CRM system was used for communications and undergraduate student retention in this IHE. These CRM documents also assess and report on the activities conducted by the CRM professionals at this IHE. Undergraduate retention data were used to describe the student retention outcomes at this IHE.

Case sampling methods. The selection of this case is based several sampling methods. This case was first based on criterion sampling. This Midwestern undergraduate IHE serves undergraduate students. This IHE meets the criterion of adopting and using a CRM system for the purpose of undergraduate student retention. Some institutions are not appropriate research subjects because some do not meet the criterion of having a CRM system for student retention in place at this time. Consequently, case selection was limited to a smaller subset of IHEs that meet the criterion of currently use a CRM system.

Typical case sampling was also used when choosing this research case. This IHE is typical of level three undergraduate institutions. It is considered a non-urban Institution that focuses on undergraduate students. This IHE is not a level one or level two research-focused institution. The majority of IHEs in the Midwest are level three campuses, which makes this IHE quite typical.

This IHE was also selected based on convenience sampling. This IHE has CRM staff and student retention staff that was willing and able to provide the information and documents required for this study. Within the smaller subset of institutions using CRM systems, it was critical to choose an Institution which already had procedures in place and staff in place that would provide the information needed for this research. Therefore, this selected IHE was accessible and convenient.

Because this case has the typical size and population of other Midwestern public IHEs, meets the criteria of implementing a CRM for undergraduate student retention, and was convenient to study given its accessibility and willing staff participation, this undergraduate IHE was chosen for this study. The IHE consists of multiple two-year campus locations which are located across one Midwestern state and function as one IHE under a more comprehensive state-supported public university system. This IHE met the sampling requirements for this research study. A case study profile on this IHE is provided in Appendix A.

Comparing this case's similarities and differences to typical IHEs. This IHE has similarities and differences with other IHEs in regard to geographic and economic issues. The first similarity is that this IHE shares the same mission, system policies and procedures, and system undergraduate student retention goals as all other system campuses across this Midwestern state. Furthermore, this IHE serves a similar student demographic in terms of students of color and first generation students. Due to the similarities in this study, the potential for problematic factors was minimized and a more consistent and comprehensive description on how CRM technologies are used in this IHE emerged.

Although this IHE has many similarities to other public system IHEs, it also has some slight differences. This IHE has multiple two-year campus locations throughout the state that function as a single IHE within the larger state system of publically-supported institutions. The campus locations cut across the majority of the state both geography and economically.

Due to the descriptive nature of this study, there was no need for a pilot study. However, a similar version of the interview protocol that was used for this research study (see Appendix B) was previously pilot tested in 2016 with one publically-supported Institution in this same Midwestern state.

Instrumentation

Interview protocol. The main instrument used for critical data collection was a researcher-constructed tool that is a semi-structured interview protocol. This interview protocol is located in Appendix B. The majority of selected questions in this interview protocol were pilot tested in 2016 with a CRM systems supervisor, information technology liaison, and retention services liaison at a similar Institution. Some of the original pilot-tested questions were fine-tuned for this study. The pilot testing of this protocol provided some assurances that these questions would garner the detailed information needed to understand and describe how typical undergraduate institutions use CRM systems for undergraduate student retention. More specifically, a number of the questions included in this interview protocol focused on describing how these CRM technologies are used for undergraduate student retention. For this research study, this interview protocol was administered first to three key stakeholders at this IHE. Those three stakeholders were: (1) the CRM systems supervisor; (2) the undergraduate advising liaison; and (3) the retention services liaison. The consistent administration of this interview protocol to the three key stakeholders described above increased the dependability of the data within this case. Following these three interviews, two mid-level administrators were interviewed. These mid-level administrators serve several campus locations and were able to provide insight on the implementation advantages and challenges within their regions. Finally, four campus-based advisors were interviewed. These advisors work directly with the undergraduate students and have the most specific campus-based data on the implementation of the CRM and undergraduate student retention. Most of those that were interviewed also teach at least one course for this IHE. Therefore, they also have insight from a faculty perspective. In total, nine stakeholders were interviewed, which included: Administration, institution-wide CRM and retention managers, mid-level administrators, and campus-based advisors. Each interview was between ninety and one-hundred and twenty minutes in length. This time allowed for in-depth conversation pertaining to each of the questions on the interview protocol.

When employing a qualitative research methodology, such as this single case study, the credibility and dependability of the data is considered in place of the validity and reliability of data that is collected and analyzed in a quantitative research study (Lincoln & Guba, 1985). There is increased credibility or internal validation for using this interview protocol as a primary research tool because the questions on the interview protocol were pilot tested in 2016 with several key CRM professionals at a similar Institution of Higher Education. By using this interview protocol with key stakeholders at this IHE, the researcher was able to look for a confluence of evidence within the data set. This added credibility and led to confidence regarding interpretations and conclusions for how the CRM system is being used at this IHE (Eisner, 1991).

Documents. The other primary source of critical data was the review of CRM system documents and undergraduate student retention data. Documents that were reviewed and used within this case include: (1) Undergraduate Student data; (2) E-Mail Campus Communication & Early Alert Plan – Fall 2014; (3) E-Mail Campus Communication & Early Alter Plan – Spring 2015; (4) CRM Training Agenda; (5) Non-Registered Student Survey; (6) Faculty Early Alert

Plan; (7) Budget & Multi-Level Decisions. An institution-wide student retention plan was expected, however such a plan has not been developed and therefore does not exist. Qualitative research methodology allows for an “emerging themes” approach (Bogdan & Biklin, 1992; Lincoln & Guba, 1985) which enables the researcher to gain insight during the process of data collection and analysis. Because this research was explanatory in nature, these document and data sources were sufficient for answering the research question.

These are the main instruments that were used during the data collection process. Instruments were developed specifically for this research study because there were no similar qualitative research studies on how CRM systems are used for undergraduate retention in institutions of higher education. Therefore, there were no established and field-tested CRM system interview protocols or document review protocols that have been used in previous studies.

Data Collection

Overview. The use of CRM systems for undergraduate student retention is a fairly new practice. CRM systems have long been used in business and industry, but the adoption and implementation of CRM systems in colleges and universities for student retention is still in its infancy. Consequently, there are no previous studies of this specific nature to use as a guide.

This is a single case research study. The data collection in any case study research requires multiple data sources of information (Creswell, 2013). The multiple data sources used for this research study include: Transcriptions of individual semi-structured interviews and CRM and retention-focused case documents (i.e., CRM system communication and early alert plans, CRM training agenda; institution-wide retention outcome data). These sources of data provided an in-depth, yet comprehensive view on how this CRM system is used for undergraduate student retention at this IHE.

Interviewing procedures. For the purpose of this study, interviewing was used as a primary method for collecting data. Elements that were considered when using the interviewing method included determining the type of interview, identifying interviewees, establishing the recording procedures, designing the interview protocol, and establishing interviewing procedures (Creswell, 2013). The semi-structured Interview Protocol (see Appendix B) was developed for a pilot study and fine-tuned for this specific study. This protocol was used to guide the interviews and focus the communication on key attributes (Patton, 2002) that contribute to describing how the CRM system is used, specifically for undergraduate student retention. The goal was to apply a consistent, repeatable and reliable method of collecting interview data from each of the nine stakeholders interviewed.

The interview protocol was administered to nine stakeholders by the same researcher. At times, the interview protocol was split into parts and conducted over two conversations. It was essential not to project interviewer bias into the questioning or follow-up interactions. Questions were asked in a neutral way as to not influence the stakeholders' responses. The designated stakeholders that were interviewed were all directly involved in the administration, collection of data, and/or supervision of the CRM system as it relates to undergraduate retention, at this IHE.

Tape-recorded & transcribed interviews with stakeholders. For this case study, one researcher personally administered the semi-structured interview protocol. These interviews were conducted by telephone and tape recorded with each stakeholder at the selected IHE: (1) The CRM systems supervisor; (2) The undergraduate advising liaison; (3) The retention services liaison; (4) 2 mid-level administrators; and (5) four campus-based student advisors. Informed Consent (see Appendix C) was secured with these nine individuals before interviews were conducted. During the interview, the conversation was tape recorded and detailed notes were taken on the Interview Protocol (see Appendix B). Immediately after each interview and while the interview conversation was clearly in mind, interview summary memos were written, which included researcher insights and thoughts. Tape recordings of the telephone interviews were transcribed and served as a detailed source of information. Having nine detailed interview transcriptions added credibility and confirmability to the data collection process (Lincoln & Guba, 1985).

Throughout the interview, clarification and feedback were solicited from each stakeholder regarding the accuracy of their responses in the recorded interview. This was an opportunity for stakeholders to add or clarify information that they provided during the interview. This is a form of member checking to ensure the confirmability of the data that was gathered and tape recorded during the interview (Lincoln & Guba, 1985). Tape recording and transcribing the telephone interviews and soliciting each interviewee to confirm accuracy, resulted in securing accurate information while minimizing potential stakeholder concerns.

Document collection procedures. Finally, the other main source of data collected was CRM system and undergraduate retention related documents. A Document Matrix (see Appendix D) was developed as a guide for collecting critical information. Documents that were collected and reviewed included: (1) undergraduate Student data; (2) E-Mail Campus Communication & Early Alert Plan – Fall 2014; (3) E-Mail Campus Communication & Early Alter Plan – Spring 2015; (4) CRM Training Agenda; (5) Non-Registered Student Survey; (6) Faculty Early Alert Plan; (7) Budget & Multi-Level Decisions. Copies of these documents and data were received from key stakeholders. Documents being used did not have student identifying information included. Rather, these documents include training and communication schedules as well as aggregate data, numbers, and percentages of undergraduates who participated in the CRM system and retention activities. Names of any staff or faculty member at the IHE were removed from these CRM and retention-related documents. These documents corroborated similar information provided by many of the stakeholders during the interviews.

Triangulation and Confirmation of Data Sources

Document data was triangulated with the interview data. When using triangulation, researchers use multiple and varied data sources and methods to corroborate the data (Lincoln & Guba, 1985; Patton, 2002). When the data was collected, examined, confirmed, triangulated, verified as credible, and a point of data saturation was reached, the more formal process of data analysis began.

Summary of Data Collection Decisions

In summary, these were appropriate data sources and data collection methods for this case study research because the identified stakeholders who were interviewed had the in-depth knowledge needed to answer the research question. Detailed tape-recorded and transcribed interviews were used to capture depth and interview details. The close examination of CRM and retention related documents and data confirmed the interview data outlining how the CRM system is being used for undergraduate student retention in this IHE. These CRM documents assessed and reported on the activities conducted by the CRM professionals at this IHE. These data sources and collection methods were needed for understanding how the CRM system is used for undergraduate student retention at this IHE.

Identification of Attributes

This study focused on how the CRM system is used for undergraduate student retention at this Midwestern undergraduate IHE. Because CRM systems and undergraduate student retention are the main areas of investigation, the following attributes are important for defining this research. The CRM-related attributes with detailed descriptions are provided in Table 2.

Table 2

CRM -Related Attributes with Corresponding Descriptions

Attribute	Description
CRM Start-up	Pre-purchase decision-making considerations with CRM product functions.
CRM Training	The methods for teaching CRM skills & procedures to end users.
CRM Processes	Course of actions, steps, procedures & ultimately best practices for CRM.
CRM Capabilities	Potential capacity of software & hardware features of CRM products.
CRM Data	All data in CRM system such as student, faculty, grading, & course attributes.
CRM Student Interactions	Describes interrelationships between students & CRM system.
CRM Faculty Interactions	Describes interrelationships between faculty & the CRM system.
CRM Advisor Interactions	Describes interrelationships between advisors & CRM system.
CRM Messaging	Communication such as email, phone & text messages sent to students.
CRM Early Alerts	Action involving faculty issuing early alerts to students & their responses.
CRM Budgets	Allocation of fiscal & other resources for CRM software, staffing & activities.
CRM Results	Data, issues & outcomes related measurement of CRM success and/or failure.

The retention-related attributes with detailed descriptions are provided in Table 3.

Table 3

Retention -Related Attributes with Corresponding Descriptions

Attribute	Description
Institutional Culture & Change	Ways of meaning & differences between campuses along with reaction to institutional changes triggered by both inside and outside forces upon the IHE.
Process	Course of actions related to non-CRM retention issues & procedures, ultimately leading to development of best practices for the institution.
Leadership	Degree of influence, guidance, direction & control from senior IHE administrators.
Faculty	Retention interactions and issues from perspective of faculty.
Curriculum	Courses and degree planning issues which affect undergraduate student retention.
Student	Describes student interactions with non-CRM retention perspectives.
Advising	Describes activities & processes used to retain and guide students through college.

The identification of these attributes emerged during the study. Interviewing key stakeholders uncovered attributes not previously anticipated or known prior to the study.

Data Analysis Procedures

Using a cyclical and emerging themes approach. The goal of this research study is to explain the use of a CRM system for undergraduate student retention, using a case study approach. The primary sources of data collection were recorded and transcribed interviews with nine key stakeholders, CRM-related documents, and undergraduate student retention data. During this study, data collection and preliminary data analysis was a cyclical process. As interviews were conducted, it was necessary to pursue additional interviews to seek information or clarification of ideas that emerged. When using this approach, the researcher's understanding is grounded in and developed from the data as it emerges and unfolds. This cyclical method of data collection and analysis resembles the "emerging theme" approach which is supported by Bogdan and Biklin (1992) and Lincoln and Guba (1985). However, the more extensive analysis was done after saturation of data took place and all data collection on this case had been completed.

Intensive data analysis procedures: categories and codes. When all data had been collected, intensive analysis began by first reading through all of the interview notes, interview summary memos, and documents in order to become familiar with the entire data set. A second read through of the data set was done by reading it with the research question and purpose in mind. During this second reading, the data set was thoroughly reviewed to determine if further interviews or correspondence was needed for clarification or additional information. Some additional institutional retention data were requested at this time. The complete raw data set totaled 304 typed pages.

Using an inductive research approach, as outlined by Miles and Huberman (1994), a provisional "start list" of codes was not developed prior to the fieldwork. In this research study, it was valuable to understand how the data nests in its context and varies among each of the campus location contexts. Essentially, codes in use were developed rather than coding the data set from a more generic "start list" of codes. This approach allowed for a more open-minded and context-sensitive coding process (Miles & Huberman, 1994).

After reading through the entire data set for the second time, notes regarding emergent categories were taken down on a separate notepad. The notes focused on concepts, activities, opinions, processes, issues, and questions that emerged or stood out. Next, these emergent categories were organized under Bogdan and Biklin's (1992) ten broad schemes: setting/context; definition of situation; perspectives; ways of thinking about people & objects; process; activities;

events; strategies; relationships and social structure; and methods. This helped to determine the most prevalent categories and associated concepts from the raw data set.

The next level of data analysis involved reviewing the categories and associated concepts and determining working attribute codes related to CRM and student retention, the focus of this research. The full raw data set was read again with the purpose of coding the raw data with these attribute codes. The pages of the data set were organized to have two blank columns on the right side. The first column was used to record insights, questions, concepts and other important information as it emerged from multiples readings of the raw data. The second column was used for assigning attribute codes to the data set. Abbreviated codes were determined for each of the emergent categories (Bernard & Ryan, 2010). This coding was done manually with mark up on a hard copy of the data. When the full data set had been coded, the data set was reviewed to verify consistency of the codes from the beginning to the end of the data set. Some units of text were coded more than once if the activity or response fell into more than one category. Once the attribute coding was completed, all attribute codes were assigned a color. Similar attribute codes were assigned the same color (e.g., CRM processes and retention processes were both coded orange). Color-coding the data set served several purposes. First, the colors provided a visual for the most prevalent or least prevalent attributes within each interview data set and within the entire raw data set. Second, the color codes made it easy to find raw data in the transcripts and documents when conducting further analysis and determining specific quotes and other document data to support each of the research findings.

Intensive data analysis procedures: determining underlying themes. With all of the raw data analyzed at several different levels and coded by attribute and color, categories were developed by combining coded attributes into subthemes. Subthemes were combined to form working themes.   These themes emerged from the triangulation of the different data sources

(Lincoln & Guba, 1985; Patton, 2002). Emerging themes were recorded on a separate paper. Furthermore, under the emerging themes, subthemes were listed that corresponded with those working themes. There were themes that pertained to CRM system use, themes that pertained to student retention, and themes that connected CRM use with student retention.

Developing a rich description of case findings. The focus was on themes that were more relevant and prevalent for answering the research question. Themes were labeled and connections between these themes were the results for this research study. Those themes that emerged and the corresponding data under each of the themes was the basis for explaining how this IHE is using the CRM system for undergraduate student retention. Based on the in-depth analysis, a rich, thick description of this case was written. Findings were then examined to determine implications and recommendations for using CRM systems for undergraduate student retention. The implications and recommendations are intended to have some transferability to other IHEs.

Limitations and Delimitations of the Research Design

Limitations. There are limitations for every research design and process, including this study. First of all, interviews with key stakeholders were a primary source of data for understanding how the CRM system is being used in this IHE. These interviews were conducted by the same researcher with a semi-structured interview protocol. Therefore, one limitation of the study is that the interview protocol was developed and used with only one undergraduate IHE. The interview protocol has not been used extensively with multiple institutions of higher education. Another limitation involves the researcher. Since the researcher has experience with CRM systems in higher education and was conducting the telephone interviews, there was a chance that researcher bias may have affected the stakeholder responses.

A third limitation of this study concerns the small number of individuals who provided the majority of CRM and undergraduate retention information for this study. CRM system information was solicited from nine key stakeholders at this IHE. Although these stakeholders had the most experience with the CRM system and processes, they represented a partial view of how the CRM system is being used within this IHE. Other advisers or faculty members may hold different perspectives on the use of CRM technologies at this IHE. Likewise, undergraduate students may hold yet another perspective on how the CRM system is being used. This study was limited to understanding the use of the CRM system from the perspective of those staff who are involved most with the CRM system as it is used for undergraduate student retention from the planning, implementation, and evaluation stages.

Furthermore, the sampling methods used for this study were based on criterion sampling, typical case sampling, and convenience sampling. The sample was drawn from large Midwestern universities. Using these sampling methods for this study had its benefits, but it also had its limitations. Information gleaned from this sample case in a Midwestern publically-supported IHE may have limited transferability to other institutions, such as private colleges or larger level one and level two universities in the Midwest. In addition, the study may have limited transferability to institutions outside of this state or outside of the Midwest.

Given these limitations and potential limitations, this research was still valuable and useful for those colleges and universities who are considering investing time and money in CRM systems for use with their undergraduate student retention plans. Describing how a similar and typical Midwestern undergraduate IHE case is developing, implementing, and assessing their CRM system can help others who are getting started with CRM systems or wishing to fine-tune their CRM practices at their undergraduate universities. The findings of this study provide important insight and direction to other stakeholders at other institutions. Finally, CRM systems and technologies for student retention are newer to higher education settings and the research on how they are used in individual institutions must proceed, even with these potential limitations.

Delimitations. As with all research studies, there are delimitations, or boundary choices, that the researcher decides upon in order to limit the scope and boundaries of the study. There were several delimitations for this research study. First of all, to examine and explain how these CRM systems and technologies are used requires a more in-depth qualitative approach. To make this a manageable in-depth study, a single case study was best. One case is a delimiting factor.

A second delimitation is that this study did not include graduate student retention, nor did it address the new student recruitment process. There is potential use of CRM systems and processes for the retention of graduate student populations or for marketing to prospective student populations. However, this study was limited to the retention of undergraduate students in one large Midwestern public IHE.

Another delimitation factor was that this study only examined one IHE in the Midwest. institutions in other geographical regions or private institutions could present a variety of confounding factors which are outside the scope of this study. This research focused on one typical Midwestern undergraduate IHE.

Finally, interviews were limited to personnel that are directly responsible for or involved in the CRM system implementation at this IHE. Students and full-time faculty perspectives on how the CRM systems are being used at this IHE were not included since they have a more peripheral involvement with the CRM system.

These delimitations were set because the purpose of this research study was to describe how a typical, Midwestern public-supported undergraduate IHE is using a CRM system for the retention of undergraduate students.

Validation

Credibility and dependability of data. This research used a qualitative methodology with a case study research design. When employing a qualitative methodology, the credibility and dependability of the data is considered in place of the validity and reliability of data that is collected and analyzed (Lincoln & Guba, 1985). The instrumentation, data collection methods and data analysis all require some level of validation.

First, one of the instruments for collecting data was a researcher-developed semi-structured Interview Protocol (see Appendix B). This tool required development because research studies that seek to understand how CRM systems are used for undergraduate student retention have not been conducted yet and there were no previously developed and field-tested interview protocols to consider. However, there is a level of credibility or internal validation for using this interview protocol as a primary research tool because the questions on the interview protocol had been pilot tested in 2016 with several key CRM professionals at a similar institution. By using this interview protocol with key stakeholders at this IHE, a confluence of evidence within this case was clear. This added credibility and led to confidence regarding interpretations and conclusions for how the CRM system is being used at this IHE (Eisner, 1991). The interviews were tape recorded and transcribed. Therefore, a detailed transcription of each interview added credibility. Immediately after each interview and while the interview conversation was clearly in mind, interview summary memos were written. These summary memos included personal insights and thoughts from the researcher. These interview transcriptions and memos helped to provide thick, rich descriptions of interview information that was shared. This process added credibility to the data collection process (Lincoln & Guba, 1985). In addition, feedback was solicited from each interviewee as a member check for credibility and confirmability of the interview data that was tape recorded and transcribed.

