A Qualitative Investigation of the Technology Acceptance Model in the U.S. Cooperative Extension Service on the Adoption of Customer Relationship Management Systems

by

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Abstract

This research investigates the technology acceptance model (TAM) in the U.S. Cooperative Extension Service (CES) regarding the adoption of customer relationship management (CRM) systems to improve communications, outreach, and engagement with the publics and communities it serves. The CES comprises land-grant universities throughout the United States and offices in nearly every county in the country. It provides research-based educational programming to help communities of all sizes meet the challenges they face. However, many CES organizations have yet to adopt CRM technologies, leading to potential missed opportunities in improving client engagement, outreach, and communications. A thorough review of the literature of the TAM and CRM adoption in organizations covers topics such as critical success factors, organizational performance, and the value of CRM in improving engagement, satisfaction, and retention. A qualitative phenomenological approach utilizing existing data and one-on-one semi-structured interviews with CES leaders and professionals is utilized. Findings highlight various perceived benefits, barriers, and reported success rates from CES professionals. The findings suggest a positive correlation between the TAM variable of perceived ease of use and the reported adoption success of CRM technologies within the CES, positive attitudes toward perceived usefulness of CRM technologies, and high rates of employee resistance around the adoption of CRM technologies.

Keywords: Cooperative Extension, customer relationship management, technology acceptance model

Dedication

This dissertation is dedicated to my wife, Maritzaida Amador, who supported me through this multiyear journey of completing this program and will soon be finishing her own academic journey. To my children, Cole and Annika Weibe, I offer my thanks for your patience, understanding, and inspiration that brought me to the successful conclusion of this degree. Words are inadequate to describe how much I love the two of you. To my parents, brothers, in-laws, and extended family members, for your encouragement and support over a lifetime of learning. Lastly, to my friends, Tahi, Charlie, and George, for your constant support and encouragement.

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Table of Contents

Abstract 2
Dedication 3
Acknowledgments 4
Chapter 1: Introduction 9
Background 10
History 11
Customer Relationship Management *11*
U.S. Cooperative Extension Service *14*
Introduction to the Problem 15
Problem Statement 16
Purpose Statement 17
Significance of Study 17
Nature of Study 18
Appropriateness of the Method *19*
Appropriateness of the Design *19*
Data Collection Method *20*
Data Analysis *21*
Research Questions 23
Definitions 24
Summary 25
Chapter 2: Review of Literature 27
Article Searches and Documentation 29
Historical Content 30
Current Content 32
Technology Acceptance Model *32*
Critical Success Factors *40*
Organizational Performance *47*
Additional Organizational Impacts of CRM Adoption and Implementation *57*
Marketing Automation and Knowledge Creation *67*

Customer Loyalty, Satisfaction, and Engagement ... ***69***
Situation to Communication Tradition ... 79
Theoretical Framework ... 82
Related Literature ... 84
Summary ... 85
Chapter 3: Methodology ... 86
Method Appropriateness ... 87
Design Appropriateness ... 87
Research Method and Design ... 89
Research Questions ... ***89***
Setting ... ***90***
Participants ... 90
Procedures ... 92
Researcher's Role ... 93
Reflexivity ... 94
Data Collection ... 95
Data Analysis ... 96
Coding ... ***97***
Trustworthiness ... 98
Credibility ... ***98***
Dependability and Confirmability ... ***98***
Transferability ... ***99***
Ethical Considerations ... 99
Summary ... 100
Chapter 4: Results ... 102
Overview ... ***102***
Data Collection and Analysis ... ***103***
Participant Profiles ... ***105***
Findings ... ***124***
Adoption Success and Familiarity ... 127
Employee Resistance ... 128

Pre-adoption Approaches 129
RQ1 Findings: Benefits and Organizational Performance 131
RQ2: Barriers and Organizational Impacts 134
RQ3 Findings: TAM Principles 136
RQ4 Findings: Outreach, Engagement, and Communications 142
Summary of Findings ***144***
Chapter 5: Discussion 146
Overview ***146***
Summary of Findings ***146***
Discussion ***148***
Technology Acceptance Model 149
Critical Success Factors ***151***
Organizational Performance 152
Adoption Barriers 153
Marketing Automation and Knowledge Creation 153
Customer Satisfaction, Loyalty, Engagement. 154
Implications ***155***
Theoretical Framework 155
Methodology 156
Practical 157
Delimitations and Limitations ***158***
Future Research ***160***
Summary ***161***
References 164
Appendix A: Survey Questions 177
Appendix B: Semi-structured Interview Questions 178
Appendix C: Coding Glossary 179

Chapter 1: Introduction

This research investigates the technology acceptance model (TAM) in the U.S. Cooperative Extension Service (CES) regarding the implementation and adoption of customer relationship management (CRM) systems to improve communications, outreach, and engagement efforts of the CES. The CES is a network of land-grant universities in the United States and U.S. territories that provide research-based educational programming to the public and communities of all sizes. Its funding comes through the Smith-Lever Act, which aligns both federal funding from the U.S. Department of Agriculture (USDA)—National Institute of Food and Agriculture (NIFA) with state funding efforts directed toward land-grant universities. CES programming is largely focused on agriculture topics but includes areas of life sciences that agriculture impacts, such as health and nutrition, youth development, mental health, and more. CRM is a philosophy for managing lifecycle contact data and examining interactions between a client and the organization. CRM systems or technologies are used to sort, filter, and analyze that data in a structured way that provides insights to an organization on how to potentially engage with its audiences.

The general background of this research is that many CES organizations are still evaluating the potential use of CRM systems to enhance their outreach and engagement mission or are not considering the adoption of CRM technologies. There are potential missed opportunities for the CES in its outreach and engagement mission by not adopting CRM technologies or by not using CRM to its full potential. According to Judd (2019), approximately 40% of land-grant universities in the United States are currently using CRM technologies, another 40% have stated that CRM technologies are under evaluation for potential usage, and the remaining 20% have expressed no interest in the implementation of CRM technologies. This

study examines the TAM to understand where CES organizations are in their adoption of CRM technologies, their perceptions and attitudes toward CRM adoption, and the perceived benefits and risks of CRM implementation in CES organizations.

Background

The U.S. Cooperative Extension Service (CES) has served the public since 1914, providing research-based education primarily focused on agriculture, family life, economic development, and youth engagement. CES is funded through a cooperative agreement between the U.S. Department of Agriculture (USDA) and every state and territory through the land-grant university system. The land-grant university system funds county-level Extension offices offering programs for local communities. Over the past several decades, public engagement with the CES and its resources and programming has decreased. According to Gupta et al. (2019), "long-term disinvestment in the Extension system, along with public skepticism of science, threatens the system's ability to deliver the expertise and research-based information that it promises." Research has shown that advances in technology and new media allow for greater possibilities for outreach and engagement across a variety of public and private sectors.

The U.S. CES is part of every land-grant university in the United States. According to the USDA—NIFA, CES is a public service that provides farmers, ranchers, and communities of all sizes with resources to meet the challenges they face, adapt to changing technology, improve nutrition and food safety, prepare for and respond to emergencies, and protect the environment (Cooperative Extension History, n.d.). Programs that are prominent within CES include agriculture and natural resources, youth development, family and consumer sciences, workforce and community development, food and nutrition, and health.

The researcher is part of a national organization that serves and supports the CES through national funding opportunities, technology services, and professional development services. The Extension Foundation is a 501(c)(3) nonprofit organization that is part of the CES system. According to the Extension Foundation (2023), it provides programmatic services and professional development to CES professionals with the mission of increasing local impact. Additionally, the Extension Foundation is a member organization where land-grant universities can become members to receive exclusive professional development opportunities and other services centered around program development and innovation (Extension Foundation, 2023). CRM technologies, such as Hubspot or Salesforce, are utilized by an organization to better manage a database of contacts with clients and measure engagement with clients over a lifecycle. For example, when observing a contact in a CRM system, an administrator can review emails exchanged between the client and other actions the client has taken, such as website views, event registrations, form submissions, social media engagements, and more. The Extension Foundation implemented a CRM system to improve engagement with its clients across the CES in February 2021, and at that time, the organization had 49 land-grant universities participating as members. Since then, the organization has grown to approximately 68 members and increased participation in all of its online offerings and services as a result. CRM implementation may have been a critical factor in that growth.

History

Customer Relationship Management

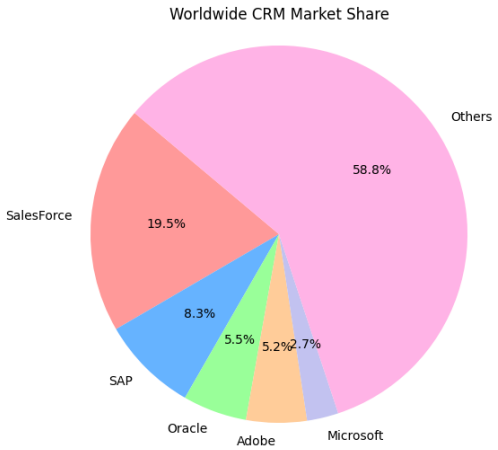
There is no single unified definition of CRM. In fact, the term “CRM” is used interchangeably between CRM as a business philosophy or process and the technology used to support this process. Adding to the complexity are some of the more recent technological

achievements of CRM systems, including greater integration of social media, marketing tools, sales tools, artificial intelligence, and data mining capabilities. This research examines CRM from a technology acceptance perspective. However, the CRM technology discussed to support CES efforts in the areas of marketing, communications, and engagement can only be as successful as the CRM philosophy that each CES organization considers when implementing or evaluating CRM technology. That same philosophy can also be the reason for implementation failures or for not considering the use of CRM technologies within a CES organization. For these reasons, it is critical to understand the origins of CRM over the past several decades, its role in business and organizational outreach to clients or customers, and its evolution over time.

Baran and Galka (2016) discuss the origins of CRM and state that there are many different views as to what led to the CRM seen today. The Rolodex may be viewed as the earliest form of CRM technology, dating back to the 1950s, or mainframe computer systems that began to appear in businesses during the 1960s. One perspective offered is that CRM had its origins in marketing research's customer satisfaction studies of the late 1970s and its relationship with *total quality management* in the early 1980s (Baran & Galka, 2016). Additionally, B2B interactions between companies and their early suppliers in the 1980s paved the way for CRM models that are prevalent today. By the mid-1980s, information technology systems became more prevalent in business operations, leading to the creation of customer databases alongside *materials resource planning* (MRP) efforts. By the early 1990s, the company SAP-integrated MRP functions with accounting and customer data, leading to the first basic commercial CRM system. Shortly after, *sales force automation* functions began to appear in these new customer systems, followed by basic marketing campaign management tools.

In the mid-1990s, the internet emerged and changed the CRM market, giving rise to a new form of electronic CRM (eCRM). In 1999, SAP, among many other companies, launched web-based CRM solutions, making CRM more interactive between an organization and the customer (Xu et al., 2002). By the early 2000s, CRM technologies began to integrate cloud-based solutions, and by the late 2000s, the rise of social media networks led to the infusion of social media sites into existing CRM systems, also known as social CRM, which allowed companies to interact with customers through social media sites (Baran & Galka, 2016). Through the 2010s, many new CRM technologies have reached the market, and the biggest changes occurred with the various integrations that CRM systems could have with other business software tools. In recent years, the rise of artificial intelligence has had an impact on CRM technology. Examples of common CRM technologies today include Salesforce, Hubspot, Zoho, and many more. According to Matosas-López (2024), there are various vendors that share the CRM market, offering a range of features and solutions. Salesforce holds approximately 19.50% of the worldwide market, followed by SAP (8.30%), Oracle (5.50%), Adobe (5.20%), Microsoft (2.70%), and other vendors (58.80%) (Figure 1). Matosas-López (2024) notes that *other vendors* largely consist of very small vendors offering simple and cost-effective solutions and include software such as Zoho, Sugar CRM, Vtiger, and Pipedrive.

Figure 1: Worldwide CRM Market Share



U.S. Cooperative Extension Service

The CES came into existence in 1914, and its roots go back to agricultural clubs and societies that were prevalent after the American Revolution (Cooperative Extension History, n.d.). In 1914, the Smith-Lever Act established the USDA as a federal partner to land-grant universities to apply research and provide education in agriculture, and the CES was created to address rural, agricultural issues. According to the USDA NIFA, CES's engagement with rural America accelerated the American agricultural revolution and increased farm productivity. During the First World War, the CES helped meet wartime needs by increasing wheat acreage, encouraged farm production, conserving perishable products, and addressing war-related farm labor shortages by organizing the Women's Land Army and the Boys' Working Reserve.

During the Great Depression, CES professionals taught farmers about marketing and provided education for farm women on nutrition, food canning, gardening, poultry production, home nursing, furniture building, and sewing. These skills helped farm families survive years of economic hardship (Cooperative Extension History, n.d.). During the Second World War, the CES worked with farmers and families to secure production increases to support the war effort.

After the war, the CES worked to extend new technologies to farmers and ranchers to dramatically increase farm production. Today, there is a CES office in nearly every county in the United States where CES professionals help communities of all sizes meet the challenges they face in areas of agriculture and natural resources, family and consumer sciences, youth development through the 4-H program, community, workforce, and economic development through a variety of research-based educational programming.

Introduction to the Problem

The TAM provides a way for looking at how individuals and organizations can successfully adopt and implement technologies, and an understanding of TAM principles can potentially reduce adoption failure rates. CRM technologies have gained significant attention over the past several decades for their ability to integrate multiple business functions into a centralized system with high returns on investment. Additionally, in recent years, CRM technologies have integrated into other software applications, bringing a more holistic view of customers, how an organization engages with customers, and the customer lifecycle. This provides great insights into the marketing, communications, and sales functions within an organization. While CRM technologies have advanced and evolved to meet the needs and budget of any sized organization, there is still an extremely high failure rate for implementation, and several challenges remain for the adoption of this technology. CRM adoption in the CES is no exception to the challenges that most organizations face. These challenges include technology costs, top management support, perceived value, perceived ease of use, and an overall understanding of how CRM can help CES organizations accomplish goals in outreach and engagement with the public they serve.

CES organizations are not the only entity serving the public across the United States in the program areas that they focus on. One area of concern for CES professionals is remaining relevant in a crowded market, particularly in the face of challenging fiscal situations. Typically, CRM adoption is motivated by wanting a competitive advantage, but Judd's (2019) landscape assessment shows that the CES has generally been slow to adopt CRM technologies. Judd's (2019) data also shows that many CES organizations are utilizing custom-developed CRM systems that appear to be lacking modern features typically found in commercially available systems. These limitations, and the limitation of not adopting CRM technologies, may be hindering the efficiency of CES professionals in engaging and serving clients in a way that meets client expectations. Additionally, CRM technologies are an industry-leading platform for gathering data from a variety of sources that help enable an organization to reach new audiences. Consequently, there is a need to improve the efficiency of CES outreach and engagement efforts in the communities it serves, and CRM may be one potential vehicle for reaching this goal.

Problem Statement

The problem is that a significant number of land-grant university CES programs are not adopting CRM technologies despite evidence to suggest it would enhance their communications efforts and their outreach and engagement mission. According to Judd (2019), approximately 40% of all land-grant universities in the United States are utilizing CRM technologies, and many of those are not commercial systems with industry-standard features. Another approximate 40% of these universities are evaluating the use of CRM technologies, while the remaining have no plans to utilize CRM (Judd, 2019). The specific problem to be addressed is identifying the barriers that exist in adopting CRM technologies, including TAM variables, in the CES, and

what implications a lack of CRM usage has on communications, outreach, and engagement efforts in the digital age.

Purpose Statement

The purpose of this phenomenological research is to investigate the TAM and how it may create opportunities for the successful adoption of CRM systems by the U.S. CES to enhance internal and external communications, engagement, and outreach efforts. There is considerable evidence to suggest that CRM systems add value to organizational communications and relationship efforts; however, there is a need to highlight how CRM technologies can impact the outreach mission of the CES. Through the lens of the TAM, this research provides practical insights into the perceived benefits and challenges of implementing CRM systems. It examines successful use cases of CRM implementation and investigate the potential for increasing client engagement and improving communications through successful client management. This research examines a recent landscape survey of the CES that gathered insights on the current usage and perceived attitudes toward CRM technologies and recruit participants from across the CES for semi-structured interviews to gain further insights into CRM usage, challenges, and successes in improving communications, outreach, and engagement. A follow-up survey is sent after the semi-structured interviews to triangulate the data.

Significance of Study

The findings of this study play a critical role in demonstrating the applicability of the TAM to CRM adoption in the CES. However, CRM is not the only technology that is being adopted by the CES, and the lessons from this study have a direct correlation to other technologies that the CES is considering for adoption. More recently, artificial intelligence

technologies have come to the attention of CES professionals and administrators, and the findings from this research may have implications for the adoption of future artificial intelligence technologies. Additionally, the CES is not the only organization that can benefit from the findings of this study. This study also provides important insights to software developers that are engaging with institutions of higher education or other business sectors that may apply TAM to enhance user experience testing functions within their organizations and software development. CRM would assist both CES professionals and the clients they serve by co-creating value between the client and the organization, tracking lifecycle engagement with CES services and programs, and potentially resolve communications, marketing, and onboarding challenges for CES educators, administrators, specialists, and agents. Evidence suggests that CRM technology implementation could improve customer service interactions with clients, increase the perceived value of CES programs, and strengthen relationships between an organization like the CES and its clients.

Nature of Study

This phenomenological research investigates the TAM within the CES regarding the adoption of CRM technologies. Qualitative data is curated through two primary tools: an analysis of participant responses from a landscape assessment related to usage, adoption, and perceptions of CRM technologies, and one-on-one interviews with CES professionals to further investigate CRM usage in a variety of land-grant university Extension programs. This research is completed over a three-month period to allow enough time to conduct interviews with CES professionals at a variety of universities, including 1862, 1890, and 1994 land-grant colleges and universities. A third-party survey analysis tool is used to review the recent landscape assessment, along with conducting statistical analyses in Python. The one-on-one interviews are conducted over Zoom

videoconferencing software, transcribed with artificial intelligence technology, and coded for themes in participant responses. The follow-up survey is analyzed using the survey software and coded appropriately based on qualitative responses.

Appropriateness of the Method

A qualitative phenomenological approach of the TAM, as implemented by the CES, evaluates usage, discontinuation, or lack of plans to use CRM technologies. This approach helps gather perceptions toward the CRM technology, its applicability for the publics served by the CES, and gathers information that leads to successful adoption and implementation or failure. According to Ravitch and Carl (2021), qualitative research is defined as using interpretive research methods as a set of tools to understand individuals, groups, and phenomena in a way that reflects how people make meaning of and interpret their own experiences, themselves, each other, and the social world. The goal of this research is to understand the perceptions and attitudes toward CRM usage in the CES, the impact of CRM technologies on creating better value with the public that the CES serves, and the barriers that exist in adoption. Additionally, qualitative research is not a linear process but begins with an interest problem or question (Ravitch & Carl, 2021). The methods and research instruments are often piloted and vetted to ensure they gather the necessary data to best answer the research questions. Data analysis also requires efforts to ensure the data is valid and trustworthy, including checking in with participants to understand their thoughts on the analysis and interpretations or member checks.

Appropriateness of the Design

Ravitch and Carl (2021) outline best practices for selecting an appropriate qualitative research design. The key interactive phases of a qualitative research design include developing study goals and rationale, iterating research questions, developing a theoretical framework,

determining methods needed to answer research questions, making decisions about the research setting, piloting and refining the research design and methods, and planning for validity. Ravitch and Carl (2021) also suggest that a flexible approach to research design considers the range and variation of method choices and how these can be used in ways to help achieve or clarify the specific goals of the study. After following the process outlined by Ravitch and Carl (2021), the researcher determined that a qualitative phenomenological design was the best approach to answer the research questions. Ravitch and Carl (2021) share that a phenomenological design includes exploring a phenomenon with a group of individuals, and data collection tends to involve interviews to understand the experiences of the phenomenon. In this research, the researcher seeks to understand the key components of the TAM, including attitudes and perceptions toward CRM usage in the CES.

The significance of this study has implications for how the TAM can be applied to the CES for adopting CRM technologies or other technologies, which can improve communications, outreach, and engagement efforts with the communities they serve while increasing workplace productivity. The findings play a critical role in determining how the TAM can be applied to CRM adoption in CES services and programming. CRM would assist both CES professionals and the clients they serve by co-creating value between the client and the organization, tracking lifecycle engagement with CES services and programs, and potentially resolving communications and marketing challenges for CES educators, specialists, and agents. Evidence suggests that CRM technology implementation could improve customer service interactions with clients, increase the perceived value of CES programs, and strengthen relationships between an organization like CES and its clients.

Data Collection Method

Existing landscape assessment data is analyzed using the JotForm survey software, which is provided by the Extension Foundation, and statistical testing is conducted in Python. The semi-structured interviews are conducted over the Zoom videoconferencing platform. Semi-structured interviews allow for a set of predetermined questions but also provide flexibility to the researcher for exploring the topic of CRM with the interview participant based on the participant's experience with CRM, the specific CRM tool being utilized, or features within the CRM that the participant is most utilizing. Firsthand observations of participants utilizing CRM technologies are not used, as participants are located across the United States. Additionally, conducting this type of field research is not cost-effective to this research. A review of documents, photos, objects, or other artifacts is not used in this study, as the research is more interested in understanding the attitudes and perceptions of CRM usage in the CES related to TAM variables and learning about the successes or failures of CRM implementation.

According to Ravitch and Carl (2021), there are a number of key characteristics and values of qualitative interviews to consider in the research design. The key considerations and values of qualitative interviews are that they are relational, contextual, non-evaluative, person-centered, temporal, partial, subjective, and non-neutral (Ravitch & Carl, 2021). Additionally, this research contains a survey element that includes reviewing landscape assessment data and a post-interview survey to further triangulate data. Ravitch and Carl (2021) highlight the advantages of questionnaires, such as their efficiency in data collection, ease of compiling responses, access to significant amounts of information, resource effectiveness, anonymity, and the ability to quickly and easily quantify or analyze results.

Data Analysis

The native JotForm analysis software is used to review the recent landscape assessment conducted through the Extension Foundation, along with statistical analysis of select responses in Python. The one-on-one semi-structured interviews is conducted over videoconferencing tools, transcribed with artificial intelligence technology, and coded for themes in participant responses. Ravitch and Carl (2021) state that data organization and management are an important, ongoing process that supports refining sense-making and are integral parts of the overall analysis. Post-interview surveys collect qualitative data and are coded in the same way as semi-structured interviews. The data management plan for this research includes organizing the landscape assessment data within the native analytics tools of the JotForm survey software. A precoding process takes place to effectively sort and filter the data based on responses related to the TAM, focusing on perceived usefulness and perceived ease of use. Additionally, pre-coded fields are filtered by institutions that have implemented CRM, are evaluating the use of CRM, have discontinued the use of CRM, or have no plans to use CRM.

Ravitch and Carl (2021) also offer insights into the best data management practices for transcribing and coding interview data for the second phase of this research. First, the original audio and video recordings of the interviews are stored on Extension Foundation storage servers, along with a backup copy on a local computer. Artificial intelligence software native to Zoom is utilized to generate a verbatim written transcript of the interviews, which are subsequently verified by comparing it to the original recording and updated manually with any necessary corrections. According to Ravitch and Carl's (2021) recommendation, transcripts are not "cleaned up" in order to have a set of data that best reflects participants' responses. The pre-coding process includes utilizing Google Docs to track changes and highlight areas of the semi-

structured interviews, highlighting emerging learnings, lingering questions, reactivity, and ideas and thoughts about potential codes (Ravitch & Carl, 2021).

An immersive engagement process takes place to critically engage with, read, and analyze the data from this research. Ravitch and Carl (2021) highlight the primary processes for immersive engagement as multiple data readings, implementing data analysis and strategies such as coding, and generating, scrutinizing, and vetting themes. A subsequent axial coding process takes place with the semi-structured interview data, which is the process of going from coding chunks of data to seeing how these codes come together into coding categories to best support the development of the findings (Ravitch & Carl, 2021). This includes creating a code set that begins broadly and develops more narrowly as the analysis progresses, including both descriptive and theoretical categories. After the coding process, connecting strategies takes place to develop the context of the data without isolating excerpts in the same way that coding does, providing a more holistic view of the data that is complementary to the coding process. Lastly, this research seeks dialogue with interview participants and other CRM experts within the CES and at the Extension Foundation to share an analysis of the findings, aiming to validate the study and corroborate the data.

Research Questions

RQ1: What are the perceived benefits of CRM systems for CES professionals?

RQ2: What are the perceived challenges and adoption barriers of CRM systems in the CES?

RQ3: To what extent do the principles of the TAM affect CRM adoption?

RQ4: In what ways are existing implementations of CRM systems enabling outreach, engagement, and communications efforts by the CES?

Definitions

Customer Relationship Management: It refers to a business philosophy on how to organize and maintain connections with clients as they engage with an organization.

Customer Relationship Management Systems/Technologies: They refer to a technology interface or platform used to accomplish tracking and managing engagement with a client throughout their lifecycle with the organization or business. It is also referred to as *electronic CRM (e-CRM).*

Social CRM: The use of social media networking sites as a way of connecting with customers, either directly through the sites or through an integration with a CRM technology.