An additional step to increase validity involved the combination of data sources being used. Case documents were examined and triangulated with the interview data. When using triangulation, researchers use multiple and varied data sources and methods to corroborate the data

(Lincoln & Guba, 1985; Patton, 2002). These are the precautions and methods that were taken in order to strengthen the credibility and dependability of the research data.

Expected Findings

First, this study expected to find that undergraduate student retention is a collaborative process involving faculty, staff, and others working across different departments. In addition, this institution is using some features of the CRM for student retention purposes, but not all functions are fully developed or used. Because student recruitment is often a lead reason for adopting CRM systems, using CRM systems for undergraduate student retention is less developed. However, this IHE has some CRM-related organizational resources allocated to undergraduate student retention. It was also expected that this IHE experiences some benefit when using the CRM system for undergraduate student retention purposes. However, those benefits did not result in the expected increase in undergraduate student retention from semester to semester or year to year.

Likewise, each institution using a CRM system develops and funds CRM technology quite independently. Depending on the institution, reporting lines, and actual application of CRM, results will differ. Not all collaborative partners and stakeholders are at the same place in using CRM for undergraduate student retention. Despite operating within the same IHE structure, stakeholders were at different stages of comfort and experience with CRM system application.

This research expected to find that the use of CRM systems for undergraduate student retention had a positive influence on undergraduate student retention. Although positive influences were found with process redesign and organization of work flow, undergraduate student retention rates did not show an increase in percentage from semester to semester. However, there are other confounding factors and institution-wide changes that are affecting student retention at this IHE. As anticipated, interview data did show that the CRM system application of early alerts can be an effective tool for identifying at-risk students and reaching out to those students on a timely basis. The data sources also revealed that one of the least effective parts of the CRM system is the use of e-mail communications, which when overused, are not always read by the students.

In conclusion, given the large financial and staffing investment made by institutions, the research findings should be beneficial to stakeholders when making decisions about the continued use and application of CRM systems for undergraduate student retention purposes. CRM systems have the potential to streamline and coordinate critical and timely information for those stakeholders who work directly with the students and those stakeholders who are interested in student retention.

Ethical Issues

Confidentiality. In a case study design, there are many potential ethical issues that must be addressed. The main data collection instrument for this research study was an interview protocol. The primary method of data collection was individual interviews with key CRM staff at this IHE. Given that there was typically only one person at the IHE with the specific CRM position, it could be easy to identify those individuals even when names are omitted to protect confidentiality of information shared. Although names were omitted for those CRM supervisory or key liaison positions who were interviewed, insiders or savvy outsiders may still be able to identify the IHE or the individual by their position within the IHE. As a result, each person interviewed was made aware of those risks. Each person chosen for an interview was asked to sign an Informed Consent Form (see Appendix C) which also provided an option for that stakeholder to withdraw their consent at any time during the research process. Individual anonymity was protected as much as possible by assigning more generalized position descriptions to the individuals, however anonymity is still limited.

Another ethical concern was confidentiality of data within the IHE and the scrubbing of any identifiable descriptors from the study results. When interviewing institutional representatives, there can be a temptation to share results gathered so far, or discuss student stories reported by others. This was not done as it would contaminate the information gathered at the institution level and possibly produce different responses from stakeholders who were interviewed.

Minimizing risk and garnering support for this study. To gain support and participation in this study, the purpose of the study was explained and there was an offer to share the final report with all who agreed to participate in interviews. Consequently, the IHE and individual participants who consented to participate can benefit from the findings and use those findings to further develop their CRM system and undergraduate retention processes. In addition, other higher education colleagues can learn from the experience and participation of this IHE.

Support for this study was also garnered due to the personal and professional experience with CRM system development and implementation at the university level. Many who consented to participate in the research study viewed the interviewer as a knowledgeable colleague who had the ability to contribute to their knowledge and success with CRM system implementation. However, it was important to guard against bias and sharing personal experiences with participants during the interviews because this had the potential to minimize or influence the authenticity of the interviewee's experience.

These were the main ethical issues to address for this research study. Procedures were in place to seek informed consent from participants and to minimize risk while bringing benefit to all stakeholders who agreed to participate. Chapter 4 will delineate the research findings and chapter 5 will describe the implications for applying these findings.

Chapter 3 Summary

In summary, the purpose of this research study was to describe how a CRM system is being implemented for undergraduate student retention at a large Midwestern undergraduate public IHE. CRM systems are costly and time-consuming. Consequently, only some undergraduate institutions are using CRM systems and those institutions may not be using them for undergraduate student retention. The use of CRM systems in higher education is very recent and the literature is minimal on this practice. Therefore, the timing is appropriate for this research.

Summarizing the research design, individual interviews were conducted with nine key CRM and retention stakeholders at this undergraduate IHE. In addition, CRM and student retention-focused documents were collected and used as a data source. Individual student-identifying information was not requested or used. These documents, as well as transcribed tape-recorded interviews were used as the sources of data. After all important data was collected, formal data analysis started by reviewing these data sources multiple times. Each review of the data set served a slightly different purpose and ultimately led to deeper details embedded within the data sources. Based on these earlier steps of data analysis, categories of data were identified and recorded. Codes were determined for each category and the complete data set was analyzed by these codes. Based on the types and frequency of different categories and codes, subthemes were developed. Subthemes led to the emergence of working themes. Data sources were triangulated to verify the accuracy and dependability of the working themes. Emergent themes were the basis for understanding how this IHE is using their CRM system for undergraduate student retention. After the in-depth analysis, the findings and recommendations developed. Common practices or challenges may have some transferability to other colleges and universities. The findings from this study have the potential to help the IHE that participated in this research, but more broadly, other institutions can learn from the experiences of this IHE.

Chapter 4: Data Analysis and Results

Introduction to Chapter 4

This is a research study using a qualitative methodology and a single case study design focused on a state-funded, large, mid-western undergraduate Institution of Higher Education (IHE). In 2013, this IHE adopted a Customer Service Management (CRM) system for undergraduate student retention. The purpose of this research study is to describe how the CRM system is being implemented for undergraduate student retention at this IHE.

The research question for this study is: "How does a large Midwestern undergraduate institution use CRM systems for undergraduate student retention?" While CRM for new student recruitment is more frequently used in colleges and universities, this area of research for retaining current students is still fairly new and evolving as more institutions struggle to meet revenue targets, compete for undergraduate students, and keep current students enrolled.

This chapter provides a description of the research sample, as well as a description of the data analysis process and the results of that analysis. The process for analyzing the raw data set is well described and established using a qualitative methodology. Following the analysis is a summary of the findings. The research findings are based upon the triangulation of multiple data sources, which include stakeholder interview transcriptions and IHE student retention and CRM documents. Presentation of the data and results follows the summary of findings. Finally, this chapter concludes with a summary that highlights the main points of the research findings.

Description of the Sample

As a result of the three sampling strategies described in detail in chapter three (i.e. criterion, typical, and convenience sampling), the single case chosen for this research study is a large Midwestern state-funded undergraduate institution. This IHE consists of multiple undergraduate campus locations which are located across one Midwestern state and function as one Institution of Higher Education (IHE) under a more comprehensive state-supported university system.

Once this IHE was selected, key stakeholders within the IHE were selected for in-depth interviews. Experienced administrators, student advisors who also served as adjunct faculty, and central office managers were interviewed in order to provide a broad range of perspectives regarding the use of CRM systems for undergraduate student retention at this IHE. Some stakeholders that were interviewed work at multiple geographically diverse campus locations (some had on-site duties at more than one campus location). Stakeholders at different levels were interviewed, including campus-based student advisors, campus-based administrators, CRM technical support staff, and institution-wide administrators. Recorded telephone interviews with nine key stakeholders were the main source of data used in order to understand how this CRM system is being implemented for undergraduate student retention. Institutional documents were another data source. The selection of interviewees was determined as the interview process unfolded.

After discussing the purpose of this research study with a senior CRM administrator and obtaining approval from the Institution to proceed with this research study, the first interview conducted was with a senior administrator. As someone with institution-wide management and budgetary oversight of the IHE's CRM system, the administrator signed the institutional consent as well as the personal interview consent. The research interview process began with the senior administrator in order to capture a larger overview on the CRM program adoption, development and implementation. Next, two CRM system technical managers were interviewed. These positions are right below the senior administrator. The technical managers were able to provide CRM system development information, as well as perspective, on the institution-wide CRM system implementation. These two positions manage the data collection and implementation of the CRM system across multiple campus locations and an on-line venue. These three stakeholders were also able to provide needed documents such as the overall CRM communications and early alert plan, the CRM training agenda, and undergraduate student retention data.

Based on the interview information and documents collected from these institution-wide positions, two of the four regional administrators were interviewed next. These regional administrators oversee the CRM system plan implementation at multiple IHE campus locations. These administrators oversee most student related operations and were identified by the IHE leadership and staff as being very effective in their role (personal communication, November 20, 2017).

After interviewing with the two regional administrators, four advisors were interviewed. These four advisors were chosen because they have extensive undergraduate student advising experience, along with adjunct teaching experience. They served in advising and retention roles before the adoption of the CRM and during the start-up of the retention CRM system. Furthermore, they have continued in these roles during the implementation of this CRM system. The four experienced advisors represent a cross-section of geographical regions, and all were identified as effective in their role when serving a diverse demographic of both traditional aged and non-traditional (over the age of 21) aged, undergraduate students.

In summary, the interview data collection process started with the highest administrative positions and proceeded to the regional-level staff and then campus-based advisory staff. These nine stakeholders provided an overall and in-depth look at the CRM system and how it is used for undergraduate student retention in this IHE. All who were asked to participate in the study, with a personal interview, willingly agreed. Interviews were not conducted with undergraduate students because they do not access the CRM system nor are they privy to the role of a CRM system as it relates to undergraduate student retention. Almost all administrators and staff who were interviewed have served as adjunct faculty at one or more of the campus locations and all used the CRM for early alerts. Full-time faculty was not interviewed because they currently play a peripheral role in the current implementation of this CRM system.

Research Methodology and Analysis

Data collection. Data collection took place over a 5-week period of time (November 20 – December 21, 2017). Nine individual voice interviews were transcribed, necessary IHE documents were collected, and interview summary memos were written. This completed the data set. Next, the data set was thoroughly reviewed to determine if further interviews or correspondence was needed for clarification or additional information. Additional undergraduate student retention data from the academic year 2012-2013 to year 2016-2017 was requested from the institutional research office staff. Saturation of data was reached as institutional administrators, regional managers and campus-based advisors shared similar or repetitious information regarding the CRM system implementation and student retention information. The interview information supported the documents at were included in the data set. The complete raw data set totaled 304 typed pages. The interview data was triangulated with IHE documents including: Institutional undergraduate student retention data, the CRM communication and early alert plans, and the CRM training agenda, in addition to several other documents. With the saturation of data noted, the formal data collection process ended on December 21, 2017 and the formal data analysis process began.

Data analysis. Using an inductive research approach, as outlined by Miles and Huberman (1994), a provisional “start list” of codes was not created or used prior to the fieldwork. In this single case study design, it was valuable to understand how the data nests in its context and varies among each of the campus location contexts. Essentially, a “grounded” approach (Glaser & Strauss, 1967) was used in order to determine codes in use rather than code the data set from a more generic “start list” of codes. This approach allowed the researcher to be more open-minded and context-sensitive when coding the data set (Miles & Huberman, 1994).

Throughout data collection and especially during data analysis, the main research question was referred to often in order to stay focused on the purpose of this research study. After reading through the entire data set, notes regarding emergent data were taken down on a separate note pad. The notes focused on concepts, activities, opinions, processes, issues, and questions that emerged or stood out. Next, these emergent data were organized under these 10 broad categories or schemes set forth by Bogdan and Biklin (1992): Setting/Context; Definition of Situation; Perspectives; Ways of thinking about people & objects; Process; Activities; Events; Strategies; Relationships and Social Structure; and Methods. This helped to determine the most prevalent broad schemes from the raw data set. Refer to Table 4: Broad Categories and Associated Concepts. The most prevalent broad scheme was: Perspectives, Processes, Strategies, Relationships and Social Structure. The other categories were represented by some raw data, but it was not a significant amount. In summary, this first level of data analysis, which was based on sorting the emergent data into broad scheme developed by Bogdan and Biklin (1992), helped refine the raw data into broad categories with associated concepts.

Table 4

Broad Categories and Associated Concepts

Broad Category	Associated Concept
Setting/Context	CRM System start-up; Budget; Institutional culture and change
Definition of situation	Curriculum Changes
Perspectives	Leadership/Administration; Faculty; Advising; Students
Ways of thinking about people/objects	CRM Data; CRM Results
Process	CRM Processes; Student retention processes; CRM Training
Activities	CRM Early Alerts; Advising; CRM Messaging
Events	CRM System adoption; CRM training
Strategies	CRM Capabilities; Marketing for enrollment & retention
Relationships & Social Structure	CRM & Non-CRM student interactions; CRM & non-CRM Advising Interactions; CRM & non-CRM Faculty interactions
Methods	CRM Capabilities

Note: Broad Categories are taken from Bogdan R., & Biklin, S. (1992).

The next level of data analysis involved reviewing the raw data set under Bogdan and Biklin's (1992) 10 broad categories and associated concepts and determining working attributes related to CRM and Retention, the focus of this research. Coding attributes were developed and defined in Table 5: Research Attributes, Definitions and Codes. This level of analysis used the grounded approach (Glaser & Strauss, 1967) in order to determine codes in their use and context. The full raw data set was read again with the purpose of coding the raw data with these attribute codes. Similar attribute codes were assigned the same color (e.g., CRM processes and Retention processes were both coded orange). Refer to Table 5: Research Attributes, Descriptions and Codes, for a listing of assigned color codes. The data set was then color–coded according to the assigned colors. Color-coding the data set provided a visual showing the prevalence of the most or least pronounced attributes within each interview data set or within the entire raw data set.

Table 5

Research Attributes, Descriptions and Codes

Color Code	Code Name	CRM & Retention-Related Attribute Description
Dark Blue	CS	CRM Start-up: Pre-purchase decision-making considerations with CRM product functions
Dark Blue	CT	CRM Training: How CRM skills & procedures are taught to end users
Orange	CP	CRM Processes: Course of actions, steps, procedures & ultimately best practices for CRM
Purple	CC	CRM Capabilities: Potential capacity of software & hardware features of CRM products
Purple	CD	CRM Data: All data in CRM system such as student, faculty, grading, & course attributes
Dark Pink	CSI	CRM Student Interactions: Describes interrelationships between students & CRM system
Dark Pink	CFI	CRM Faculty Interactions: Describes interrelationships between faculty & the CRM system
Light Blue	CAI	CRM Advisor Interactions: Describes interrelationships between advisors & CRM system
Yellow	CM	CRM Messaging: Communication such as email, phone & text messages sent to students
Yellow	CE	CRM Early Alerts: Action involving faculty issuing early alerts to students & their responses
Purple	CB	CRM Budgets: Allocation of fiscal & other resources for CRM software, staffing & activities

Research Attributes, Descriptions and Codes (continued)

Color Code	Code Name	CRM & Retention-Related Attribute Description
Orange	CR	CRM Results: Data, issues & outcomes related measurement of CRM success and/or failure
Grey	RI	Institution Culture and Change: Ways of meaning & differences between campuses along with reaction to institutional changes triggered by both inside and outside forces upon the IHE
Orange	RP	Process: Course of actions related to non-CRM retention issues & procedures, ultimately leading to development of best practices for the institution
Light Pink	RL	Leadership: Degree of influence, guidance, direction & control from senior IHE administrators
Dark Pink	RF	Faculty: Retention interactions and issues from perspective of faculty
White	RC	Curriculum: Courses and degree planning issues which affect undergraduate student retention
Green	RS	Student: Describes student interactions with non-CRM retention perspectives
Light Blue	RA	Advising: Describes activities & processes used to retain and guide students through college

With all of the raw data analyzed at several different levels and coded by attribute and color, categories were developed by combining coded attributes into subthemes. Subthemes were combined to form themes. The focus was on themes that were more relevant and prevalent for answering the research question. Themes were labeled and connections between these themes are the results for this research study.

Summary of Findings

The main themes that emerged from the data analysis process were: CRM Implementation, Multi-level Decision-making, Interdepartmental Communications and Interactions, and Student Retention Information and Results. These themes were developed from the subthemes. Subthemes were developed by combining categories of coded data. Table 6 shows the themes and corresponding subthemes.

Table 6

Themes and Subthemes

Themes	Subthemes
CRM Implementation	CRM start-up and training CRM capabilities & processes CRM data & results
Multi-level Decision-Making	CRM Budgets Retention-focused Leadership Institutional culture and change
Interdepartmental Communications & Interactions	CRM & Retention-focused faculty& advisor interaction CRM student interactions CRM Early alerts and messaging
Student Retention Information & Results	Retention-focused Student Interactions (non-CRM) Retention Processes (non-CRM)

The next step was to determine the relationship among these four themes. The relationship showing the connections among the four research theme is best illustrated in Figure 1.

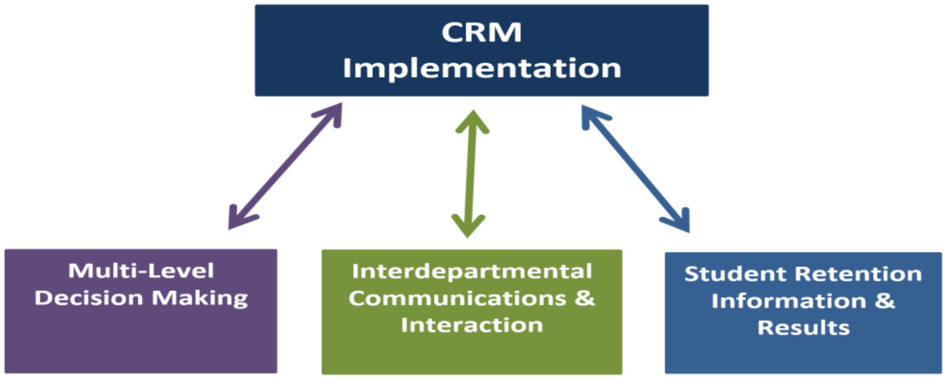

Figure 1. Connections among research themes.

As shown in Figure 1, CRM implementation is the main theme. There are many components to CRM implementation including start-up, training, capabilities, processes, data, and results. The implementation of the CRM is closely tied to and continually informing the other three themes or components, pictured in Figure 1. Multi-level Decision-making informs the CRM implementation and CRM implementation leads to continuous multi-level decision-making. Likewise, interdepartmental communications and interactions also result from the CRM implementation and inform the CRM implementation when CRM system adjustments need to be considered. Finally, student retention information and outcomes are influenced by the CRM implementation and the student retention results provide feedback that is important for adjusting the CRM implementation plan and processes. The CRM system implementation influences each of these three areas and is informed by each of these.

By using the a grounded approach (Glaser & Strauss, 1967) and a context-sensitive coding process (Miles & Huberman, 1994) codes, categories, sub-themes and themes were determined, which led to the findings from this single case study. A more specific presentation of the data and results follows.

Presentation of Data and Results

The first theme was CRM Implementation**.** This was the most comprehensive theme and was supported by the largest amount of raw data. The sub-themes for CRM implementation include: CRM system start-up & training, CRM capabilities & processes, CRM data & results. The analysis of this raw data is best illustrated in a chart that shows this theme, the sub-themes supporting it, and a listing of interview excerpts from the nine individuals who were interviewed as well as the supporting institutional documentation. This chart is: CRM Implementation, and is located in comprehensive form in Appendix E

All nine of the professional staff interviewed for this study provided quotable support for this theme. The majority of interview comments for this theme were from two of the administrative positions, yet other stakeholders also offered comments that support this theme, Table 7: CRM Implementation: Supporting Theme Data**,** highlights some of the interview excerpts and document data for supporting the finding of CRM Implementation.

Table 7

CRM Implementation: Supporting Data

Interview Code	Finding: CRM Implementation: Supporting Data *Personal Interview Excerpts with Stakeholders*
KK	We thought we could do a project and then be done, but CRM planning is ongoing. It takes way longer and it's more complicated to get the CRM up and running than people think.
KK	We had to make a decision early on about how the data should flow with the CRM, so it goes one way, from the master student file (PeopleSoft) to the CRM. How will these systems interact with each other?
MM	The CRM needs a full-time position to support it. I had about 7 months to get the CRM up and running.
MM	In the start-up phase, have the right people at the table and develop a plan to make sure the system does what you want it to do. Once you set-up a time line keep to it.
MM	Some CRMs come 'out of the box' and are ready to go as a complete product serviced by one company vs. others like Salesforce offer a basic shell and you add apps, like Mail Chimp, from other vendors depending on what you want it to do. Can use 3rd party providers like Sierra-Cedar and Target X to help you configure the system into what you want. They show you how to build out your CRM. Many CRM positions require business analysis skills to analyze what you need so you pick the best CRM options to fit your needs.
KK	Launch with full operation in Fall semester rather than doing a soft start – take the time to get the system right or all you do is clean up after words.
MM	Need to figure out what are all the CRM roles and needs are first, then build a training program which will be customized to those needs. We started much more broadly then we needed to in our own launch.
KK	Training is an ongoing thing. You can't just train people once.
BN	Before the CRM we did advisor notes on paper updated in a file, recording notes on sheets of paper, & these have been eliminated since then…the CRM offers most of that information at our fingertips. The biggest thing for me is tracking activities, the CRM changes how we do that.

Table 7

CRM Implementation: Supporting Data (continued)

JD	We have good data on demand.
MG	Prior to the CRM our workload was heavier just to get and organize the data, plus we often had to have another staff member or supervisor run the reports – now we do those ourselves.
CB	With the CRM introduction and our reorg, we needed to redesign most functions in student affairs, and the CRM allowed us to do it efficiently.
PT	The CRM gave us more updated information – before we had static lists to work off of, and if a student had registered since that list was made we were not aware of it. The CRM lists could be updated daily so we know those we were calling had not acted yet.

Document Name	Finding: CRM Implementation: Supporting Data *Supporting IHE Document Title & Summary of Contents*
Training Agenda	CRM Training Agenda: Introduction to CRM Applications (Jan. 2014) Start-up & Training: Objectives & plan for CRM system. What role do CRM systems plan in student retention? What are the overall goals for this CRM? What roles are needed in CRM systems? How will the CRM workflow work out for each kind of position?
Training Agenda	CRM Training Agenda: CRM Advising applications & capabilities Accessing student information and reports Taking student notes & Early Alert documentation Importance of integrating CRM into daily workflow
Training Agenda	CRM Training Agenda: CRM Data and Results Getting data out of CRM Using Filters for data reports Other data methods training
Faculty Early Alert	Faculty Early Alert Options & Plan Invitation for faculty to participate in the early alert process Steps for faculty to follow in the early alert system Dates for issuing early alerts to students who are at-risk

Based on the interview excerpts and document data above, it is clear that CRM Implementation includes a wide range of components from start-up to on-going training and adjustments. The start-up process requires stakeholder input and buy-in. The CRM adoption process starts with a discussion with key players, including Student Affairs (advising), Academic Affairs (faculty), and students (personal communication, November 20, 2017). Choosing an appropriate CRM system for this IHE was paramount. A couple of years before the current CRM system was adopted, this IHE used a different CRM system and little time was spent on the implementation and training of it. Ultimately, this first CRM system was not widely adopted by stakeholders throughout the IHE and the CRM was phased out (personal communication, November 20, 2017). There are many different CRM systems from which to choose. Choosing one that has the right fit for the IHE is an important factor in this start-up and implementation process. The timing of the CRM start-up is also important. The ideal time to launch the system live is the Fall semester with initial training being done in the prior spring and summer semester (CRM Training Agenda). The idea is to have everything planned out and ready to go with full implementation during the fall semester. CRM implementation can be a complicated process with many opportunities for error. “Take the time to get the system right or all you do is clean-up afterwards” (personal communication, November 20, 2017). There are components of the implementation that are helpful time-saving processes and there are components that cause frustration and can be improved upon (CRM Training Agenda). “There are other components, such as student conduct and academic appeals which could be better integrated into the current CRM system. Right now, these are all separate mini-CRM like systems which typically do not talk to each other (personal communication, November 22, 2017). As an implementation system, there are a number of continuous improvements needed along the way. The CRM Implementation theme includes all of this.

When planning to use a CRM system for the first-time, CRM implementation is done to some degree with incomplete information because there are problems to solve and processes which need to be developed or revised along the way. Some vendors offer ready-to-use solutions which can help reduce uncertainty in how to get started. With these ready-to-use systems, the institution plugs in their data and the CRM system then uses that data to carry out processes. However, there are unintended consequences. What might have seemed reasonable at the start of CRM system adoption and implementation may need to be developed or changed because that process is not working well once the system is operating. Some components of the CRM system may actually have an undesirable effect. At one campus location, less than half of the faculty participated in the early alert process and approximately half of the students read their e-mail alerts. If faculty did not issue an early alert concerning poor student academic progress, then the student may perceive that they are doing fine academically, when they are not (Faculty Early Alert Options & Plan). This was one of the issues that was working less well and needed to be changed along the way.

The CRM implementation theme is uniquely and integrally connected to the other 3 themes: Multi-level Decision-making, Interdepartmental Communications & Interactions, and Student Retention Information & Results. Consequently, Figure 1 illustrates that the CRM Implementation is hierarchically on a different level and is more comprehensive as a theme than the other 3 themes. CRM Implementation influences each of these three theme areas and is also informed by each of these. There is ongoing interaction between the CRM Implementation theme and the other 3 themes. To support this finding, Table 8: CRM Implementation Influences and Interactions, provides excerpts taken from nine interview transcripts and CRM documents.

Table 8

CRM Implementation Influences and Interactions

Interview Code	Finding: CRM Implementation Influences and Interaction Multi-Level Decision-Making *Personal Interview Excerpts with Stakeholders*
MM	In the start-up phase, have the right people at the table and develop a plan to make sure the system does what it should. Set-up a time line and keep to it.
MM	Campus Management claims 700 IHE's are using their system and Salesforce and is one of the biggest CRM providers in the world.
KK	We had to make a decision early on about how the data should flow with the CRM, so it goes one way, from the master student file (PeopleSoft) to the CRM. How will these systems interact with each other?
MM	Need to figure out what data you need, gathering that data, and importing it into the CRM system, and this all takes time, plus it does not always work the way you want it to the first time.
KK	Having a system which is not doing everything you want it to do, is difficult to maintain, when dollars are tight, and they are tight everywhere, I could see this going away.
MM	Licensing fees can depend on how many users, campuses, students & what features you want. You can reduce the costs by opting out of some options you don't need as much. Be aware of post-purchase fees such as per-text fees and student volume bands.

Document Name	Finding: CRM Implementation Influences and Interaction Multi-Level Decision-Making S*upporting IHE Document Title & Summary of Contents*
Budget & Multi-Level Decisions	Budget & Multi-Level Decisions CRM plan to address declining student retention & enrollment IHE Re-design for operational practices Budget Impacts

Table 8

CRM Implementation Influences and Interactions (continued)

Interview Code	Finding: CRM Implementation Influences and Interaction Interdepartmental Communications and Interactions *Personal Interview Excerpts with Stakeholders*
CB	Our housing areas (mostly owned by outside companies) did not use the CRM for their communications or alerts – they mostly used text messaging to reach the students.
MG	The big thing that supported us was the CRM models they set up for us, which supported our day to day advising.
PT	The CRM gave us more updated information – before we had static lists to work off of, and if a student had registered since that list was made we were not aware of it. The CRM lists could be updated daily so we know those we were calling had not acted yet.
BN	The big areas are student communications, advisor notes, early alerts sent out by faculty, using filters to target and reach specific students, and information, including student notes, which may help advisors with student needs. Pre-CRM, these processes had to be done by hand.
CH	The student profile page offers a quick review of key student facts to review before meeting with student.
AB	The student notes feature allows us to share our advising notes with other advisors, administrators and even other locations if students attended another one our 13 campuses.
PT	Other than getting an email about an alert, the student did not actively interact with the Retain CRM – they received communications in their outlook email to hopefully act on.
PT	As an advisor, when I got a student alert, I would email and phone the student (depending on severity), but I don't know if it was a perfect system because often the student did not respond back. This is where faculty who see the student in the classroom, might be a better first responder, & some have asked for student phone numbers to contact them.

Table 8

CRM Implementation Influences and Interactions (continued)

Document Name	Finding: CRM Implementation Influences and Interaction Interdepartmental Communications and Interactions *Supporting IHE Document Title & Summary of Contents*
Faculty Early Alert	Faculty Early Alert Options & Plan: Invitation for faculty to participate in the early alert process. Steps for faculty to follow in the early alert system. Dates for issuing early alerts to students who are at-risk
Non-Registered Student Survey	Non-Registered Student Survey: Advisor notes regarding non-registered students. documentation of student concerns relating to non-registration.
E-Mail Campus Communication & Early Alert	E-Mail Campus Communications and Early Alerts Early Alert plans and schedule, Fall 2014 Early Alter Plans & schedule, Spring 2015

Interview Code	Finding: CRM Implementation Influences and Interaction Student Retention Information & Results *Personal Interview Excerpts with Stakeholders*
MM	Using CRM for retention processes is kind of like service after the sale when you buy a car. Higher education is catching up to what already happens in the business world.
KK	So I don't think the data shows we changed retention, but it has changed the conversation here – So it's not the be-all-end-all to the problem, that is an issue with technology, but I don't think that means it's not useful. I can't see why anyone would not want to use it.
AB	CRM systems offer great potential, but only in support of a good student retention plan which is already in place.

Table 8

CRM Implementation Influences and Interactions (continued)

Interview Code	Finding: CRM Implementation Influences and Interaction Student Retention Information & Results *Personal Interview Excerpts with Stakeholders*
MM	I would say CRM has a neutral effect on retention. Given the turmoil over the past couple of years with budgets and the reorg, the system has not been used to its fullest capacity. We gained so much on the organization side using the CRM, but have not made much progress on the student retention side & follow-up with students to the degree we wanted to.
BN	Prior to the current CRM, we did many similar processes in terms of retention strategies, mostly by developing relationships and connecting with students, but the data used often came from manual processes…. it was harder to get information out or track what we were doing.

Document Name	Finding: CRM Implementation Influences and Interaction Interdepartmental Communications and Interactions *Supporting IHE Document Title & Summary of Contents*
Non-Registered Student Survey	Non-Registered Student Survey: Advisor notes regarding non-registered students. documentation of student concerns relating to non- registering
Undergraduate Student Retention Data	Freshman Retention Full-time freshman retention trends and percentages for 2011-2017

Some of the findings include the importance of proper staffing levels. “The CRM needs a full-time position to support it” (personal communication, November 22, 2017). “Budgetary decisions have created great difficulty on the campus. This campus went from having four advisors down to one (Budget & Multi-level Decisions). Decisions regarding budgets and restructuring are impacting how the CRM system is working regarding student retention (personal communication, December 1, 2017). The CRM system makes information readily available, but still requires an adequate level of staffing to use the system well. Another factor is bringing the essential people into the process early "In the start-up phase, have the right people at the table and develop a plan to make sure the system does what you want it to do" (personal communication, November 22, 2017). "It is important to have representatives from key departments on the planning team, including faculty and students. These people need to make the decisions on how to get the system up and running" (personal communication, November 22, 2017). Appropriate staffing from the start-up through on-going implementation is important.

Once a plan is developed that details the CRM needs, there are many product options to consider. "Some CRMs come 'out of the box' and are ready to go as a complete product serviced by one company vs. others that offer a basic shell and you add apps from other vendors depending on what you want it to do" (personal communication, November 22, 2017). Determining what the IHE needs is critical to implementing a successful CRM program. "A huge advantage of the CRM system is the ability to track student progress, advisor interactions and programming activities" (personal communication, December 20, 2017). The IHE is best served by a CRM system that incorporates the unique needs of that Institution.

Training at the beginning of CRM implementation and continuously thereafter is another finding. "Training is an ongoing thing" You can't just train people once" (personal communication, November 20, 2017; CRM Training Agenda). Depending on the user role, training should be customized. "There is a need to figure out all of the CRM roles and needs first, and then build a training program which will be customized to those needs (CRM Training

Agenda). We started more broadly than we needed to when we launched" (personal communication, November 22, 2017). Some campus-based staff members are more knowledgeable about systems technology and how to use it. They are in a good position to help other campus-based staff who need to use the CRM system. "This campus' CRM start-up and launch was helped by two student affairs staff who are good at developing communication, are more powerful users of the CRM system, and comfortable using the CRM system to its potential" (personal communication, December 5, 2017).

CRM Implementation is interactive with ongoing multi-level decision-making, ongoing interdepartmental communications & interactions, and with student retention and retention results. Therefore, the data shows that CRM Implementation is hieratically different from the other three themes. In addition, it is continually interactive with the other three themes. CRM Implementation serves as a linking mechanism.

The second theme that emerged from the data is Multi-Level Decision-Making. This theme includes the sub-themes: CRM budgets, Retention-focused leadership, and Institutional culture and change. Multi-level decision-making informs CRM implementation and is also driven to some degree by the CRM implementation. Setting up and implementing the CRM system required that decisions are made in advance of CRM start-up and are on-going as the CRM system functions and changes in relationship to fine-tuning interdepartmental communications and interactions and adjusting to student retention information and data. Some decisions are administrative and budgetary, others are technical, and many decisions require input from advisors, program managers and regional administrators regarding how the system is interacting with student retention and related factors.

In order to summarize some of the interview data supporting this theme, a chart was created. This chart is: Multi-level Decision-Making, which is located in comprehensive form in

Appendix F. This theme incorporates budgetary decisions, leadership decisions, cultural shifts, and institutional reorganization changes that have taken place due to tuition freezes, cuts in public funding, shifts in employment and other related factors. All of these subthemes encompass decision-making at different levels.

Institution-wide decisions are often made by the administration and those in campus-based leadership roles. However, those decisions impact other stakeholders, who also can contribute valuable input. "Our top leadership was looking into another CRM recently and at least early on there was little collaboration with the end users of the CRM involved in the decision process." (personal communication, November 20, 2017). CRM and student retention decisions involve input from multiple levels, including advisors, regional administrators, faculty and other institutional staff who interact with undergraduate students or the systems that support the CRM system (Non-Registered Student Survey). The need for multi-level decision-making about the CRM system and student retention was further supported with other data. "In the start-up phase, have the right people at the table and develop a plan to make sure the system does what you want it to do." (personal communication, November 22, 2017). If groups of stakeholders are left out of the decision-making, the implementation of the CRM system will lack consistency and value. Since less than half of the faculty consistently used the CRM system, the net benefit to the student was inconsistent (personal communication, November 20, 2017; Faculty Early Alert Plan). Decision-making requires input and buy-in from all involved stakeholders for the CRM system to work well.

Institution-wide culture, regional campus cultures, and state-wide political and employment factors also play a role in making decisions about student enrollment and retention. This institution functions across multiple campuses and includes an on-line venue. These campus locations all function under the umbrella of one IHE. Each regional campus location has its own internal culture, yet, “There has to be some kind of institutional framework & then the culture of the campus can do it [implement the CRM system]” (personal communication, November 20, 2017). The culture of each campus location determines the best ways in which to address communications with the students at that campus location. These decisions are made at a more localized level. However, all of these regional campus locations are impacted by the same state-wide political and employment factors. Several stakeholders spoke to this. “The work culture in our state is leaning back towards manufacturing while we are a liberal arts IHE, so we compete more with technical colleges for students” (personal communication, December 5, 2017). Technical colleges used to be in more of a partnership role with this IHE. That has been changing in the last several years with higher levels of overlapping curriculum between the two different types of institutions.

Because this is a state supported public institution, budget changes also affect decisions that need to be made at all levels. This IHE has experienced significant and on-going changes in the last 3 years. Those changes have affected the services and programs that are available for students (Budget & Multi-Level Decisions). “Think about all the things that have happened in the past 3 years. Some of our enrollment & retention issues have to be contributed to the greater conversations going on (budget cuts, reorganization, etc.)” (personal communication, November 20, 2017; (Budget & Multi-Level Decisions). Student enrollment levels and retention efforts have been impacted by several budget cuts and tuition freezes (undergraduate Student Retention Data). “Curriculum offerings are also a consideration for student retention. Course selections have been reduced due to lower enrollment and administrative decisions to cut budgets. Depending upon the major, the campus may need to send students off to other campus locations for essential classes” (personal communication, November 27, 2017). Budgetary decisions are far-reaching in higher education overall and are impacting this IHE. “The other challenge we are facing in higher education is budgets and financial stability – being able to invest, being able to provide strong data to argue what the investment is necessary and needed, and trying to formulate enrollment management plans that have student retention structured into it" (personal communication, November 22, 2017). Due to budgetary decisions, the purpose of the CRM system adoption and implementation was to streamline processes and provide important student information to different stakeholders, thus making for a more cost-effective and efficient communication system. "Declining budgets and financial stability are major concerns for our IHE operations – we now need to continue to increase our effectiveness while working with less resources. The CRM gives us the data to argue why the investment is needed" (personal communication, November 22, 2017; Budget & Multi-Level Decisions).

In summary, Institutional culture and change, along with budgetary issues, and leadership roles are all a part of the multi-level decision-making processes. Decisions are made at different levels and those decisions influence the implementation of the CRM system and undergraduate student retention.

> Decisions are made at multiple levels in our IHE. The retention CRM decision was made in the academic affairs division, but its implementation was out of student affairs. Early on, many decisions about CRM were made at the local campus level, but this resulted in inconsistent processes and policies. It seemed that what the central administration wanted was not really enforceable at the local level. With the budget and staff reductions, we were no longer able to have multiple processes, and our IHE was forced to standardize most of our processes and at least everyone was on the same page. (personal communication, December 20, 2017)

Table 9: Multi-Level Decision-Making highlights only some of the interview excerpts and document data supporting the finding of Multi-Level Decision-Making.

Table 9

Multi-Level Decision-Making: Supporting Data

Interview Code	Finding: Multi-Level Decision-Making: Supporting Data *Personal Interview Excerpts with Stakeholders*
KK	There has to be some kind of institutional framework & then the culture of the campus can do it.
KK	I think who ‘owns’ the CRM is a big factor – also who needs to manage it.
MM	In the start-up phase, have the right people at the table and develop a plan to make sure the system does what you want it to do. Once you set-up a time line keep to it.
BN	The other challenge we are facing in higher education is budgets & financial stability – being able to invest, being able to provide strong data to argue what the investment is necessary & needed, and trying to formulate enrollment plans that have retention structured into it.
BN	Declining budgets and financial stability are major concerns for our IHE operations – we now need to continue to increase our effectiveness while working with less resources. The CRM gives us the data to argue why the investment is needed.
KK	Think about all the things that have happened in the past 3 years. Some of our enrollment & retention issues have to be contributed to the greater conversations going on (budget cuts, reorg, etc.).
KK	Our top leadership was looking into another CRM recently and at least early on there was little collaboration with the end users of the CRM involved in the decision process.
PT	There has been a change in how our four-year partners interact with us. Now they more actively compete for the same students rather than let them transfer in a 2+2 situation. This is because their enrollments are dropping as well.
CB	The work culture in our state is leaning back towards manufacturing while we are a liberal arts IHE, so we compete more with technical colleges for students.

Table 9

Multi-Level Decision-Making: Supporting Data (continued)

Document Name	Finding: Multi-Level Decision-Making *Supporting IHE Document Title & Summary of Contents*
Budget & Multi-level Decisions	Budget & Multi-level Decisions CRM plan to address declining student retention & enrollment IHE Re-design for operational practices Budget impacts

The third theme emerging from the data is Interdepartmental Communications & Interactions. This theme includes the sub-themes: CRM & retention-focused faculty and advisor interactions, CRM student interactions, CRM early alerts & messaging. Different stakeholders (i.e., faculty, advisors, administrators, program managers) must communicate and interact with each other, and with the students, in order to help students move forward at this IHE. Likewise, students need to access information and respond. The CRM system is designed to filter for certain situations, then stream-line, fine-tune and target students who need to receive specific information and alerts. The filter parameters, message, and timing all rely on campus personnel for coordination. Thus, the success or failure of the CRM processes relies, in part on the cooperation of stakeholders, faculty and students.

In order to summarize some of the most important raw data supporting this theme, a chart was created. This data summary chart is: Interdepartmental Communications & Interactions, which is located in comprehensive form in Appendix G. There is a great deal of data that speaks to collaborative communications and interaction among different stakeholders at this IHE. In contrast, data also speaks to the lack of collaborative communication processes and interactions among stakeholders and students. The CRM system is a tool that has stream-lined some of these needed communication functions, yet students, advisors and faculty are not participating or responding to the communications as anticipated. This theme includes content that encompasses a variety of factors relating to cross departmental early alert and messaging communications to students as well as the responses to those communications. Table 10: Interdepartmental Communications & Interactions is below and highlights some of the interview excerpts and document data supporting the finding of Interdepartmental Communications & Interactions.

Table 10

Interdepartmental Communications & Interactions: Supporting Data

Interview Code	Finding: Interdepartmental Communications & Interactions: Supporting Data *Personal Interview Excerpts with Stakeholders*
PT	As an advisor, when I got a student alert, I would email and phone the student (depending on severity), but I don't know if it was a perfect system because often the student did not respond back. This is where faculty who see the student in the classroom, might be a better first responder, and some have asked for student phone numbers to contact them.
AB	The student notes feature allows us to share our advising notes with other advisors, administrators and even other locations if students attended another one our 13 campuses.
KK	When people are looking at CRM systems, they need to involve faculty, students and all types of end users in the selection process.
BN	I think it's really important that we communicate the information we use and show how faculty and staff could be of help.
MM	Faculty need clear expectations and communication on their role in CRM.
KK	There are 3 types of employees at the campus level: advisors, events coordinators & info. specialists. They (all 13 locations) meet once a month (usually by Skype) as a group to discuss issues and solve problems.
BN	With the CRM, we can plan our communications & add more as needed.