Cooperative Extension Service: A state and federally funded public service in the United States connected to every land-grant university that translates university science and research into community-based programs. Each land-grant university operates its own Extension service across its states, and some states with multiple land-grant universities combine into a single statewide CES.

Land-Grant University: Public colleges and universities funded through three separate congressional acts, including the Congressional Acts of 1862, 1890, and 1994. The land-grant university mission focuses on agriculture and military sciences.

1862 Land-Grant University: The first land-grant university in the United States that obtained its land-grant status in 1862.

1890 Land-Grant University: These are historically Black colleges and universities that obtained land-grant status in 1890.

1994 Land-Grant University: These are tribal colleges and universities that obtained land-grant status in 1994. Although they receive federal funding for their land-grant status, they were not awarded physical land for the establishment of these colleges and universities.

Technology Acceptance Model (TAM): A theoretical framework grounded in the idea that technology is more likely to be adopted if the conditions for two principles are met: perceived ease of use and perceived usefulness.

Technology-Organization-Environment Framework (TOE): A theoretical framework that explains how the adoption of a new technology is influenced by several factors, including the technology itself, the organization that hosts the technology, and the external task environment, such as support infrastructure, market structure, and government regulations.

Summary

This chapter provides an overview of the study that explores the role of CRM systems in the CES. The CES is a network of land-grant universities in the United States that provides research-based educational programs to communities of all sizes and primarily focuses on agricultural topics but also encompasses other areas of life such as health, nutrition, youth development, and more. This chapter highlights the background of the CES's use and adoption of CRM technologies and reveals that many CES organizations are either still evaluating the use of CRM or not considering the adoption of CRM systems. There are potentially missed opportunities for enhancing the outreach and engagement efforts of the CES mission, particularly in a more crowded market. The background section illustrates the history and significance of the CES while also sharing challenges about its federal and state funding and challenges with public engagement in the digital age. The problem statement is focused on the lack of CRM technology adoption throughout the CES and its program and the implications it may have on communications, outreach, and engagement efforts. The purpose statement outlines the qualitative research design approach to explore opportunities for CRM systems in the CES to enhance communications and engagement with its clientele. The significance of this study

focuses on improving CES client engagement efforts, along with the perceived benefits and challenges of CRM adoption and implementation.

Chapter 2: Review of Literature

A direct search of existing literature was performed to gain insights from past studies on CRM technologies in organizations. Most studies were successful in addressing critical success factors, implementation failures, and adoption strategies, but no studies were able to successfully address the adoption of CRM implementation in the CES. This literature review details CRM's impact on organizational performance, adoption, and implementation successes and failures and highlights conceptual framework literature focused on Davis' TAM.

This research aims to explore the successes, challenges, and opportunities of CRM in the CES. The problem is that a significant number of land-grant university Extension programs are not utilizing CRM technologies, despite evidence suggesting they would enhance their communications efforts and their outreach and engagement mission. According to Judd (2019), approximately 40% of all land-grant universities in the United States are utilizing CRM technologies, and a significant portion of those are not commercial systems with industry-standard features. Approximately 40% of these universities are evaluating the use of CRM technologies, while the remaining have no plans to utilize CRM (Judd, 2019). The specific problem to be addressed is identifying the barriers that exist in adopting CRM technologies in the CES and what implications a lack of CRM usage has on communications, outreach, and engagement efforts in the digital age.

Based on data from the assessment by Stephen Judd (2019) and the more recent landscape assessment as part of this research, the TAM provides a solid model to examine the perceived ease of use and the perceived usefulness of CRM systems in the CES, which may be a variable for acceptance and adoption. This extensive review of literature examines the TAM in the context of CRM systems, and one area of concern for many organizations, both within the

CES and outside of it, is around the high failure rates for CRM adoption. This review also investigates the critical success factors of CRM implementation in organizations to provide insights on effectively using CRM within CES organizations. It also examines adoption and implementation best practices that can lead to a successful CRM implementation. Additionally, there is an extensive amount of existing research on the impact of CRM systems on organizational performance, suggesting it is one of the most critical enterprise information systems an organization can use to maintain a competitive advantage, track lifecycle engagement with clients and customers, and provide better service to clients. This includes the ability to co-create knowledge with customers about the organization and its products and services; potentially strengthen CES services by gaining valuable insights and feedback from the communities it serves; and improve client satisfaction, engagement, retention, and loyalty.

The CES holds a unique place in higher education. Within the land-grant university system, there are typically three areas of activities: research, Extension, and academics (commonly referred to as "*teaching*"). This creates challenges for implementing new technology within any university, considering the various scenarios departments or organizations within the institution may face and the audiences each of these organizations may serve. Unlike a traditional student information system used by a college or university admissions department that tracks prospective students from the time they apply through graduation, the CES serves a very different audience by providing the public with various research-based educational programs. The CES is headquartered within each land-grant university in the United States, but a considerable number of CES employees work in offices outside the main or satellite campus of the university and perform work in offices located across approximately 3,000 counties in the United States. Data from the landscape assessment suggests that one particular area of concern

around adoption is issues with centralizing client data within the statewide CES organization, and a number of issues are present on this topic. This includes employee resistance to centralizing contacts due to perceived ownership of contacts; similar issues exist in organizations from other sectors and contribute to the high failure rates of CRM implementation.

Article Searches and Documentation

A literature review was conducted to research CRM adoption in organizations and the critical success factors for successful implementation. The strategy was to locate peer-reviewed scholarly works regarding CRM adoption in a variety of organizations. While higher education is one of the areas of CRM discussed, the CES's use-case of CRM may better resemble other industries since the organization is focused on community and client engagement generally outside of teaching and academics. Keywords and phrases included Davis' TAM. Table 1 showcases the keyword searches used in the empirical database.

Article Searches

Table 1. Article Searches and Search Terms

Search Terms	*Years*	*Location*
"Customer Relationship Management" and "Organizational Performance"	2017–Present	Google Scholar ProQuest EBSCOhost
"CRM" and *"Success Factors"*	2017–Present	Google Scholar ProQuest EBSCOhost
"Technology Acceptance Model" and "CRM"	2017–Present	Google Scholar ProQuest EBSCOhost
"CRM" and "Adoption"	2017–Present	Google Scholar

		ProQuest EBSCOhost
"CRM" and "Customer Satisfaction"	2012–Present	Google Scholar ProQuest EBSCOhost
"CRM" and "Loyalty"	2012–Present	Google Scholar ProQuest EBSCOhost
"CRM" and "Engagement"	2012–Present	Google Scholar ProQuest EBSCOhost
"CRM" and *"Knowledge"*	2005–Present	Google Scholar ProQuest EBSCOhost

Historical Content

Agrawal (2004) provides a concise overview of CRM, spanning from the 1960s through 2004. He also suggests that CRM can be viewed in four primary ways: a contemporary response to the emerging climate of unprecedented customer churn, central to the task of making an organization more customer-centric, the surest symbol of embracing information technology in business, and the most certain way to increase value to customers and profitability within an organization. The article discusses early marketing paradigms that were prevalent in the 1960s and states that the role of marketers at that time was to be "ordained marketers to satisfy customer needs that were essentially nature created" (Agrawal, 2004). In the 1970s, marketing functions served customer wants that were specific solutions to their needs and the outcome of marketing initiatives, while the marketing ideas of the 1980s were focused more on the lifestyle-oriented expectations of customers. However, it wasn't until the 1990s when information

technology completely changed the scope and potential of marketing and customer engagement, and Agrawal (2004) emphasizes that CRM was the fallout of this particular era. CRM reduces the cost to acquire customers, cost to sell, cost to serve, and the time to serve; simultaneously, CRM enhances customer satisfaction, return on relationships, competitive advantage, number of consumers and retention rates, and ultimately revenue.

Ngai (2005) examined CRM from a historical perspective and searched a range of online databases to gain a comprehensive listing of categories related to CRM. Ngai (2005) found that in the 600 articles identified and reviewed, CRM fell into five broad categories: general marketing, sales, service, support, and IT. Additionally, there were 34 subcategories, and the most popular areas covered included CRM management, planning and strategy, concept, software, tools, and systems, knowledge management, and e-commerce (Ngai, 2005). Ngai (2005) highlights that interest in CRM began to grow in the 1990s and that although CRM has become widely recognized as an important business approach, there is no universally accepted definition.

Stone et al. (1996) explored the use of information technology in managing customer relationships in the 1990s within the context of relationship marketing. The items analyzed included customer contacts with company staff, outbound contact management, physical service environment, brand image, and transactions (Stone et al., 1996). The recommendations from this research provided some interesting insights into the future of CRM technology and stated that companies considering stronger relationship marketing approaches need to develop an integrated CRM position, possibly through the deployment of IT solutions. The recommendations of this article by Stone et al. (1996) suggest that branding needs to be controlled, customer focus needs to be maintained, material in digital form needs to be used cost-effectively, and customers can be

encouraged to use the transparent marketing approach. Additionally, these recommendations note that the interface containing core processes such as marketing, sales, inventory, distribution, and finance is complex and should be developed with a holistic approach rather than piecemeal development. Finally, they also recommended that a key factor in project success is close cooperation between IT and customer management functions.

Xu et al. (2002) were concerned with the issue of how to apply cutting-edge CRM solutions in the aftermath of the information technology era. They highlight that CRM solutions emerged in the late 1980s to automate and standardize internal processes related to acquiring, servicing, and keeping customers. This research examined the characteristics of CRM, and the first characteristic identified was Salesforce automation and how CRM systems house customer, deal, product, and competitor information together for Salesforce retrieval (Xu et al., 2002). Additionally, Xu et al. (2002) emphasize customer service as a characteristic of CRM technologies to help improve an organization's abandonment rate through tracking, monitoring, and measuring customer service responses. The third characteristic is marketing automation, which provides the most up-to-date information on customers' buying habits so that the most effective marketing campaigns can be achieved. Using CRM, marketing intelligence, customer database, and communication technologies in combination can better address customers' individual needs and allow a company to capture a market before its competitors. Finally, field service is another characteristic of CRM that allows remote staff to quickly and effectively communicate with customer service personnel to meet customer expectations.

Current Content

Technology Acceptance Model

The TAM was first introduced by Fred Davis in the late 1980s and early 1990s and was based on earlier research in the fields of both psychology and the social sciences (Davis, 1989). The TAM derived from the theory of reasoned action (TRA), which suggests that an individual's attitude toward engaging in or perform a behavior is determined by their attitude toward the behavior and the subjective norms that surround it (Hill et al., 1977). To build upon the TRA model, Davis created the original version of the TAM for his doctoral dissertation. In that, Davis suggests that an individual's intention to use technology is influenced by two primary principles: perceived ease of use and perceived usefulness (Davis, 1989). The former refers to the degree of difficulty that an individual perceives when using a particular technology, and the latter refers to the user's belief that the technology would improve performance or productivity.

Askool and Nakata (2011) applied the TAM to explore a conceptual model for the acceptance of social CRM systems through a scoping study. This research notes that social CRM has emerged as a new way of integrating social networking into more traditional CRM systems and looks at factors that may influence businesses and customers' adoption of social CRM in the banking industry in Saudi Arabia (Askool & Nakata, 2011). The model being proposed examines the TAM by incorporating some enhancements, including factors identified in social networking and business relationships literature that influence social CRM adoption. A scoping study was conducted on the banking sector of Saudi Arabia and included a comprehensive literature review and discussions with CRM managers and experts in Saudi banks. A template analysis was applied to analyze the data, and the findings suggest that CRM implementation improves the ability to better handle customers' preferences and deliver improved services, including enhancements to marketing and sales functionalities. The proposed model suggests that customer familiarity, organizational caring behavior, and transparency through sharing information to

present an organization as trustworthy generate a positive cognitive relationship between employees and clients.

Sönmez (2018) analyzed the TAM of user acceptance on business intelligence and CRM systems. Business intelligence systems are defined as a repository of all data inside and outside the business, and this study was organized by examining existing studies in the field of business intelligence and CRM systems (Sönmez, 2018). Then, this study looked at influence factors for the utilization of business intelligence and CRM systems through the lens of the TAM. This study notes that, while CRM has been spreading rapidly through the business sector, very few CRM systems have been successful, and cites human factors as the main reasons for these failures. An updated version of the TAM, known as TAM-3, is applied and tries to explain that interventions can be done by administrators for greater acceptance and more effective use of technologies within the organization. A survey was developed to explore the underlying factors of business intelligence and CRM systems' usage within business organizations with the intent of including real-world professionals who currently use these systems. It focused on perceived usefulness, perceived ease of use, behavioral intention to use, output quality, anxiety, subjective norms, trust, and convergence. The survey received 97 responses from employees that are active users of these systems. The findings of this study demonstrate that the order of importance for successful CRM implementation, as viewed through the lens of TAM-3, is as follows: perceived usefulness, perceived ease of use, and behavioral intention. Additionally, the findings show a positive relationship between the subjective norm and the intention to use. Subjective norms are the most explanatory variable for the behavioral intention to use. There was a positive relationship between subjective norms and perceived usefulness, between output quality and perceived usefulness, and between perceived ease of use and perceived usefulness.

Hasanein and El-Kafy (2022) studied the impact of technology acceptance on the effectiveness of CRM in the hospitality and tourism industry through the mediating role of employee satisfaction. The TAM was applied and focused on five main constructs: perceived usefulness, perceived ease of use, enjoyment, information quality, and system quality. Employee satisfaction is defined as how employees feel about working in an organization according to their expectations and feelings, which are affected by several factors. The study highlights the relationship between the TAM and CRM by alluding to previous studies that suggest that the TAM variables are key drivers of the effectiveness of CRM systems, and the achievement of CRM systems depends on the ease of use of the system. A questionnaire was used and directed toward employees (*N = 213*) who work in the hotel and tourism industry and divided into four sections: staff profile, technology acceptance, and two parts regarding employee satisfaction. The study demonstrated that the CRM system improves customer relationships and interactions with customers and creates a competitive advantage, and is an efficient tool for increasing customer loyalty, satisfaction, retention, and reducing business operation costs. The findings also suggest that TAM variables are key drivers of effective CRM implementation and use and that ease of use is the most significant technological factor that affects the performance and effectiveness of CRM. Lastly, findings show that to improve the effectiveness of CRM systems, organizations should consider developing infrastructure capabilities and acceptance strategies among employees to support CRM implementation. Organizations should focus on employee satisfaction, reducing customer costs, and applying simple technological systems to both customers and employees.

Al-Shammari and Al-Showaikh (2021) investigated user satisfaction with CRM systems in a telecommunications company in Bahrain. The TAM was applied to this study, and the

selected variables were perceived ease of use, perceived usefulness, user support, facilitating conditions, and social influence (Al-Shammari & Al-Showaikh, 2021). The conceptual framework for this evaluation labeled perceived ease of use, usefulness, user support, facilitation condition, and social influence as the independent variables, with users' satisfaction toward a CRM system as the dependent variable. A non-probability convenience sample of employees (*N* = 67) utilizing CRM technologies within their organizations was selected and provided a closed-ended questionnaire to measure users' satisfaction with the CRM system through a five-point Likert scale. A statistical analysis was conducted using a partial least square-structural equation modeling technique. The findings revealed that two main components of TAM (perceived ease of use and perceived usefulness) have a significant impact on user satisfaction with the CRM system, leading users to believe in the importance of the system and reducing their learning time while elevating their performance. Additionally, a positive and significant impact of user support on user satisfaction within the CRM system was found, along with a significant relationship between facilitating conditions and user satisfaction with the CRM system. This translates to critical support employees gain from top management and training to empower them to utilize a CRM system effectively. Lastly, the findings suggest that social influence has a positive impact on user satisfaction, meaning that social influence plays an essential role in compelling people to use specific technology systems.

Ngangi and Santoso (2019) conducted a customer acceptance analysis of CRM systems in automotive companies using the TAM. The goal of this study is to measure the perception and acceptance of services provided by a company within the automotive industry by the customer and also to measure factors such as ease of use to determine other factors that relate to customer satisfaction (Ngangi & Santoso, 2019). The variant of the TAM used in this study examines

TAM 2, which is focused on perceived usefulness and perceived ease of use. The research instrument used in this study is a questionnaire containing several closed-ended questions measured on a Likert scale. The population ($N = 200$) included employees of an automotive company utilizing a CRM system. The results of this study show that the subjective norm has a significant effect on perceived usefulness and perceived ease of use. The output quality has a significant effect on perceived ease of use, and perceived enjoyment has a positive effect on both perceived usefulness and perceived ease of use. Perceived ease of use has significant effects on perceived usefulness and intention to use. Lastly, perceived usefulness has a significant effect on intention to use, and intention to use has a significant effect on CRM technology adoption.

Amazhanova and Huseynov (2018) examined the impact of CRM on customer satisfaction in e-commerce businesses in Turkey, including the perceived usefulness of CRM technologies through the TAM. The main purpose was to examine the impacts of CRM features, such as complaint handling, information content, communication, security, and privacy, on customer satisfaction with perceived usefulness as a mediating variable (Amazhanova, 2018). An online questionnaire was developed and used in this study, containing a series of five-point Likert scales that measured customer satisfaction, complaint handling, communication, perceived usefulness, and security and privacy. It was distributed online through a non-probability convenience sample method that included 210 participants utilizing CRM in their e-commerce business. The results demonstrate that complaint handling as a CRM feature has a statistically significant positive impact on customer satisfaction but fails to do so with perceived usefulness. Additionally, communication, as a CRM feature, had a statistically positive impact on customer satisfaction and demonstrated a positive impact on perceived usefulness. Security and privacy had a positive effect on customer satisfaction but a negative impact on perceived usefulness.

Finally, perceived usefulness demonstrated a significant positive influence on customer satisfaction. The study concludes that perceived usefulness has a significant positive impact on customer satisfaction and demonstrates that it plays a mediating role.

Ramadan and Eleyan (2021) analyzed an adoption model of social CRM in the banking sector and investigated the factors that impact banks' intention to adopt CRM through a combination of the technology-organization-environment framework (TOE) with the TAM. The study suggests that TOE variables, such as top management support and relative advantage, have a direct effect on the two primary TAM variables of perceived usefulness and perceived ease of use (Ramadan & Eleyan, 2021). Additional variables of the TOE include consumer pressure and competitive pressure, which have an impact on CRM adoption. This research utilized a quantitative cross-sectional study to measure these variables and the factors that could influence employee intention to participate in social CRM programs. The sample included senior managers and employees of IT, marketing, public relations, and customer service departments, and data was collected through several phases. The first phase included a review of relevant studies for a better understanding of social CRM, followed by a pilot test of a questionnaire to discover any flaws or inconsistencies. This was followed by a survey questionnaire ($N = 220$) that was provided via email, telephone, or a face-to-face meeting. The findings show a statistically significant positive influence of relative advantage on perceived usefulness in using social CRM. Additionally, the impact of relative advantage on perceived ease of use was also statistically significant. The study notes that the relative advantages of social CRM may be perceived as leading to better outcomes, such as efficiency and improving productivity, which lead to enhanced customer service and increased revenue levels. Additionally, the relationship between top management support on perceived usefulness and perceived ease of use was supported. The

environmental determinants, such as customer pressure and competitive pressure, were also found to have an impact on social CRM adoption.

A study by Wang and Lien (2018) sought to identify the casualties between design features and behavioral intention within the CRM space, identify the priorities of design features, and forecast user intention to adopt CRM systems. Drawing from the TAM, this study examined exploratory features and analytic features of CRM systems and characterized the perceived ease of use and perceived usefulness (Wang & Lien, 2018). This study delivered 500 questionnaires through an in-person survey, postal mail, and email using a purposive sample and collected a total of 388 responses from employees in sales, marketing, and customer service departments in companies that utilize CRM systems. The findings of this study show that firms with prior implementation experience with enterprise information systems focus on the construct of perceived usefulness, while inexperienced organizations focus on the constructs of perceived ease of use. Additionally, experts with knowledge of statistics and databases are more interested in mining analytics than in the features of exploratory understanding. The study also finds that training employees in statistics or database management is helpful to improve CRM operational skills among beginning users. Lastly, following the concept of TAM, both perceived usefulness and perceived ease of use are useful predictors in CRM adoption, and other constructs such as system complexity, compatibility, and trialability are all mediators in forecasting user intentions.

Mokha and Kumar (2021) applied the TAM to the viewpoint of the customer and their behavioral intention to use e-CRM to interact with an organization. The proposed research model was based on the TAM but hypothesized that e-CRM had a positive impact on both perceived usefulness and perceived ease of use. Perceived ease of use had a positive impact on perceived usefulness and attitude toward using e-CRM (Mokha & Kumar, 2021). Additionally, the

hypothesis was that perceived usefulness had a positive impact on attitudes toward using e-CRM and behavioral intention toward using e-CRM, and attitude toward using e-CRM had a positive impact on behavioral intention toward using e-CRM. A sample ($N = 345$) of respondents participated in an online questionnaire containing 19 items across six dimensions (customized products/services, transaction security/privacy, alternative payment methods, problem-solving, online feedback, and FAQs) and included individuals who use e-CRM technologies to interact with the banking industry in India. The findings revealed that e-CRM had a positive impact on both perceived usefulness and perceived ease of use by customers, which had a positive impact on the attitude toward using e-CRM, leading to a positive behavioral intention of customers interacting with the organization through CRM front-end features.

Critical Success Factors

Guerola-Navarro et al. (2021b) studied the potential of CRM technologies and the necessary and sufficient conditions required for CRM implementation to obtain good organizational performance. This research explained the wine and winery sector of Spain because the larger winery groups have substantial technology departments. The study shares that the main strength of CRM technologies as a business tool is due to a sustainable model of benefits it creates and provides to companies that use it properly (Guerola-Navarro et al., 2021b). A total of 418 companies that invoice over 2 million Euros annually and a list of 84 companies were then generated that were known to utilize CRM. Questionnaires were provided to each of the sample firms. The questionnaires gained insights into firm performance, culture of CRM, use of CRM technology, innovation in processes, and innovation in products. The results of this study indicate that firm performance requires either CRM technology or CRM culture and that the sufficient condition for firm performance is CRM culture combined with innovation

Additionally, the study finds that CRM is a key business asset from both cultural and technological perspectives. The implications of this research show that organizations that have been reluctant to transform digitally and adopt business management technologies are likely not benefiting from better knowledge about customers, improved customer-centered strategies, better customer service, and greater satisfaction among customers with greater market efficiency.

Farhan et al. (2018) conducted a systematic review for determining and classifying critical success factors for CRM implementation. Their research notes that approximately 70% of all CRM implementation projects fail to achieve desired objectives, and it shares that organizations ignoring the critical success factors required for CRM implementation often result in high failure rates and losses in CRM initiatives (Farhan et al., 2018). The research questions examine the key challenges behind the high failure of CRM initiatives, the success factors identified through empirical studies that have a positive effect on CRM implementation, the expected classification of the critical success factors, and how critical success factors can be measured. A systematic review of the literature was conducted and narrowed down to 182 papers that focused on analyzing critical success factors and studies around adoption and implementation. From there, the study extracts data into a list of 18 items including issues of CRM adoption and implementation, critical success and risk factors for successful implementation, metrics, and classification. The findings of this study uncover that the reasons for failure include organizational change, company policies/inertia, little understanding of CRM, a lack of senior management support, and a poor CRM strategy plan. The study also finds that the top critical success factors are top management support and commitment, IT systems management and integration, clearly defined CRM strategy, knowledge management capabilities, and an organizational culture of change.

Similarly, Parahita et al. (2021) conducted a case study on CRM system implementation to analyze the critical success factors. This research sought to explain the CRM implementation process, including identifying issues, phases of implementation, and the business process (Parahita et al., 2021). The study states that technology implemented in a company must provide clear value or function aligned with the expectations of users of the system and needs support from users to achieve success. With an explanatory case-study design that examined an Indonesian tower provider company, Parahita et al. (2021) investigated how the CRM system was implemented and what the critical success factors affecting the success of the CRM system implementation were. Data collection for this case study takes place during the CRM selection phase, implementation, staff training, and the go-live stages (Parahita et al., 2021). Additionally, five senior managers from each department were interviewed, and five departments were chosen that represented customer processes such as finding new customers, billing, and support. Additional interviews were conducted with two employees who oversaw the technical implementation of the CRM system. The findings of this study reveal that three perspectives influence several success factors: people, process, and technology. The success factors related to people include support from leaders and managers, sufficient employee knowledge and capabilities, and effective teamwork. The success factors of the process perspective include effective project documentation management and internal support. Finally, the success factors of the technology perspective include real-time transactions and integration with existing business processes and applications.

Cieciora et al. (2020) investigated the critical success factors of CRM implementation in small and medium-sized enterprises in Poland. This study indicates that properly used CRM systems can significantly increase the efficiency of company operations and enable an

organization to quickly collect, organize, and analyze various customer data to boost information flow within the company and with clients or other external stakeholders (Cieciora et al., 2020). The main hypothesis for this study was that the main critical success factor for successful CRM implementation was a thorough pre-implementation analysis and a sufficient number of financial resources for implementation. A survey questionnaire was issued to information and communication technology specialists ($N = 83$). Respondents were asked to evaluate the significance of nine critical success factors for CRM implementation on a five-point Likert scale in order of importance. The results of this study show that the most important factor for CRM implementation was a thorough pre-implementation analysis of the company's needs. Two additional factors included having sufficient financial resources and good communication with an external company providing the CRM. Additionally, respondents indicated other important factors, such as the skills and experience of the implementation service provider, preparation of employees to implement and use the system before starting implementation, support of top managers, and reorganization of the company that matched the best conditions after implementation.