Table 10

Interdepartmental Communications & Interactions: Supporting Data (continued)

Interview Code	Finding: Interdepartmental Communications & Interactions: Supporting Data *Personal Interview Excerpts with Stakeholders*
KK	It's unfortunate but 50% of students do not look at their emails for alerts.
BN	Texting students offers a high success rate for contact and response.
Document Name	Finding: Interdepartmental Communications & Interactions: Supporting Data *Supporting IHE Document Title & Summary of Contents*
E-Mail Campus Communications & Early Alert	E-Mail Campus Communications and Early Alerts CRM Communications Plan – Fall Semester, 2014
E-Mail Campus Communications & Early Alert	E-Mail Campus Communications and Early Alerts CRM Communication Plan – Spring Semester 2015
Faculty Early Alert Plan	Faculty Early Alert Plan Invitation for faculty to participate in the early alert process. Steps for faculty to follow in the early alert system. Dates for issuing early alerts to students who are at-risk.
Non-Registered Student Survey	Non-Registered Student Survey Advisor notes regarding non-registered students. documentation of student concerns relating to non-registration.

Table 10 illustrates some of the ideas and issues regarding Interdepartmental Communications and interactions with students. For example, the CRM system uses faculty reported information and filters to streamline, target, and send early alert and messaging communications to specific groups of students (E-mail Campus Communications & Early Alert Plan – Fall 2014; E-mail Campus Communications & Early Alert Plan – Spring 2015; Faculty Early Alert Plan). "Faculty can add a customized note that will appear in the alert" (personal communication, November 22, 2017). This personalized communication offers students specific advice and encouragement to prompt their positive action.

Faculty can generate and send alerts out if they believe the student may be at risk (Faculty Early Alert Plan). "Early alerts worked when the faculty took the time and interest to contact those students with academic issues" (personal communication, November 20, 2017). These alerts are also retrieved by CRM personnel who can generate a message to the student. Students access these alerts via their e-mail account. However, advising staff and faculty find that many students are not accessing the e-mails that contain these important alerts. The CRM system is alerting the correct students with important information (E-mail Campus Communications & Early Alerts- Fall 2014; E-mail Campus Communications & Early Alert Plan – Spring 2015), "Unfortunately less than fifty percent of the students are not looking at their e-mails to see if they have an alert" (personal communication, November 20, 2017). On other occasions, where phone messages and text messages are used to communicate with students, the staff was unaware if the messages were received because the students did not respond back. "This is where the faculty, who see the student in the classroom, might be a better first responder, and some (faculty) have asked for student phone numbers to contact them" (personal communication, December 19, 2018). However, faculty does not always see institutional communications and student retention as their responsibility (Faculty Early Alert Plan).

> This is where retention bucks up against a campus culture - we sent out an email encouraging faculty to remind students about registration for Fall classes before the students left for the summer. One of the faculty members pushed back on announcing

> these important dates in his classroom saying that it wasn't his job to remind students. It wasn't his job to encourage them, it was student affair's job and he should have nothing to do with it. This was just one faculty member but we were dumbfounded at that kind of response. (personal communication, November 20, 2017)

Students might benefit from being brought into the conversation about alerts earlier. Using orientations and other onboarding methods, students can be educated on the alert process and be encouraged to act as the alerts are received. "When people are looking at CRM systems, they need to involve faculty, students and all types of end-users in the selection process (personal communication, November 20, 2017). Faculty can also be brought into the process more. "I think it's really important that we communicate the information we use and show how faculty and staff can be of help" (personal communication, November 22, 2017; Faculty Early Alert Plan). The raw data supporting this theme clearly illustrated the successes and concerns regarding communications and interaction among IHE stakeholders and communications and interaction between IHE stakeholders and students (E-mail Campus Communication & Early Alert Plan – Fall 2014; E-mail Campus Communications & Early Alert Plan – Spring 2015). The implications of this finding will be addressed in Chapter 5.

The fourth theme that emerged from the data is Student Retention Information & Results, which identifies the significance of retaining students and the role of stakeholders in this process. Student retention has been greatly explored in the literature and continues to be an important topic for IHEs. This theme includes the sub-themes: Retention-focused Student Interactions and Retention processes. In order to summarize some of the most important raw data supporting this theme, a chart was created. This data summary chart: Student Retention Information & Results, which is located in comprehensive form in Appendix H.

Table 11: Student Retention Information & Results highlights some of the interview excerpts and document data supporting this finding.

Table 11

Student Retention Information & Results: Supporting Data

Interview Code	Finding: Student Retention Information & Results: Supporting Data *Personal Interview Excerpts with Stakeholders*
MM	Using CRM for retention processes is like service after the sale when you buy a car. Higher education is catching up to the business world.
KK	So I don't think the data shows we changed retention, but it has changed the conversation here – So it's not the be-all-end-all to the problem, that is an issue with technology, but I don't think that means it's not useful.
AB	CRM systems offer great potential, but only in support of a good student retention plan which is already in place.
MM	I would say CRM has a neutral effect on retention – Given the changes with budgets and the reorg, the system has not been used to its fullest capacity. We gained so much on the organization side using the CRM, but have not made much progress on the student retention side as we wanted.
BN	Prior to the current CRM, we did many similar retention strategies, mostly by developing relationships and connecting with students, but it was harder to get information out or track what we were doing.

Document Name	Finding: Student Retention Information & Results: Supporting Data *Supporting IHE Document Title & Summary of Contents*
Non-Registered Student Survey	Non-Registered Student Survey: Advisor notes regarding non-registered students. Documentation of student concerns relating to non-registration.
Undergraduate Retention Data	Freshman Retention Full-time freshman retention trends and percentages for 2011-2017

Student Retention is the responsibility of every stakeholder who works at or has a vested interest in the IHE. “I think it takes more than one office to do retention. It takes a group and even the whole campus to work together to give students the information and support that they need” (personal communication, December 1, 2017). This is an evolution in thinking at many IHEs. Part of the movement in this direction is related to enrollment declines, which affects the curriculum offered on campus (undergraduate Student Retention Data). “Our enrollment has dropped on our campus from just over 2,000 students three years ago to about 1,700 today. As a result, our curriculum has also been reduced, especially for night class sections” (personal communication, December 21, 2017). If the effects of student enrollment loss are widespread over the IHE environment, then a broad response to this decline might produce a more positive enrollment future. “Just as all faculty and staff is part of retention, removing them can hurt retention, like when they got rid of campus IT support staff. These people helped me be more successful in the classroom and in my job” (P. T., personal communication, December 19, 2017). Even with IHE issues, retention continues. “Things change and that’s where we are now. What can we do in our current environment to help student retention? That is the question to address. You take what you have and try to make it the best it can be” (personal communication, December 19, 2017). Not all stakeholders are included in the process.

> During my 20 years in advising I never saw any campus plan for retention, or any IHE plan for retention. We did talk about it with some committees, but it was sporadic with few connections to the previous discussions. Retention was important but we did not incorporate it widely across our campus, even though I think retention is everyone’s job. (personal communication, December 19, 2017)

The lack of an institution-wide student retention plan impacts these regional campus locations in various ways. “There is a marketing and enrollment plan at this IHE, but there is no institution-wide student retention plan in place, nor is there a regional student retention plan (personal communication, December 20, 2017). Student retention may be viewed as everyone's responsibility, but the local campus stakeholders are seeking leadership, direction, and coordination of student retention efforts across all campuses in this IHE.

Engaging and building relationships with students is often part of the retention effort. "That's a really big thing. Develop relationships with the students and create student engagement events right away" (personal communication, December 5, 2017). Often on campus, student engagement is manifested through events and activities. "I think the personal touch and contacts with students make a huge difference, like the probation conferences I did this semester" (personal communication, November 22, 2017; Non-Registered Student Survey). Building relationships were a common theme. "This incoming generation of students has more millennial types, and some of those want more attention and hand-holding than other groups (personal communication, December 1, 2017).

Students encounter challenges in their progression toward academic goals. "I don't know if its culture, but some students think they can manage on their own, even if they can't. They don't often know they have a problem until it's too late. I think they eventually ask for help, but it may not be soon enough" (personal communication, November 22, 2017). In some cases, they need to withdraw for situations beyond their control (Non-Registered Student Survey, Document 9). "Students tend to drop out when there are changes in their lives, when they are hurt, when they are sick, or when someone dies" (personal communication, November 27, 2017; Non-Registered Student Survey). Withdrawing from college for reasons beyond the student's control was a common theme. "I see a variety of students from all kinds of backgrounds. There are so many different reasons for why they may drop out, often for reasons beyond their control. Something falls apart in their life and they have absolutely no control over that. Our focus is on students having a good experience while they are here" (personal communication, December 5, 2017).

IHEs engage in student retention activities. "I might have a different opinion on using student holds. I feel that this is college, not high school. My preference is not to put advising holds on students. I might be in the minority on that opinion, but I think we may lose students because of that by creating another barrier to enrollment" (personal communication, December 19, 2017). Some programing for students has been reduced. "Before the reorganization, we used to have a bridge program, where at-risk students would need to participate in both supplemental courses and more intrusive advising as a condition of admission. That program was hard to support with less staff, so we removed that requirement and support" (personal communication, December 21, 2017).

The CRM system is most effective as a tool for supporting a strong retention plan. **"**I would say our CRM experience has been positive with the hope that it continues to grow. The alerts tip it over to the positive side. Even though the student response was low, we know we are helping students with the CRM system alerts. (personal communication, December 21, 2017). CRM features such as student notes are useful. "Advisors taking notes on student meetings are considered one of our best practices so that conversations with the student can continue. Students appreciate that we remember their situations, and our meetings are much more productive when we can continue where we left off" (personal communication, November 20, 2017). Using CRM to track student progress is possible. "Tracking and documenting our communications is great for conversations our staff has with students. We can really track those situations" (personal communication, December 5, 217; E-mail Campus Communications & Early Alert Plan – Fall 2014; E-mail Campus Communications & Early Alert Plan – Spring 2015).

Yet CRM processes need further development. "We don't have the ability to send out advisor-based batch communications directly from the advisor, it comes mostly from a central point. Our campaigns should be more advisor-based so students see that ongoing relationship" (personal communication, December 21, 2017). "Keeping in mind that building student engagement and satisfaction are important for student retention, CRM systems offer great potential, but only if it supports an already great retention operation. With our existing retention plan on the weak side, adding a CRM alone will not fix those issues" (personal communication, December 20, 2017).

Implementing a strong student retention plan is critical for the health and future of the IHE. "I think there should be a plan. I think that's the biggest thing and it should be driven by academic affairs" (personal communication, November 20, 2017). Pro-active contact with students is part of retention (E-mail Campus Communications & Early Alert Plan – Fall 2014; E-mail Campus Communications & Early Alert Plan – Spring 2015). "Using more of an intrusive or holistic approach was better, working with the whole student, really reaching out and engaging them vs. waiting for them to engage us as academic advisors and academic professionals" (personal communication, November 22, 2017). Maintaining current students is challenging (Undergraduate Student Retention Data).

> Traditional-aged student enrollment was dropping in a highly competitive recruiting market. Action was needed as the IHE budget was becoming more tuition-dependent (with recent state cuts). Since recruiting additional new students was more costly, increasing student retention seemed to be the low hanging fruit. Keeping students who are already on your campus seems easier and cheaper because you already have them, but can you keep them going forward? (personal communication, December 20, 2017)

There have been many changes in this IHE over the last several years. The student retention percentages have stagnated, even with the implementation of the CRM system. It is beyond the scope of this research study to determine all of the factors that are impacting the reduction in student retention percentages. Budget cuts, cultural shifts, student demographics, workforce needs, and administrative decisions are likely some of the factors impacting the declining student retention results.

Chapter 4 Summary

The findings of this single case study are framed in the context of how a large Midwestern undergraduate IHE uses their CRM system for undergraduate student retention. In an effort to understand and describe the use of this CRM system for undergraduate student retention, nine stakeholders representing administration and staff at this IHE were interviewed. These stakeholders provided their insights, information and experiences. Additional documents and information was also collected from this IHE. The four findings for this study emerged from the analysis of this set of data.

First, CRM Implementation was the most comprehensive finding and is supported by the largest amount of raw data. Based on the interviews, it is clear that CRM Implementation includes a wide range of components from start-up to on-going training and adjustments. There are components of the implementation that are helpful time-saving processes and there are components that cause stakeholder or student frustration, thus requiring adjustment. The CRM Implementation theme includes all of this. CRM Implementation is hierarchically at a different level than the other three findings because CRM Implementation is interactive with ongoing Multi-Level Decision-Making, ongoing Interdepartmental Communications & Interactions, and with Student Retention Processes and Results. CRM Implementation serves as a finding, but also as a linking mechanism to the other three findings.

The second finding to emerge is Multi-level Decision-Making. This finding incorporates budgetary decisions, leadership decisions, cultural shifts, and institutional changes that have taken place. Interview data supports the perspective that decisions about what to include in the CRM system and how to best implement it requires input from a variety of stakeholders, such as administrators, student advisors, and engaged faculty. The culture of the IHE, budgetary cuts, staffing changes, and changing workforce needs, all influence the decisions regarding student enrollment and retention. Finding ways to be more efficient with fewer resources requires on-going decision-making at many levels. These decisions influence the CRM Implementation, but can also be helped by the CRM implementation.

The third finding is Interdepartmental Communications & Interactions. Different stakeholders (i.e., faculty, advisors, administrators, program managers) must communicate and interact with each other and with the students in order to help students advance from semester to semester. Likewise, students need to access information that is sent to them and respond to it. In this study, many students did not read their e-mail communications. The CRM system is designed to stream-line, fine-tune and target students who need to receive specific information and alerts. The success or failure of the CRM system relies, in part, on the cooperation of stakeholders and students. The interview data supporting this finding clearly illustrated the successes and concerns regarding communications and interaction among IHE stakeholders and communications and interaction between IHE stakeholders and students.

The fourth finding is Student Retention Information & Results, which identifies the significance of retaining students and the role of stakeholders in this process. Student retention is the responsibility of all stakeholders including faculty, administration, and staff. It is not simply the job of one department, such as student affairs. Engaging and building relationships with students is often part of the IHE retention effort. Yet, not all stakeholders are brought into or buy into their role in the student retention process, especially faculty who may perceive their role differently. The CRM system can be an effective tool for coordinating stakeholder communications in an effort to support a strong student retention plan.

This chapter provided a description of the research sample, research methodology and analysis processes, and resulting findings from the data analysis. Data was presented to support the four findings and a diagram was used to illustrate the relationship among the findings. Chapter 5 will provide an interpretation of these findings and provide conclusions and inferences that reach beyond the descriptions and connections that were discussed here.

Chapter 5: Discussion and Conclusions

Introduction to Chapter 5

The purpose of this research study was to examine and describe how a Customer Relationship Management system is being implemented for undergraduate student retention at a large Midwestern undergraduate IHE. CRM systems and processes have operated in the business world for some time, but only more recently have CRM systems been adapted and used for undergraduate student retention in colleges and universities. The literature review in this study showed that while general undergraduate student retention studies are included in the literature base, there are minimal studies regarding how CRM systems are used for undergraduate student retention. This has been addressed, in some part, in this study.

As described in chapter two, a framework of understanding how CRM works for undergraduate student retention is not adequately addressed in the literature. To address these gaps, this single-case research study explored how CRM technology, best practices, and CRM processes are being applied to aid undergraduate student retention at a public undergraduate IHE. An advantage of this study is that stakeholder interviews were conducted at multiple levels in the organization, from higher-level administrators to front-line advisors.

This chapter includes a summary and discussion of the research results. Limitations pertaining to the study will follow the discussion of results. Implications of the results for practice, policy, and theory are also included. Finally, this chapter ends with recommendations for further research and final conclusions.

Summary of the Results

The research question for this study is: "How does a large Midwestern undergraduate institution use a CRM system for undergraduate student retention?" The literature review addressed current undergraduate student retention practices and from this study, gaps were identified with using CRM systems as a tool for undergraduate retention. Specifically, the literature lacks detailed research studies showing how CRM systems are used for undergraduate student retention. This study does not address the use of CRM for new student recruitment because that is a separate population with its own needs and attributes.

The four main themes that emerged from the data analysis process are: CRM Implementation, Multi-level Decision-Making, Interdepartmental Communications & Interactions, and Student Retention Information & Results. The relationship among these four themes was determined and the relationship was illustrated in Figure 1: Connections among Research Themes. Each of these themes will be discussed in this chapter.

Discussion of the Results

The research question focused on understanding and describing the use of CRM systems for undergraduate student retention at one IHE. It was important to look in-depth at a case example because stakeholders can easily make assumptions regarding the impact of a CRM system on student retention without digging deep enough or searching broad enough to uncover the validity of those assumptions. Often the front-line users of CRMs have different perspectives and experiences than administrative personnel. This study has strong representation from multiple levels in the organization. Some of the results of this case study were predicted, while other results were more surprising.

CRM Implementation was the most comprehensive theme and was supported by all nine stakeholders and documents with the largest amount of raw data. This theme includes: CRM purchase, design and start-up, CRM training, CRM system capabilities and processes, and CRM data and results. Included in this theme is the strong emphasis on planning, training and support for CRM systems, which involve complicated and overlapping IHE processes.

A starting point for this theme was identifying the stakeholders and then describing their roles and relationships to each other. These roles and actions can become quite extensive when mapped out. For example, students, faculty and advisors all have expectations, activities, roles, and communications related to the early alert process. In planning an early alert program, each of those positions is spelled out in terms of their role in the early alert process (personal communication, November 20, 2017). The CRM system is then modified to support the activities needed in the early alert process. The alert is triggered by a faculty member as needed and then a series of communications and/or advisor contacts are made with the student. These student alerts are initially generated into the CRM central office staff. Advisors can then monitor this activity and step in with their own intervention as needed. After an alert cycle is completed, the CRM can be used to measure how many alerts were generated, which faculty member initiated an alert, who got the alert, and if the receiver opened the communication to read the alert. All along the way data is captured, notes are taken by the advisor, and the student proceeds towards resolution of the alert. Even so, not all data is captured. Advisors do not know if faculty resolved the issue themselves and faculty usually do not know what intervention was done by the advisors.

Some early alert activity may take place outside of the CRM system. For example, a student may choose to talk to the faculty member directly (or a faculty member to the student directly) and together they may resolve an issue. None of this activity is recorded in the system, and the advisor may still have the student as an active alert, even though the issue was resolved. There is not a formal process at this IHE for faculty to report back to the system regarding resolution, nor is there a formal system for the advisor to report to the faculty member if the situation was resolved (personal communication, November 27, 2017).

The student alert process works well when everyone is onboard and responding. Follow-up processes can break down if these functions are not completed. For example, faculty may not bother to issue an alert even though one might be needed. Students may not open the message, thus missing the cue to take action. An advisor may mark an alert as resolved when it is not. Consequently, there are opportunities for CRM system failure along the way. The cause of CRM system failure may be the CRM system itself, but created by the failure of the individuals using the system.

The CRM implementation theme is uniquely and integrally connected to the other three themes: Multi-level Decision-Making, Interdepartmental Communications & Interactions, and Student Retention Information & Results. The CRM system implementation influences each of these three themes and is also informed by each of these. This is especially true upon CRM system start-up where many decisions need to be made about how the system will operate.

Multi-level Decision-Making was the second theme which incorporates budgetary decisions, leadership decisions, cultural shifts, and institutional reorganization changes that have taken place due to tuition freezes, cuts in public funding, shifts in employment and other related factors. Six of the nine stakeholders offered information for this theme. Institution-wide decisions are often made by the administration and those in campus-based leadership roles (personal communication, November 22, 2917). However, those decisions impact other stakeholders, who are charged with implementing those decisions. Stakeholders can also contribute valuable input. For example, with reduced staffing levels, advisors were given more autonomy to redesign CRM workflow in ways which allowed them to keep up with increased workloads. CRM and student retention decisions involve input from multiple levels, including advisors, regional administrators, faculty, and other institutional staff who interact with undergraduate students (personal communication, December 5, 2017).

Institution-wide culture, regional campus cultures, and state-wide political and employment factors also play a role in making decisions about student enrollment and retention. This IHE has departments which function across multiple campus locations and an on-line venue. The culture of each campus location can determine the best ways in which to address communications with the students at that campus location. Many of the operational decisions are made at the campus level. However, these regional campus locations are impacted by the same state-wide political and employment factors which affect other state IHEs.

As a public institution, budget reductions affect decisions that need to be made at all levels. The most recent budget cuts for this IHE included 83 positions lost and a $5,000,000 reduction in the IHE operating budget (Savidge, 2015). As a result of these reductions, this IHE has experienced significant reorganization and on-going process changes in the last three years. Those changes have affected many of the services and programs that are available for students. The most recent budget reduction is on top of prior reductions, which has resulted in a decline in curriculum offerings, student enrollment and student retention (Undergraduate Student Retention Data).

Reduced curriculum offerings are also a factor related to student retention (personal communication, November 27, 2017). Course selections have been reduced due to lower enrollment and administrative decisions to cut budgets. Budgetary decisions are far-reaching in higher education overall and are significantly impacting this IHE. Due to budgetary reductions, the CRM system implementation period was modified to allow for stream-lining processes and providing important student information to stakeholders, thus creating a more cost-effective and efficient communication system. "Declining budgets and financial stability are major concerns for our IHE operations. We now need to continue to increase our effectiveness while working with less resources" (personal communication, November 22, 2017).

In summary, institutional culture and change, along with budgetary issues, and leadership roles are all a part of the multi-level decision-making processes. Decisions are made at different levels and those decisions influence the implementation of the CRM system and its impact on undergraduate student retention.

Interdepartmental Communications and Interactions is the third major theme, which was addressed by seven out of the nine stakeholders who were interviewed as well as CRM documents. This theme includes: CRM retention-related faculty interactions, advisor and student interactions, CRM system early alerts and messaging. Each stakeholder involved with CRM processes interacts with other campus staff members and students to some degree. For example, faculty report student academic issues to advisors (such as poor attendance, missing work, or failing grades) using the early alerts process. Advisors then reach out to students regarding those issues. When the CRM system is being implemented as designed, essential communication flows between a variety of stakeholders (personal communication, December 20, 2017).

A significant finding for this theme was that communications among faculty, advisors and students is inhibited when the CRM messaging does not reach its intended audience. For example, approximately 35% of faculty participated in the student early alert process (personal communication, November 20, 2017). This trend goes back to the implementation stage and the discussion of faculty buy-in and commitment for using the CRM system. Faculty may believe that the mid-term grade process is enough of an early alert to struggling students, or that faculty workload issues inhibit them from fully participating in the CRM system as it is designed. Some advisors report back to faculty with appropriate feedback, but more often, the communication loop is not always closed. Faculty do not have access to the CRM notes that advisors are creating for each student, and advisors are not typically updated by faculty if the instructor reached out and resolved an issue with a student. Due to the need to make up a deficiency, students may be reluctant to read their e-mail, or to update faculty or advisors about their own progress, or lack of progress. With the combination of system limitations and incomplete staff interactions, communication challenges or identifying and resolving missing communication between stakeholders is not settled just because there is a CRM system in place. The CRM is just a tool for the professionals working with the students and not an automatic solution for solving all retention problems. (personal communication, November 27, 2017). The personal connection between student and campus staff still needs to take place.

On the student side, there are unintended consequences of initial high CRM e-mail volume. The system was designed to use filtering as a way to select student audiences and target communications for a specific need. When the CRM launched, each campus location worked off of a general template for communications, along with a calendar indicating when to send specific e-mails. However, some campus locations went much further, including one campus which sent over a hundred e-mails to current students during the semester (personal communication, November 22, 2017). A result of too many e-mail messages, students were less likely to read any of their e-mail communications, thus missing the really important early alerts and financial messages. During the 2017 Fall semester, advisors from all campuses met and agreed to consolidate most of the messaging into a weekly newsletter which highlighted key points, rather than generate a new message for each item. This brought down student e-mail volume dramatically with the goal of increasing student reading rates on e-mails. Students may also benefit from better communication on how the early alert process functions and what their own role is as a student.

Another finding is that the initial CRM early alert and communication plans proved to be difficult to manage in the field. For example, student communication plans started as more complex campus-generated, filter-driven message, each focused on a specific audience. There could be 35 to 45 different types of messages, many with their own audience and filter. For example, veteran students, or those with a nursing major, or those with a grade point average

(GPA) with less than a 2.6 could all be targeted with a message at a certain date. There might be additional messages not included in the semester plan, such as a closed parking lot or school closing which could also go out. After several semesters, it became apparent that the time needed to update, queue, and send these messages each semester took too much of the advisor's time. Many of these messages were scaled down in volume and sent from a central office site to simplify the process for all advisors. For example, an email reminding students to pay their tuition by a certain date could come from the central office rather than from each campus. Even so, additional issues arose as the student received these centrally sent communications from an unknown contact person, so the personal effect of communication coming from a local advisor was lost. Students were less likely to read messages sent by unknown senders. It was a challenge to send personally queued customized messages from a central office location. This was a limitation of the CRM system, but also due to this IHE operating with a multi-campus structure.

Student Retention Information and Results is the fourth theme that emerged from the data. Eight out of the nine stakeholders and student retention data provided supporting evidence for this theme. This theme identified the significance of retaining undergraduate students and the role of stakeholders in this student retention process. This theme includes the sub-themes: Retention-focused student interactions and retention processes. Long before CRM systems were introduced, student retention has been important for colleges and universities. Extensive research into undergraduate retention issues, concerns, and possible solutions has been explored (Barefoot, 2004; Kuh, 2009; Pascarella & Terenzini, 2005; Tinto, 2006). Student retention has been extensively studied in the literature and continues to be an important topic for colleges and universities. While there were many expectations that undergraduate student retention rates would rise with the use of CRM system, one significant discovery is that undergraduate student retention rates have not improved at this IHE when using the CRM system for student retention.

Unanticipated Results When Using the CRM System for Student Retention

Perhaps the most surprising finding from this study, and supported by all of the interviewees, is that CRM system processes addressing student retention involve many stakeholders and much more pre-launch planning, assessment, and flexibility in order to function optimally as previously thought. The CRM cannot substitute for a weak or nonexistent campus retention plan. Even taking months for CRM system design prior to the CRM system launch did not fully live up to the stakeholders' ideal vision. Many aspects were not anticipated, including a major budget and staffing reduction for this IHE during the launch period. CRM is just a tool for student interactions that had process design issues which needed to be changed and adjusted after the CRM system launch.

Some of the challenges of effectively using a CRM system for undergraduate student retention involved coordination between stakeholders. It was assumed that almost all of the faculty would participate in student alerts and that most students would read their e-mail, and respond to messaging prompts accordingly. With less than half of the faculty participating in early alerts and lower message reading rates by students at this IHE, the overall CRM effectiveness was less than expected, even when the CRM system operated as it was designed. Addressing possible student reaction and cultural issues should be anticipated and addressed upfront. Developing an overall strategy involving students, faculty, and staff roles requires extensive planning and coordination for how the CRM system will interact between these stakeholders. Interviewees reported that many faculty and staff were not coordinating with each other regarding CRM system knowledge, communication, and student retention goals.

Some of the challenges can be traced back to the CRM system start-up phase. Bringing in the right stakeholders early on in the CRM system development can help the start-up phase run more efficiently. "In the start-up phase, make sure to have the right people at the table and develop a plan to make sure the system does what you want it to do" (personal communication, November 22, 2017). For example, few faculty were involved early on in the conversations about CRM planning and start-up. "Faculty need clear expectations and communication about their role in the CRM process" (personal communication, November 22, 2017). Securing their support, buy-in, and cooperation in the CRM process right from the beginning, might lead to higher faculty participation rates.

CRM system options require discernment when developing and implementing the IHE plan. Just because the CRM has a particular capability, does not mean that feature needs to be used. Each feature requires careful and full vetting regarding its potential impact. Not all of the initial CRM design elements proved to work as well as anticipated. For example, student communication plans started as more complex filtered messages with each focused on a set audience. Later, these were scaled down to simplify the process for advisors to manage as well as to increase student participation. Launching too many communications and alerts, just because it is an option, can bring about the opposite result if students fail to read them.

CRM system assessment, flexibility, and change should be considered as part of the launch process. As the CRM system launch proceeded for this IHE, data such as faculty participation, student read rates of communications, and advisor feedback all indicated that changes needed to be made. Processes had to be updated to function more effectively and some initial plans had to be changed once the reality of fully operating a CRM system was absorbed. Some of the processes which stakeholders thought would work before the launch, turned out not to be the correct path. These processes needed redesign at different times during the CRM system implementation. "We thought we could do a project and then be done, but CRM planning is ongoing. It takes way longer and it's more complicated to get a CRM up and running than people think" (personal communication, November 20, 2017).

Much of the literature on undergraduate student retention sees IHE investment and intervention in retention-related activities as favorable. However, this study of CRM system use for undergraduate student retention found mixed results. On one hand, the redesign of processes around the adoption of a CRM system proved to be of great benefit for the restructuring this IHE was undergoing as a result of significant budget cuts. Processes were simplified and redesigned to accommodate the smaller staffing levels now found at each campus location. Had the CRM system not been in place for a period before the budget reductions, these processes would not have been in place to handle the reduced staffing levels.

Another finding was that overall undergraduate student retention rates did not improve during the several years when the new CRM was in place. This lack of improvement in undergraduate student retention rates may be a result of the disruption caused by the IHE restructuring and significant reduction in staffing due to the overall budget cuts. The lack of improvement in undergraduate student retention rates could also be a result of limitations from staff or the CRM system itself. Due to a variety of factors in play at the same time, there is not enough data to identify the reason that undergraduate student retention rates did not increase for this IHE.

These are the study results that focused on CRM system use for undergraduate student retention. Many of the intended and practical plans for using the CRM system for student retention required change and adaptation due to variety of unanticipated implementation factors. In addition, structural, budgetary and staffing changes within this IHE were also unanticipated at the time this CRM system was adopted and launched. These additional factors have an impact on student retention. Further discussion regarding how these results relate to the community of practice, the literature, and the community of scholars is presented next.

Discussion of the Results in Relation to the Literature

This research study makes several contributions to the literature. It provides an in-depth single case study which includes information and insight on the planning, launch and implementation of a CRM system in a large public Midwestern IHE. The literature base had already identified that CRM technology, when used for customer-oriented functions, can increase levels of student satisfaction, identify and assist students with higher needs, and also reduce the number of student dropouts (Hrnjic, 2016; Rigo, 2016; Seeman & O'Hara, 2016). However, the literature base does not address the methods and use of a CRM system specifically for undergraduate student retention.

This research study helps to fill in some of the literature gaps. Few studies, including Seeman and O'Hare (2006), provided an in-depth detailed look at how CRM systems are used for undergraduate student retention. This research study provides one in-depth case study example describing how a CRM system is used for undergraduate student retention.

This research study has identified a number of emerging patterns to explore in comparison to the literature base. First, the CRM system implementation theme included a strong emphasis on planning, training, and support for CRM systems. This involved complicated and overlapping IHE processes. CRM systems offer a number of analytic tools which allow for assessment of CRM processes and staffing. These analytics can be used to review past trends, plan in the present circumstances, and anticipate the future (Baer, 2014; Pember et al., 2014). It takes a large investment in time and resources to rethink and redesign the many retention-related processes required to make a CRM system operate in a higher education setting, and CRM systems can provide significant data to guide this process. Even so, the literature found that CRM systems are increasingly being considered by colleges and universities for the purpose of managing new student recruitment and communications as well as undergraduate student enrollment and retention

(Ariffin, 2013; Gholami et al., 2015; Hrnjic, 2016; Rigo et al., 2016; Seeman & O'Hara, 2016). The use of CRM technology in higher education settings will continue to evolve, but it is unlikely that many campuses will return to not using a CRM system.

Even with the new CRM system in operation for over three years, undergraduate student retention has not increased at this IHE. The literature confirms that student retention trends and withdrawal patterns from IHEs have been studied, yet increasing the rate of undergraduate student retention continues to be a challenge for many IHEs (Kuh, 2009; Pascarella & Terenzini, 2005; Tinto, 2006). For this IHE and study, it was expected that student retention rates would improve since the introduction of this CRM system. The literature supports the potential positive effects of CRM systems, but those positive effects may not be directly related to improving student retention percentages at particular institutions.

Several factors, particular to this IHE, might contribute to the lack of improvement in student retention percentages. Significant down-sizing and restructuring during the CRM system launch period resulted in the loss of over 80 campus professional positions at this IHE. Many of these positions that were lost were in the very division which provided most of the student related retention and advising services. Operational disruption, caused by down-sizing and extensive reorganization of the IHE, may have negatively impacted student retention at this IHE. The IHE also has over a dozen campus locations that are geographically spread over the entire state. So, the CRM system implementation was part of an overall strategy for addressing a weaker student retention plan in the first place. No written institutional student retention was in place. Since attrition negatively affects both students and institutions, student retention is both an institutional and an individual problem (Errico, Valeri-Gold, Deming, Kearse, Kears, & Callahan, 2000).

Relating Results to the Community of Practice

One CRM stakeholder who was interviewed said that it would be unusual for a college or university to not have a CRM system of some sort (B. N., personal communication, November 22, 2017). While this is often true for new student recruitment, it is less likely for student retention purposes. This comment raised the question of how CRM systems are used. New student recruitment involves working with outside databases and purchasing lists, such as ACT or SAT student test scores. These outside databases are then imported into a student prospect database and managed along the recruitment cycle. One advantage to a recruiting CRM system is that an institution can respond quickly to prospects, with coordinated messages tailored to each student. While some of these students will move through the recruiting funnel and matriculate at the IHE, the majority in the prospective student database will not. CRM systems for student retention purposes work with a relatively stable population of currently enrolled students. So there are conditions that make a recruiting CRM system more useful for colleges and universities while a CRM system that is designed to address student retention might be a lessor priority.

Even as more colleges and universities are considering adopting CRM systems for undergraduate student retention, the vast majority of IHEs have not. An Association of College Registrar's survey showed that while the number is growing, only 14% of colleges and universities are currently adopting and integrating CRM technology for undergraduate student retention purposes (Klie, 2013). This may be due to a number of potential barriers and costs.

The barriers to adopting a CRM system for undergraduate student retention include additional staffing, high ongoing investment in software and licenses, and ongoing maintenance costs. Even a basic system with a full-time support person (a full-time CRM support position was recommended by several interviewees) can cost over a $100,000 per year. Annually, this might seem affordable for most colleges, but a five-year CRM program implementation can cost an institution $500,000 or more, depending if more than one CRM is needed. System and user licenses are often charged annually so these high costs continue going forward and may rise as contracts are renegotiated. Some CRM venders charge for each user license and application while others charge by the number of students served. Combining these higher costs with a declining IHE budgets can lead to debate about adopting a CRM system for student retention.

CRM system implementation requires extensive planning and coordination between multiple departments, divisions and faculty. Having a strong pre-CRM institutional retention strategy in place can ease the transition to adopting a CRM system, but it can also lead to conversations about using CRM-like strategies without actually buying the CRM system. Many colleges and universities already have many of the CRM functions in place, in a manual format. Faculty can generate student alerts using e-mails or phone calls to advisors for follow-up. Advisors can make personal contact with students as they have always done. Communications can be managed by stand-alone applications, or supported by inexpensive apps like Mail Chimp. If coordinated well, and with sufficient protection of data, and staffing, these CRM practices could function without the actual purchase, complexity and maintenance of a big-box off-the-shelf CRM system, especially on a smaller college campus. It's a tradeoff between higher workloads vs. CRM systems, and this may be worth it for those IHEs with limited budgets.

Relating Results to the Community of Scholars

The net effect of CRM implementation and undergraduate student retention research is that most IHEs can build higher levels of student engagement and commitment with the development of their own infrastructure for influencing students' academic and social experiences. Students who have stronger institutional commitment levels and higher rates of satisfaction are more likely to persist in college and complete their educational goals. Retention activities and strategies should be grounded in research so that common knowledge and best practices can be developed and shared across the higher education community. CRM systems can be strategically used to fill in the gaps of an already well-conceived student retention plan.

With the overall lack of progress for increasing undergraduate student retention, the call to action is clear. Examining how technologies like CRM can be used for student retention purposes is important because nearly half of all students drop out of college at some point in their college career (Ackerman & Schibrowsky, 2007; Anderson, 2005; Bosco, 2012; Brown, 2015). With the careful application of retention research and planning, successful retention strategies can be developed and replicated in other colleges and universities.

Much of the focus on CRM communication systems in college and university settings is based on an understanding of how institutions can positively affect undergraduate student retention rates. One critical piece connecting many of these efforts is using CRMs to maintain contact and to build positive relationships with current student populations. CRM systems and processes have been adopted by IHE's to manage retention, improve services, and provide better lines of communication to students (Seeman & O'Hara, 2006).

Limitations

There are several research design limitations in this study. First, while the nine stakeholders interviewed have close connections and knowledge about the CRM system implementation, interviews with additional stakeholders, like faculty, may have added more perspectives to strengthen the research findings. Although the role of faculty in CRM implementation at this IHE was limited, this study may be more complete if full-time faculty perspectives were included in the interview data set.

Second, there is a possibility that this study could have been further strengthened if time constraints were not in place. Time is always a factor that plays a role in data collection and analysis, and there was an urgency to get all of the interviews completed before the semester break. In addition, there are many sudden and immediate structural changes occurring in this university, so there was an urgency to interview these key stakeholders while they remain in their current positions. Some interviewed stakeholders may be losing their employment at this university and others may need to shift to different positions. In an effort to capture these stakeholders' experiences and for them to have time available for the interview, all interviews had to be conducted within a five week time frame. This may have inhibited the stakeholders from sharing all information that they would have liked to share. Also, it might be beneficial if this research study was conducted again once the IHE has re-stabilized.

Third, the researcher-designed interview protocol lacked testing with other IHEs. A version of the interview protocol was pilot-tested, but some revisions were made since the pilot testing in order to solicit more specific information from this case IHE. The lack of extensive field testing of this instrument impacts the validity and reliability of the results.

In the future, it may be helpful to examine the use of CRM systems at an IHE not undergoing massive restructuring change in order to have more time to conduct interviews with stakeholders and analyze a more stable operation. Adding in some full-time faculty interviews could also help to provide insights and recommendations that are not included in this study. More extensive testing of the interview protocol would also be beneficial for similar future studies. Nevertheless, these limitations should not negate or diminish the findings of this study.

Implications of the Results for Practice, Policy, and Theory

The results of this study showed that the introduction of a CRM system into an IHE is more complex than anticipated, even if an institution purchases a pre-designed CRM system that is ready to install and use. CRM systems are an information processing tool that requires a great deal of planning and coordinating upfront. The planning and coordination includes deciding on what data and specific attributes will be used, what features (communications, advisor notes, early alerts, faculty access, degree planning, etc.) will be needed, and who will coordinate the system. In many cases, adopting a CRM system will require a reconfiguration of the student-related service functions currently in place. The implications of foregoing the time and effort needed for key stakeholders to work together and custom design the CRM system, are great. The investment of money in the CRM system purchase and implementation requires thoughtful pre-planning by a committed and collaborative group of faculty, staff, and administrators.

In terms of CRM system implementation, it is critically important to get the strategies, processes, and collaborations, lined up before purchasing the CRM system. IHEs can benefit from extensive planning and coordinating very early on in the CRM system adoption process. Since many retention processes involve faculty, or at least their input, it is especially important to get early faculty feedback and buy-in to the CRM system process. Senior leadership and administration should also be invested, especially to encourage faculty engagement in the student retention process. The implications of this study revealed the importance of developing a strong leadership-driven student retention plan prior to a CRM system adoption.

To successfully integrate a CRM system into an IHE requires many decisions before and during the initial implementation, but flexibility is also essential. In the case of this IHE, a number of retention-related activities and strategies in communications and early alerts did not develop as anticipated. Consequently, those strategies and activities needed to be redesigned in order to improve the CRM system processes at this IHE.

Recommendations for the Community of Practice

This research study suggests recommendations for those IHEs that are considering using a CRM system for undergraduate student retention. The successful adoption of a CRM system for undergraduate student retention involves stakeholder collaboration, planning, and decision-making before purchasing a specific CRM product. Recommendations and processes include:

1. Conduct an initial assessment on the number of students who dropped out of the IHE and translate that into the budgetary impact for the institution. Show IHE retention trends (compared to similar institution retention averages) over several years so that a baseline is established to compare to future performance.
2. Conduct an assessment of strategies, processes and costs currently being used at the IHE towards the retention of students. Survey faculty and staff as there may be retention activities and processes not captured by traditional institutional data. Identify these strategies and processes in a spreadsheet to be used for stakeholder awareness.
3. Investigate the literature on research-based retention programs (see reference list) and select or synthesize research to share with stakeholders that represents all departments and responsibilities connected to the IHE. Prepare the research and ideas on retention best practices to use during a stakeholder awareness meeting. Anticipate possible feedback from stakeholders and be prepared to address objections as they arise.
4. Meeting One: Invite stakeholders, representing all area of the institution, for a meeting (at a convenient time with refreshments) on issues surrounding undergraduate student retention and the need to keep students enrolled at the IHE. Do not forget to include students in this discussion. Discuss how students prefer to receive campus communications. Use RSVP's to seat participants in diversified mixed table groups and facilitate a discussion on retention issues. Record key points using a tool (large sheets of paper) for a visual of group discussion points. Have top administrators voice their support for the process and for the priority of retention programming.
5. Meeting Two: Convene stakeholders for a discussion on retention priorities and develop a plan for the IHE. Share retention materials and ideas developed so far, and have participants record what they think is important to include for the institution's retention

plan. In addition to retention processes, focus on what the expectations are for each of the stakeholders and how communication between the stakeholders will work. Discuss how an early-alert process should work between faculty, students and staff, as well as who should "own" the retention process and system. List elements that can be measured, such as student e-mail read rates, faculty participation in early alerts, etc. and decide what should be measured and how this will be communicated. Chart and post group comments on the wall and encourage others to view all suggestions so they can add comments and read what others groups have recorded.