Research by Khanh et al. (2021) highlighted the impact of organizational factors on CRM success implementation and proposed a CRM framework with direct and indirect effects on organizational factors, data quality, and CRM strategy. One observation of this study is distinguishing between CRM as a process or philosophy and labeling e-CRM as the technology used to maintain customer relationships or a technology strategy focused on marketing activities across all business operations (Khanh et al., 2021). Aside from organizational factors influencing CRM success implementation, this study also considered other factors influencing CRM success, such as customer orientation, knowledge management, data quality, and CRM strategy. Data for

this study was collected through a structured questionnaire and received 241 responses from individuals working in the Vietnamese airline industry. A correlation analysis was conducted to examine the causal relationships between the various organizational factors. The findings of this study suggest that customer orientation is the most significant determinant of CRM success implementation, followed by knowledge management, technology, and organizational factors. This study uncovers the idea that while organizational factors have some importance in CRM success implementation, these factors have the least influence compared to the other direct factors. This study also finds that knowledge management and technology have a similar direct effect on CRM and that CRM strategy and data quality contribute indirect effects on CRM success implementation.

Anaam et al. (2021) researched the critical success factors for CRM success adoption through a case study of telecommunication companies in Malaysia. The authors sought to address the issues and challenges in CRM adoption by reviewing studies and literature in the CRM field that highlight failure levels for adoption and improve understanding of the high failure rates (Anaam et al., 2021). The research questions examined the critical success factors positively affecting CRM adoption and how those factors affect employee satisfaction with CRM A systematic review of the literature was conducted, collecting data from theses, journals, and conferences from the years 2000 through 2020. The keywords used in the search queries included e-CRM, adoption, critical success factors, success factors, challenges, and employee satisfaction. In this process, 210 papers were eligible from an initial 3,349 articles. The findings determined that critical success factors from three aspects, including technology, organization, and individual factors, have a significant effect on the successful adoption of CRM technologies. The technology factors included system quality, information quality, service quality, and

perceived usefulness. The organizational factors included top management support, training, and perceived usefulness. The individual factors included skills, computer experience, computer self-efficacy, and perceived usefulness. An additional finding of this study was that perceived usefulness played a mediating role between technology, organizational, and individual factors, and all impacted both employee satisfaction and individual performance.

Alshourah et al. (2018) studied the roles of top management and customer orientation in enhancing the performance of CRM in the hotel industry. The study highlights how policymaking within organizations related to CRM requires a deep knowledge of customer needs, behavior, and preferences and that the major driver of CRM-related change is technology (Alshourah et al., 2018). A total of 133 Jordanian hotels participated in this study through a voluntary survey questionnaire, and questions conceptualized CRM across a four-dimensional construct: key customer focus, CRM organization, knowledge management, and technology-based CRM. CRM performance was measured by 14 items, top management was measured by eight items, and customer orientation was measured by nine items. The findings revealed that top management significantly influenced CRM performance but found an insignificant relationship between customer orientation and CRM performance. The study found that the reason for the insignificant impact of customer orientation on CRM performance is possibly due to customer orientation alone, not guaranteeing better CRM performance in regard to customer satisfaction, loyalty, retention, and profitability. In particular, the study found that top management's consideration of CRM is closely associated with successful CRM implementation. Managers' efforts to promote CRM increase staff recognition and acceptance of the concept, as well as employee participation.

CRM success factors as determinants of customer satisfaction rates were examined in a study by Zaim et al. (2020). The authors defined e-CRM as "marketing a strategy that integrates all business activities for attracting and retaining customers over the internet to consolidate retention, cross-buying, brand loyalty, and customer satisfaction" (Zaim et al., 2020). Additionally, this research differentiates between the various classifications of CRM, including analytical, operational, and collaborative CRM processes. This study serves as an extension of an existing study, including data on soft computing and pattern recognition in the context of determining the values and weights importance of CRM features on customer satisfaction rates based upon click streams and reviews data (Zaim et al., 2020). The entire study was adapted from the previous research and uses five criteria with 30 sub-criteria in the analysis of CRM, including usability, content adequacy, reliability, and order fulfillment. The sub-criteria included accessibility, purchase process performance, communication facilities, clarity, purchase conditions, and more. The findings of this study delivered a CRM success determinant model for improved customer satisfaction rates. It highlighted usability, content adequacy, reliability, delivery time, and order fulfillment as critical determinants of customer satisfaction through CRM.

Abu Amuna et al. (2017) investigated the critical variables for CRM in higher education from the employee perspective. According to this study, higher education institutions that embrace CRM initiatives experience a surge in performance, endorse better management practices, and advance the institution's relationship with existing and prospective students (Abu Amuna et al., 2017). This research sought to highlight positive features of CRM technologies that are expected to improve long-term relationships between students and universities. The hypothesis of the study is that there is a positive relationship between the critical success factors

and the success of CRM implementation from an employee perspective. The study used a sample of 300 employees from Al-Quds Open University in Palestine and provided a questionnaire where respondents could rate four dimensions of CRM implementation. The results of the study showed a positive correlation between the critical success factors and CRM implementation from the perspective of employees. The study notes that adopting CRM initiatives increase performance, promote better management practices, and improve the institution's relationships with current and prospective students. The study shares that the importance of people-capability to implement CRM, including support from top-level management, is among the most critical success factors for CRM implementation. Additionally, the overall findings demonstrate that the features of CRM were welcomed by employees once trained in using those features.

Organizational Performance

Al-Weshah et al. (2018) studied the role of CRM systems in organizational performance within the Jordanian small business industry. This study developed a conceptual model that links CRM systems with performance and seeks to understand the effectiveness of CRM as a marketing tool (Al-Weshah et al., 2018). One critical question that this study aimed to address is how to conceptualize the effectiveness of CRM practices in an organizational context and examined this in Jordanian small businesses, particularly in the food industry. A qualitative research design was used to achieve the objectives, and it included face-to-face interviews with experts and executives ($N = 9$) in the Jordanian food industry. The findings demonstrate that there are significant effects of CRM dimensions on company performance, including four primary dimensions: system quality, information quality, system usage, and user satisfaction. Interestingly, the study found that each of the participants had a fairly different response to defining what a CRM system is or does, focusing mainly on the outcomes for their organization.

However, the benefits of CRM systems were outlined as profit maximization, gaining market share, enhancing brand equity, improving competitive positioning, and positive word of mouth. Lastly, respondents indicated that the criteria for evaluating CRM include a customer satisfaction index, research and survey, customer complaints, sales volume, and customer lifetime value.

Soltani et al. (2018) examined the impact of CRM on organizational performance. The goal of this study was to determine how technology, organizational capability, customer orientation, and customer knowledge management can influence CRM success. A questionnaire was used to sample 155 employees in the East Azerbaijan Tax Administration and included questions regarding customer orientation, organizational capability, information technology, customer knowledge management, CRM success, and the firm's performance (Soltani et al., 2018). The findings of this study illustrated that the success of CRM is considered one of the most important resources for an organization to enhance its performance and success. The research also concludes that there is a positive relationship between successful CRM implementation and organizational capacities related to customer orientation, knowledge management, and overall organizational capability. Additionally, the study affirms that the interrelationship among customer orientation, organizational capability, information technology, and customer knowledge management is a major factor for CRM success that directly impacts organizational performance.

Valmohammadi (2017) tested a framework that identifies the relationships between CRM practices, organizational performance, and innovation capability. The study included a sample of 211 Iranian manufacturing firms, and a survey instrument was developed to test the research model. The questionnaire analyzed CRM practices such as information sharing, customer involvement, long-term partnership, joint problem-solving, and technology-based CRM

(Valmohammadi, 2017). It also inquired about innovation capabilities such as process and product innovation, and organizational performance. The findings of this study suggest that CRM practices have a positive and significant effect on organizational performance and innovation capability and that any improvements in innovation caused by CRM result in better organizational performance. Additionally, the findings suggest that CRM practices have a higher impact on the innovation of organizations compared to the direct impact on organizational performance, and this study is notably in contrast to past studies that have indicated that CRM technology does not have a significant impact on organizational performance. Finally, the study finds that the sampled group does not pay enough attention to the implementation of CRM technologies to collect and analyze customer information, using statistical techniques, and transforming the data into useful information for the organization.

Ernst et al. (2011) examined CRM and company performance and observed the mediating role of new product performance. This study looked at the role of CRM's potential to aid future product development and developed a conceptual framework that examined multiple facets of CRM and the linkage to new product and company performance (Ernst et al., 2011). The hypothesis of this study was that the more a firm implements its CRM processes of information management, value management, and multi-channel management, the higher the firm's new product performance. Additionally, the study hypothesized that the greater the use of CRM technology, the stronger the positive link between CRM processes and product performance. The study included a large-scale survey, delivered through email and phone, of 183 companies from six industry sectors in Germany that reflect the national economic performance. The findings demonstrated a positive relationship between CRM processes and new product performance. Additionally, it was found that with a higher degree of CRM process

implementation, new product performance would be significantly higher. This research concludes by stating that new product performance is an important mediator of the CRM-business performance link and that CRM reward systems facilitate a positive effect of CRM processes in the context of new product development.

Lipiäinen (2015) investigated the implementation of CRM in three contemporary business-to-business firms to examine the objectives of CRM and the exploitation of social media to serve those objectives. More specifically, this research investigates social media and its potential in the context of implementing CRM technologies within a B2B operation (Lipiäinen, 2015). Through a multiple case study of three organizations and semi-structured interviews with key staff responsible for CRM activity, four central themes emerged: the role of CRM in companies, the usage of social media and other digital tools for CRM, gaining customer insight, and engaging customers. The findings of this study demonstrate that all firms reported CRM as having a strategic position within the organization, not only as a technical process solution to assist customers but also as a particular method to take care of customers. Each company identified CRM as a method for building long-term profitability with customer relationships at the center and viewed CRM as a way of streamlining goals toward building customer loyalty and targeting customer engagement. Interestingly, although all the firms utilized social media, the respondents suggested that it played no part in CRM. The reported findings suggest there was nothing of value for sales or any new information on customers gleaned from incorporating social media within CRM. One respondent suggested that the reason why was because social media provides more general knowledge of trends and events, rather than offering strategic customer knowledge.

Ullah et al. (2020) studied the impact of CRM adoption on organizational performance through the moderating role of technological turbulence. The purpose of this study was to develop empirical insights in relation to moderating technological turbulence in the banking sector (Ullah et al., 2020). The theoretical framework for this study was relationship marketing theory, and technologies such as CRM systems support relationship-building processes between organizations and customers. CRM systems allow organizations to develop insights into individual customer behavior. A questionnaire was distributed to employees in the Pakistani banking industry, and 277 responses were gathered. The questionnaire analyzed three primary areas of CRM usage in these organizations, including adoption, organizational performance, and technological turbulence. The findings suggest that CRM adoption has a critically positive impact on organizational performance in the business-to-customer setting. The results also highlight that client satisfaction is improved through CRM adoption, which also promotes better organizational performance. Finally, the authors found that technological turbulence has a negative impact on CRM adoption and organizational performance.

Drawing from the dynamic capabilities theory, Pedron et al. (2018) developed a conceptual model for understanding the development of innovation capabilities through CRM usage. They also note that when organizations use CRM technologies, it develops different organizational capabilities that can lead to innovation. The study sought to understand the role of CRM in dynamic organizational capabilities, which are defined as an organization's ability to integrate, build, and reconfigure internal and external competence in order to adapt and address changing markets and environments (Pedron et al., 2018). An exploratory study was conducted based on qualitative interviews with CRM experts. The experts were selected based on their knowledge and professional experience with CRM and included CRM consultants, academics,

clients, and vendors. The questionnaire examined CRM questions regarding long-term partnerships, information sharing, customer involvement, and technological integration. Innovation capabilities were examined through questions concerning product, process, administration, marketing, and service innovations. The findings of this study demonstrate that CRM drives innovation through dynamic capabilities and that CRM allows organizations to generate innovation by sensing, seizing, and reconfiguring marketing opportunities and threats. This study highlights that a framework of dynamic capabilities based on customer feedback obtained through CRM can assist organizations in sustaining a competitive advantage and that the full potential of CRM system implementation has implications on different levels of an organization beyond just marketing and sales alone.

Through a systematic review of literature by Guerola-Navarro et al. (2021), the role of CRM and its impact on innovation within organizations was analyzed. This study notes that CRM is essential for business success and has been proven to be one of the fastest-growing technological solutions in organizations due to its impact and return on investment (Guerola-Navarro et al., 2021). This research completed a review of previously published findings and studies related to CRM in business through a qualitative and descriptive approach. The literature included 17 recent studies on CRM and its impact on the development of business innovation policies from 2015 to 2019. The dimensions of CRM analyzed in the literature review included customer identification, attraction, retention, and development and were used to classify the relevant articles. Additionally, the study applied five innovation dimensions for analysis, including product, process, administrative, marketing, and service innovations. The results of this study indicate that among all the dimensions used to classify the combination of CRM with innovation, customer retention stands out. Regarding innovation, the process innovation

dimension is the most significant. Finally, the study's findings suggest that CRM is a key tool for customer loyalty reinforcement and overall organizational performance.

Pham-Singer et al. (2020) examined how CRM systems can be used to manage quality improvement interventions in the healthcare research sector. A strategically planned CRM system was implemented to support quality improvement interventions with 257 small independent healthcare practices. The purpose was to collect, track, store, and share data about practices and practice facilitation activities in real time (Pham-Singer et al., 2020). Additionally, the CRM system was used to track the organization's practice facilitation quality improvement system intervention. This three-year project included 16 primary care information projects, encompassing 257 small, independent healthcare practices that were randomly assigned the CRM intervention in four waves at three-month intervals. Each of the primary care information projects was assigned to a panel of practices to implement the intervention, focusing on promoting system changes. The CRM was used as a tool to manage the intervention and provide real-time feedback; the Salesforce CRM solution was utilized in this study. The results indicate that CRM systems were able to track what and why adaptations were made and how they impacted the quality of care and provided a greater understanding of the practice facilitation process. The study notes that the challenges of implementing the CRM were ensuring data collection and accuracy and that the technology intervention alone was not enough to support the required intervention. For CRM implementation to be successful, time, effort, and willingness to adopt process changes were critical, along with additional resources such as supervision, protocols, training, and retraining.

Januszewski and Krupcala (2021) researched the impact of CRM systems and time management on organizational effectiveness and performance. Their research notes that there are

problems with IT systems adoption in small and medium-sized enterprises, and there are no methodologies for their implementation. Therefore, it is important to determine the failures and highlight some recommendations (Januszewski & Krupcala, 2021). Using a multi-search engine approach of various bibliography databases, the authors conducted an extensive literature review on content related to the impact of CRM on organizational effectiveness and performance, and the impact of time management on organizational effectiveness and performance. A case study was designed, including participant observation and direct unstructured interviews, over the course of 11 months. It focused on the organization of work and communication within the company and was recorded in an observation log. The questionnaire contained 40 questions across five different groups that were concerned with the premises for implementing a CRM system, the implementation process, and the reasons for giving up on the system, the questionnaire examined human aspects such as support from top management, employee resistance, and perceived conclusions from the unsuccessful attempt at CRM adoption. The research findings show a significant impact of the CRM system and time management tools on increasing organizational effectiveness and performance. Additionally, this research found that individuals who did not have time management tools in place used the CRM less and were not able to benefit from its potential, therefore becoming a reason for CRM implementation failure. Finally, the lack of knowledge of IT management support, tools, training, and the non-intuitive nature of the technology presented barriers for full CRM adoption and led to failure.

Paliouras and Siakas (2017) engaged in a case study of social CRM to examine the importance of CRM and social CRM for businesses and provide perspectives on objectives and types of CRM, the working cycle of CRM, stages of CRM strategy, and technology tools used. The goal of this research was to create a social CRM strategy in collaboration with the

companies and is a follow-up on previous research on social CRM. The study highlights how many businesses are using social media in order to advertise their brand and products and achieve greater communication with customers and that social CRM is an approach of using social media to engage with customers (Paliouras & Siakas, 2017). It is worth noting that many CRM systems contain integrations with social media sites to track conversations with customers, gain customer insights, and aggregate that data alongside other data collected through the CRM. This research suggests a conceptual model that proposes that customer engagement in social CRM is achieved through customer relationships orientation, communication with customers, management of online customers through social media, and usage of mobile technology. The case study examined three small Greek family businesses that participated in a previous study and were asked to create a social CRM strategy in collaboration with the researchers. The findings of this study demonstrate that all three companies consider social CRM as an excellent tool for obtaining real-time data and feedback from customers and can be a cost-effective way to reach them. Additionally, all three companies put the goal of gaining customer loyalty at the center of their social CRM efforts.

Foltean et al. (2019) examined CRM capabilities and social media technology use on firm performance. This research analyzed the influence of customer coercive pressure and competitor mimetic pressure on social media technology use and investigated the mediating role of CRM capabilities between social media technology use and firm performance (Foltean et al., 2019). The hypotheses were that social media technology use is positively related to CRM capabilities, that CRM capabilities have a direct and positive influence on firm performance, and that the relationship between social media technology use and firm performance is mediated by CRM capabilities. This study used self-reported data collected through an online questionnaire from a

random sample of 149 companies in Romania. Respondents ($N = 149$) were members of top management, such as marketing and sales managers or IT managers. The results highlight that customer coercive pressure and mimetic competitor pressure have a significantly positive influence on social media technology use. The findings also show that these two determinants of social media technology use are perceived to ensure company legitimacy in the competitive market. Additionally, the findings concluded that social media technology use has a positive effect on CRM capabilities. It notes that CRM technologies must evolve by creating multiple contact points to engage clients and generate benefits for both the company and the customer. It recommends that companies store valuable data from social media channels within the organization's CRM system. The findings also suggest that social media technology use does not lead directly to firm performance, and CRM capabilities only indirectly mediate the relationship between the two. However, the usage of social media technologies to gather information about customers and foster conservations enhances CRM capabilities, which in turn improves firm performance.

Yanto and Asiah (2019) examined how CRM technologies can improve the performance of companies and emphasizes that CRM is helpful in increasing customer interest, improving economic conditions, and enhancing product promotion through intimate customer knowledge (Yanto & Asiah, 2019). However, this study recognizes that many companies are not utilizing CRM efficiently to improve company performance, and this study examines the utility of CRM technologies in increasing performance. The research method utilizes two data collection techniques: the first is a waterfall model, which is a software development model used to examine the progress of a process through planning, analysis, design, implementation, and maintenance stages. The second method was a library study that examined past studies on CRM

usage in companies, and five articles were selected as the basis of this research. The findings of this study highlight that CRM technology provides convenience to employees in processing data, reports, and delivering information to customers. Additionally, CRM technologies make it easy for customer service administrators to manage customer inquiries and provide convenience for customers to get the latest information about products or services from the company, as well as convey questions or complaints to the company while having those items recorded neatly in the system. Lastly, CRM technology provides the company with knowledge about customers' wishes so the company can strive to improve company performance while maintaining old customers and soliciting new customers.

Additional Organizational Impacts of CRM Adoption and Implementation

Chatterjee et al. (2020) looked at the role of knowledge management in improving business processes and developed an interpretative framework for the successful implementation of CRM and knowledge management systems in organizations. The purpose of this study was to identify the critical success factors for AI-integrated CRM systems for better knowledge management in organizations to improve business processes (Chatterjee et al., 2020). This study also explores how critical success factors are interrelated and how they can be classified and categorized according to their levels of importance. Through interpretive structural modeling, this study helped identify the specific relationships among the factors and utilized a series of brainstorming sessions with CRM experts, applying a Delphi method. Sixteen critical success factors were identified, and the interrelationship between those factors was established through an interpretive structural modeling technique. The findings of this study suggest that out of the sixteen critical success factors, leadership support, adequate funding, and the support of functional area leaders were the most important factors for artificial intelligence, CRM, and

knowledge management integration. The implications of this research and the transferability of this research to something like the CES show that the support of leaders and managers is essential for the successful adoption of CRM systems for better knowledge management, which improve business processes.

In a separate study by Chatterjee et al. (2021), the adoption of artificial intelligence-integrated CRM systems in organizations was examined in India. This study examined the factors impacting the adoption of an AI-integrated CRM system as part of a digitalization strategy and built a theoretical foundation to develop hypotheses and a conceptual model (Chatterjee et al., 2021). Additionally, this study sought to understand how trust impacts users' attitudes and the adoption of CRM systems in digitized organizations. A questionnaire was delivered to ten experts for their opinion on 42 measurement items to validate the conceptual model. Eventually, 357 responses were obtained from employees of various companies to provide their feedback. Aligned with the TAM, the study highlights that if stakeholders of an organization understand the usefulness of a system and feel that the system is not complex to use, they are significantly more inclined to use it. Additionally, the study notes that an organization must examine and address the threat and challenge factors of successful usage and implementation, and that organizations should structure their IT competencies to sense and respond to threats in order to build stakeholder trust.

Pohludka and Štverková (2019) investigated the best practices of CRM implementation for small and medium-sized enterprise businesses. The aim of their study was to identify the determinants for successful CRM implementation through a case-study design, and the study notes that functional CRM systems lead to better marketing funnel management, which improves customer relations and leads to greater business sustainability (Pohludka & Štverková, 2019).

Additionally, Pohludka and Štverková (2019) note that there are three major elements of CRM system, including people (human capital, customers, employees), business processes (orientation, blending, unification), technologies (type, scope, area of use), and contents (data, processing, sorting, archiving). A total of 319 entities were surveyed to understand the adoption and implementation of CRM technologies in their organizations. The findings suggest that only 58% of enterprises use a CRM system. The reasons why enterprises did not implement CRM systems were the result of insufficient information, insufficient technical background, and the perceived cost-effectiveness of CRM systems. However, the companies that did report the use of CRM systems shared that the reasons for implementation were increasing efficiency, customer satisfaction, customer loyalty, brand reinforcement, and cost reduction. The study concludes that the key to successful CRM initiatives is consistent customer data accessible online across the entire organizational infrastructure and an understanding that CRM solutions affect sales, marketing, and customer satisfaction. The study notes that CRM is not just a technology but a change in organizational philosophy so that an emphasis can be placed on the customer.

Sardjono et al. (2021) assessed the implementation of CRM systems to support the competitive advantage of companies. This study looked for factors and indicators to build a model of readiness and efficiency for successful implementation of CRM and suggests that CRM is the core of business strategies that integrates internal processes and functions to create and deliver value to targeted customers (Sardjono et al, 2021). The study also created a CRM value chain of existing factors that impact CRM readiness, including the following primary stages: customer portfolio analysis, customer intimacy, network development, value proposition development, and managing the customer lifecycle. These primary stages were supported by the following conditions: leadership and culture, data and information technology, people, and

processes. A total of 150 questionnaires were distributed using an online survey form, and 131 were valid for processing. The findings of the survey suggest that there are new factors related to the readiness of CRM implementation in organizations and include customer service information, customer relations value, lack of service, and lack of communication.

Rigo et al. (2016) examined the best practices for adopting a CRM strategy in a higher education institution. The study draws from the perspective that higher education students are viewed as customers, and like other business sectors, CRM strategies can help an institution have a more holistic understanding of students' needs while gathering data and knowledge collected through each interaction the student has with the institution, including admission, registration, fee payment, course conclusion, all the way through graduation (Rigo et al,. 2016). However, this study notes that a newer form of CRM technologies is emerging, known as student relationship management, where the strategies of the technology and process are more oriented toward academic goals and student needs. The authors also describe student relationship management systems as a way of developing organizational capabilities that enable institutions to develop a holistic view of students in order to increase retention levels. A qualitative case-study approach through an action research method was applied over two cycles with a European School of Business and Economics containing approximately 200 academic staff, 50 employees, and 4,800 students. The first stage of this research was selecting a CRM system, and this process took nine months as it went through several cycles in the study. These cycles included diagnosing, action planning, action taking, evaluating, and specific learning. The second stage of this study was the actual CRM implementation and evaluating the planning that occurred within the first stage during the actual implementation. The main findings of this study demonstrated that although the primary customer is the student, the institution found that there are other

external stakeholders that the CRM project must consider. Additionally, effective CRM development and implementation can be achieved using an Agile methodology and the Scrum method. Finally, having in-house expertise in CRM helps the institution manage the major organizational resources, including people, process, and technology.

Salah et al. (2021) examined the determinant factors for the adoption of CRM in small and medium-sized enterprises through the moderating effect of firm size. This study notes that CRM technologies can be viewed as an approach to marketing that originates from relationship marketing and is the concept of using process, information, technology, and people to manage the organization's interaction with customers (Salah et al., 2021). Additionally, this study illustrates CRM systems as consisting of three major components: technologies employed for external customer operations, technologies employed for internal operations, and technologies that drive other technologies and allow firms to analyze and disseminate data across organizational departments. Salah et al. (2021) highlight several justifications for small and medium-sized enterprises to adopt CRM technologies, including compatibility, IT infrastructure, complexity, relative advantage, security, top management support, customer pressure, and competitive pressure. Data for this study was collected from employees working in small and medium-sized enterprises in Palestine, including general managers, heads of departments, and operational employees who utilize CRM technology. A total of 331 responses were received from a survey, with 323 usable questionnaires. Participants were asked questions about the influence of justifications on CRM adoption. The findings of this study show that the moderating effect of firm size has a major impact on compatibility, top management support, customer pressure, and IT infrastructure considerations. Additionally, the study found that the hypotheses

regarding complexity, relative advantage, security, customer pressure, and competitive pressure were not moderating effects on CRM adoption based on firm size.

Cruz-Jesus et al. (2019) highlight that there are considerable benefits of CRM but observe that there is limited research considering the CRM adoption stages, including evaluation, adoption, and routinization. This research developed a conceptual framework to examine the antecedents that affect CRM adoption stages in organizations (Cruz-Jesus et al., 2019). This study highlights that there is a prominent assumption about CRM, either as exclusively technological or a marketing tool, rather than a dynamic innovation that must be well managed to maximize organizational efficiency and competitive agility. The framework developed looks at three components that serve as antecedents to CRM adoption, including technological context such as competence and data quality, organizational context such as top management support, and environmental context such as competitive pressure. The hypotheses were that technology competence positively influences CRM evaluation, adoption, and routinization; top management support positively influences CRM evaluation, adoption, and routinization; and competitive pressure positively influences CRM evaluation but negatively influences CRM routinization. A questionnaire was developed and distributed to firms in multiple professional sectors, including questions related to the hypotheses. A total of 277 responses were collected from these various sectors, with a variety of individuals utilizing CRM across multiple components of the organization. The results of this study highlight that data quality and integration, top management support, and competitive pressure are the primary drivers of CRM evaluation and adoption. Additionally, technology competence and CRM evaluation drive CRM adoption, while competitive pressure and CRM adoption positively influence routinization. There was also a

distinct effect of each of the constructs within the conceptual framework on each stage of CRM adoption.

Dubey et al. (2020) studied the implementation and adoption of CRM and co-creation leveraging collaborative technologies. The purpose of this study was to examine the role of the emerging technology landscape and the collaborative platforms associated with it on CRM that open new opportunities for improved co-creation in the context of the banking industry (Dubey et al., 2020). Additionally, this research attempted to analyze the capabilities created by collaborative technologies that result in a better understanding of mutual needs, creating and delivering value, co-creating offerings, and influencing relationship quality with improved outcomes. Through the theoretical framework of DART (dialogue, access, risk assessment, and transparency), a case-study approach was taken to recruit diverse participants ($N = 21$) from the Indian banking industry who participated in a series of interviews. Additionally, the data was triangulated through a study of other documents, observation, collection of artifacts, and field notes. The findings suggest that customers looked for opportunities to have continuous dialogue with the bank, which influenced their trust in the relationship with the bank. Collaborative technologies have opened a new paradigm of customer interaction, and three forms of customer encounters were identified: customer encounters, usage encounters, and service encounters. Many customers were also considered to be transformed customers where they moved from being part of a passive audience to active players. The study found that the role of CRM technology drastically increased dialogue and provided customers with opportunities to gather information, improving customer knowledge. Lastly, CRM collaborative technology implementation brought high levels of transparency to the relationship between the bank and the customer.

Tazkarji and Stafford (2020) examined the failures of CRM implementation in organizations. Their research indicates that the ratio of CRM failures to CRM successes exceeds 2:1 and takes a grounded theory approach to explore the failure factors of the CRM implementation process (Tazkarji & Stafford, 2020). The research questions examine the factors behind the high percentage of CRM system implementation failures and what factors contribute to the success of CRM system implementations. The grounded theory study begins with the process of abduction, which is a technique utilized for explaining surprises or devising a theory to explain an unusual set of facts. The methodology included recruiting CRM system developers and vendors to gather insights about the role CRM systems play in businesses among their clients and users, for in-depth qualitative interviews. The interview participants were representatives from three different CRM system vendors and were transcribed and coded for theoretical analysis. The results identified numerous factors that prevent the successful implementation of a CRM system, including the level of managerial commitment, employee resistance, user motivations, development issues, training issues, organizational fit, and organizational context. Each of these reasons for failure resides in the three main components of CRM systems: people, process, and technology. The study concludes that while these factors contributing to the failure of CRM systems are particularly challenging regarding people and technology, the process category can be more manageable for organizations to plan for and anticipate to reduce failure in the other two categories.

A study by Suoniemi et al. (2022) sought to understand the extent and conditions that consultants have in the successful implementation of a CRM system to produce performance gains for an organization. This research investigates the interdependent roles of CRM consultants, including consultant resources and user involvement, in overcoming the

technological and organizational implementation challenges of CRM systems (Suoniemi et al., 2022). The hypothesis of this research was that CRM consultant resources have a positive effect on CRM system quality. Application complexity negatively moderates the relationship between CRM consultant resources and CRM system quality, such that the relationship becomes weaker as the technology complexity increases. Requirements uncertainty negatively moderates the relationship between CRM consultant resources and CRM system quality. Additionally, Suoniemi et al. (2022) suggested that there may be a three-way interaction effect of CRM consultant resources, application complexity, and user involvement on CRM system quality, and that CRM system quality has a positive effect on firm performance. Data was sampled from IT executives using an online survey instrument, and a questionnaire was delivered to executives in 526 firms, generating 168 usable responses. The findings of this study demonstrate that the extent to which CRM consultants improve CRM system quality and firm performance largely depends on user involvement, which acts as a facilitating mechanism to cope with application complexity and requirements uncertainty.

Jami Pour and Hosseinzadeh (2020) created an integrated framework of change management for social CRM implementation. Implementation attempts often result in failure, and the study states that this is often due to a lack of readiness to change or resistance toward change. More specifically, this research sought to identify the change management requirements for successful implementation of CRM systems and to prioritize and weight the requirements based on their importance for success (Jami Pour & Hosseinzadeh, 2020). The study first completed a comprehensive literature review to identify the initial set of CRM change management requirements. It was completed using keywords including social media, CRM, social CRM success factors, and change management. Secondly, the study sought the opinions of

experienced experts in the Iranian social CRM market who had both academic and professional backgrounds in running CRM systems or strategies in organizations. A total of 10 experts were selected, including top managers, academics, and scholars in the field of change management who were familiar with CRM practices, for semi-structured interviews to investigate the identified requirements based on their experience. Finally, a panel of experts was assembled for a focus group to help rank the order of importance of the requirements for successful CRM implementation. The findings suggest that the context of change (competitive industry, customer-centric culture, senior management commitment, etc.) was the most important factor for CRM implementation. Other important factors included individual factors (e.g., qualified employees), process factors (e.g., developing a clear action plan), and content of change (e.g., customer information management), all of which were critical to the success of CRM implementation.

Rahayu et al. (2022) examined the impact of CRM implementation to maintain service quality for the customer. The objective of this research describes the requirements of an information system that employs CRM methods to fulfill the requirements of customers, thereby ensuring their return business (Rahayu et al., 2022). This research sought to develop a CRM application that simplifies business processes that can be adapted to meet the requirements of customers. Its features may include product recommendation, promotional, and transaction features. Additional goals of this research include accelerating services, improving service quality, and simplifying sales transactions. The methodology utilized the Tokopedia application, and the sampling technique employed a Lemeshow formula and obtained 300 respondents, who were analyzed quantitatively. The results demonstrate that word of mouth, experiential marketing, and brand ambassadors have a positive impact on purchasing decisions in the CRM

application. The findings also show that when the CRM was deployed, system administrators had an easier time managing the various procedures carried out within the system, including the login interface page, dashboard interface page, product interface page, project interface page, promotional interface page, and transaction interface page. The results demonstrate that through a proper organizational analysis, system flow diagrams can be developed to customize the CRM system to the organization's needs.

Marketing Automation and Knowledge Creation

CRM systems have advanced marketing capabilities that help marketers and communicators target communications and messages to intended audiences about products or services tailored to individual customer needs. Järvinen and Taiminen (2016) examined the role of marketing automation for B2B content marketing. The study highlights how the use of content marketing has become widespread in the B2B sector, and this study concentrates on the organizational processes that support content marketing related to B2B sales (Järvinen & Taiminen, 2016). Additionally, the study states that one IT tool attracting more attention in the B2B sector is marketing automation, including CRM technologies, to align marketing and sales system interfaces, improve lead qualification, and target potential customers through personalized content. A single case-study approach was selected for a company that was a large-scale developer and manufacturer of industrial goods and services headquartered in Finland and had exacted expertise in combining content marketing with marketing automation. Data collection occurred through semi-structured interviews focused on the marketing philosophies of the company, content marketing as a concept and strategy, marketing and sales processes, the use of marketing automation, and alignment of marketing and sales efforts. The findings of this study show that the use of marketing automation has a high impact on generating quality sales leads

through both behavioral targeting and content personalization. Additionally, behavioral tracking in marketing automation improves the lead qualification process, and an integrated marketing and sales funnel increases transparency between the two departments, fostering closer cooperation between both organizational departments.

Khodakarami and Chan (2014) examined the role of CRM systems in customer knowledge creation processes. According to Khodakarami and Chan (2014), CRM systems help organizations acquire and generate customer knowledge and that the level of support these systems provide for knowledge creation processes can vary based on CRM system features and functionality. The theoretical framework of this study draws from knowledge creation theory and proposes a three-way interaction between CRM systems, customer knowledge, and creation processes (Khodakarami & Chan, 2014). A qualitative exploratory study was conducted through a case-study method to learn more about CRM systems in their natural settings and to explore the structure of the knowledge creation process. Interviews were the main technique for data collection and included 12 participants from three organizations from various departments that were familiar with the organizations' CRM system and customers. The findings reveal that analytical systems like CRM systems strongly support knowledge creation processes, and collaborative systems provide great support for externalization. Additionally, operational systems facilitate socialization with customers, and collaborative systems are used for internal organizational socialization. All three organizations were satisfied with operational CRM system capabilities regarding work efficiency, impact on business performance, and customer and organizational knowledge creation.

Similarly, Migdadi (2020) examined CRM systems alongside knowledge management and innovation capabilities through a unified framework to test knowledge management on CRM

success, the effect of CRM success on innovation capabilities, and the impact of knowledge management on innovation capabilities through CRM as a mediator. Knowledge management was examined through six factors, including acquisition, diffusion, application, knowledge from customers, about customers, and for customers (Migdadi, 2020). The conceptual model shows that these six factors affect the five factors of CRM success, which include information sharing, customer involvement, long-term partnership, joint problem-solving, and technology-based CRM. Consequently, those factors have an impact on the five factors of innovation capabilities that include innovations in products, processes, administration, marketing, and service. A questionnaire was designed and directed at general managers of organizations in the services sector using a series of five-point Likert scales to assess the degree of implementation of knowledge management, CRM, and innovation capabilities and received 193 valid responses. The findings of this study show that knowledge management influences CRM success and subsequently affects innovation capabilities. Additionally, knowledge management impacts innovation capabilities through the mediating role of CRM systems and CRM success.

Customer Loyalty, Satisfaction, and Engagement

Elfarmawi (2019) examined the correlation between CRM system usage, product innovation, and customer satisfaction. The specific problem was to determine the benefits of using a CRM system for customer satisfaction and product innovation and sought insights into the effects of CRM on innovation, leadership, business organizations, customers, and education (Elfarmawi, 2019). A quantitative method with correlational design was used to link the use of CRM systems to product innovation and customer satisfaction in small and medium-sized organizations in the United States. The sample included individuals working as top managers, middle managers, and first-line managers; the respondents ($N = 97$) participated in an online

survey. The findings of this study showed a strong correlation between the use of CRM systems and customer satisfaction and also indicated that the use of CRM systems could improve relationships with existing customers while simultaneously helping to attract prospective customers and win back former customers. The findings of the study also show a negative linear relationship between CRM system usage and product innovation, meaning this only proves that CRM systems enhance customer service rather than offering an organization new ideas for products; however, it is noted that improved customer feedback can potentially lead to greater organizational innovation.

Rostami et al. (2014) examined the connection between customer satisfaction and CRM systems. Interestingly, Rostami et al. (2014) consider CRM as a system that determines how to interact with customers, solve problems, persuade engagement with products and services, create feelings of loyalty, and have financial interactions, and that CRM contains all aspects of communication between customers and users (Rostami et al., 2014). The theoretical framework of this study suggests that customer satisfaction is a result obtained from a customer before purchase and is influenced by the marketer's activities acting as a mediator in the various stages of consumer purchase behavior. The study suggests that satisfied customers are likely to discuss their experience with others by engaging in positive word-of-mouth advertisements, whereas dissatisfied customers have the opposite negative effect. A questionnaire was designed and received 388 responses; results indicated a strong relationship between service characteristics and customer satisfaction. Additionally, CRM systems were shown to enhance service quality, level of service access, and handling of customer complaints.

Khan et al. (2020) examined the impact of CRM and company reputation on customer loyalty, with satisfaction mediating the relation. The study indicates that customer satisfaction is

essential for a positive company reputation and loyalty and that the reputation of the company depends on customer satisfaction, particularly in turbulent markets (Khan et al., 2020). This was demonstrated through structured questionnaires delivered to 217 participants working in top management for firms in Pakistan with small and medium-sized businesses. The findings of this study suggest that customer relationships have a positive and significant impact on customer loyalty and that customer satisfaction mediates the relationship among CRM, company reputation, and loyalty. Additionally, this study provides suggestions to practitioners, including using CRM to build a deep trust between customers and staff to improve company reputation. Moreover, other areas of communications such as public relations, advertising, and marketing campaigns can enhance efforts to change customer behaviors or motivate customers to a call to action.

Hassan et al. (2015) studied the effect of CRM on customer satisfaction. This study examined the effectiveness of CRM in retaining and satisfying customers in Shell Oil Pakistan (Hassan et al., 2015). The study first examined the reasons for adopting CRM in this context and notes that competition for customers is intense and that a 5% increase in retaining existing customers translates into a 25% or more increase in profitability. The researchers utilized qualitative methods and delivered a survey questionnaire through various banks in Pakistan with a sample of 100 participants. The findings of this study suggest that CRM has a significant effect on customer satisfaction and that when an organization implements a reliable CRM, the customer is more likely to be satisfied and retain the company. This leads to increases in organizational profits and an increase in the number of loyal customers. This study also found that employee training in CRM systems led to better outcomes for the organization through increased customer

satisfaction. This research also suggests that CRM's ability to reach the right customer at the right time with the right message helps attain a competitive advantage in a crowded market.

Bhat and Darzi (2016) examined the competitive advantage in the banking sector by exploring the role of loyalty in CRM. The study points out that CRM technologies have enabled organizations to know customers well enough before developing a relationship and that improved relationships with customers can lead to great customer loyalty and retention, providing a better competitive advantage over others (Bhat & Darzi, 2016). This study investigated the relationship between complaint resolution, customer knowledge, empowerment, and orientation toward customer loyalty. Additionally, the study hypothesized that customer loyalty mediates the relationship between CRM and competitive advantage. In the study of a private-sector bank in India, random sampling techniques were applied for a questionnaire to 278 respondents. The questionnaire was based on 31 questions representing four dimensions of CRM, including complaint resolution, customer knowledge, customer orientation, and customer empowerment. The findings suggest that complaint resolution has a significant positive impact on customer loyalty and that customer knowledge has a considerable positive impact on loyalty. Additionally, customer empowerment leads to loyalty when customers are encouraged to give suggestions to the company regarding service failures. Finally, the study found that customer loyalty acts as a mediator between CRM and competitive market advantage and documents the direct relationship between CRM and competitive advantage throughout the literature. The study also notes that if the bank fails to maintain CRM with customers, it is likely to have a negative impact on the strength of customer relationships and the potential for transforming valuable customers into hostile customers.

Alam et al. (2021) examined the relationship between CRM and customer loyalty and applied the moderating role of customer trust in the banking sector in Bangladesh. The study notes that CRM is a crucial organizational strategy for staying focused on customer needs and incorporating customer-centered approaches across all areas of the enterprise (Alam et al., 2021). Data was collected using a survey questionnaire that was delivered to 350 customers of commercial banks in Bangladesh. The questionnaire asked customers questions regarding customer knowledge, orientation, advocacy, engagement, trust, and loyalty. The findings suggest that aside from engagement, all of the customer-oriented CRM components were found to be positive determinants of customer loyalty. Customer knowledge appeared to be the most significant influential factor on customer loyalty. In addition, the study's findings revealed that customer trust had a positive and meaningful impact, and customer advocacy appears to be the most powerful predictor of customer loyalty.

Arora et al. (2020) looked at the role of CRM in customer engagement, including elements of social media integrated with CRM technologies. Additionally, the study examined the role of customer engagement and its effects on customer loyalty, retention, and satisfaction (Arora et al., 2020). According to Arora et al. (2020), social media integration with CRM enhances business performance in small and medium enterprises and can also help overcome problems associated with a lack of personal interaction. This study aimed to create a synergistic effect by integrating social media with CRM, focusing on dimensions such as information accuracy, reliability, personal attention, and social relations, aiming to generate engagement leading to customer loyalty, retention, and satisfaction. A questionnaire was developed and received 575 responses from a random sample of customers. The study shows that social media integration with CRM significantly influences customer loyalty and that social media helps

maintain good relationships with customers and makes them feel connected due to immediate responses from company employees. Additionally, the study concludes that customized engagement has a significant impact on customer loyalty, retention, and satisfaction. The study highlights that product and service information shared by companies on social media influences customers to continue to engage with the company and empowers customers to share the information with their friends and followers on social media, driving more customers to the organization. The study concludes that customer engagement is a key strategy for maintaining the relationship between CRM and social media.

Nusantara et al. (2023) investigated efforts to penetrate customer loyalty through CRM and highlighted the advantages of customer loyalty to the organization, such as reducing marketing, transaction, turnover, and failure costs, while encouraging positive word of mouth and increasing cross-selling. The study notes that loyal customers end up making regular purchases, typically purchase outside the product line, recommend consumer products, and demonstrate immunity from the attractiveness of similar products from competitors (Nusantara et al., 2023). A descriptive qualitative approach was used through a case study on CRM usage with the Lotus UMKM company through observation and document analysis and interviews with informants, including the owners. The findings of this study highlight how the implementation of CRM has impacted customer loyalty at Lotus UMKM. First, CRM helps the organization create targeted communications through the customer database available within the system. Additionally, the study found that CRM helps develop relationships with customers, particularly with online customers utilizing social networking applications, and found that having access to this information enabled the organization to share more relevant information back with customers. The study also found that the implementation of CRM increases sales volume through

special offers to customers based on information about customer wants and needs. Finally, the results of this research show that there is a significant influence of CRM on customer loyalty and that the better the implementation of CRM within the business unit, there is an increased opportunity for the organization to leverage data from customers, leading to greater loyalty to products and services.

Yohans et al. (2023) analyzed the effect of CRM technologies and customer engagement on customer loyalty. This study suggests that the process of using CRM to manage detailed information about customers and managing activities related to contact with customers can maximize the realization of loyalty. Additionally, this study examined the role of CRM within the online transportation space in Indonesia through a case-study design of the Gojek platform (Yohans et al., 2023). Importantly, this study defines customer engagement as the level of attention and active involvement of customers in communication and suggests that a more active response from customers can allow an organization to obtain better value. Yohans et al. (2023) also define customer loyalty as the deeply held commitment to repurchase a product or service in the future, although there may be external factors and marketing initiatives from competitors. The hypothesis of this research is that there is an effect of CRM technologies on customer loyalty, a positive effect on customer engagement on customer loyalty, a positive effect of CRM technologies on customer engagement, and an effect of CRM on customer loyalty through customer engagement. A quantitative and qualitative questionnaire that utilized a series of five-point Likert scales was utilized and received approximately 100 responses from Gojek customers and users. The findings of this study suggest that there is a significant influence of CRM on customer loyalty and customer engagement. Additionally, the study found a positive correlation

between the influence of customer loyalty and engagement, indicating that customer engagement can play a mediating role in the effect of CRM on customer loyalty.

Adnan et al. (2023) examined how CRM and brand image encourage customer retention, along with the mediating role of customer engagement. This research highlights how brands spend 500–600% more on attracting new customers compared to retaining existing customers and that brands must build a strong relationship with customers through a positive brand image in an attempt to retain them as loyal customers (Adnan et al., 2023). Adnan et al. (2023) define brand image as the perception customers have of a brand due to their own association with it. This study utilized a quantitative method with a sample of 200 individuals living in Pakistan. Data was collected through a questionnaire utilizing a seven-point Likert scale regarding CRM, brand image, customer engagement, and customer retention. For analyzing the data, this research utilized Variance-based Partial Least Squares—Structural Equation Modeling. The findings of this study support previous literature that suggests that CRM has an influential impact on customer retention through fostering quality relationships with customers, and there is a definite role for customer engagement as a mediator between CRM and customer retention. This study also found that brands must exert extreme efforts to build strong relationships with customers in order to retain them through building a positive brand image in the minds of the customers, which is accomplished through engaging customers and providing products or services that exceed their expectation.

Dehghanpouri et al. (2020) studied the impact of trust, privacy, and quality of service on the success of CRM and the mediating role of customer satisfaction. To test these components in their framework, the authors developed several hypotheses around four variables: customer satisfaction, trust, privacy, and quality (Dehghanpouri et al., 2020). These include customer

satisfaction being positively influenced or affected by privacy, trust, and service quality. Additionally, research questions included the impact of trust, quality, and customer satisfaction on e-CRM technologies. A questionnaire was designed and collected data from 378 respondents in Iran, utilizing a series of five-point Likert scales measuring participant agreements, attitudes, and perceptions toward trust, quality, and customer satisfaction. The findings of this study suggest that customer satisfaction is significantly influenced by the perceived quality of service, which is in turn impacted by trust within an organization. Additionally, the study found that service quality, trust, and privacy, through the mediating role of customer satisfaction, deeply affect the success of e-CRM systems. Finally, the study also reveals a significant correlation between e-CRM quality of service and the success of e-CRM systems. It suggests that as e-CRM systems continue to increase transparency of administrative and decision-making processes, they ultimately build trust with clients or customers.

Gopalsamy and Gokulapadmanaban (2021) investigated the effect of CRM on enhancing customer loyalty in the banking sector. This study addresses a deeper question on whether customer knowledge management has been properly utilized in CRM practices to facilitate the increase of customer knowledge, leading to increased customer satisfaction and ultimately greater customer loyalty (Gopalsamy & Gokulapadmanaban, 2021). The research questions asked whether customer knowledge management and customer trust and satisfaction were significantly associated with CRM, if CRM is positively associated with customer loyalty through customer satisfaction, and how effective CRM implementation is in the Indian banking sector. This study used a quantitative approach through a survey questionnaire that was prepared based on factors considered in a conceptual model that was developed. The questionnaire was distributed electronically to private-sector banks and received 779 responses. The findings of this

study confirm that customer knowledge management increases better CRM and that knowledge management is an essential tool for creating better customer satisfaction. Interestingly, the study shows that inadequate budgets and a lack of top management support were barriers to the implementation of CRM. When analyzing the association between customer trust and CRM, a significant relationship was found, and an indirect relationship between customer trust and customer retention was also identified. Finally, a direct correlation between the impact of customer satisfaction and customer loyalty was found.

Al-Arafati et al. (2019) studied the mediating effect of output quality on the relationship between top management support and customer satisfaction in the implementation of CRM systems in the public sector. Their research discusses the implementation of CRM systems and the signification investments required that do not always lead to higher customer satisfaction for many reasons, including the gap between organizational understanding of customer expectations and the real expectations of customers (Al-Arafati et al., 2019). Output quality is defined as meeting the customers' expectations through products and services. It is theorized that when output quality is high, customer satisfaction increases, leading to greater retention and revenue growth. The authors hypothesize that output quality mediates the relationship between top management support and customer satisfaction in the implementation of CRM technologies. A quantitative approach was taken for this study through a survey questionnaire, and the targeted respondents are individual employees working in public sector organizations where these organizations have implemented CRM technologies. A total of 356 usable questionnaires were returned from participants and analyzed in SPSS for reliability testing and Partial Least Squares. The findings of this research showed that output quality is the most important determinant of

customer satisfaction in the implementation of a CRM system and mediates the relationship between top management support and customer satisfaction of CRM system implementation.

Situation to Communication Tradition

One might think that in the context of CRM systems, the TAM is a better fit within the cybernetics tradition due to the nature of the flow of information and feedback throughout those technology systems. However, this research is not examining how data flows through an information system, but how the adoption and usage of the system itself flows through a social system. Maguire (2006) describes the socio-psychological tradition of communication as communication being theorized as expression, interaction, and influence. Griffin (2011) elaborates on this point by stating that researchers believe there are communication truths that can be discovered through careful, systematic observation and look for cause-and-effect relationships that can predict results when people communicate. Often, causal links can be discovered that help explain how a practitioner can identify paths to desired behavior changes (Griffin, 2011).