6. Call to Action: Merge the charts into a cohesive document that identifies what the stakeholders feel is needed in a student retention plan, then send it out to all stakeholders. Have the college president or other senior officers ask for volunteers to serve on a retention team in order to assess different programs that provide systems for increasing student retention and overall enrollment. The team should be prepared to assess solutions and also consider the budgetary needs and possible impact for specific retention strategies.
7. Develop a campus-wide undergraduate student retention plan, using the retention research, contributions of the retention team, and contributions of stakeholders (including students). Seek a senior administrator's budgetary support to implement the plan. Decide what elements of the plan need a CRM system vs. those activities and processes that can be done outside of the CRM system. This plan can be used to establish priorities for a CRM system selection, as needed.
8. CRM Product Review: Develop a criteria checklist from the retention plan (with space for notes), and list needed components for the retention team to use when looking at commercial CRM systems. Include a place for costs (wherever applicable) for CRM system purchase, ongoing licensing fees and vendor support costs, CRM system-related

staffing, Instructional Technology needs, training, maintenance costs, and replacement. Add-on the per message costs for features, such as texting, extra site licenses, etc.

9. Develop a list of measurement tools and checkpoints for the CRM system. Ask vendors about what can be measured (e.g., student e-mail read rates, faculty participation in early alerts, etc.) and have each vendor show the location of measurement data in their CRM system. Be aware that this feedback loop of important and may be difficult to locate or even produce with some vendors.
10. Identify the CRM systems that are potential systems for your institution. Set up meetings with CRM system vendors to present their retention CRM solutions to the retention team. Vendor options should be compared to the criteria checklist and team members should take notes on each system for comparison later. Develop a consensus on what is offered by each vendor and if there are multi-year contract discounts. Be sure to have a clear idea of what upfront and on-going costs are for each vendor and their CRM system packages. Ask about the level of support after the sale regarding what service is included in the contract. Check to see if the contract includes system maintenance support costs in the future. Ask how each vendor supports transition into another product, should there be a need to move onto to another system provider. Also discuss the options should the vendor decide to phase out their CRM system product. Repeat the process for each vendor and use the checklists for a full-group discussion. Consider sending faculty and staff to retention or CRM system related conferences.
11. Have the team identify and review costs for each vendor, including the costs for additional applications added to the CRM, licensing fees and text messaging. Look to see how these costs are listed on the contract for purchase. Pay special attention to services and costs which occur after the sale so that an accurate budget can be established. On the individual

campuses, the budget should consider any additional staffing and equipment that will be needed to operate the CRM. Compare these costs with campus staff that have budget authority in order to ensure that the resources are allocated correctly to fit the launch timetable.

12. Develop a list of CRM start-up processes which address staffing, Instructional Technology coordination and processes (i.e., data transfer, training, communication plans early alert development, etc.) and attribute lists (which identify the data needed for the CRM system). Assign a person to be responsible for each task. In addition to the data evaluation and transfer, policies and procedures will need to be adjusted or created along the way. Create or update campus job descriptions to reflect student retention priorities.
13. Check with other institutions who have already adopted similar programs to explore how their implementation has progressed. Interview their CRM coordinators to get specific information on vendors they considered, implementation tips, budgeting, timetable development, and CRM system features. This may help the committee with its own CRM system process. Ask about the challenges of CRM system implementation to understand why they choose a specific vendor.
14. Once the criteria is reviewed and the vendor is identified, a timeline should be developed for CRM system implementation. This study found that allocating six months to a year for start-up processes, with a fall semester launch is recommended. Provide a blank yearly calendar for the team to fill in with institutional dates, holidays, term end dates, deadlines, etc. Use backward mapping to identify what needs to be done and the preceding time/dates needed to accomplish each step.
15. Develop the necessary assessment tools and check-ins along the way so that the committee and campus administrators have a way to manage and adjust the process as needed. Be

able to track CRM features, such as student e-mail read rates, faculty participation in early alerts, advising notes activity, messages responses, early alert closing rates, etc. Arrange for regular meetings to update staff, present results or provide training.

Consideration should be given to how extensive the CRM system should be. There may be components of a packaged CRM system that may not be needed, or that could be done with campus-based staff instead of purchasing that particular feature from a vendor. Evaluate the differences in processes, workflow, added costs, advantages and disadvantages of using a CRM system to do specific processes vs. doing those tasks outside of the CRM system. Campus size also plays a role in selecting the components to include in the CRM system. Smaller IHE campuses may find that they can provide some in-person functions that are far better than using a CRM system to deliver the same process. CRM system processes and applications should be compared against IHE best practices so that gaps can be identified. CRM options and applications can be added or pared back depending on the IHE budget and scope of the retention project.

It is important to establish an overall budget. Special attention should be made to on-going costs associated with the adoption and implementation of a CRM system. Most CRM programs require annual licensing fees, which may be based on the number of users in the system or even the number of students at the IHE. Some features, such as text messaging, charge the IHE for every text message sent. Costs for regular maintenance of the CRM system and ongoing training also should be considered up-front. Staffing and budgets allocated to student retention also need clarification. This study found that allocating at least one full-time position to daily CRM system coordination is recommended, along with the right managerial staff to support the CRM system efforts at all levels in the IHE. Senior administrators should be on-board and supportive of a CRM system adoption and implementation plan. Who “owns” the CRM system can make a difference in the success of using it. This study found that if academic affairs takes on the lead role in adopting the CRM system and then student affairs implements the CRM system retention plan, a successful launch is more likely.

The start-up of a CRM system includes identifying CRM student attributes, and designing communications, filters, early alert messages and other plans before launching it. Once the system is launched, continuous assessment of the CRM system is important. For example, faculty and student response rates can be tracked, along with student e-mail read rates for CRM communications. As results come in, adjustments can be made to the CRM system processes. At the IHE in this study, adjustments had to be made to the volume and timing of CRM messaging communications to the students. If the students received too many messages within a small amount of time, they simply did not open and read the messages. Continuous monitoring of these kinds of processes is critical so that adjustments can be made as soon as an issue becomes evident.

Recommendations for Future Research

This case study describes the introduction and use of a CRM system in a large Midwestern IHE. The findings demonstrated that there are many factors and challenges that affect the successful implementation of the CRM system in this IHE. These factors include: preferred methods of student communications, faculty participation in early alerts, monitoring processes, filtering methods, advisor protocols, and student reaction. Since the focus of this case study was to present an overview of CRM system use for undergraduate student retention, future research might look at the key components that make up the CRM system retention process.

One particular finding in this study was that less than half of the faculty at this IHE participated in the early alert process. A study which explores just the faculty/student early alert interactions could offer potential insight into this specific feature of the CRM system. What are the best strategies for generating a successful faculty-led early alert process for identifying and reaching out to struggling students?

Since almost half of the students are not reading their e-mails at this IHE, as documented by the CRM system tracking patterns, exploration of CRM communication preferences for undergraduate students would help advance this research discussion. Students appear to be changing their habits regarding accessing social media, interacting with e-mail communications, and text messaging. They are significantly connected to technology and communication, but not necessary in the ways IHEs want to reach them. Colleges and universities might benefit from studying the most effective ways to communicate with college students once they begin classes. Multiple stakeholders mentioned the need to figure out how to communicate with undergraduate students in the method and time they prefer, and not force or expect students to use methods that they will not easily adapt to, given their workflow, cultural background and attention span in an already cluttered information-packed environment.

Student engagement plays a major role in undergraduate student retention. A CRM system offers a great number of options to help build student engagement, but there is little research on how specific CRM system features might be connected to increasing student engagement. Attaching measurement tools to activities might be explored.

Retention-based CRM systems offer many features which may have a positive impact on undergraduate student retention results. While CRM systems for retention purposes might have a positive impact on overall retention strategy, little is known as to which CRM system features have the most impact on moving student retention rates forward. Given that many CRM systems allow for optional application additions to the core system, it would benefit the practitioners to know which of those applications might offer the most impact on student retention.

Conclusion

This research study breaks new ground in the literature with its detailed description of a CRM system being used for undergraduate student retention at a public undergraduate IHE. While previous studies mention the use the CRM systems for business and industry, exploration into how CRM systems are used in higher education settings for undergraduate student retention is emerging more recently and the knowledge base is far from complete.

The purpose of this research study was to answer the question, “How does a large Midwestern undergraduate institution use a CRM system for undergraduate student retention?” This single case study provided an in-depth view into the use of a CRM system for student retention at one IHE. While CRM applications for prospective students are covered in the literature, there are significant gaps in CRM application for the purpose of undergraduate student retention. Many IHEs do not yet have a CRM dedicated for undergraduate student retention.

Interviewing nine key stakeholders who interact with the CRM system at multiple levels provided insight and a rich description of the CRM system planning, launch processes, challenges and implementation at this IHE. As the front-line operators of the CRM system, these stakeholders have extensive knowledge of the advantages and challenges for using the CRM system for student communication and retention. It is a tool which offers great potential.

Some of the research results were surprising. In this study, lower faculty and student participation rates with CRM processes reduced the overall effectiveness of the system. Yet the CRM system offered a great opportunity for campus staff to organize and coordinate interactions and processes, assist those at risk, and to communicate with students. Given that IHE adoption of CRM systems for undergraduate student retention is in its infancy in terms of the number of IHEs using such systems, there is still opportunity for further evaluation and study.

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Appendix A: IHE Case Study Site Profile

Selected Midwestern Undergraduate Institution of Higher Education

Undergraduate students: 12,033 in 2016

- Undergraduate Program: Associate of Arts & Science Degrees covering freshmen and sophomore years
- Top majors: Business, Health Sciences, Education, Communication & Biology
- Freshmen 65% of the total - Ratio: female students: 53% vs. 47% male
- Students of color: 13%. Average class size: 26. First generation students: 60.9%
- 37% were in the top half of their high school class and 13% were in the bottom quarter.
- Undergraduate Full-time student retention: Fall 2012 to Fall 2013: 67%. Part-time students 51% (2015)
- 313 faculty and Instructional staff in 2016.
- 2015-16 full-time Tuition and Fees: $5,330 per year – 56% receive some form of financial aid

IHE Fact book (2016)

Appendix B: Interview Protocol for CRM Stakeholders

Time of Interview:

Date:

Place:

Type (Telephone; in-person, etc.):

Interviewer:

Interviewee:

Position of interviewee:

(Briefly describe the research project)

Questions:

1. What is your name, current position, and experience in higher education.

2. Describe your role and experience with the customer relationship management (CRM) system and processes at this IHE.

3. What is your experience and involvement with undergraduate student retention, more specifically with retention of freshman student advancing to sophomore status?

4. Describe how the CRM system is being implemented at this IHE for undergraduate student retention.

5. Describe how the CRM system contributes to undergraduate student retention, more specifically with retention of freshman students advancing to sophomore status.

6. Based on your role and experience, describe how you see freshman students interacting with the CRM system.

7. From a retention perspective, how does the CRM interact with individual faculty and staff who serve freshman students?

8. From a retention perspective, how does the CRM interact with campus departments (i.e., student services, registrar's office, financial aid, and/or advising)?

9. Describe your experience with undergraduate student early alerts and e-mail communication as it pertains to student retention, more specifically with retention of freshman students advancing to sophomore status.

10. Describe your views on effective practices for retaining undergraduate freshman students.

11. From a retention perspective, describe the challenges with regard to using the CRM system on your campus.

12. From your perspective and your data, is the CRM system having a positive, neutral, or negative effect on freshman retention? If so, how is it having a positive, neutral or negative effect on freshman retention?

13. Is there anything else you would like to tell me about using CRM systems for freshman and sophomore retention on your campus?

Final Comments:

- Request copies of CRM and freshman retention-related documents for review.
- Thank Interviewee for their time and participation.
- Tell interviewee that you will be fleshing out the interview notes and would like to share the detailed interview notes with them in order to confirm the credibility of their responses.
- Remind interviewee that you will be providing as much anonymity as possible by changing their name to a pseudonym within the research study.
- Let interviewees know that you will share a draft of the research report, as well as a copy of the final research report with them.

Appendix C: Informed Consent Form

Research Study Title: A Study of Customer Relationship Management and Undergraduate Student Retention

Principal Investigator: Christopher A. Beloin
Research Institution: Concordia University - Portland
Faculty Advisor: Dr. Candis Best

Purpose and what you will be doing:
The purpose of this study is to describe the use of CRM (Customer Relationship Management) systems for undergraduate student retention. The researcher will interview volunteer CRM and retention staff and administrators. No students will be interviewed and no one will be paid to be in the study. We will begin enrollment on October 1st, 2017 and end enrollment on December 20th 2017.

To be in the study, volunteers will be asked to participate in interviews with the principle investigator (PI). The PI will ask questions, collate data, and report on findings. You will be asked to respond to questions asked via telephone. You will be asked if your campus could provide CRM related documents which may help this descriptive study.

The procedure will be to identify key CRM & Retention contacts on campus and request permission via this form for interviews. The researcher will ask a standard set of questions with follow-up questions as needed. Notes will be taken but the interview will not be tape recorded. The interview is expected to take about 1.5 hours of your time with a follow-up by telephone and e-mail, as needed. Any supplied documents will be reviewed and either returned or destroyed after the study is completed. All documents will be held as confidential.

Risks:
There are no risks to participating in this study other than providing your information. However, we will protect your information. Any personal information you provide will be coded so it cannot be linked to you. Any name or identifying information you give will be kept securely via electronic encryption or locked inside file drawer. When we or any of our investigators look at the data, none of the data will have your name or identifying information. We will only use a secret code to analyze the data. We will not identify you in any publication or report. Your information will be kept private at all times and then all study documents will be destroyed 3 years after we conclude this study.

Benefits:
Because there is literature base is minimal on the use of CRM for undergraduate student retention, the information you provide could advance our understanding of applying CRM to aid undergraduate retention and benefit your institution and other institutions of higher education. An understanding of common and perhaps best practices for using CRM in undergraduate student

retention will develop. You could benefit from this study by gaining knowledge on how CRM is effectively used in other institutions for undergraduate retention purposes.

Confidentiality:

This information will not be distributed to any other agency and will be kept private and confidential. The only exception to this is if you tell us abuse or neglect that makes us seriously concerned for your immediate health and safety.

Right to Withdraw:

Your participation is greatly appreciated, but we acknowledge that the questions we are asking are personal in nature. You are free at any point to choose not to engage with or stop the study. You may skip any questions you do not wish to answer. This study is not required and there is no penalty for not participating. If at any time you experience a negative emotion from answering the questions, we will stop asking you questions.

Contact Information:

You will receive a copy of this consent form. If you want to talk with a participant advocate other than the investigator, you can write or call the director of our institutional review board, Dr. Oralee Branch (email obranch@cu-portland.edu or call 503-493-6390).

Your Statement of Consent:

I have read the above information. I asked questions if I had them, and my questions were answered. I volunteer my consent for this study.

______________________________ __________

Participant Name Date

______________________________ __________

Participant Signature Date

______________________________ __________

Investigator Name Date

______________________________ __________

Investigator Signature Date

Investigator: Christopher A. Beloin
c/o: Professor Candis Best
Concordia University – Portland
2811 NE Holman Street
Portland, Oregon 97221

Appendix D: Document Matrix

Document Type	***Document Provider***	***Document Description***	***Comments***
CRM Training Agenda	Division of Student Affairs – Marketing Department	Describes student & faculty initial training with CRM systems	Initial CRM training prior to implementation
Faculty Early Alert Plan	Division of Student Affairs	Describes Faculty expectations and time-lines for issuing student alerts	Plan for identifying at-risk students early in the term
Non-Registered Student Survey	Division of Student Affairs – Enrollment Management	Survey information gathered for students exiting the IHE	Attempts to get specific information to address retention issues
E-Mail Campus Communication & Early Alert Plan – Fall 2014	Division of Student Affairs – Marketing Department	Details both type and timing for distribution of CRM related communications	Communication plan set by semester
E-Mail Campus Communication & Early Alert Plan – Spring 2015	Division of Student Affairs – Marketing Department	Details both type and timing for distribution of CRM related communications	Communication plan set by semester
Budget & Multi-Level Decisions	Division of Student Affairs	Describes IHE reorganization and loss of staff positions	Budgetary impacts on staff positions
Undergraduate Student Retention Data	Division of Student Affairs and official institution web site	Provides historical data on undergraduate student retention trends	Examine change in retention rate patterns

Appendix E: Data Summary: CRM Implementation

Interview code	Page #	Finding: CRM Implementation (CRM Start-up & Training; CRM Capabilities & process; CRM data & results) *Personal Interview Excerpts from Stakeholders*
MM	101	They learned that the CRM needs a full-time position to support it.
MM	103	I had about 7 months to get the CRM up and running
KK	28	Launch with full operation in Fall semester rather than doing a soft start – take the time to get the system right or all you do is clean up after words.
KK	15	CRM should contain enough intelligence to figure out what you need & have easy access to get at data and use it in intelligent ways
MM	113	Using CRM for retention processes is kind of like service after the sale when you buy a car. Higher education is catching up to what already happens in the business world.
MM	120	In the start-up phase, have the right people at the table and develop a plan to make sure the system does what you want it to do. Once you set-up a time line keep to it.
KK	17	Talk to other campuses that adopted CRM and get more than just the happy talk about how they work.
MM	104-105	Campus Management claims 700 IHE's are using their system and Salesforce and is one of the biggest CRM providers in the world
MM	110	Some CRMs come 'out of the box' and are ready to go as a complete product serviced by one company vs. others like Salesforce offer a basic shell and you add apps, like Mail Chimp, from other vendors depending on what you want it to do. Can use 3rd party providers like Sierra-Cedar and Target X to help you configure the system into what you want. They show you how to build out your CRM. Many CRM positions require business analysis skills to analyze what you need so you pick the best CRM options to fit your needs.
MM	106	Licensing fees can depend on how many users, campuses, students & what features you want. You can reduce the costs by opting out of some options you don't need as much. Be aware of post-purchase fees such as per-text fees and student volume bands.
KK	17	We thought we could do a project and then be done, but CRM planning is ongoing. It takes way longer and its more complicated to get the CRM up and running than people think
MM	109	Will/should the CRM be able to store all your data – We use Image Now for student records like transcripts – don't want to end up with different documents in different places so plan for where the data should be kept and archived.
VK	24	We had to make a decision early on about how the data should flow with the