On the other hand, the TAM does not fit squarely into any of the seven traditions of human communication, but it does contain elements of other theoretical communication models such as the diffusion of innovations theory and the uses and gratification theory. The TAM is potentially a better fit within behavioral science traditions, but the inclusion of communication perspectives into this model makes it an appropriate choice for examining the value of CRM practices and technologies in the CES. Yet, in the context of communications studies, one could argue that this model may still have a place in the socio-psychological tradition with existing precedents. In a separate study of an agricultural organization like the CES, climate-smart technologies were examined among farmers and producers through the lens of the TAM (Khoza

et al., 2020). In this research study, adoption patterns were examined using a socio-psychological theoretical lens to test the applicability of the TAM in predicting climate-smart agricultural practice technology adoption among farming communities. The results of this study demonstrated that social processes are central in influencing decisions on adoption, especially around ease of use, usefulness, and perceived risk. The implication of this study, in the context of the proposed research, is that the TAM can be applied through the socio-psychological tradition.

Kamrath et al. (2018) also examined the TAM through socio-psychological factors in the agricultural industry around postharvest handling technology. The study examined the decisions of traders within the tomato value chain, including 19 retailers, 13 village collectors, and 48 wholesalers, utilizing a survey questionnaire to test the theoretical model (Kamrath et al., 2018). The results of this study concluded that perceived behavioral control and subjective norm were the most important factors explaining respondents' behavioral intention. In attitude, measurements of attitude were significantly influenced by perceived usefulness and perceived ease of use.

Yang and Yoo (2004) revisited the TAM to consider affective and cognitive dimensions of attitude and hypothesized a hierarchy of beliefs: cognitive attitude, affective attitude, and information systems use. Concisely, this study examined the mediating role of socio-psychological factors such as affective attitude and cognitive attitude on TAM factors such as perceived ease of use and perceived usefulness (Yang & Yoo, 2004). The research indicates that socio-psychological literature suggests that attitude has both affective and cognitive components. Affective refers to how much an individual likes the object of thought, while cognitive components refer to an individual's specific beliefs related to the object. Data was collected from undergraduate students (N = 211) majoring in management information systems, and they were

asked to fill out a spreadsheet of usage surveys. Data was analyzed through a structural equation modeling tool to investigate the influence of attitude and the relationship between the two types of attitudes and other variables. The findings found that in the context of TAM, affective and cognitive attitudes are two separate socio-psychological constructs and that user beliefs and attitudes are not interchangeable. TAM should not only be observed as an affective construct but also through a cognitive dimension. Additionally, this study found that perceived usefulness has a direct influence on information systems use, although affective attitude did not mediate the influence of cognitive attitude on information systems use. Lastly, the study notes that attitude is contagious, and as people work together, they express and listen to their own and each other's attitudes. Managers must pay close attention to the attitudes of employees when adopting new technologies.

Park and del Pobil (2013) investigated the TAM for the use of tablet computers and highlighted some history of the TAM. The study notes that the TAM is an extension of the TRA, which is a socio-psychological model that explains the key factors of intended behaviors (Park & del Pobil, 2013). The purpose of this study was to examine user attitudes toward tablet computers and identify the effects of external factors and extend the TAM alongside perceived mobility and viewing experience as external variables in a proposed model. A web-based survey was used and included 511 participants, including graduate students, researchers, and members of two user forums in South Korea. The hypothesis included positive relationships between perceived ease of use and perceived usefulness on attitude in addition to external variables such as perceived mobility and viewing experience on the TAM variables. The study found that perceived usefulness and perceived ease of use were key determinants of attitude toward tablet computers. Additionally, perceived ease of use and usefulness of tablet computers were

significantly enhanced by perceived mobility and viewing experience. The study concluded that all traditional relationships from the TAM were supported.

In an interesting study by Wu et al. (2011), the researchers examined the impact of the socio-psychological factor of trust on the TAM. The researchers define trust as the willingness of one party to be vulnerable to the actions of another party based on the expectation that the latter party perform actions of importance to the former (Wu et al., 2011). A meta-analysis of existing research was conducted based on previous TAM studies to attempt to make statements on the role of trust in TAM. A literature search produced 128 articles for analysis and coding, and the results revealed a large correlation between perceived usefulness and attitude, attitude and behavioral intention, and perceived ease of use and attitude. The study also suggests that it is common for attitude to be excluded from the TAM model but highlights that attitude is a critical factor because it represents user satisfaction with a system. Most importantly, the study found strong relationships between trust and attitude, behavioral intention, perceived usefulness, and perceived ease of use. The implications of this research highlight the importance of trust when considering technology acceptance and have implications for practitioners involved in the design, operation, and maintenance of technology services.

Theoretical Framework

One way of examining the role of CRM systems in the CES is through the TAM. Soon, et al. (2016) explain the TAM as being rooted in the perceived usefulness and the perceived ease of use of a new technology. Soon et al. (2016) further define perceived usefulness as the degree to which an individual can see the benefit of using a new technology or process as it relates to improving job performance. The theoretical importance of perceived benefits for an individual or an organization also helps determine successful technology acceptance or adoption; this is

particularly true if the technology or process is determined to have economic benefits for the individual or organization (Soon, 2016). A technology is more likely to be accepted or adopted if there is a perceived ease of use, meaning that the individual or organization views its usage as free from effort.

Additionally, the TAM examines the perceived risk by the individual or the organization. If an individual or organization views the risk of using a technology to be high, it is less likely that the technology would be adopted. The final component of the TAM is focused on training. Training refers to what an organization must provide its employees, or what is needed for individuals to learn to use a technology with consideration to the ease of use and usefulness. Training is viewed as a critical component of successful technology acceptance and adoption (Soon, 2016). This model is also related to the diffusion of innovations (DOI) theory that Kaminski (2011) describes as a valuable change model and process that describes the adoption of a new idea, product, practice, or technology. DOI begins with a few people adopting a new idea, product, or practice, and that very thing gains momentum until it reaches a critical mass of new users (Kaminski, 2011). Dearing and Cox (2018) discuss DOI theory as being related to dissemination, implementation, sustainability, improvement activity, and scalability of a new process, technique, or technological innovation. Diffusion is an innovation that is communicated through specific channels over time from members of a social system (Dearing & Cox, 2018).

Additionally, Dearing and Cox (2018) highlight three factors that affect the DOI. The first factor is each innovation's set of pros and cons (Dearing & Cox, 2018). This often relates back to the perceived ease of use or value of an innovation. The second factor that affects the DOI is the characteristics of the adopters themselves, which includes the perceptions of opinion leaders' reactions and social influence. Lastly, the final factor is the larger social and political

context, including the relationship of other issues in comparison to the innovation, how the innovation is framed by both proponents and opponents, and the timing of the innovation itself within the social ecosystem.

Related Literature

Another theory related to this research is Labus and Stone's (2010) CRM behavior theory. This theory represents seven interrelated models of CRM related to managing organizational relationships with customers (Labus & Stone, 2010). This theory suggests that taking a holistic view of the CRM concept across leadership, strategy, organization, process, systems, customers, and measurements is necessary for successful CRM. The most interesting thing about CRM behavior theory is that leadership and an integrated approach to CRM within organizations are found to be critical, but software and technologies are not. In fact, this theory suggests that software-centered approaches fail to deliver long-term results because these approaches often do not consider issues within the organization, particularly organizational culture.

Additionally, the TOE framework has been mentioned several times in this literature review. This framework was originally developed by Tornatzky and Fleischer in 1990 to examine how technology, environment, and organizational factors impact the adoption of new methods, technologies, innovations, or ideas within an organization (Awa et al., 2017). Within the umbrella of technology, the elements of perceived simplicity, compatibility, and performance-expectancy are included. Additionally, normative pressures and mimetic pressures are environmental factors that affect innovation adoption. Lastly, management support, size of enterprises, and scope of business operations are all considered organizational factors that influence adoption. More recent scholars, like Awa et al. (2017), have added individual factors

within the TOE framework, which include subjective norms and hedonistic drives, as being factors that also influence innovation adoption.

Summary

This comprehensive literature review covers various topics related to CRM adoption and implementation, the value of CRM adoption in the context of improved client engagement, and the applicability of the TAM to CRM adoption in the CES. The TAM focuses on perceived usefulness, ease of use, risk, and training as potential determinants of technology acceptance. In addition, this chapter covers the critical success factors of CRM implementation, including reasons for CRM implementation failure, and highlights the impact of CRM on organizational performance. Marketing automation and customer knowledge creation are also key deliverables of an implemented CRM system and have potential implications for the CES. The impacts of CRM implementation on customer satisfaction, knowledge, and engagement were also investigated and demonstrate that CRM systems have a broad impact in these areas. Finally, this chapter examines related literature, such as Labus and Stone's CRM behavior theory, as a practical theoretical framework to be considered for this research along with Tornatzky and Fleischer's TOE theory.

Chapter 3: Methodology

This qualitative phenomenological research investigates the applicability of the TAM on CRM technology adoption in the CES. Qualitative data is curated through three primary sources: a review of a recent landscape assessment conducted by the Extension Foundation related to CRM technologies, one-on-one semi-structured interviews with CES professionals to further investigate CRM usage in a variety of land-grant university Extension programs, and participant responses to a follow-up survey related to usage, adoption, and perceptions of CRM technologies. This research is completed over a three-month period to allow for enough time to conduct interviews with CES professionals at a variety of universities, including 1862, 1890, and 1994 land-grant institutions. A survey analysis tool native to the survey tool is used for the landscape assessment, along with statistical computations through Python. The one-on-one semi-structured interviews are conducted over videoconferencing tools, transcribed with artificial intelligence technology, and coded for themes in participant responses.

The purpose of this qualitative phenomenological design is to explore the opportunities of CRM systems for the CES to enhance internal and external communications, engagement, and outreach efforts while also investigating the barriers that exist for successful adoption. There is considerable evidence to suggest that CRM systems add value to organizational communications and relationship efforts; however, there is a need to highlight how CRM technologies can impact the outreach mission of the CES. Through the lens of the TAM, this research provides practical insights into the perceived benefits and challenges of implementing CRM systems. It examines successful use cases of CRM implementation and investigates the potential for increasing client engagement and improving communications through successful client management. This research deploys a landscape survey of the CES to gather insights on the current usage and

perceived attitudes toward CRM technologies. It proceeds to semi-structured interviews with participants from across the CES to gain further insights into CRM usage, challenges, and successes for improving communications, outreach, and engagement.

Method Appropriateness

A qualitative phenomenological approach of the CES, which has been implementing, evaluating use, discontinued, or has no plans to use CRM technologies, helps gather perceptions toward the CRM technology, its applicability for the publics served by the CES, and gathers information that leads to successful implementation or failure. According to Ravitch and Carl (2021), qualitative research is defined as using interpretive research methods as a set of tools to understand individuals, groups, and phenomena in a way that reflects how people make meaning of and interpret their own experiences, themselves, each other, and the social world. A goal of this research is to understand the perceptions and attitudes toward CRM usage in the CES, the impact of CRM technologies on creating better value with the public that the CES serves, and the barriers that exist in adoption. Additionally, qualitative research is not a linear process but begins with an interest problem or question (Ravitch & Carl, 2021). The methods and research instruments are often piloted and vetted to ensure they gather the necessary data to best answer the research questions (Ravitch & Carl, 2021). Data analysis also requires efforts to ensure that the data is valid and trustworthy, including checking in with participants to understand their thoughts on the analysis and interpretations or member checks (Ravitch & Carl, 2021).

Design Appropriateness

Ravitch and Carl (2021) outline best practices for selecting an appropriate qualitative research design. The key interactive phases of a qualitative research design include developing

study goals and rationale, iterating research questions, developing a theoretical framework, determining methods needed to answer research questions, making decisions about the research setting, piloting and refining the research design and methods, and planning for validity (Ravitch & Carl, 2021). Ravitch and Carl (2021) also suggest that a flexible approach to research design considers the range and variation of method choices and how these can be used in ways to help achieve or clarify the specific goals of the study. After following the process outlined by Ravitch and Carl (2021), the researcher determined that a qualitative phenomenological design was the best approach to answer the research questions. Ravitch and Carl (2021) share that a phenomenological design includes exploring a phenomenon with a group of individuals, and data collection tends to be interviewed to understand the experiences or the phenomenon. In this research, the researcher seeks to understand the attitudes and perceptions toward CRM usage in the CES as it relates to the impact of CRM on communications, marketing, and engagement.

The significance of this study has implications for how the CES can improve communications, outreach, and engagement efforts with the communities they serve while increasing workplace productivity. The findings play a critical role in determining the appropriateness of CRM usage in CES services and programming. CRM would assist both CES professionals and the clients they serve in co-creating value between the client and the organization, tracking lifecycle engagement with CES services and programs, and potentially resolving communications and marketing challenges for CES educators, specialists, and agents. Evidence suggests that CRM technology implementation could improve customer service interactions with clients, increase the perceived value of CES programs, and strengthen relationships between an organization such as the CES and its clients.

Research Method and Design

Research Questions

The purpose of this qualitative phenomenological research is to better understand the principles of the TAM regarding the adoption of CRM technologies in the CES, which ultimately have implications for internal and external communications, engagement, and outreach efforts. There is considerable evidence to suggest that CRM systems add value to organizational communications and relationship efforts; however, there is a need to highlight how CRM technologies can impact the outreach mission of the CES. Through the lens of the TAM, this research provides practical insights into the perceived benefits and challenges of implementing CRM systems, examines successful use cases of CRM implementation, and investigates the potential for increasing client engagement and improving communications through successful client management. This research reviews a recent landscape survey of the CES to gather insights on the current usage and perceived attitudes toward CRM technologies. It then proceeds to semi-structured interviews with participants from across the CES to gain further insights into CRM usage, challenges, and successes for improving communications, outreach, and engagement, followed by a post-interview survey to triangulate the data.

The problem is that a significant number of land-grant university Extension programs are not utilizing CRM technologies despite evidence suggesting they would enhance their communications efforts, outreach, and engagement mission. According to Judd (2019), approximately 40% of all land-grant universities in the United States are utilizing CRM technologies, and many of those are not commercial systems with robust features. Another approximate 40% of these universities are evaluating the use of CRM technologies, while the remaining have no plans to utilize CRM (Judd, 2019). The specific problem to be addressed is identifying the barriers that exist in adopting CRM technologies, including TAM variables, in the

CES, and what implications a lack of CRM usage has on communications, outreach, and engagement efforts in the digital age. This research seeks to explore the following questions:

RQ1: What are the perceived benefits of CRM systems for CES professionals?

RQ2: What are the perceived challenges and adoption barriers of CRM systems in the CES?

RQ3: To what extent do the principles of the TAM affect CRM adoption?

RQ4: In what ways are existing implementations of CRM systems enabling outreach, engagement, and communications efforts by the CES?

Setting

This research contains two phases: a review of an existing landscape assessment conducted by the Extension Foundation in June 2023 and one-on-one semi-structured interviews with a sample of land-grant universities to understand and perceptions toward CRM implementation, evaluation, discontinuance, or no plans to use. A follow-up survey was also sent to interview participants to assist with the triangulation of data. The one-on-one semi-structured interviews are conducted virtually over the Zoom videoconferencing software to best ensure a national reach and include diverse perspectives that may otherwise not be possible to obtain without the use of remote conferencing software. Within one week of completing the interview, interview participants receive a survey that contains similar questions to those asked during their interview. This survey aims to gather their responses in writing, in an effort to better triangulate the data.

Participants

CES administrative leaders, known as CES directors and administrators, are the primary stakeholders of this study. These individuals lead the CES for their institutions and are

responsible for major decisions, including decisions about large-scale technology implementations. Additionally, CES directors and administrators greatly benefit from understanding the TAM and how it applies to CRM implementation in their Extension services and among their faculty and staff. As indicated in the review of literature, one of the key reasons for failure in CRM adoption, as it relates to technology acceptance, deals directly with employee attitude and perceptions toward TAM variables such as ease of use and usefulness. CES directors and administrators are positioned as critical leaders for CES organizations in every U.S. state and territory, and their awareness of technology acceptance and adoption is critical for understanding how CRM technology can be successfully applied in the CES.

However, not all CES directors and administrators may be well versed in CRM technologies to fully engage in this study. This is another reason outlined in the literature review for why CRM technology implementation can fail. For that reason, this study invites CES directors and administrators to appoint another individual who has been tasked with CRM implementation or evaluation at their institution. In most cases, this individual is likely a senior administrator with a similar level of administrative responsibility as the CES director or administrator, or an individual who has led CRM implementation in another organization within the university setting. In some cases, this may be an information technology (IT) professional who has been tasked with the implementation and administration of CRM technologies. Purposive sampling is used, and participants are recruited from a sample of individuals from the 112 land-grant universities in the United States who work professionally for the CES. CES directors and administrators are contacted and invited to participate in the survey, with the option to refer participation to another individual within their respective institutions who can best answer questions about CRM implementation, evaluation, discontinuance, or other plans for

CRM. The 112 land-grant universities are divided among three categories that refer to congressional acts designating their institutions as land-grant institutions. This includes 58 institutions that are designated as 1862 land-grant universities, 19 institutions designated as 1890 land-grant universities, and 35 institutions designated as 1994 land-grant universities. After completing the semi-structured interview, participants receive a follow-up survey with similar questions. Purposive sampling enables the researcher to be deliberate about choosing participants for this research to ensure familiarity with and knowledge of CRM systems within their respective states and institutions. Additionally, purposive sampling provides a more well-rounded picture of CRM usage, implementation, successes, and failures within any given land-grant university.

Procedures

An email is delivered to Extension directors and administrators at all land-grant universities. The email explains the purpose of this research and states that the results are shared with the system. The email contains the following information to help ensure it is disseminated to the appropriate people within each land-grant university:

1. The researcher is examining CRM technologies in the CES and would like your input on the usage of these technologies.
2. This interview takes up to one hour to complete, and the information is used as part of a larger research project to understand the opportunities, challenges, and successes of CRM for the CES and what lessons can be learned across the system.
3. This data is also shared back with you when it is complete.
4. We ask that you, or one individual from your Extension organization responsible for CRM administration or evaluation, participate in this research.

If the sample size of voluntary participants does not meet an appropriate research threshold, CES directors and administrators are contacted again, asking for volunteers to participate in one-on-one semi-structured interviews. Additionally, an existing mailing list of approximately 18,000 CES professionals through the Extension Foundation can be utilized to reach more participants if referral from CES directors and administrators does not yield an appropriate number of volunteers.

Researcher's Role

In this study, the researcher is positioned as a communication practitioner working within a nonprofit organization that is part of the CES. Although not directly employed by the CES, the researcher serves the CES by examining system-wide challenges and investigates potential solutions. As an experienced communication practitioner in pursuit of a PhD in Communications, with multiple years of experience managing CRM technologies for organizations, the researcher's background provides valuable insights into the research topic of CRM technologies within the CES. However, it must be acknowledged the potential biases and assumptions arise from current employment and professional background. This will require the researcher to examine their beliefs and biases throughout the course of this research and utilize a process of reflexivity to address any potential impact on data collection, analysis, interpretation, and engagement with research participants.

Any conflicts of interest are acknowledged with transparency throughout the process, and the researcher acknowledges the influence they have on the research process. Through rigorous data collection methods, including a survey and one-on-one semi-structured interviews, a systematic approach to analyzing the data, objectivity can be maintained to ensure the highest

ethical standards and maintain the integrity, validity, and reliability of the findings of this research.

Reflexivity

As the researcher and interviewer for this study, it is important to be transparent about my role as both the researcher and an employee of the Extension Foundation in order to ensure integrity and an understanding of potential biases that may influence the research process. As previously mentioned, the Extension Foundation is a 501(c)(3) nonprofit organization that is a part of and a partner to the CES. My position within the Extension Foundation provides unique opportunities and challenges during this research process. My familiarity with the CES, its stakeholders, and the landscape of adoption of CRM technologies within the CES provides valuable insights and facilitates access to potential research participants. This perspective opens the opportunity for a deeper understanding of organizational dynamics, challenges, and opportunities related to CRM adoption, which can better enhance data collection.

As an employee of the Extension Foundation, there are potential biases that need to be addressed, primarily while interfacing with CES colleagues during the interview process. It is possible the participants may feel pressure to overemphasize the positive aspects of CRM technologies while underemphasizing negative aspects of their CRM adoption or conform to their own organizational expectations. To mitigate these biases and ensure both credibility and trustworthiness of this research, several steps are taken. First, there are efforts to maintain objectivity and impartiality throughout the data collection and analysis process. This includes adopting a reflexive stance, questioning assumptions, and critically reflecting on my own role and potential influences on the research. Second, transparency is prioritized throughout this research, including clear communication regarding the purpose of the study, my affiliation with

the Extension Foundation, and the voluntary nature of participation. Participants are encouraged to express honest opinions regardless of whether they align with organizational goals or expectations. Data privacy of participants is prioritized so that participants can speak freely about CRM adoption in their states without fear of reprisal from their respective organizations. This includes the use of pseudonyms for participants in the research outputs and securing all data to protect participant privacy. Additionally, all participants are provided with a full narrative summary of their interview responses, with the opportunity to make any clarifications or edits.

Data Collection

The landscape assessment data was collected by the Extension Foundation approximately five months prior to this research. The semi-structured interviews are conducted via the Zoom videoconferencing platform. Semi-structured interviews allow for a set of predetermined questions but also provide flexibility to the researcher for exploring the topic of CRM with the interview participant based on the participant's experience with CRM, the specific CRM tool being utilized, or features within the CRM that the participant is most utilizing. Firsthand observations of participants utilizing CRM technologies are not used as participants are located across the United States. Additionally, conducting this type of field research is not cost-effective for this research. A review of documents, photos, objects, or other artifacts is not used in this study as the research is more interested in understanding the attitudes and perceptions of CRM usage in the CES and learning about the successes or failures of CRM implementation.

According to Ravitch and Carl (2021), there are several key characteristics and values of qualitative interviews to consider in the research design. The key considerations and values of qualitative interviews are that they are relational, contextual, non-evaluative, person-centered, temporal, partial, subjective, and non-neutral (Ravitch & Carl, 2021). Additionally, this research

contains a survey element as a tool to follow the semi-structured interviews to further triangulate the data. Ravitch and Carl (2021) highlight the advantages of questionnaires, such as being an efficient way to collect data, ease of compiling responses, access to significant amounts of information, resource effectiveness, anonymity, and the ability to quickly and easily quantify or analyze results.

Data Analysis

The native JotForm analysis software is used for the landscape assessment questionnaire, along with Python for statistical analysis. The one-on-one semi-structured interviews are conducted over videoconferencing tools, transcribed with artificial intelligence technology, and manually coded for themes in participant responses. Qualtrics survey software is being used for the follow-up survey and is coded to match the coding process for the semi-structured interviews. Ravitch and Carl (2021) state that data organization and management are an important, ongoing process that supports refining sense-making and are integral parts of the overall analysis. The data management plan for this research includes organizing the landscape assessment data within the native analytics tools of the JotForm survey software and conducting a statistical analysis in Python. A precoding process takes place to best sort and filter the data by responses related to the TAM focused on perceived usefulness and perceived ease of use; additionally precoded fields have filters for institutions that have implemented CRM, are evaluating the use of CRM, discontinue the use of CRM, or have no plans to use CRM.

Ravitch and Carl (2021) also offer insights into the best data management practices for transcribing and coding interview data for the second phase of this research. First, the original audio and video recordings of the interviews are stored on Extension Foundation storage servers, along with a backup copy on a local computer. Artificial intelligence software native to the

Zoom videoconferencing software is utilized to generate a verbatim written transcript of the interviews, which is subsequently verified by comparison to the original recording and updated with any necessary manual corrections. Per Ravitch and Carl's (2021) recommendation, transcripts are not "cleaned up" to have a set of data that best reflects participant responses. The precoding process includes utilizing Google Sheets to track changes and highlights areas of the semi-structured interviews, highlighting emerging learnings, lingering questions, reactivity, and ideas and thoughts about potential codes (Ravitch & Carl, 2021). Lastly, this research seeks dialogue with interview participants and other CRM experts in the CES and at the Extension Foundation to share an analysis of the findings to best validate the study and corroborate the data.

Coding

An immersive engagement process takes place to critically engage with, read, and analyze the data from this research. Ravitch and Carl (2021) highlight the primary processes for immersive engagement as multiple data readings, implementing data analysis and strategies such as coding, and generating, scrutinizing, and vetting themes. An inductive axial coding process takes place with the semi-structured interview data and the survey data, which is the process of going from coding chunks of data to see how these codes come together into coding categories to best support the development of the findings (Ravitch & Carl, 2021). This includes creating a code set that begins broadly and develops more narrowly as the analysis progresses and includes both descriptive and theoretical categories (Ravitch & Carl, 2021). In addition to axial coding, certain interview questions are subjected to a quantitative coding process to better facilitate statistical analysis. For questions with a binary nature or with a limited number of potential

responses, they receive a quantified code to allow for quantitative representation of participant sentiments.

After the coding process, connecting strategies take place to develop the context of the data without isolating excerpts in the same way that coding does, providing a more holistic view of the data that is complementary to the coding process (Ravitch & Carl, 2021). This includes further analysis of quantitative code in Python to explore statistical correlations, providing a complementary perspective to the qualitative findings. The use of correlation analyses better highlight potential connections between different variables, providing a more holistic view and understanding of the research questions.

Trustworthiness

Credibility

Multiple strategies are deployed to enhance the credibility of this research. The data acquired during the research process is triangulated against multiple data sources, including survey data, one-on-one semi-structured interviews, and existing data from previous landscape assessments regarding the use of CRM in the CES. This ensures cross-validation of findings and reduces any biases inherent to both the researcher and any one data source. During the research process, the researcher engages at length with the participants to ensure their perspectives are fully represented in the study. In addition, research data is reviewed by both participants and critical stakeholders at the conclusion of the research to enhance the credibility of data interpretation. This process improves the accuracy and authenticity of the findings.

Dependability and Confirmability

To enhance the dependability of this research, all components of data collection, analysis, and analysis techniques are documented extensively. Additionally, critical stakeholders, including CES administrators, are regularly briefed on the research process to provide critical feedback and insights on the design and methodology. This collaborative approach and scrutiny help ensure that the research findings are reliable and consistent with the expectations of stakeholders.

Transferability

CRM systems are widely used across various professional sectors. The findings and implications of this research may very well extend beyond the CES. That is why it is critical that a detailed description of the research context and population is outlined throughout the study, along with a profile of the participants. Readers are able to evaluate the applicability of the findings to their own research or professional contexts, with their own priority populations. A natural part of this study is to reflect the diversity of both the personnel of the CES and the land-grant university system as a whole, which increases the potential for transferability to other contexts. Finally, a comprehensive discussion on both the findings and limitations of this study is provided, including implications for future research, both internal and external to the CES.

Ethical Considerations

The purpose of this study is clearly explained to all participants, along with the risks and benefits to participation. The survey portion of the study is anonymous, with no personally identifiable information, and the one-on-one semi-structured interview portion of the study is strictly voluntary. A statement of confidentiality is provided to all participants, and any identifiable information is handled securely with respect to the right to privacy. Additionally, all participants are made aware of potential conflicts of interests, including the researcher's current

employment. The study adheres to all guidelines set forth by the researcher's institution and the regulations outlined by the Institutional Review Board (IRB). The well-being and safety of all participants are prioritized during this process to ensure the minimization of any distress.

Summary

This chapter outlines the research methodology used to investigate CRM technology usage and considerations in the CES. This qualitative phenomenological approach utilizes qualitative data collection methods such as surveys and one-on-one semi-structured interviews with CES professionals. The study aims to explore the potential of CRM systems in enhancing internal and external communications, client engagement, and outreach efforts for the CES. The TAM provides the theoretical frameworks to provide insights into the perceived benefits, challenges, and use cases of CRM implementation. The research is conducted over a three-month period and engages with land-grant universities to include voluntary participants from as many diverse institutions as possible. The survey data is collected utilizing JotForm software. One-on-one semi-structured interviews are conducted over Zoom videoconferencing and transcribed using AI technology. Subsequently, they are coded for thematic analysis, utilizing connecting strategies to gain a more holistic understanding of the phenomenon from the data.

To ensure the credibility of this research, multiple data sources are triangulated. The researcher engages extensively with participants to represent their perspectives fully, and critical stakeholders provide feedback on the research process. Dependability is enhanced through complete documentation of data collection efforts and analysis processes, along with regularly briefing participants and critical stakeholders on the process to gather further insights. The transferability of the findings is facilitated by providing detailed descriptions of the research context and participant profiles. Ethical considerations include providing clear explanations to

participants about the purpose, risk, and benefits of this research. Additionally, participants are made aware of the researcher's potential conflicts of interest, and their personally identifiable information is removed from the study to ensure confidentiality. The study complies with all IRB guidelines and regulations.

Chapter 4: Results

Overview

The purpose of this qualitative phenomenological research is to better understand the effects of the TAM on the adoption of CRM technologies in the CES that ultimately have implications for internal and external communications, engagement, and outreach efforts. This qualitative phenomenological approach utilized qualitative data collection methods, including a review of existing assessment data, one-on-one semi-structured interviews with CES professionals, and a follow-up survey. There were four research questions that the survey and the interview questions were designed to answer:

RQ1: What are the perceived benefits of CRM systems for CES professionals?

RQ2: What are the perceived challenges and adoption barriers of CRM systems in the CES?

RQ3: To what extent do the principles of the TAM affect CRM adoption?

RQ4: In what ways are existing implementations of CRM systems better enabling outreach, engagement, and communication efforts by the CES?

The specific problem to be addressed is identifying the barriers that exist in adopting CRM technologies in the CES and what implications a lack of CRM usage has on communications, outreach, and engagement efforts in the digital age. This chapter describes the research sample, the data analysis process, and the results of the study. The process for analyzing the data is described following a qualitative methodology, followed by a summary of the findings. The research findings are based upon the triangulation of multiple data sources including the semi-structured interview transcriptions and landscape assessment data results.

Finally, this chapter concludes with a summary that briefly describes the main points of the research findings.

Data Collection and Analysis

This research contained of two phases. The first phase involved a review of existing landscape assessment data conducted by the Extension Foundation in June 2023, which received 32 responses from a range of land-grant universities in the United States. The second phase included one-on-one semi-structured interviews with volunteers from land-grant universities to better understand their perceptions toward CRM implementation, evaluation, discontinuance, or have no plans to use it. An email invitation was sent to CES directors and administrators inviting their participation in the study or the participation of one of their faculty or staff members responsible for CRM in their respective states. The one-on-one semi-structured interviews were conducted virtually over Zoom videoconferencing, and 24 interviews were conducted between November 10, 2023, and January 26, 2024.

Within one week of completing the interview, interview participants received a follow-up survey containing similar questions to their one-on-one interview to obtain their responses in writing, in an effort to better triangulate the data. Regrettably, despite efforts to bolster data quality, the follow-up survey yielded only 10 responses of suboptimal quality. Possible factors contributing to the poor quality could include participant fatigue, survey redundancy, or time constraints, all of which are considered in the ensuing discussions and conclusions of this study. Fortunately, the exploratory questions found on the original landscape assessment from the Extension Foundation, along with the completeness of the 32 responses, proved to be useful.

The interview data was first transcribed using artificial intelligence tools available through the Zoom videoconferencing software. The transcriptions were then manually reviewed

alongside the video recordings for accuracy and updated as necessary. All interview responses underwent an axial coding process to highlight the key themes and connections between participant responses (see Appendix C). Select responses were assigned a quantified coding structure, where binary responses were available to conduct a statistical analysis in the Python software. Similarly, data from the landscape assessment followed the same coding process as the interviews, incorporating both qualitative and quantitative coding structures for comparative and statistical analysis.

Trustworthiness

Multiple strategies were utilized to enhance the credibility, dependability, confirmability, and transferability of this research. First, interview data was triangulated against data from the landscape assessment regarding perceived benefits, barriers, ease of use, and usefulness of CRM systems, which allows for a cross-validation of findings that reduce any biases inherent to both the researcher and any one data source. Additionally, during the interview process, the researcher engaged at length with participants to ensure their perspectives were fully represented in the study. Following the interview, participant summaries were created and matched to the appropriate codes and provided directly to each individual participant for feedback to ensure that their comments and quotes were indeed a reflection of what was discussed in their interview. Interview participants had the opportunity to respond and request corrections or changes as necessary. This process ensures the accuracy and authenticity of these findings.

Additionally, participants have been briefed on the research process for their feedback, which included one CES administrator co-designing several of the questions that were thought to be most beneficial in this research. This collaborative approach and scrutiny helped ensure that the research and these findings are consistent with the expectations of stakeholders. Lastly, given

the wide usage of CRM technologies across various professional sectors, it was important to craft a detailed description of the research context, population, and profile summary of each participant in order for readers to evaluate the applicability of these findings in their own professional contexts.

Participant Profiles

A descriptive summary of all 24 interview participants is provided below. The name of each individual has been replaced by a pseudonym to protect the identity of the participants. Additionally, the names of their respective land-grant universities are not stated and are simply replaced by the geographic or Cooperative Extension region in which their university resides. The summaries include some information about who these individuals are, their experience with CRM technologies, and a brief overview of their responses to the questions in the semi-structured interviews.

Annalise Grace

Annalise Grace is an Extension director in the northeastern region. She has previous experience with CRM technologies, but her current institution is not currently using a CRM system. Her previous experience includes the use of Salesforce. She defines CRM as lifecycle contact management, project and task management, and email marketing. Annalise believes that contact and data management, along with email marketing, are key benefits of CRM systems. From her experience, she noted varied acceptance of the CRM among employees, with moderate levels of employee resistance rooted in perceived usefulness. She states that the critical success factors include leadership commitment, perceived usefulness, training and support, and an integration strategy. Pre-adoption approaches used include organizational planning and communications across the organization. Annalise identified costs and resources, data security,

perceived ease of use, and training and support as barriers to CRM adoption. The potential risks associated with CRM implementation include data security. Annalise reported moderate ease of use regarding CRM systems and perceives them as useful. Additionally, Annalise believes that engagement tracking, strategic marketing, and communications resulting from the implementation of CRM technologies could have implications for outreach, engagement, and communications.

Cole Alexander

Cole Alexander leads technology efforts for his university in the southern region. He has previous experience with Salesforce, and his university is currently evaluating the use of Salesforce for Extension. He defines CRM as lifecycle contact management and client engagement and serves as the local champion for CRM at his university. Cole states that the benefits of CRM include contact and data management, as well as email marketing. He reports varied levels of employee acceptance with a high level of employee resistance. The reasons for resistance involve change management and digital literacy. Cole states that the critical success factors include strategic organizational planning, leadership commitment, and perceived usefulness. Additionally, he states that perceived ease of use and leadership commitment are criteria for technology adoption. Cole is currently engaged in pre-adoption strategies such as communicating across the organization, strategic organizational planning, and evaluation. The barriers to adoption are reported as change management, training and support, employee resistance, and digital literacy. He reports that CRM systems have a moderate ease of use and are perceived to be very useful. Currently, the university uses various ad hoc systems, and this is also considered to be an alternative approach to CRM implementation. Cole reported potential risks, such as adoption and implementation failure, and poor data management. Cole states that

CRM technologies have implications for outreach, engagement, and communications through the centralization of data, improved user experience, enhanced customer support, and strategic marketing and communications.

Annika Noel

Annika Noel is an Extension specialist at a university in the northeastern region. She is currently in charge of CRM implementation in her state. She assumed leadership of these responsibilities from another employee who left the university. At present, Salesforce has a limited implementation across her state. Annika defines CRM as lifecycle contact management and perceives the benefits of CRM to be client insights, engagement, and interaction tracking, as well as reporting and evaluation. There is low acceptance among employees at her university of the Salesforce system, and employee resistance was noted for reasons including digital literacy, perceived ease of use, and perceived usefulness of the system. Annika believes that the critical success factors for CRM implementation include leadership commitment, training and support, cost and resource considerations, integration strategy, and the presence of a local champion. She states that that criteria for technology adoption include consideration of costs and resources, data privacy, and alignment with organizational goals. The pre-adoption approaches she utilized included different evaluative approaches such as focus groups and communicating across the organization. Annika has experienced barriers to CRM adoption, including concerns over data privacy, cost and resources, training and support, perceived usefulness, and perceived ease of use. She states that the technology is perceived as being difficult to use and not useful. As a result, many colleagues continue using various ad hoc systems. The potential risks of CRM implementation include cost and resources issue, adoption or implementation failure, and poor data management. Annika reports engagement and interaction tracking, as well as strategic

marketing and communications, as having potential implications on outreach, engagement, and communications.

Landon Frederick

Landon Frederick holds a management role in communications and technology at his university in the north central region. Currently, there is no current CRM system implemented, but he and several colleagues are evaluating the potential of implementing one and are exploring Salesforce and open-source solutions. He defines CRM as lifecycle contact management and email marketing. Landon believes the benefits of CRM include strategic marketing and communications, efficiency, and contact and data management. Currently, there is no local champion present by definition in this research. Employee acceptance of CRM at their institution is currently unknown, but a potential for employee resistance was noted regarding perceived usefulness. Landon believes that the critical success factors for CRM implementation include consideration of data security, data privacy, having appropriate policies and procedures in place to encourage adoption, perceived usefulness, integration strategies, and the availability of training and support. He states that criteria for technology adoption include strategic organizational planning and perceived usefulness. The current pre-adoption approaches he uses include communicating across the organization. Landon notes employee resistance, digital literacy, perceived usefulness, data privacy, and data security as potential barriers to adoption. He states that CRM technologies have a moderate ease of use, and he perceives them to be useful. At present, the university utilizes different ad hoc systems instead of CRM technologies, and alternative approaches to CRM include investigating new ad hoc solutions. Landon believes that data security and data privacy are primary risks for CRM technologies. Additionally,

Landon states that CRM technologies can have implications on outreach, engagement, and communications through strategic marketing, and contact and data management.

Matthew Ryan

Matthew Ryan is an Extension specialist in the northeastern region. His university currently utilizes Salesforce, and Matthew defines CRM within the scope of lifecycle contact management. He states that the benefits of CRM technologies include contact and data management, revenue generation, strategic marketing and communications, automation, and client insights. Matthew notes that there is low employee acceptance of the Salesforce system and suggests that a local champion was not present, as employees utilize training provided by Salesforce. The reasons for employee resistance include leadership commitment, poor policies and procedures, digital literacy, and training failure. Matthew states that the critical success factors include the presence of a champion, training and support, perceived usefulness, leadership commitment, policies, and procedures, and accountability. He also states that the criteria for technology adoption include usefulness and considerations of cost and resources. Matthews notes that training and support, perceived usefulness, employee resistance, leadership commitment, change management, policies and procedures, poor data management, and integration and interface issues are the primary barriers to adoption. At present, the university uses both CRM and various ad hoc systems. Alternative approaches to CRM include the utilization of various ad hoc systems. Potential risks of CRM implementation include poor data management, adoption failure, data security, data privacy, as well as costs and resources. Matthew indicated that the Salesforce system is perceived as difficult to use and not useful. He suggested that CRM technologies may have implications for outreach, engagement, and

communications through engagement and interaction tracking, contact and data management, and strategic marketing and communications.

Madelyn Elizabeth

Madelyn Elizabeth is a director at a university in the north central region and plays an integral role in leading a CRM implementation across her state. Currently, she is engaged in a pilot effort using Salesforce with a subset of users. The presence of a local champion, or champions, was noted during the interview. She defines CRM as lifecycle contact and data management, strategic marketing and communications, as well as project and task management. Madelyn reports several benefits of CRM technologies, including scalability, contact and data management, client insights, efficiency, strategic marketing and communications, and reporting and evaluation. Madelyn reports a high level of acceptance among current users and notes that employee resistance pertains to digital literacy. She believes that the critical success factors include integration and strategy, strategic organizational planning, perceived usefulness, and user buy-in. She believes the criteria for technology adoption include strategic organizational planning, cost and resources, perceived usefulness, and integration strategy. Pre-adoption approaches include a pilot effort, strategic organizational planning, evaluation, training and support, and finding early adopters. Adoption challenges include costs and resources, leadership commitment, perceived usefulness, training and support, and potential integration and interface issues. Alternative approaches to CRM considered include ad hoc systems and custom-developed solutions. Madelyn notes that the potential risks of CRM implementation include change management, costs and resources, data security, perceived usefulness, and perceived ease of use. She reported that current users of the system generally perceive the system to be easy to use and find it useful. She shared that the potential implications for outreach, engagement, and

communications are personalization, multi-channel engagement, data-driven decision-making, reporting, and evaluation, and strategic marketing and communications.

Lee McFarland

Lee McFarland leads Extension at a college in the 1994 region. He is not familiar with CRM technologies, and his college is not currently using a CRM technology. However, he recently learned about CRM technologies from another colleague and sees contact and data management as a key benefit. Lee indicated a potential for employee resistance to change management. Lee believes that critical success factors of implementing a technology like CRM involve the presence of a local champion, leadership commitment, and training and support. He states that the criteria for technology adoption include strategic organizational planning. Lee viewed employee resistance and training and support as potential barriers to CRM adoption. Lee sees adoption or implementation failure as a potential risk to CRM implementation and has low perceived ease of use of the technology, although he notes that it could be useful. At this time, his college utilizes ad hoc systems in lieu of CRM technologies.

Leia Cornwalis

Leia Cornwalis is an Extension director in the southern region. Her university currently uses Salesforce CRM and is evaluating the use of another CRM system. Her definition of CRM includes lifecycle contact management, email marketing, and contact and data management. She states that efficiency, client insights, event management, contact and data management, and reporting and evaluation are all benefits of CRM technologies. Employee acceptance of the current system is varied, and the presence of a champion is unknown. The reasons for employee resistance include change management and digital literacy. Leia identifies strategic organizational planning, user buy-in, perceived usefulness, and training and support as critical

success factors for CRM adoption. Additionally, she states that strategic organizational planning and consideration of cost and resources are criteria for technology adoption. Pre-adoption approaches include strategic organizational planning, evaluation, and communication across the organization. She states that the challenges in CRM adoption include training and support, cost and resources, perceived ease of use, data security, employee resistance, and employee turnover. Alternative approaches to CRM include the use of various ad hoc systems. Currently, Leia reports that employees do not find the CRM to be difficult to use, but it is viewed as somewhat useful. She stated that data security and data privacy were potential risks for CRM implementation. Leia states that the implications of CRM technologies on outreach, engagement, and communications include data centralization and increased efficiency.

Jane McCall

Jane McCall works for Extension at a university in the southern region, and she is the local champion for CRM adoption in her state. She defines CRM as event management and revenue generation. Her state currently utilizes Modern Campus Destiny One, and there is a varied acceptance rate in what she describes as a relatively slow rollout of the technology. Employee resistance is centered around change management, digital literacy, perceived ease of use, and perceived usefulness. Jane describes the critical success factors of CRM implementation as user buy-in, the presence of a champion, training and support, and policies and procedures. She suggests that the criteria for technology adoption include the perceived usefulness of the technology. The pre-adoption approaches she uses across her state include offering training and support, and communicating with different offices around the state about the opportunities a CRM can offer. The challenges of adoption include perceived usefulness, employee resistance, change management, and training and support. Jane states that the potential risks of CRM

implementation include adoption or implementation failure and change management. In addition to the availability of the CRM system, many offices utilize various ad hoc systems. Jane notes that the technology is not perceived as easy to use but is perceived as useful after demonstrating the technology to potential users. She believes that CRM technologies have many possible implications for outreach, engagement, and communications, including strategic marketing and communications, engagement and interaction tracking, centralization, contact and data management, reporting, and evaluation, as well as automation.

Andrea Simpson

Andrea Simpson is an Extension specialist in the northeastern region, one of the few individuals at her university with access to the Salesforce CRM. Her university outgrew two previous CRM systems and eventually adopted Salesforce. Andrea defines CRM as lifecycle contact management and strategic marketing and communications. She believes the benefits of CRM systems include email marketing, client insights, contact and data management, and strategic marketing and communications. There is a champion present at her university, and she reports a high acceptance rate among the limited number of users, with no considerable employee resistance observed. Andrea states that the critical success factors of CRM implementation include strategic organizational planning, training and support, the presence of a local champion, user buy-in, and early adopters. Her stated criteria for considering a technology to adopt include strategic organizational planning and consideration of costs and resources. Andrea stated adoption challenges such as costs and resources, training and support, and change management. Andrea reported the Salesforce CRM is perceived as difficult to use; however, it is regarded as useful among the limited number of users. Potential risks reported include data security. Individuals at her university still utilize various ad hoc systems alongside the CRM. The

continuation of those ad hoc systems is considered to be an alternative approach. Andrea stated many possible implications of CRM technologies on outreach, engagement, and communications, including strategic marketing and communications, client insights, increased efficiency, contact and data management, and data-driven decision-making.

Jimmy Washington

Jimmy Washington is in a director role in Extension at a university in the northeastern region. His university currently uses Salesforce, and he defines CRM as strategic marketing and communications, contact and data management, lifecycle contact management, and revenue generation. The perceived benefits include client insights, personalization, contact and data management, email marketing, and automations. A local champion is not present, and Jimmy reports a varied rate of acceptance among employees with moderate employee resistance. The reasons for employee resistance include change management, costs, resources, and perceived ease of use. He states that training and support are the most critical success factors for implementing a CRM system and that training and support, data security, and an integration strategy are criteria for technology adoption. The pre-adoption strategies included strategic organizational planning and vendor selection. Some of the challenges with adopting the Salesforce CRM include training and support, perceived ease of use, employee resistance, and perceived usefulness. Jimmy reported that the system is not perceived as easy to use; however, it is perceived as useful. The potential risks associated with technology include costs and resources, as well as poor data management. Jimmy stated that contact and data management, personalization, multi-channel engagement, and strategic marketing and communications through CRM had implications for outreach, engagement, and communications.

Clarence Carpenter

Clarence Carpenter was selected by his Extension director to discuss CRM technologies as part of this research. Clarence is an IT professional at a university in the western region. His university currently does not use a CRM system and does not have plans to use one. However, he defined CRM by both client engagement and customer service. According to Clarence, the perceived benefits of CRM technologies include engagement and interaction tracking and database management. Clarence stated that the critical success factors include perceived usefulness, perceived ease of use, and data security. His criteria for adopting a technology like a CRM system focus on cost and resources, evaluation (e.g., focus groups), and perceived usefulness. Some pre-adoption approaches he would consider would be evaluations and vendor selection. Clarence identified training and support, as well as knowledge and awareness, as challenges of implementing a CRM system. The university currently uses different ad hoc systems. There was no opinion on the perceived ease of use or usefulness of a CRM system; however, Clarence stated that customer insights and strategic marketing and communications were potential ways that a CRM could better enable outreach, engagement, and communications.

Deborah Anderson

Deborah Anderson is an evaluation specialist at a university in the northeastern region. Her university currently utilizes Salesforce, and she has a role in the administration of the CRM system as a local champion. Deborah defines CRM as data management and lifecycle contact management. She believes the benefits of a CRM system include engagement traction, customer service, and data management. She has reported low success with adoption at her university, with low employee acceptance and high employee resistance. Reasons for resistance include perceived usefulness, change management, and training failures. Deborah states that the critical success factors of CRM implementation include user buy-in and training and support. She

believes that the criteria for technology adoption include user buy-in and having an integration strategy. Pre-adoption approaches included organizational planning and engaging with consultants. Challenges or barriers to adoption include employee resistance, perceived ease of use, and perceived usefulness. In addition to the CRM system, many employees utilize ad hoc systems. Deborah states that the potential risks of CRM adoption include data security, poor data management, and adoption failure. She reported that the CRM is perceived as difficult to use and not useful. She also stated that the CRM has the potential to better enable outreach, engagement, and communications through targeted communications, data centralization, and data-driven decision-making.

Krystal Parks

Krystal Parks is an Extension director at a university in the northeastern region. Her university currently uses an event management system that is also a CRM system known as Momentous. She defines CRM as contact and data management, as well as strategic marketing and communications. She believes the benefits of a CRM system include customer insights and strategic marketing and communications. She reports a low success rate with the adoption of the CRM at her university. There is no local champion present, and employee acceptance of the technology is also low, with high resistance. The reasons for resistance were stated to be policies and procedures, data security, perceived usefulness, digital literacy, and perceived ease of use. Krystal states the critical success factors include perceived usefulness and perceived ease of use. Similarly, she states that the criteria for technology adoption also include perceived usefulness and perceived ease of use. The pre-adoption approaches reported include training and support. Challenges in adoption were stated to be employee resistance, policies and procedures, and perceived ease of use. Current systems in use include the Momentous Event Management and

CRM system, as well as ad hoc systems. Krystal suggested examining other ad hoc systems as an alternative approach to CRM. She identified data security as a potential risk of CRM technologies. She reported that the CRM is perceived as difficult to use but somewhat useful.

Mara Lopez

Mara Lopez leads IT for a university in the southern region. Her university currently uses ActiveCampaign as its CRM. She defines CRM as client engagement, sales, and strategic marketing and communications. Mara identifies customer service and database management as benefits of the CRM system. She reports a moderate rate of success with adoption, varied acceptance among employees, with moderate employee resistance. The reasons for employee resistance center around the time commitment to using the system and perceived usefulness. There is at least one champion present for CRM in the state. She identifies training and support as the critical success factor; cost and resources, perceived usefulness, and scalability were reported as the criteria for technology adoption. Mara reported training and support as the pre-adoption approach. In her state, the CRM system is used along with various ad hoc systems. Challenges in adoption included data integration, perceived ease of use, and training and support. Mara identifies data privacy and data security as potential risks of the technology. Mara states that the technology is perceived as moderately easy to use and useful. Additionally, Mara reports that CRM's ability to deliver targeted communications and its personalizations can better enable outreach, engagement, and communications.

Samuel Reynolds

Samuel Reynolds is an Extension director at a university in the western region. His institution includes multiple campuses and has implemented multiple CRM systems, including Salesforce, along with several ad hoc technologies at the various campuses. Samuel defines

CRM for development, email marketing, and strategic marketing and communications. Samuel reports the benefits of CRM as revenue growth, strategic marketing and communications, and engagement tracking. This particular case is unique in the sense that success rates may be higher or lower depending on the campus. Moderate success of CRM adoption was reported, with varied acceptance among employees and moderate resistance. The reasons for resistance include cost, resources, and data security. Samuel identifies perceived usefulness and integration strategy as the critical success factors. Additionally, his criteria for technology adoption include perceived usefulness, integration strategy, and cost/resources. The barriers to adoption include integration and interface issues, data security, change management, and cost/ resources. Alternative approaches considered include combining CRM technologies into a centralized system and using various ad hoc systems. Samuel stated data security, data privacy, and political uncertainty were the risks associated with CRM technologies. According to Samuel, CRM technologies can be perceived as difficult to use but are perceived as useful. Client insights, strategic marketing and communications, and data-driven decision-making were all factors that Samuel reported as ways CRM technologies could better enable outreach, marketing, and communications.