		CRM, so it goes one way, from the master student file (PeopleSoft) to the CRM. How will these systems interact with each other?
MM	121	Need to figure out what data you need, gathering that data, and importing it into the CRM system, and this all takes time, plus it does not always work the way you want it to the first time.
BN	66	Using a CRM to manage appointments vs outlook systems
KK	26	Plan folder names and placement ahead of time as it's hard to change them once you start system – Also plan where to archive folders and communications as you need to.
MM	115	About 143 individual student attributes are loaded into the CRM from the master student file and can be accessed by advisors
KK	25,26	The system can get lots of junk in it. You need to go back and cleanup the system and find a way to archive data – should budget for some system maintenance from vendor or others
BN	65	How are other databases such as student conduct integrated into the CRM?
CB	164	Our housing areas (mostly owned by outside companies) did not use the CRM for their communications or alerts – they mostly used text messaging to reach the students.
KK	20	"Training is an ongoing thing" You can't just train people once.
MM	116	Need to figure out what all the CRM roles and needs are first, then build a training program which will be customized to those needs. We started much more broadly then we needed to in our own launch.
JD	85	Training is by Skype and mostly around items which we need a refresher on
KK	39	Having a system which is not doing everything you want it to do, is difficult to maintain, when dollars are tight, and they are tight everywhere, I could see this going away
KK	36	So I don't think the data shows we changed retention, but it has changed the conversation here – So it's not the be-all-end-all to the problem, that is an issue with technology, but I don't think that means it's not useful. I can't see why anyone would not want to use it.
AB	198	CRM systems offer great potential, but only in support of a good student retention plan which is already in place.
MG	129	The big thing that supported us was the CRM models they set up for us, which supported our day to day advising.
PT	215	CRM systems are a step removed from direct personal contact with students – need to be careful how you use them so you don't lose too much of that.
MM	123	I would say CRM has a neutral effect on retention – Given the turmoil over the past couple of years with budgets and the reorg, the system has not been used to its fullest capacity. We gained so much on the organization side using the CRM, but have not made much progress on the student retention side and follow-up with students to the degree we wanted to.
MG	135	Prior to the CRM our workload was heavier just to get and organize the data, plus we often had to have another staff member or supervisor run the reports – now we do those ourselves.
CB	168	With the reorg, we needed to redesign almost every function in our student affairs area, and the CRM allowed us to do that in an efficient way.
BN	53	Prior to the current CRM, we did many similar processes in terms of retention

		strategies, mostly by developing relationships and connecting with students, but the data used often came from manual processes…. it was harder to get information out or track what we were doing.
JD AB	90, 190	I see the CRM as a tool, it's just a tool The CRM is kind of like a toolbox if integrated processes which can do lots of individual retention processes, but in a more organized and trackable way.
PT	216	The CRM gave us more updated information – before we had static lists to work off of, and if a student had registered since that list was made we were not aware of it. The CRM lists could be updated daily so we know those we were calling had not acted yet.
BN	58	The big areas are student communications, advisor notes, early alerts sent out by faculty, using filters to target and reach specific students, and information, including student notes, which may help advisors with student needs. Pre-CRM, these processes had to be done by hand.
MG	134	We were one of two campuses which used the student scheduling quite a bit – students could go into Agile Grad and sign up for a 30 or 60 minutes appointment to see an advisor. As regional advisors came on board (who served two campuses) there were some issues with students picking the right campus for their appointment – they would select days which the advisor was on the other campus and the system could not lock those locations out to the specific day.
CH	240	The student profile page offers a quick review of key student facts to review before meeting with student.
MG	133	Students really appreciated getting a 'map' which offered them a pathway towards earning their degree – this CRM did not offer that feature but I think it could be a powerful tool for our students, if they could check their progress.
AB	177	The student notes feature allows us to share our advising notes with other advisors, administrators and even other locations if students attended another one our 13 campuses.
CH	255	Adding student notes was problematic as there often was not enough time to update the notes during the apt. itself or after the appointment. Advisors would get them in about 70% of the time.
PT	219	Student notes were terrible for me with the CRM – even in a half-time day, I would see 6-8 students so taking notes in the CRM was difficult, realistically 50/50 if they were entered into the CRM. It depended on the day.
CH	254	When we are able to send text messages (depending on budgets as we get charged per text) it only goes one way – students can't respond back like with regular text messages. We can send a link for them to click on but not be able to track if they actually did click it
PT	222	Other than getting an email about an alert, the student did not actively interact with the Retain CRM – they received communications in their outlook email to hopefully act on.
KK	34	We are sending out early alerts to 11% of our entire student population and only half of those students are opening them
PT	214	As an advisor, when I got a student alert, I would email and phone the student (depending on severity), but I don't know if it was a perfect system because often the student did not respond back. This is where faculty who see the

		student in the classroom, might be a better first responder, and some have asked for student phone numbers to contact them.
MM	122	We see student read rates of 45-55% of communications and alerts, and after they read it, what are they doing about them? I don't know if we can get them to interact given the competing technology out there.
CH	249	We don't do a good job closing the loop on communicating about student alerts. Faculty usually don't know what we did, unless we cc'd them in an email about the student, and we don't know if the faculty member addressed the issue with the student, since almost none are using the notes in the Agile Grad side. So this information goes out, the alert goes out, but what actually happened?
KK	34, 122	Only 30 to 40 % of our faculty are participating in our alert system to begin with – So you can see how you have a system and there are all different places where people are not using it, so you have to be careful about that.
JD	79	I would say about 50% of faculty actually participate in the alert program… It's almost worse than not having an alert program at all. Not more than 50% of students are reading their alerts.
BN	61	Faculty participation rates vary by campus, with one campus have a 80% rate and another at 50%
BN	65	The student alert is a huge component and I have heard from faculty that it is easy to do, and I think it's a great prompt for advisors.
PT	214	When we started alerts the student was not able to see which class the alert was from, just that there was an alert. This changes when faculty could make comments right in the alert the student received so at least the student knew where it was generated from.
CH	245	Only about 15% of appointments were made with the Agile Grad CRM. This is due to student confusion over log-in name (different from main system), lack of training, and having some of our advisors serving multiple campuses – which made scheduling difficult as students were selecting the wrong campus for the apt. day.
JD	84	I am in the Retain CRM every day and use the notes feature the most
JD	80	Retain is being used for notes about 75% of the time
BN	51	We cannot break down student notes as nicely (to measure if they are done) but we can sort by successful vs. not successful alert follow-ups.
BN	73, 74	Before the CRM we did advisor notes on paper updated in a file, recording notes on sheets of paper, & these have been eliminated since then…the CRM offers most of that information at our fingertips. The biggest thing for me is tracking activities the CRM changes how we do that.
JD	81	We have good data on demand
MG	133	We got support for the CRM campaigns we did, like to all non-registered students – they made sure we had the right filters to select those groups to contact.
KK	4	The CRM adoption process starts with a discussion with key players, including Student Affairs (advising), Academic Affairs (faculty), and students.
KK	5	The ideal time to launch the system live is the Fall semester. The idea is to have everything planned out and ready to go with full implementation

KK	2	A couple of years before the current CRM system was adopted, this IHE used a different CRM system and little time was spent on the implementation and training of it. Ultimately, this first CRM system was not widely adopted by stakeholders throughout the IHE and the CRM was phased out.
KK	5	Setting up a CRM system initially takes ideally about a year to do it correctly. There should be a full-time CRM technician with strong IT skills to set up the process and handle day-to-day technical issues.
KK	5	A program administrator handles budgetary, implementation oversight and outreach aspects for the CRM implementation.
BN	2	There are other components, such as student conduct and academic appeals which could be better integrated into the current CRM system. Right now, these are all separate mini-CRD like systems which for the most part, do not talk to each other.
JD	3	Some components of the CRM system may actually have an undesirable effect. At one campus location, less than half of the faculty participated in the early alert process and approximately half of the students read their e-mail alerts. If faculty did not issue an early alert concerning poor student academic progress, then the student may perceive that they are doing fine academically, when they are not.
CB	2	At the start, this campus' CRM start-up and launch was helped by two student affairs staff that are good at developing communication, more powerful users of the CRM system and comfortable using the CRM system to its potential.

Appendix F: Data Summary: Multi-Level Decision-Making

Interview code #	Page #	Finding: Multi-level Decision Making (Budgets; Retention-based Leadership; Institutional culture and change) *Personal Interview Excerpts from Stakeholders*
KK	5, 132	Retention is everyone's opportunity and everyone's responsibility.
BN	48	I see retention as everybody, from the business office to the library to the food service to custodians walking around campus.
KK	10	There has to be some kind of institutional framework & then the culture of the campus can do it.
MM	112	Our enrollment environment is changing to a more competitive situation where you need CRM systems to get your message out to students before or at the same time as your competitors.
CB	153	The work culture in our state is leaning back towards manufacturing while we are a liberal arts IHE, so we compete more with technical colleges for students.
CH	231	Some high school students are not prepared for the cultural change they encounter as they move into the college settings. Many are used to not opening textbooks or doing home and getting by. They encounter a new environment where studying is necessary to succeed.
PT	206	There has been a change in how our four-year partners interact with us. Now they more actively compete for the same students rather than let them transfer in a 2+2 situation. This is because their enrollments are dropping as well.
AB	174	Decisions are made at multiple levels in our IHE. The Retention CRM decision was made in academic affairs division, but its implementation was out of student affairs. Early-on, many decisions about CRM were made at the local campus level, but this resulted in inconsistent processes and policies. It seemed that what the central administration wanted was not really enforceable at the local level. With the budget and staff reductions, we were no longer able to have multiple processes, and our IHE was forced to standardize most of our processes and at least everyone was on the same page.
KK	19	There have been tons of discussions about when we should do early alerts, how many should we do, and if they should overlap with mid-term grades which is another form of student alert. We have decided to make larger changes only once a year so there can be at least some consistency.
KK	27	At the start of our Retention CRM start-up we decided to let virtually everyone who did at least some advising to have permission to use most of the CRM features – we had to revisit those decisions later and lock down the wider permissions to only 25 people.
KK	36	As we made decisions about how we use CRM system, there was continuous

		second guessing by some as to if those were the best decisions.
MM	106	From a budgetary point of view, you can select more or fewer CRM program options to keep the cost within your budget. So some colleges don't get the communications module and run that separately.
AB	176	We launched our CRM in 2014, but in 2015 our IHE's state support was cut by $5 million and 83 full-time equivalent positions (FTE"s) were eliminated. The CRM allowed us to redesign our processes, centralize most of our backroom operations, and automate many functions. It was a profound change after previous years of budget cuts.
BN	46	Declining budgets and financial stability are major concerns for our IHE operations – we now need to continue to increase our effectiveness while working with less resources. The CRM gives us the data to argue why the investment is needed.
JD	80	After the 2015 budget cuts our administrators realized we cut advising too deep and some part-time advisors were added back in so we have some additional help on our campus for advising.
MG	139	After the budget cuts we eventually got additional advising help since we were down to one advisor at times to help students.
KK	15	Our top leadership was looking into another CRM recently and at least early on there was little collaboration with the end users of the CRM involved in the decision process.
KK	12	To get our CRM to its best operational level there needed to be more conversation around permissions, more conversations around who was going to use it, more conversations on how the training would happen.
KK	8	There is not an overall retention plan for the institution but some campuses have retention committees.
KK	3	I believe that each of our campuses have a different feeling about retention.
KK	38	I think who 'owns' the CRM is a big factor – also who needs to manage it.
BN	49	Administrators use CRM for reports, filters, and to gather data for their duties.
KK	3	If you don't have a strong Provost then it's (participation in retention communications and alerts), not required, it becomes nice talk & not directed from top – it won't work unless you really have it coming strongly out of academic affairs. There has to be a lot of buy-in from the rank and file, and the academic side.
KK	6	Academic affairs and the IHE administration should applaud, reward, and support retention efforts throughout the institution.
MM	100	My first experience with CRM ended up as a failure – poor vendor support and training, along with lack of support from administration.
KK	1	Program came out of academic affairs & institutional research but they were not prepared to managing the grant, after discussion by the management team, student affairs assumed ownership of this project going forward.
AB	171	The starting point for the retention CRM was a three-year institutional grant for $398,722, which covered the CRM product & support, a full-time program manager and four part-time advisors to work on high need campuses.
KK	11	For our recruiting tool Connect we pay $50,000 a year, the retention Retain products are $30,000 and $12,500 for Agile Grad. The key is that even though these products are used across 13 campuses and our online program.

KK	38	We spend $42,000 for 13 or 14 instances – some colleges would be spending that for one campus.
MM	108	IHE's often look at CRM products and programs without considering the budgetary impact of the ongoing license fees they might need to pay for after the purchase. These fees can be based on users of the system or even number of students on campus.
BN	45	If we want to send out text messages to students we had to budget for the cost to do so. It can cost about .9 cents for a one way text.
JD	76	We are charged for sending out text messages in the CRM so need to budget for that. Some of our students complained that they were charge because they have limited texting (data plans) and thus text messages were a cost to them.
KK	26	Our ongoing budget for the CRM needs to include funds for system maintenance and clean-up. The system gets junky after a while and runs slower. We hired our CRM provider to help us clean up and archive those files.
KK	39	"Having a system which is not doing everything you want it to do, is difficult to maintain, when dollars are tight, and they are tight everywhere, I could see this going away"
MM	120	In the start-up phase, have the right people at the table and develop a plan to make sure the system does what you want it to do. Once you set-up a time line keep to it.
KK	24	Campus Management claims 700 IHE's are using their system and Salesforce and is one of the biggest CRM providers in the world
KK	24	We had to make a decision early on about how the data should flow with the CRM, so it goes one way, from the master student file (PeopleSoft) to the CRM. How will these systems interact with each other?
MM	120	Need to figure out what data you need, gathering that data, and importing it into the CRM system, and this all takes time, plus it does not always work the way you want it to the first time.
BN	46	The other challenge we are facing in higher education is budgets and financial stability – being able to invest, being able to provide strong data to argue what the investment is necessary and needed, & trying to formulate enrollment management plans that have retention structured into it.
AB	182-184	Traditional-aged student enrollment was dropping in a highly competitive recruiting market. Action was needed as the IHE budget was becoming more tuition-dependent (with recent state cuts). Since recruiting additional new students was more costly, increasing student retention seemed to be the low hanging fruit. Keeping students who are already on your campus seems easier and cheaper because you already have them, but can you keep them going forward?
KK	2	Previously, almost any campus staff member could send e-mails to "All Students" which resulted in hundreds of unnecessary communications going out to students. Students quit reading all of their e-mails. Decisions were made to lock down the system and allow just a couple of staff members per campus to format and send out packages e-mails once per week.
KK	5	When adopting a CRM system, it is important to decide who "owns" the CRM as the primary owner will have the most influence on how the system is implemented and used.

MM	1	It is important to have the right people at the table from the start, with representatives from key departments on the planning team. These people need to make the decisions on how to get the system up and running.
MM	2	Data is stored and processed for financial aid and student transcripts through a different system. It is important to decide how you want to store certain data and where it should be stored.
MG	2	Budgetary decisions have created great difficulty on the campus. This campus went from having four advisors down to one. Decisions regarding budgets and restructuring are impacting how the CRM system is working regarding student retention.
CB	3	The main IHE administration has struggled to justify the use of CRM systems for student retention, so it is important to use the system correctly.

Appendix G: Data Summary: Interdepartmental Communications & Interactions

Interview code #	Page #	Finding: Interdepartmental Communications & Interactions (CRM & Retention-focused Faculty and advisor interactions; CRM Student Interactions; Early Alerts and messaging) *Personal Interview Excerpts from Stakeholders*
KK	14	When people are looking at CRM systems, they need to involve faculty, students and all types of end users in the selection process.
BN	41	I think it's really important that we communicate the information we use and show how faculty and staff could be of help.
BN	62	Faculty can add a customized note to their student alert.
MM	114	With faculty you need to have expectations worked out at the beginning and clear communications going forward. We tend to bring them in at the end so they miss all the build-up and development, and this can affect their buy-in for alerts.
KK	5	It wasn't his job (as faculty) to remind students or help them, it was the job of student affairs.
KK	6	Academic affairs taking leading role in retention & supporting/rewarding retention efforts by faculty.
BN	59	I think that faculty are #1 in the student retention role…They are the lifeline to our students.
KK	12	There needed to be more conversations about permissions, who is going to use CRM, and training.
KK	14	I don't think there was enough faculty involvement (in the CRM) early on.
MM	114	Faculty need clear expectations and communication on their role in CRM.
BN	46	The other challenge we are facing in higher education is budgets and financial stability – being able to invest, being able to provide strong data to argue what the investment is necessary and needed, & trying to formulate enrollment management plans that have retention structured into it.
BN	46	So if we are cutting back stuff and losing those types of resources, how do we continue to be effective in our retention efforts if we have less money and less people.
KK	20	There are 3 types of employees at the campus level: advisors, events coordinators & info. specialists. They (all 13 locations) meet once a month (usually by Skype) as a group to discuss issues and solve problems.
PT	209	Doing preventative things is always going to be better than trying to fix things after it happens This applies to having student holds for advising and conditional admits so students have to check in before moving on.
CH	252	Would love to be able to do advisor-based communications to those students

		assigned to me. Right now these come from the central office and students don't know where that is. I could then send a message to just those students and they could hit reply to get directly back to me.
PT	221	CRM's can be used to target students in specific majors with GPA's, etc. So you could reach out to nursing majors with less than a 2.7gpa for a campaign to work with at-risk students for that major.
CH	234	Using CRM with one-stop advising model which allows for shorter appointments 10-15 minutes) for most cases.
CH	235	Every time you throw in another barrier (like student registration holds) you risk that students will decide not to resolve the hold or come in to see and advisor – not enrolling for future classes.
BN	64	I would love to reach students in the way they want to be reached & communicated to.
BN	45	To reach them (students) we utilize text messaging, social media, phone calls – we've done anything and everything as once size does not fit all.
BN	46	Communication strategies depend on what students need, but if it does not reach them in the format they need it's not going to be effective.
BN	70	With the CRM we can plan our communications and add more as we see fit.
KK	29	E-mail is not magic either. We can't send out email after email so we learned the hard way about that We try to send out important date emails once a month and to have campuses send out weekly newsletters for local items, rather than ad-hoc which loses its importance.
KK	29	The unintended consequence of this is that it does not mean anything to the student.
KK	30	It's unfortunate but 50% of students are not looking at their emails to see if they have an alert.
KK	29	We wanted to make sure that students were not getting too many emails and that we were talking to the right audience.
BN	76	Texting students offers a high success rate for contact, students were more likely to respond.
KK	25	Our IT department was not as involved with the launch overall, but the PeopleSoft group was because you had to monitor and understand how that import happens.
KK	31	Filters are important – we can now pull high school or non-enrolled students out of our messages and target those students we wanted to reach.
KK	30	Instead of getting 60 emails per week about activities the student gets four .
CB	164	Our housing areas (mostly owned by outside companies) did not use the CRM for their communications or alerts – they mostly used text messaging to reach the students.
MG	129	The big thing that supported us was the CRM models they set up for us, which supported our day to day advising.
PT	216	The CRM gave us more updated information – before we had static lists to work off of, and if a student had registered since that list was made we were not aware of it. The CRM lists could be updated daily so we know those we were calling had not acted yet.
BN	58	The big areas are student communications, advisor notes, early alerts sent out by faculty, using filters to target and reach specific students, and information,

		including student notes, which may help advisors with student needs. Pre-CRM, these processes had to be done by hand.
CH	240	The student profile page offers a quick review of key student facts to review before meeting with student.
AB	177	The student notes feature allows us to share our advising notes with other advisors, administrators and even other locations if students attended another one our 13 campuses.
PT	222	Other than getting an email about an alert, the student did not actively interact with the Retain CRM – they received communications in their outlook email to hopefully act on.
PT	214	As an advisor, when I got a student alert, I would email and phone the student (depending on severity), but I don't know if it was a perfect system because often the student did not respond back. This is where faculty who see the student in the classroom, might be a better first responder, and some have asked for student phone numbers to contact them.
BN	73, 74	Before the CRM we did advisor notes on paper updated in a file, recording notes on sheets of paper, & these have been eliminated since then…the CRM offers most of that information at our fingertips. The biggest thing for me is tracking activities the CRM changes how we do that.
BN	53	Pre-CRM campuses used physical files with hand written notes and very few of these processes were standardized.
AB	1	There is a marketing and enrollment plan at this IHE, but there is no institution-wide student retention plan in place, nor is there a regional student retention plan.
AB	1	Some campus locations have a student retention committee, but most of these committees dissolved with the last reorganization.
JD	2	With the CRM, communications can be organized and sent out to students from a centralized location. This helps to establish a flow of communication and messages don't get bunched up over a short period of time. As students view communications, the CRM system records the opening time of the message. This provides a record of student interaction with the CRM system.
KK	3	Early alerts worked when the faculty took the time and interest to contact those students with academic issues, which is what generates the alert. Since less than half of the faculty consistently used the CRM system, the net benefit to the student was inconsistent.
CB	2	In addition to a weekly newsletter which is sent out at the beginning of each week, student lists are run from the CRM system to identify students who have not yet registered for the next semester. Then, a combination of e-mail and phone calls are sued to communicate with the students. Facebook and Twitter are also used for communication.
CB	3	On the communication side, using the CRM system has cleaned up student inboxes and streamlined the communication process. Communication is an area where the CRM has made a positive difference.
AB	2	A huge advantage of the CRM system is the ability to track student progress, advisor interactions and programming activities.
AB	2	The CRM system allows for recording and retrieval of advisor or faculty notes which can then be used by another advisor who picks up an appointment with the same student.

CH	2	This stakeholder sees real value in the student early alert process, even if only about 30% of the students are opening their alert e-mails. The advisors at copied on the alerts so they can follow up with the students even when students don't look at the alert e-mail.