Roger Carmichael

Roger Carmichael is an Extension administrator in the 1890 region. He is somewhat familiar with CRM technologies and is not totally sure about its widespread application by various entities within the organization. Some CRM technologies are used within Extension by Ag Communication and certain program areas to track user contacts and tendencies. Currently, there are no plans for its broad implementation and data management use across the organization, but he did acknowledge that agents and educators in the various counties may be

using their own ad hoc systems. His definition of CRM includes lifecycle contact management and strategic marketing and communications. He stated that the benefits of CRM technologies include engagement tracking, strategic marketing, and communications. Roger identifies the critical success factors as having a solid integration strategy and perceived usefulness. His criterion for adopting a technology includes an integration strategy and perceived ease of use. The pre-adoption approaches he would consider include strategic organizational planning. The challenges he foresees include cost and resources, change management, and integration and interface issues. The current CRM technology systems used by his university vary from high-tech to various low-tech ad hoc systems. Roger identified the potential risks of CRM as adoption failure and poor data management. He states that CRM has the potential to improve outreach, engagement, and communications through interaction tracking, data centralization, contact management, personalization, improved user experience, and data-driven decision-making.

Terrence Young

Terrence Young is an IT specialist at a university in the northeastern region and was asked by his Extension director to consider participating in this research. There was a previous implementation of Microsoft Dynamics CRM at his university prior to some organizational realignments, but the university has discontinued use of that system. Terrence defines CRM as contact and data management and client engagement. He believes the benefits of CRM technologies include client insights, personalization, contact and data management, and strategic marketing and communications. Terrence reported a low success rate of the CRM system, with low employee acceptance and high employee resistance. The reasons for employee resistance include efficiency, cost and resources, perceived usefulness, and data privacy. Terrence believes that the critical success factors of CRM technologies include costs and resources, perceived ease

of use, and perceived usefulness. He identifies user buy-in, costs and resources, and perceived ease of use as criteria for technology adoption. Terrence stated that evaluations were used as pre-adoption approaches. Additionally, he views perceived usefulness, employee resistance, and data privacy as adoption barriers. The university currently uses ad hoc systems instead of a CRM. Terrence states that costs and resources are a potential risk for CRM implementation. He stated that he perceives CRM technologies as useful, and the implications for outreach, engagement, and communications include contact and data management, and client insights.

Daniel Lawrence

Daniel Lawrence is an associate director of Extension at a university in the western region. He currently utilizes the QuickBase CRM system for Extension at his university and defines CRM as lifecycle contact management. Daniel reported that the benefits of a CRM system include reporting and evaluation, and contact and data management. Daniel reports a high level of success of the CRM at his university, serves his colleagues as a local champion, and reports varied employee acceptance with low employee resistance. The reasons for employee resistance include change management and efficiency. Daniel states that the critical success factors include strategic organizational planning and user buy-in. His criteria for technology adoption include strategic organizational planning, and costs and resources. The pre-adoption approaches that Daniel reported include communicating across the organization, and training and support. His reported barriers to adoption include change management, employee resistance, and perceived ease of use. The current systems being used in Extension at his university include CRM and other ad hoc solutions. Daniel states that data privacy, data security, and perceived ease of use are potential risks for CRM technologies. He reports a moderate ease of use of the

CRM system and perceives it to be useful. Daniel reported that engagement tracking has implications for outreach, engagement, and communications.

Josh Hartman (JH)

Josh Hartman is an Extension director at a university in the northeastern region. He is currently evaluating the use of CRM technologies but has not selected a particular technology at this time. His definition of CRM includes client engagement, and strategic marketing and communications. Josh states the benefits are engagement and interaction tracking, reporting and evaluation, and personalization. Josh believes that the critical success factors for CRM implementation include training and support, strategic organizational planning, and leadership commitment. His criteria for technology adoption include perceived ease of use, and costs and resources. Additionally, he envisions vendor selection and pilot efforts as pre-adoption approaches. Josh reported that training and support, as well as costs and resources, may be potential adoption barriers. His university currently utilizes ad hoc solutions, and he views data security and data privacy as a risk with CRM technologies. He perceives the software to be useful, with improved user experience, strategic marketing, and communications as potential implications for outreach, engagement, and communications.

David Benjamin

David Benjamin is an Extension director at a university in the southern region. His university currently uses Modern Campus Destiny One as its CRM solution. David defines CRM as lifecycle contact management and client engagement. He perceives reporting and evaluation, revenue generation, and client insights as key benefits. He reports moderate success, the presence of a local champion, varied acceptance among employees, and low employee resistance. The reasons for employee resistance include data privacy, and costs and resources. David suggests

that champion presence is the key critical success factor. The pre-adoption approaches his university took included vendor selection and working with consultants. David views employee resistance as a barrier to CRM adoption. He stated that data security and data privacy were potential risks to CRM implementation, and he perceives the CRM system to be easy to use and useful. David stated client insights have implications for outreach, engagement, and communications.

Jonathan Traylor

Jonathan Traylor is a program manager at a university in the southern region. His university currently uses Modern Campus Destiny One, and he is the local champion of that software for his state. He defines CRM as lifecycle contact management, client engagement, and contact and data management. He states that the benefits of CRM include engagement and interaction tracking, client insights, employee onboarding, and efficiency. His reported success is moderate, with varied employee acceptance and low employee resistance. The reasons for employee resistance include change management and perceived ease of use. Jonathan states that the critical success factors for CRM include training and support and user buy-in. Additionally, his criteria for technology adoption includes training and support and user buy-in. Jonathan reports training and support and employee resistance as CRM adoption barriers, and the potential risks of CRM implementation include perceived ease of use. He views the CRM as moderately easy to use and useful. He states that centralization of data and increased efficiency has implications for outreach, engagement, and communications.

Stephanie Martinez

Stephanie Martinez is an Extension specialist at a university in the 1890 region. She is currently evaluating the use of CRM technologies for her work but has not selected a software

yet. Her definition of CRM includes reporting, evaluation, and client engagement. Stephanie believes the benefits of CRM technologies are engagement and interaction tracking, and efficiency. Stephanie reports moderate potential resistance from employee due to concerns data privacy and poor data management. She believes that the critical success factors of CRM implementation include perceived ease of use and perceived usefulness. Additionally, she identifies perceived ease of use and an integration and interface strategy as criteria for technology adoption. Her potential pre-adoption strategies include a pilot effort and training and support. She perceives policies and procedures and data privacy as the primary adoption barriers to the technology. Her university currently uses ad hoc solutions, and she views data privacy and data security as potential risks to CRM implementation. She perceives CRM technologies to be useful, and the increased efficiency of these technologies may have impacts on outreach, engagement, and communications.

Caroline Sanders

Caroline Sanders is an Extension agent at a university in the northeastern region. Caroline is a unique participant because while her university does not have a uniform CRM system, she currently operates her own for use in her county with one other colleague. The software Caroline uses is AirTable, and she defines CRM as lifecycle contact management, customer service, client engagement, reporting and evaluation, and client engagement. She believes the benefits of the technology are contact and data management, client insights, customer service, reporting and evaluation, and engagement and interaction tracking. Caroline reports high success with her CRM system but predicts low acceptance among employees due to high resistance. The reasons for resistance include perceived usefulness, centralization, efficiency, costs and resources, and digital literacy. She believes that the critical success factors of CRM technologies include

perceived ease of use and usefulness. Additionally, she believes that costs and resources and perceived ease of use are criteria for technology adoption. The pre-adoption approaches she considers critical include strategic organizational planning, user buy-in, training and support, and evaluations. She foresees several adoption barriers, including data security, data privacy, costs and resources, perceived ease of use, and employee resistance. Current systems, aside from her CRM, include various ad hoc systems. Caroline believes that data security and data privacy are potential risks of implementing CRM technologies. She perceives the CRM to be moderately easy to use and useful. Caroline reports that strategic marketing and communications from CRM implementation may have implications for outreach, engagement, and communications.

Findings

This research first uncovered basic information about CRM usage and implementation in the CES to provide greater context and insights into the applicability of TAM variables on CRM adoption and implementation. Most participants from the interviews (n = 24) identified as being from a university in the northeastern region (42%) of the CES, with the southern region ranked second, followed by the western region, north central region, 1890 region, and 1994 region. Interview participants included individuals from various levels, such as leaders or administrators, communications practitioners, information technology professionals, and other Extension professions. Participants from the landscape assessment (n = 32) were distributed across the regions as follows: north central (28.6%), southern (21.4%), western (21.4%), 1890 (7.1%), and 1994 (7.1%). Among the landscape assessment participants, 34.3% reported current usage of a CRM system, 44% reported they were evaluating its use, 18.7% have no plans to use it, and 3.1% have discontinued its use. Landscape assessment results also showed participation primarily from CES leaders or administrators, communications practitioners, and information

technology professionals. The majority of interview participants (58%) identified as currently using a CRM system, while a significant percentage identified as evaluating use. Several had no plans to use or adopt CRM technologies (15%), and few had either discontinued use (4%) or reported previous experience (4%). These reported adoption rates are similar to the findings by Judd (2019) from his initial landscape assessment.

In both the landscape assessment and the interviews, most universities utilizing or evaluating CRM reported that Salesforce was the system that is being used or considered (see Figures 2-3. In the interviews, Modern Campus Destiny One was the next most frequently reported system (19%), and various other systems, including ActiveCampaign, Momentous, Microsoft Dynamics, QuickBase, AirTable, and Open Source solutions, were infrequently reported. When interview participants were asked to provide a definition of CRM, the top responses included lifecycle contact management (28%), client engagement (19%), strategic marketing and communications (15%), contact and database management (11%), email marketing (7%), and revenue generation (6%). Other responses (12%) included events management, reporting and evaluation, project and task management, customer service, and no response. As previously mentioned in Chapter 1, there is no single unified definition of CRM, and this finding is true for the CES. The term “CRM” is used interchangeably between CRM as a business philosophy or process and the technology used to support this process. In addition, the term is used based on a single state Extension service definition according to their organizational goals and plans for the technology.

Figure 2: Distribution of CRM Systems—All Interview Participants

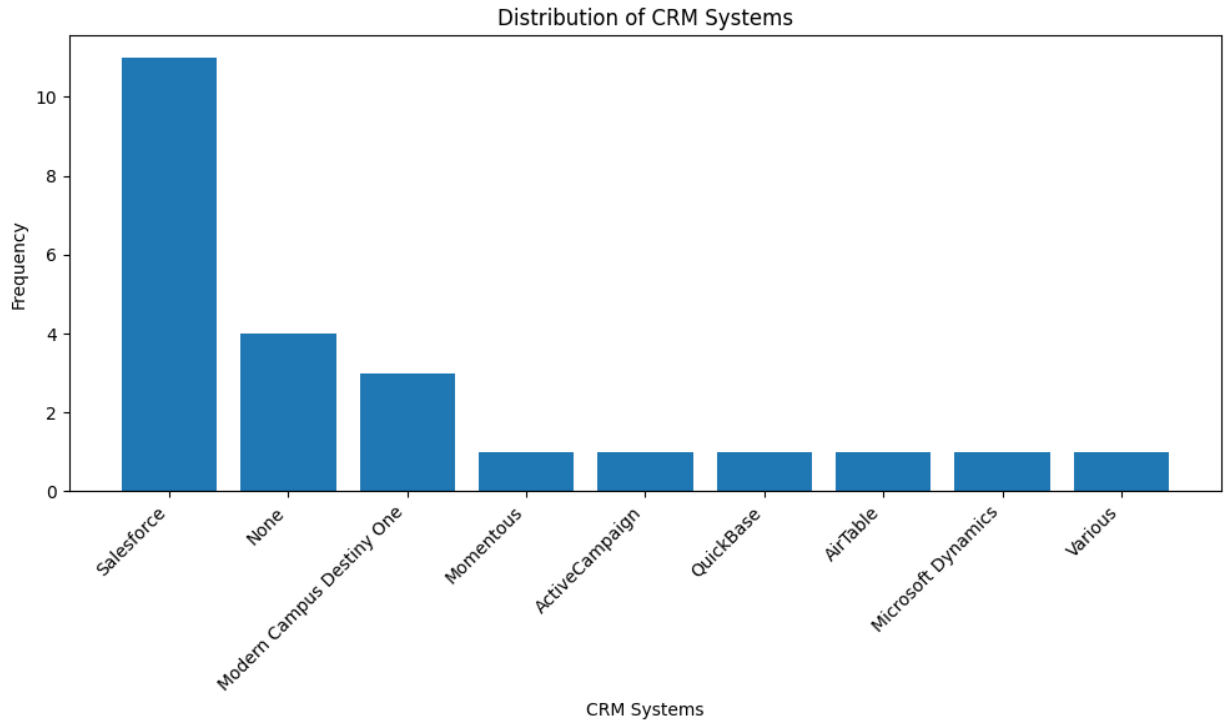
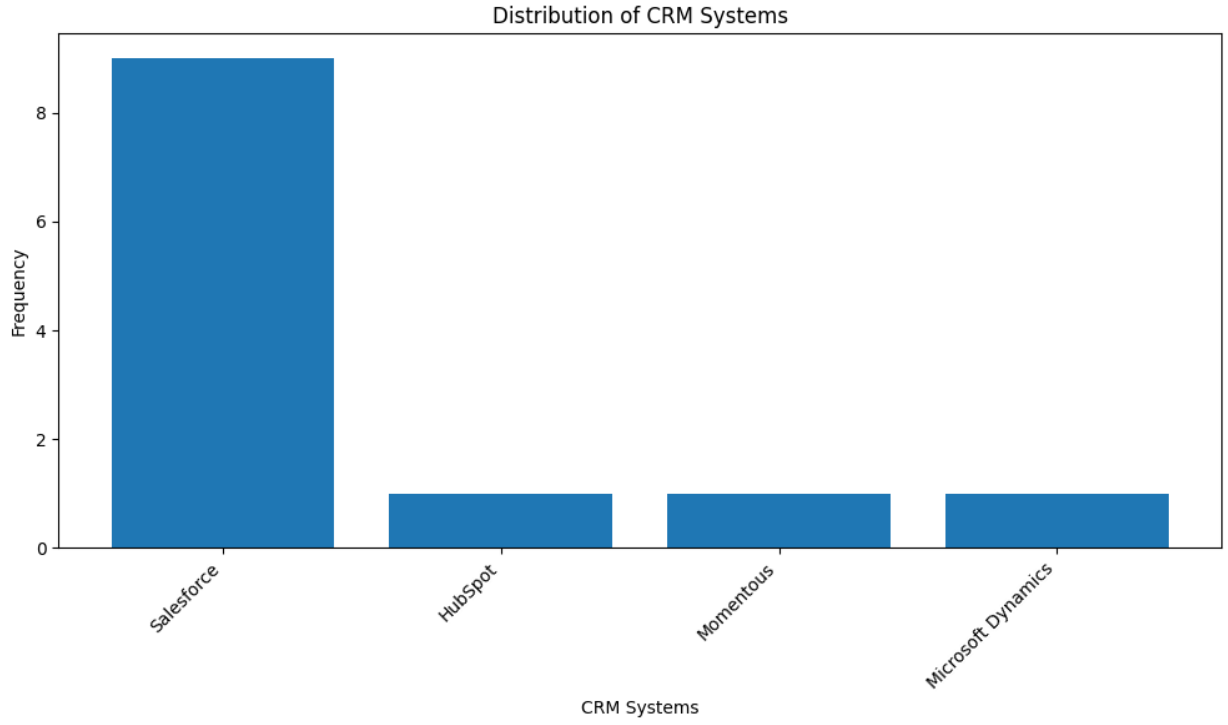


Figure 3: Distribution of CRM Systems—Landscape Assessment Participants



Adoption Success and Familiarity

Of the participants interviewed who reported utilizing CRM technologies, perceived adoption success was measured as follows: low (31%), moderate (38%), high (25%), and none (6%). An analysis of interview participants reporting the use of Salesforce (n = 11) found rates of perceived success as low (37.5%), moderate (25%), high (25%), and none (12.5%). The reason for the specific analysis of Salesforce is because it is the most frequently used software solution and the most frequently cited solution being considered by both landscape assessment participants and interview participants. By comparison, interview participants reporting other CRM solutions demonstrated slightly higher but comparable rates of perceived adoption success.

Additionally, interview participants were measured on their familiarity with CRM overall and largely indicated an active use or awareness of CRM technologies, with 8% reporting no familiarity at all. As outlined in the literature review, the presence of a local CRM champion may have positive implications for CRM implementation and adoption. Interview participants were measured on the presence of a local champion as yes (56.5%), no (30.4%), or unknown (13%). Interview participants reported moderate acceptance of CRM technologies within their states. Of the interview participants who currently use CRM, perceived employee acceptance was identified as low acceptance (31%), varied acceptance (56%), and high acceptance (13%).

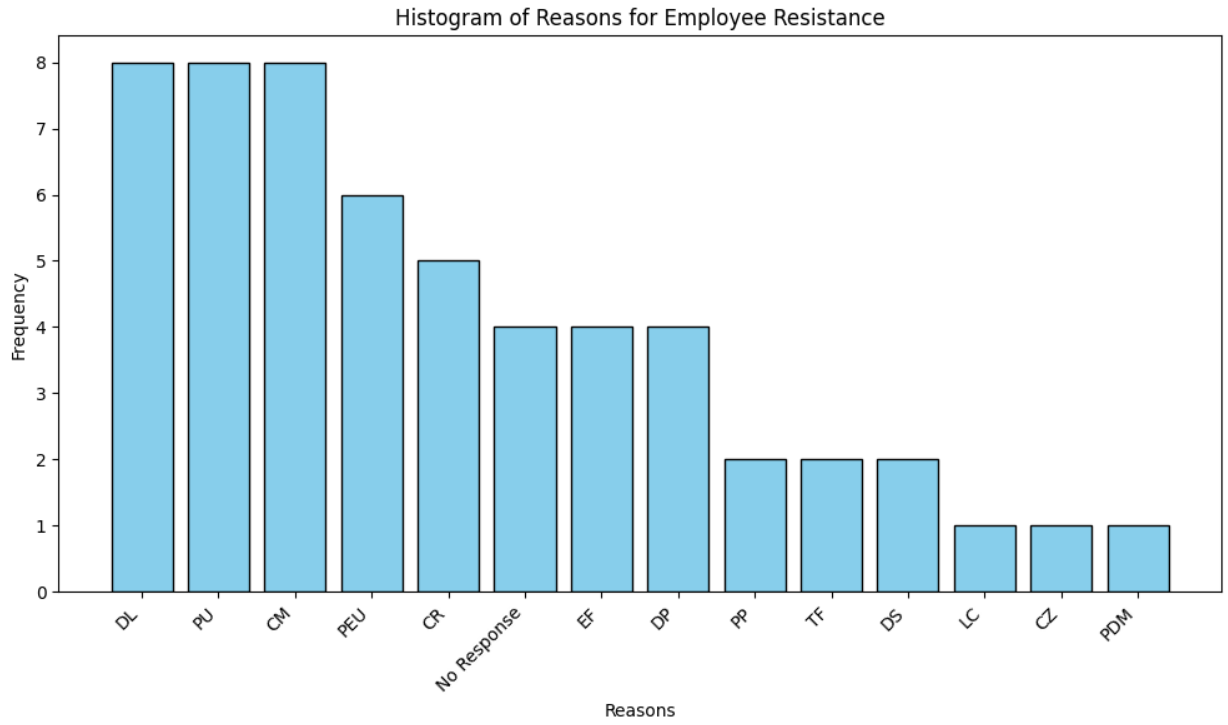
A statistical correlation analysis was also conducted to better understand the relationship between reported adoption success and the presence of a location champion, and perceived ease of use and the presence of a local champion. Regarding the relationship between the presence of a local champion and reported adoption success, the correlation coefficient was 0.261, indicating a positive correlation between the presence of a local CRM champion and reported adoption success. However, while there is some association between the presence of a CRM champion

and reported success, the correlation coefficient is not strong, suggesting that other factors may be influencing reported success. On the relationship between the presence of a local champion and perceived ease of use, the correlation coefficient was 0.327, suggesting a positive correlation. This means that there is a moderate positive correlation between the presence of a local champion and the perceived ease of use, as described by participants as *easy to use*.

Employee Resistance

Interview participants were asked about the presence of employee resistance regarding current or potential CRM technologies in their states, and the results found that resistance to be moderately high (see Figure 4). This was particularly true among participants currently using CRM technologies, with 38% reporting high employee resistance and 31% reporting moderate employee resistance. The most frequently reported reasons for employee resistance among all interview participants were change management (15%), digital literacy (15%), perceived usefulness (15%), perceived ease of use (11%), and costs and resources (7%). Similar results were identified among the interview population that currently uses CRM technologies. The most frequently reported reasons for employee resistance among interview participants who are currently using CRM technologies include digital literacy (17%), perceived ease of use (14%), perceived usefulness (14%), change management (14%), and costs and resources (7%).

Figure 4: Reasons for Employee Resistance—Interview Participants

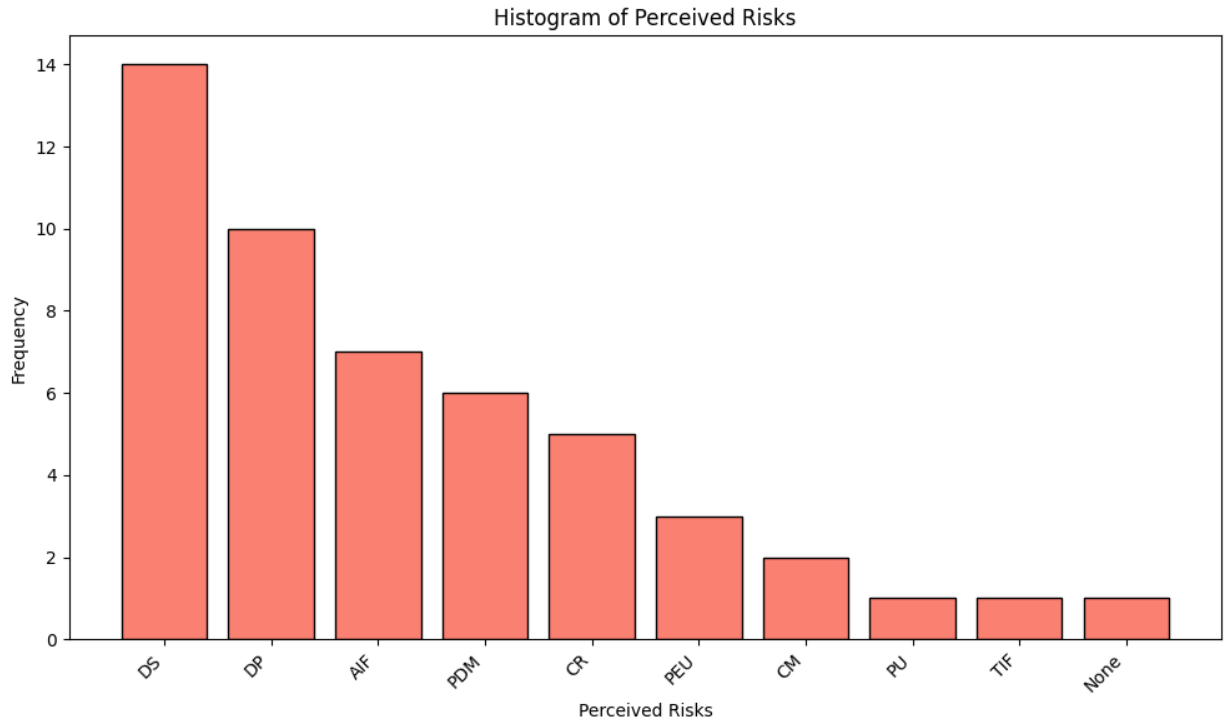


Pre-adoption Approaches

Interview participants also identified various pre-adoption approaches to implementing a CRM system. This included strategic organizational planning (18%), communications across the organization (16%), evaluations (16%), training and support (16%), vendor selection (9%), pilot efforts (7%), and no response (11%). Additionally, participants were asked what alternative approaches to CRM technologies they have considered, and 74% reported the possibility or current use of various ad hoc solutions. Ad hoc solutions included responses such as email marketing technologies, the Microsoft Office Suite, and event management technologies. Several perceived risks with CRM technologies were also reported among interview participants (see Figure 5). The biggest concerns centered around data security (29%), followed by hesitancy

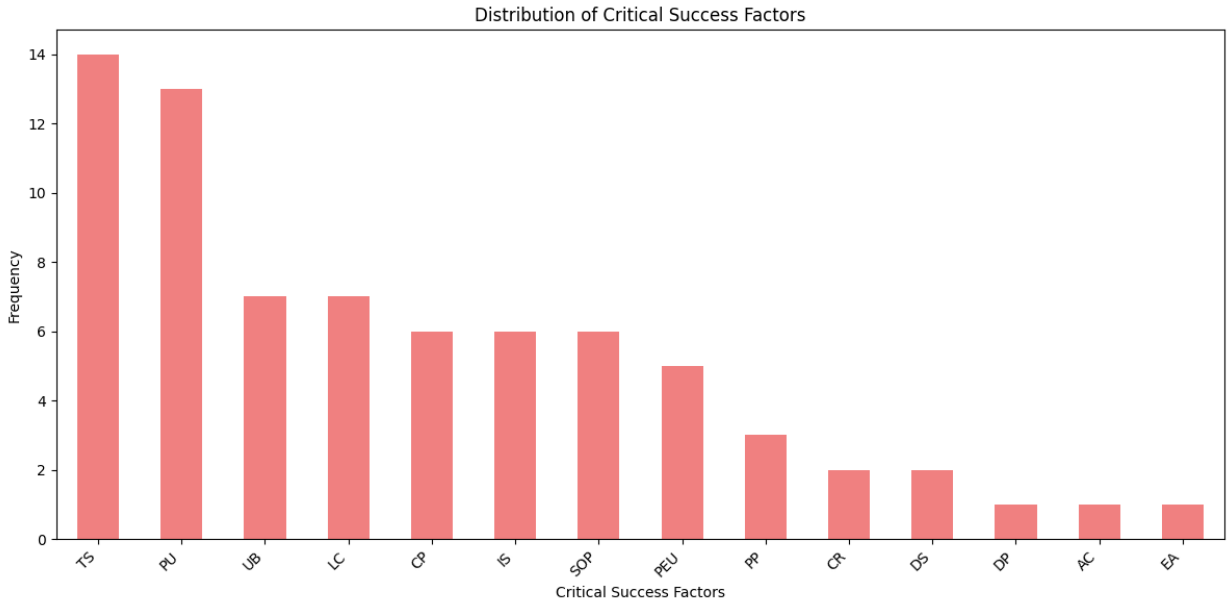
regarding data privacy (18%), potential failures in adoption or implementation (14%), poor data management (12%), costs and resources (10%), and perceived ease of use (6%).