Appendix H: Data Summary: Student Retention Information and Results

Interview code #	Page #	Finding: Student Retention Information and Results *Personal Interview Excerpts from Stakeholders*
KK	16	There was little planning (with processes) and efforts differed widely by campus.
AB	198	Keeping in mind that building student engagement and satisfaction are important for student retention, CRM system offer great potential but only if it supports an already great retention operation. With our existing retention plan on the weak side, adding a CRM alone will not fix those issues.
MG	128	I think it takes more than one office to do retention – it takes a group and even the whole campus to work together to give students the information they need.
CB	150	That's a really big thing – developing relationships with those students, and creating student engagement events right away.
BN	53	Prior to the current system, we did many similar processes in terms of retention strategies, mostly by developing relationships, and connecting with students, but the data often came from manual processes.
JD	75	I think the personal touch and contacts with students make a huge difference, like the probation conferences I did this semester.
PT	211	During my 20 years in advising I never saw any campus plan for retention, nor any IHE plan for retention. We did talk about it with some committees, but it was sporadic with few connections to the previous discussions. Retention was important be we did not incorporated it widely across our campus, even though I think retention is everyone's job.
AB	182-184	Traditional-aged student enrollment was dropping in a highly competitive recruiting market. Action was needed as the IHE budget was becoming more tuition-depended (with recent state cuts). Since recruiting additional new students was more costly, increasing student retention seemed to be the low hanging fruit. Keeping students who are already on your campus seems easier and cheaper because you already have them, but can you keep them going forward?
MG	130	This incoming generation of students has more millennial types, and some of those want more attention and hand-holding than other groups.
MM	99	I don't know if it's culture, but some students think they can manage on their own – even if they can't. They don't often know they have a problem until it's too late. I think they do ask for help when they need to, but maybe not soon enough.
JD	75	Students tend to drop out when there are changes in their lives, when they are hurt, when they are sick or somebody dies.
AB	200	Many students choose to dropout only a few weeks into the semester, long before mid-term grades come out. It's better if faculty can notify us quickly when they see a student not attending classes. For example, if can intervene before the 10^{th} day of classes, when the tuition bill gets locked in, we might

		save that student thousands of dollars if they needed to withdraw from some or all of their classes.
PT	204	I think in the early years, retention seemed more like a student affairs job, rather than a faculty or campus-wide initiative. Student affairs was to recruit and retain them.
CB	152	We see a variety of students from all kinds of backgrounds, and so many different reasons for why they might drop out, often for reasons which are beyond their control. Something falls apart in their life and they have absolutely no control over that. Our focus is on having a good experience while those students are here.
MM	95	I think students are more complicated than they were in the past and they try to balance many other things besides their education.
PT	207, 208	I think retention comes back to engaging students on campus in both academic (like with our career center, or sophomore program), and non-academic activities (sports, clubs, organizations). For example, I remember the activities and groups I was involved with more than the classes, so cutting these opportunities out can hurt retention.
CB	162	We've done a number of in-your-face interactions with students to get them to sign up for appointments.
KK	37	Think about all the things that have happened in the past 3 years. Some of our enrollment & retention issues have to be contributed to the greater conversations going on (budget cuts, reorg, etc.).
PT	218	Problems came up during turnover or layoffs. Key people who knew how things worked were no longer there, and processes stopped in some cases until the new person, or the person the task was assigned to get up to date.
PT	213	Just as all faculty and staff are part of retention, removing them can hurt retention, like when they got rid of our campus IT support staff. These people helped me be more successful in the classroom and in my job.
PT	213	Things change and that's where we are now. What can we do in our current environment to help student retention? That is the question to address. You take what you have and try to make it the best it can be.
CB	166	Tracking and documentation of our communications is great for conversations our staff has with students. If we advised them to do x, y & z, did they take our advice? We can really track those situations.
MG	133	A great tool for the students was to provide some kind of map of some sort towards their degree here, then they can successfully transfer into a four-year program to complete the program.
AB	180	I think our full-time advisor had about 300 student assigned to them, which is around some of the national recommendations I have seen. But at times this doubled with people leaving or laid off. It varied widely depending on what campus you were on.
CH	234	Our new one-stop advising model makes it convenient for students to drop by without an appointment to see an advisor for 10-15 minutes. This works for quick questions, but not as well for those at-risk students who really need an hour to work out a plan.
PT	216	When we put holds on student accounts for advising do we lose them? I just wish we could do more things up front, more proactive work with these

		students. Being more proactive is better than being restrictive.
AB	198	The majority of our initial contact with students is by email, but we know that 30% or more are not even reading their email, so key messages are not reaching their intended audience.
MM	120	Getting students to open and read their email, than actually act on those messages is a big challenges.
CH	232	Our enrollment has dropped on our campus from just over 2,000 students three years ago to about 1,700 today. As a result our curriculum has also been reduced, especially for night class sections.
PT	210	Students and parents have less confidence in what a liberal arts degree can do. That is kind of scary to me. I would really like to see some data on how our current student population has changed.
PT	216	Before CRM came we used to get static lists of students who had not registered to make phone calls to. Once it ran, we had to manually update it or you might have called them when they already registered (after the first list was run) for a reason that no longer exists.
KK	176-177	Advisors taking notes on student meetings is considered one our best practices so that conversation with the student can continue. Students appreciated that we remembered their situations, and out meeting were much more productive if we could pick up where we left off. Our student notes varied a great deal. Some campuses and advisors did almost none, while others did a great job. Poorly written ones or missing ones made it difficult for other advisors to follow-up with them.
CH	234	With the reorg. we removed many of the direct student contact points at the campus level. For example, students can no longer go to the business office and pay their tuition, fines or fees by check or cash. Everything is now done electronically so students lose those other options and the ability to talk to a local person who can resolve their issue on the spot.
CH	235	Before the reorg. we used to have a bridge program, where at-risk students would need to participate in both supplemental courses and more intrusive advising as a condition of admission. This was hard to support with less staff so we removed that requirement. About 150-200 students were in that program. Now we have only 30 participating in a smaller optional program. I think we should bring this program back as a mandatory offering for those at-risk students.
PT	215	I might have a different opinion on using student holds. I feel this is college, not high school My preference is not to put advising holds on students. I might be in the minority on that opinion but I think we may lose students because of that – creating another barrier to enrollment.
CH	249	If a faculty member follows up with a student we (the advisors) don't know if that happened. So part of our retention issues is that the communications look between the advisors and faculty is not very strong. So faculty are not clear on what advisors have done with students and advisors are not clear on what went on with faculty. This has always been a challenge.
CH	253	We don't have the ability to send out advisor-based batch communications directly from the advisor, it comes mostly from a central point. Our campaigns should be more advisor-based so students see that ongoing relationship.

CH	255	I would say our CRM experience has been positive with the hope that it continues to grow. The alerts tip it over to the positive side, so even though the student response is low, we know we are helping students with that system.
CB	144	Our fall-to-fall retention is about 60-70% making us a bit ahead of other campuses.
BN	70	I think our overall retention has increased, it’s always been stronger in the sprint vs Spring to Fall. I think the bigger thing is why retention is improving.
MG	140	There was only one year recently where we saw an increase in student retention, otherwise it was a steady decline in enrollment.
AB	1	There is a marketing and enrollment plan at this IHE, but there is no institution-wide student retention plan in place, nor is there a regional student retention plan.
AB	2	The organizational, planning and tracking features of the CRM system can help the faculty and staff communicate regularly with the students which leads to better academic success and student retention over semesters.
CH	3	This stakeholder believes that the CRM system has a positive influence on student retention due to the organization and retrieval capabilities of data, the early alerts messages and the targeted population capabilities that can be used.
MM	113	Using CRM for retention processes is kind of like service after the sale when you buy a car. Higher education is catching up to what already happens in the business world.
KK	36	So I don’t think the data shows we changed retention, but it has changed the conversation here – So it’s not the be-all-end-all to the problem, that is an issue with technology, but I don’t think that means it’s not useful. I can’t see why anyone would not want to use it.
AB	198	CRM systems offer great potential, but only in support of a good student retention plan which is already in place.
MM	123	I would say CRM has a neutral effect on retention – Given the turmoil over the past couple of years with budgets and the reorg, the system has not been used to its fullest capacity. We gained so much on the organization side using the CRM, but have not made much progress on the student retention side and follow-up with students to the degree we wanted to.
BN	53	Prior to the current CRM, we did many similar processes in terms of retention strategies, mostly by developing relationships and connecting with students, but the data used often came from manual processes…. it was harder to get information out or track what we were doing.

Appendix I: CRM Training Agenda

CRM Training Agenda: Introduction to CRM Applications
Trainer: CRM Project Coordinator January, 2014
Audience: Faculty, Advisors, and staff with CRM roles

Day 1	**Attendees**	**Agenda Topic**
9:00am - 10:00am	All faculty and staff who are interconnected with CRM processes	Introductions Overview of CRM: Cover objectives and plan for CRM system. What role do CRM systems plan in student retention? What are the overall goals for this CRM? What roles are needed in CRM systems? How will the CRM workflow play out for each kind of position?
10:00am - 12:00pm	Staff who will use CRM for student searches or sending ad-hoc communications or noting student records.	Communications planning • Review Communications plan • Attributes Training – (Over 120 at this time) • Customizing Views for staff to get right information • Adding Student notes in system
12:00pm – 1:00pm		Lunch
1:00pm – 3:00pm	Staff who will need to search for groups of records and launch communications from the system.	Filters & Exports Overview • Filters Training – Note these will now be centralized more • Emails to students
3:00pm – 4:00pm	Staff who will be working with early alerts.	Review Early Alert plans for each semester • Advisor and Faculty roles for early alerts • What action is needed for each alert • Note taking and recording progress with early alerts
Day 2 9:00am – 11:00am	Staff who will be building communication plans to automate E-mails.	Communication Plans & Email Templates • Communications plans review Communication Plan training • E-mail Template Creation and Queuing training
11:00am – 12:00pm	Staff who advise students	Advising applications of CRM • Accessing student information and reports • Taking student notes & Early Alert

		documentation • Importance of integrating CRM into daily workflow
12:00pm – 1:00pm		Lunch
1:00pm – 2:00pm	Staff who will build various reports or need to access key data points	Assessment: Getting data out of CRM • Using Filters for reports and other methods training

Appendix J: Faculty Early Alert Plan (Spring 2014)

Teaching a class this semester? - Please consider participating in our Early Alert Program

This is just a reminder about Early Alert. February 6-10 marks the 3rd week of classes. Our goal is to identify and then work with students who may be at risk academically in your class. Our research shows that many students decide to withdraw from classes within the first few weeks of the semester. With appropriate intervention as needed, these students might be more likely to be retained into future semesters & earn their degree.

The earlier we can identify these students, the higher the chance of a successful intervention. If you have students who are not attending regularly or are not doing the necessary work, please contact in the Learning Center, and we will send a letter to those students informing them of the problem and services available to help them.

We are encouraging faculty to complete these three steps:

1. Establish some kind of student assessment early in the semester, including options like:
    - Taking attendance beyond just the first day of class—through week 3
    - Offering a quiz in the first couple of weeks
    - Assigning and collecting a homework project in the first 3 weeks
    - Looking at student notes – perhaps simply by walking around the classroom
    - Complete an in-class assignment students work on & turn in by the end of class
2. Notify the learning center of any student falling behind (see schedule below)
3. Meet with students and advise them to drop the class if there is little hope of passing – Let them know that April 6th is the last day to drop a class this semester.
   Students may not be aware that a "W" is better than a failing grade on their transcript.

<u>Dates for the Spring 2012 Program:</u>

Feb. 13th – All instructors send an e-mail to the Learning Center listing any at-risk students.
Feb. 17th – The Learning Center will send letters to those students who are missing class or missing work and are in danger of earning D or F grades (see attached sample)

March 2nd – The Learning Center will check in with faculty regarding those risk students

March 14th –Student Services will send a reminder to instructors about mid-term exams

March 28th – Midterm grades are due for entry into system

April 2nd – Student Services sends reminders to students about last day to withdraw from classes

April 6th - Last day to drop a class or withdraw from all classes

Appendix K: Non-Registered Student Survey (2014)

CRM Generated List – Triggered on week 14 at end of semester: Advisor Student Calls
Advisors should complete this form for those not returning & enter notes in CRM. All non-registered students should receive a phone call - Note that CRM emails have already been sent to student account, so goal is to reach out & retain these students for the next semester.

Name ______________________ ID# ____________ Semester _______ Sem. Attended_____
Major/Minor_________________ GPA:_______ Credits Earned _____ Transferred In________

<u>Student not returning for classes next semester due to</u>: (note more than one reason can apply)
__ Graduated with AS Degree or met student's academic goals: Describe: _________________
__ Entering work force full-time; ____________________ Part-time:_________________
__ Transferring to another public college campus _____________ Major ________________
__ Transferring to a private college _________________________ Major ________________
__ Transferring to a technical college ________________________ Major ________________
__ Would like to attend but cannot pay the $100 ATD deposit for next semester <u>Yes</u> <u>No</u>
__ Not attending any college next semester Returned rental books to Book Store? _____
  __ Poor academic work? _________________- Used our Learning Center? <u>Yes</u> <u>No</u>
  __ Need a school with on-campus housing <u>Yes</u> <u>No</u> Need Off-campus Housing ____
  __ Cannot afford tuition - Still owe tuition? <u>Yes</u> <u>No</u> Plan for repayment_________?
    __ Did not apply for financial aid for the current semester
    __ Did not receive a FA award letter before decision not to attend
    __ Did get award letter, but FA award not enough to cover student costs
    __ Lost job or major reduction in hours/salary
__ Personal Reasons (illness, family, moving out of area, etc.) _________________________
__ Plans for returning to college: ____
Would like to return <u>Fall</u> <u>Spring</u> <u>Summer</u> <u>Winterim</u> of ___________

Best phone number to call ____________________ Off-campus e-mail ___________________

Notes: ____

Appendix L: E-Mail Campus Communications and Early Alerts – Fall 2014

Campus Locations	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**	**L**	**M**	**N**	**O**
Early Alert Schedule															
Early Alert One	10-9	10-3	10-2	9-15	10-9	9-11	10-20	9-18	9-30	10-9	9-5	9-18	9-25		
Early Alert Two		10-8	10-9	10-1		9-18		10-20	10-10		9-26	9-25	10-9		
Early Alert Three			11-10	10-7		9-26		11-25				11-6			
Early Alert Four				10-13		10-2									
Early Alert Five				10-20		10-9									
Early Alert Six				10-27		10-16									
Early Alert Seven				11-3		10-20*									
Follow up - Early Alert															
Early Alert Academics	10-1	9-17									10-3				
Early Alert Attendance		9-16													
Early Alert Mid-terms															
Communications															
Financial Aid Applied			7-15					8-14			8-6		7-17		
Financial Aid Missing		8-18					7-28	8-19							
Missing Transcript							8-15								

Welcome to Semester			9-2	9-2		8-13	8-27	9-2		9-2				8-26	
Fresh Start Advisor															
TRIO															
Last Day to Add a Class					9-10										
AODE Info & Survey															
Parking Permits															
Safety & Smoking Policy													10-5		
Youth Options	9-9	9-5			9-11		9-4			9-2					
Adult Student Op House							9-3								
Non-Trad Welcome					9-3							9-15			
Veterans			9-2	9-2	9-4		8-25	9-2			9-22				
Voter ID Procedures													9-30	9-15	
Tuition Due															
Tuition Payment Plan				11-7											
FA Refund Checks Sent					9-23										
Advisor Introductions													9-12		
Part Grant – Half Time						9-16									
Getting Ready Advising	10-7				10-22					11-7		10-20			
News you can use update													9-29		
Undecided Student				9-21	10-1			10-1		9-23		10-27			
Undecided Group Advise															
Education Majors Update				10-16											
Student Leaders															

SGA															
Mental Health Services						12-2									
Mid-term Grade Warning				10-27											
Tutoring Services Rem.															
Last Day to Withdraw			11-6	10-28	11-3			10-27		11-7			11-9		
Thanksgiving Hours													11-24		
Transfer Fair Reminder													10-7		
Transfer Application															
45+ Advising Reminder											8-15		9-11		
Associate Degree Checks				10-15											
Getting Ready to Register				10-27		11-5							11-11		
Enroll next Semester				12-15		11-7									
45+ AAS Application				10-30									10-7		
60+ Post Audit Grad App													12-9		
Winterim Registration						12-11					12-11		12-7		
Fall Reg – Not Spring yet				12-8		12-16									
Mental Health – Test Anx						12-4									
Mental Health - Stress						12-11									
Rental Book Return					12-15										
Suspension One															

Semester															
Suspension One Year															
First Generation								10 -7							
Lane Closure - Construct				11 - 14											
* Names since last order in Nov/Dec															

Appendix M: E-Mail Campus Communications and Early Alerts – Spring 2015

Campus Location	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Early Alert Schedule															
Early Alert One	2-9	2-3	2-13	2-18	2-3	2-13	1-30	2-20	2-23	2-11	2-16	2-10	2-12	2-26	
Early Alert Two	3-4	3-30	2-27	3-30	2-17	2-20	2-16			2-23		3-3	2-26	3-25	
Early Alert Three			3-17	4-6	3-3	2-27								4-21	
Early Alert Four						3-6									
Early Alert Five						3-13									
Early Alert Six						3-20									
Early Alert Seven						4-3*									
Follow up - Early Alert															
Early Alert Academics		3-23			2-25		3-19				2-24		2-24		
Early Alert Attendance					2-25		3-19								
Early Alert Behavior					2-25										
Communications															
Financial Aid Applied	2-11												1-6		
Financial Aid Missing	5-15												1-8		
Missing Transcript															
Welcome to Semester	2-5		2-3	1-26		1-26							1-26		
Fresh Start Advisor															
TRIO															
Last Day to Add a Class				1-30											
AODE Info & Survey			2-18	2-18			2-18	2-18				2-18	2-18		

Parking Permits													1-28		
Safety & Smoking Policy				1-28											
Youth Options	2-5	1-28		2-2											
Scholarships Apps - Fall										3-13	2-11				
Non-Trad Welcome					1-26										
Veterans	2-5			1-21											
Voter ID Procedures															
Tuition Due					2-2								2-2		
Tuition Payment Plan													2-26		
FA Refund Checks Sent															
Advisor Introductions															
Part Grant – Half Time															
Getting Ready Advising			3-30					4-25		3-30					
Career Exploration										4-20					
Undecided Student					2-27										
Undecided Group Advise															
Education Majors Update															
Student Leaders SGA						2-13									
Mental Health Services						1-28									
Mid-term Grade Warning			4-1	3-30				3-24		3-31	3-31		4-2		
Tutoring Services Rem.				3-30		1-29							2-12		
Last Day to Withdraw			4-6	3-31	4-3	4-7	3-23					3-31	3-30		
Thanksgiving Hours								4-5		4-8					
Transfer Fair													2-		

Reminder													25		
Transfer Application													1-28		
45+ Advising Reminder				3-5											
Associate Degree Checks				3-18											
Get Ready to Register				3-10	3-16	4-17									
Enroll Summer Semester					3-2								2-12		
45+ AAS Application													3-3		
60+ Post Audit Grad App													1-12		
Winterim Registration															
Spring Reg – Not Fall yet						4-20							1-6		
Mental Health - Depress.						2-5									
Mental Health - Stress						1-30									
Rental Book Return															
Suspension One Semester											1-6		1-6		
Suspension One Year													1-6		
First Generation															
Lane Closure - Construct															
Winterim Registration											1-2				
Spring Reg – Last ditch											1-6				
Enroll in Specific Class													1-22		
Check Campus Email															3-31
Adult Student Open House				4-16											
Student News you can use													2-2		

Appendix N: Budget & Multi-Level Decisions

A recent State budget cut of $4.958 million annually to the IHE have triggered the loss from a combined level of 79.88 full-time equivalents (FTE) down to 45.78 FTE (plus additional campus cuts based on campus specific revenue targets). Advising services at most of IHE sites reduced to below two FTE's per campus. The IHE has launched a substantial redesign of operational practices to accommodate this new fiscal reality. These changes also fit into the CRM adoption program as standardization of best practices and communication were an objective under that program too. The chart below outlines the impact on individual campuses.

Current FTE	Restructured FTE	Legal Title Working Title	Information Speclialist	Advisor	Student Life and Activities	Solution Center Events Coordinator	Combined Student Life and Events Coordinator
5.33	2.6		1	1			0.6
6.35	3.5		1	1.5			1
3.4	2.5		1	1			0.5
5.15	2.75		1	1			0.75
5	2.75		1	1			0.75
8.73	6.5		2	2.5	1	1	
5.25	2.75		1	1			0.75
6.3	3		1	1			1
5.73	3		1	1			1
12.32	6.35		2	2.5	0.85	1	
4.45	2.75		1	1			0.75
5.45	2.5		1	1			0.5
6.42	4.83		1.5	2	0.58	0.75	
79.88	45.78		15.5	17.5	2.43	2.75	7.6

Appendix O: Undergraduate Student Retention Data

New Full-Time Freshman Retention Trends

Retention Year	Initial Freshmen Student Count	% Retained 1st Year to Spring	% Retained 2nd Year to Fall
Fall 2011 to Fall 2012	3,569	85%	57%
Fall 2012 to Fall 2013	3,602	85%	57%
Fall 2013 to Fall 2014	3,646	87%	60%
Fall 2014 to Fall 2015	3,276	87%	59%
Fall 2015 to Fall 2016	3,142	86%	56%
Fall 2016 to Fall 2017	3,142	86%	56%

Source: IHE Factbook

Appendix P: Statement of Original Work

The Concordia University Doctorate of Education Program is a collaborative community of scholar-practitioners, who seek to transform society by pursuing ethically-informed, rigorously-researched, inquiry-based projects that benefit professional, institutional, and local educational contexts. Each member of the community affirms throughout their program of study, adherence to the principles and standards outlined in the Concordia University Academic Integrity Policy. This policy states the following:

Statement of academic integrity.

> As a member of the Concordia University community, I will neither engage in fraudulent or unauthorized behaviors in the presentation and completion of my work, nor will I provide unauthorized assistance to others.

Explanations:

What does "fraudulent" mean?

> "Fraudulent" work is any material submitted for evaluation that is falsely or improperly presented as one's own. This includes, but is not limited to texts, graphics and other multi-media files appropriated from any source, including another individual, that are intentionally presented as all or part of a candidate's final work without full and complete documentation.

What is "unauthorized" assistance?

> "Unauthorized assistance" refers to any support candidates solicit in the completion of their work, that has not been either explicitly specified as appropriate by the instructor, or any assistance that is understood in the class context as inappropriate. This can include, but is not limited to:

- Use of unauthorized notes or another's work during an online test
- Use of unauthorized notes or personal assistance in an online exam setting
- Inappropriate collaboration in preparation and/or completion of a project
- Unauthorized solicitation of professional resources for the completion of the work.

Statement of Original Work

I attest that:

1. I have read, understood, and complied with all aspects of the Concordia University- Portland Academic Integrity Policy during the development and writing of this dissertation.
2. Where information and/or materials from outside sources has been used in the production of this dissertation, all information and/or materials from outside sources has been properly referenced and all permissions required for use of the information and/or materials have been obtained, in accordance with research standards outlined in the *Publication Manual of The American Psychological Association*

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Christopher Beloin
Name (Typed)

March 26, 2018
Date