Figure 5: Perceived Risks of CRM Systems—Interview Participants



Lastly, an analysis was conducted on what interview participants reported as the critical success factors of CRM adoption and implementation (see Figure 6). Each participant provided a set of critical success factors, with factors being identified through codes such as “LC” (leadership commitment), “PU” (useful), “TS” (training and support), “IS” (integration and interface strategy), “SOP” (strategic organizational planning), “CP” (champion presence), “CR” (costs and resources), “DS” (data security), “DP” (data privacy), “EA” (early adopters), “AC” (accountability), “PP” (policies and procedures), and “UB” (user buy-In). The most frequently used responses for critical success factors included training and support (n = 14), followed by perceived usefulness, leadership commitment, user buy-in, integration strategy, strategic organizational planning, champion presence, and perceived ease of use.

Figure 6: Reported Critical Success Factors—Interview Participants



RQ1 Findings: Benefits and Organizational Performance

Both interview participants and data from the landscape assessment highlighted a range of perceived benefits of CRM technologies (see Figures 7–8). For interview participants, contact and database management (19%) was the most reported benefit, followed by client insights (15%) and engagement and interaction tracking (12%). Other benefits, including strategic marketing and communications (11%), reporting and evaluation (10%), efficiency (6%), email marketing (5%), revenue generation (5%), and other benefits (17%) were also reported. Other categories include automation, customer service, personalizations, scalability, employee onboarding, project and task management, and event management. Results from the landscape assessment demonstrated similar perceived benefits of CRM technologies. Like the interview participants, the most frequently cited benefits from the landscape assessment data were contact and data management (n = 15). Additionally, other similar benefits were present in this dataset, including strategic marketing and communications (n = 14), reporting and evaluation (n = 8),

engagement and interaction tracking (n = 8), efficiency (n = 5), and customer insights (n = 3). Quotations from interview participants regarding perceived benefits of CRM technologies are provided in Table 2.

Figure 7: Perceived Benefits of CRM Technologies—Interview Participants

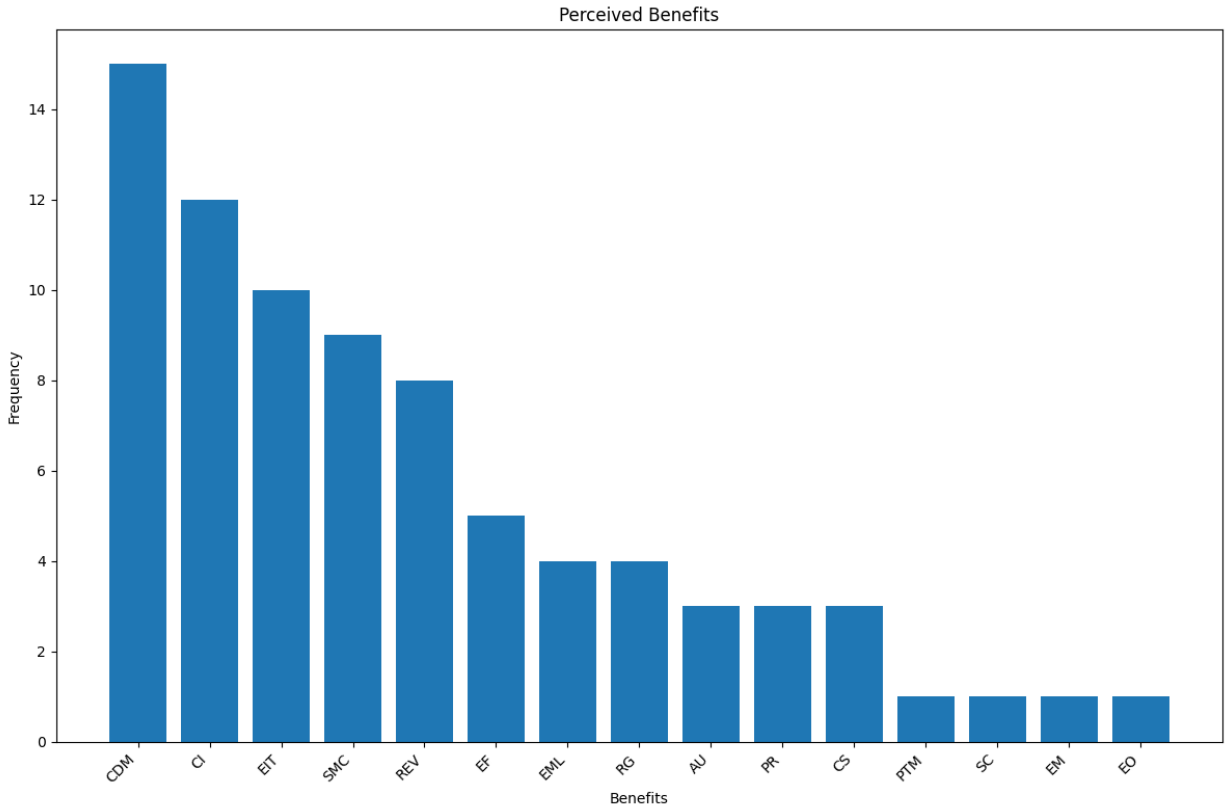


Figure 8: Perceived Benefits of CRM Technologies—Landscape Assessment

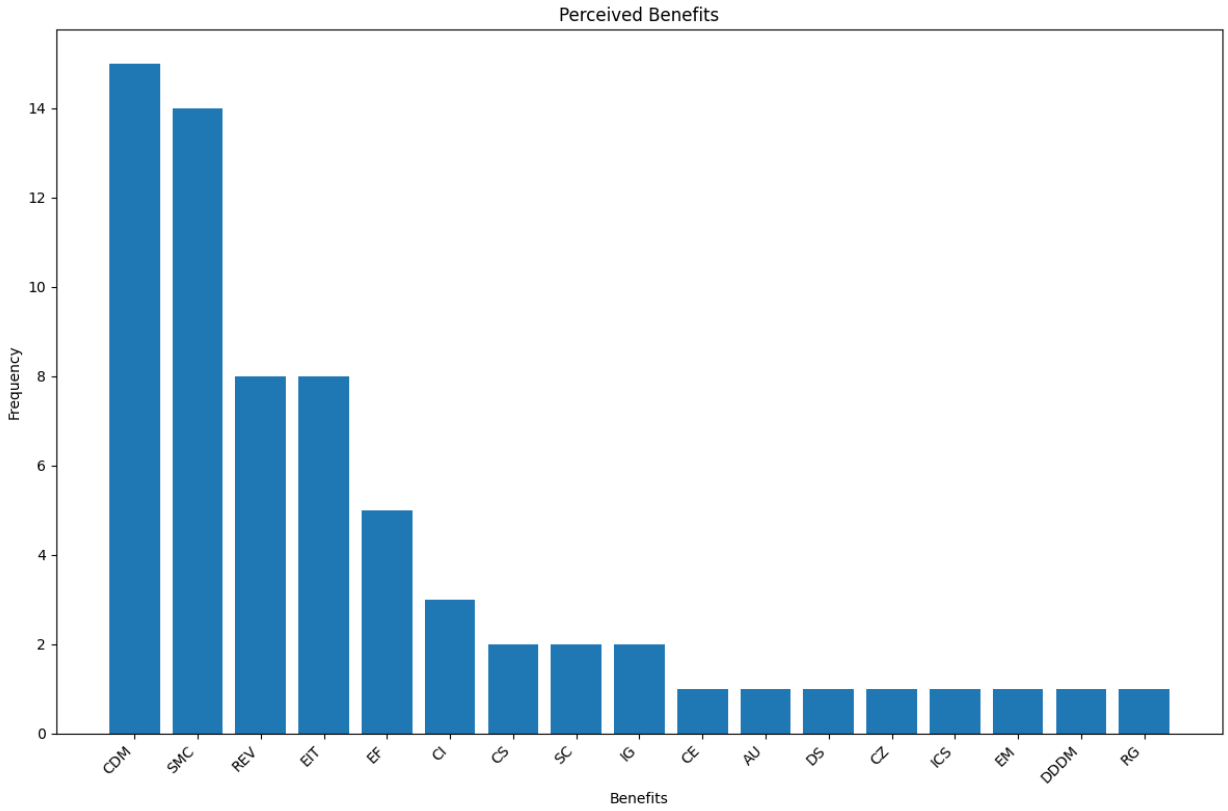


Table 2.

Participant Name	Code(s)	Quotations
Andrea Simpson	SMC	"I think the biggest benefits are that we can be more strategic and intentional with both our workflow and how we communicate with people."
Caroline Sanders	REV	"Being able to just pull that information out really quick has been really good for record-keeping and reporting."
Jimmy Washington	CDM, AU	"The promise has always been that if we are sharing these contacts, there is the ability to eventually be able to automate and analyze those contacts."
Clarence Carpenter	CI, EF	"I think one of the biggest thing we're lacking is, you know, following up on someone's interest because we might not, you know, it falls between

		the cracks or someone reached out about something, we didn't have it, but six months later we do have that program and we can't remember what that person's email address was or their phone number or, you know, those kinds of things."
Andrea Simpson	EIT	"You can look in the analytics and see exactly what topics people are clicking on, how many people are opening your emails, how many times they're opening your emails."

RQ2: Barriers and Organizational Impacts

All participants were asked about their perceived barriers to adoption or potential adoption of CRM technologies within their organizations (see Figures 9-10). Among interview participants, the most frequently reported perceived barriers to CRM adoption and implementation include training and support, employee resistance, and costs and resources. Survey participants also reported several perceived barriers to CRM adoption and implementation. The most frequently reported perceived barriers from survey participants include costs and resources, training and support, perceived usefulness, employee resistance, and data security. For interview participants, the top five perceived barriers to CRM adoption and implementation include training and support, employee resistance, costs and resources, perceived ease of use, and perceived usefulness. See Table 3 for quotations from interview participants regarding their perceived barriers to CRM adoption.

Figure 9: Perceived Adoption Barriers—Interviews

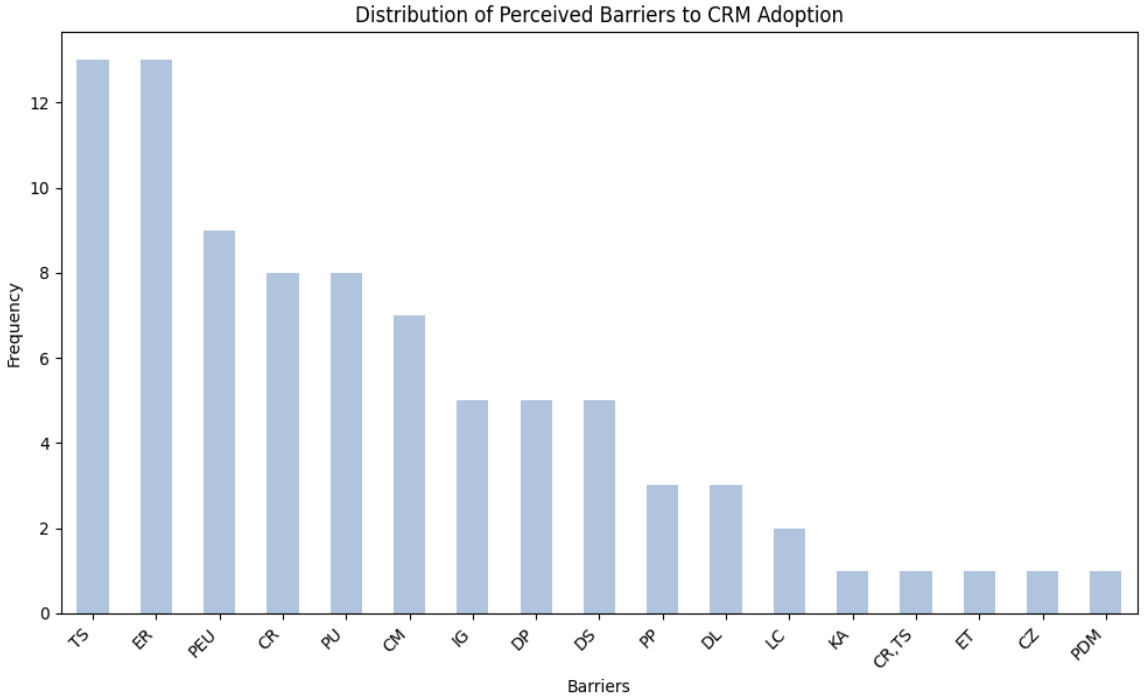


Figure 10: Adoption Barriers—Landscape Assessment

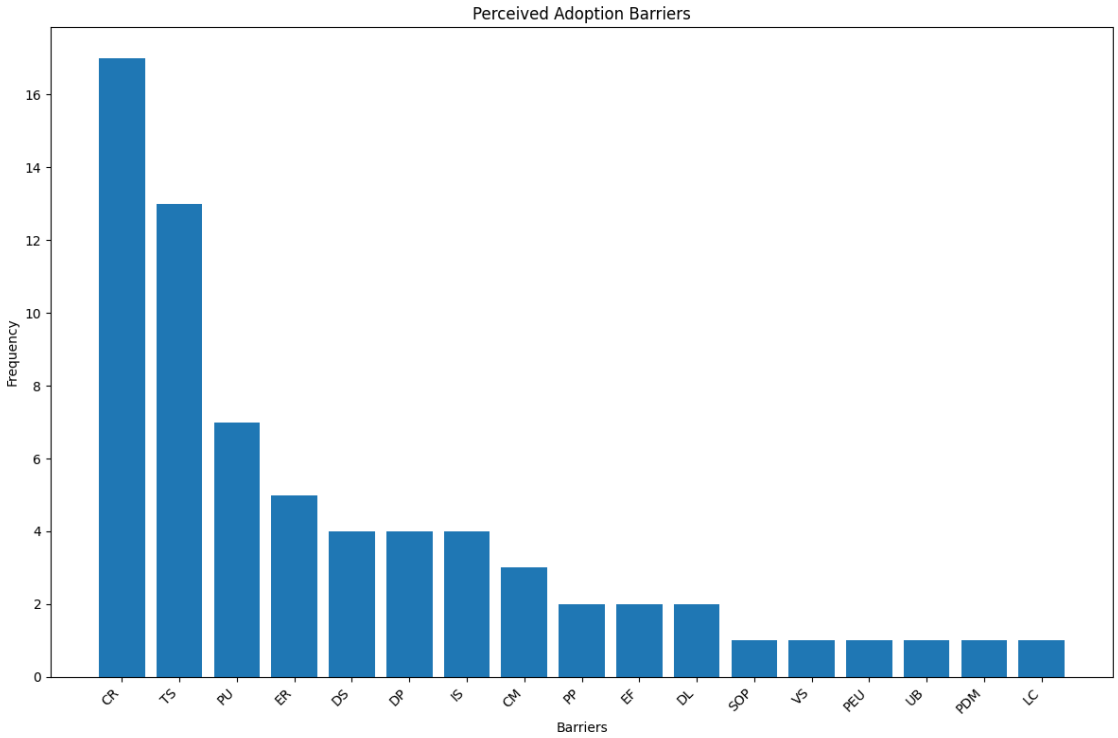


Table 3.

Participant Name	Code	Quotations
Daniel Lawrence	PU, EF	"If people look at it and say, this is gonna take me more time to understand than to enter the data, they're just gonna withdraw from the activity automatically."
Deborah Anderson	ER	"The main issues are around the adoption of Salesforce and people just having a negative perception of it."
Roger Carmichael	CR	"I'm gonna always ask the question about cost and what would be the return on the investment, how we would see this product, this technology giving us an overwhelming return for what we're investing in it."
Caroline Sanders	TS	"I think that's the biggest resistance is, you know, we already have so many different things we're using and having to learn something new and take the time and effort to get it up and running to fit what we need is, is a challenge."
Annika Noel	DS	"There has been a lot of pushback, or there was in our exploration phase. There's concerns about privacy and the idea of sharing a relationship that someone has built over time."

RQ3 Findings: TAM Principles

Participants were asked about the perceived ease of use and perceived usefulness of CRM technologies in their states, both for existing implementations and for those that have not implemented CRM technologies (see Figures 11-12). Interview participants were asked to share their opinion on the perceived ease of use of CRM technologies in their states. All interview participants reported the perceived ease of use as difficult (42%), moderate (29%), easy to use (8%), and no response (21%). Among only the participants currently using CRM technologies, the data was reported as difficult (56%), moderate (31%), and easy to use (13%). Similarly, data

from the landscape assessment shows that participants were asked to rate their perceived ease of use on a five-point Likert scale, and responses included 1 = Very Difficult to Use, 2 = Somewhat Difficult to Use, 3 = Average Ease of Use, 4 = Somewhat Easy to Use, and 5 = Very Easy to Use. The mean perceived ease of use was found to be approximately 2.59, indicating a moderate level of perceived ease of use. The median was 3.0, further supporting the notion of a moderate ease of use, and the mode of the dataset was 3, indicating that this score occurred most frequently. See Table 4 for participation quotations regarding the perceived ease of use and usefulness of CRM technologies within their organizations.

A statistical analysis of interview participants revealed a moderate positive correlation ($r = 0.517$) between participants' reported success and their perceived ease of use. This indicates that, on average, an increase in the perceived ease of use of the system is associated with a moderate increase in reported success. Participants who found the system easier to use tended to report higher levels of success in their experiences. However, an analysis of interview responses reveals an interesting relationship between their perceived ease of use and reported success with Salesforce. The results indicate a weak positive correlation ($r = 0.204$) between participants' assessments of Salesforce's ease of use and their reported success. Lastly, an analysis of interview responses revealed a moderate positive correlation ($r = 0.548$) between their reported success with CRM software other than Salesforce and their perceived ease of use.

Figure 11: Perceived Ease of Use—Interviews

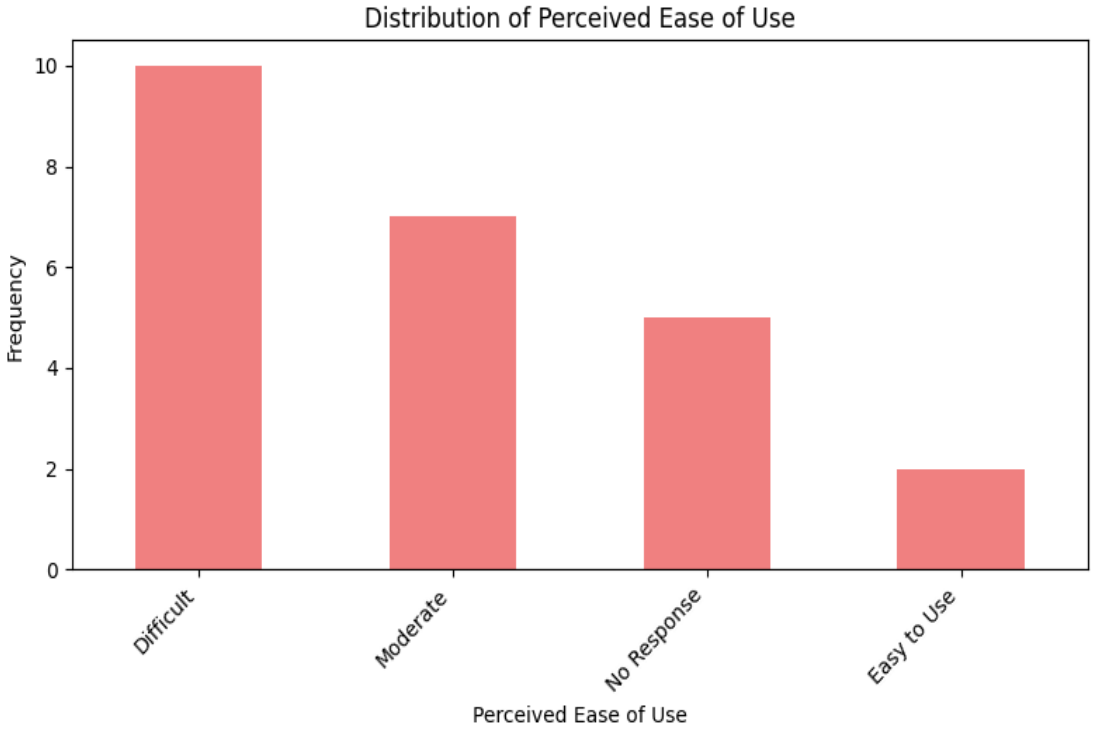
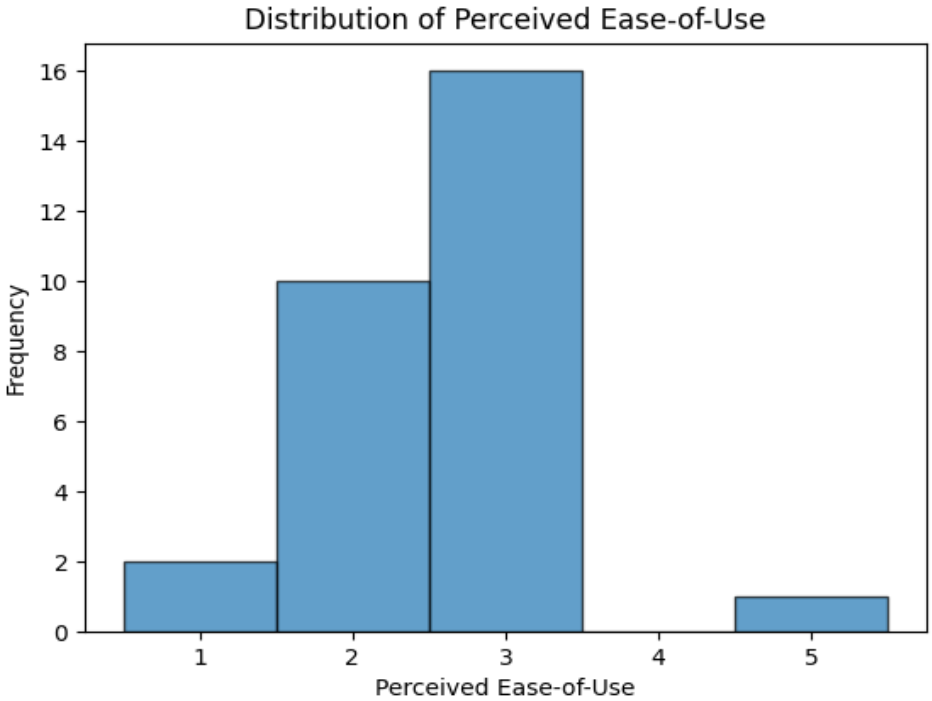


Figure 12: Perceived Ease of Use—Landscape Assessment



Perceived usefulness was investigated in both the landscape assessment and during the interviews (see Figures 13-14). Overwhelmingly, participants perceive CRM technologies as useful. Survey participants were measured for perceived usefulness on a five-point Likert scale with 1 = Not Useful at All, 2 = Not Very Useful, 3 = Somewhat Useful, 4 = Very Useful, and 5 = Extremely Useful. For survey participants, the mean perceived usefulness score was found to be 4.47, indicating a fairly positive perspective regarding the utility and usefulness of CRM technologies. The median perceived usefulness score was 5.0, and the mode of the dataset was also 5. All interview participants were asked for their opinions on the perceived usefulness of CRM technologies in their states. Interview participants reported it as useful (79%), not useful (13%), and no response (8%). There were similar results from only participants who are currently using CRM technologies that found the system useful (81%) and not useful (19%).

Figure 13: Perceived Usefulness—Interviews

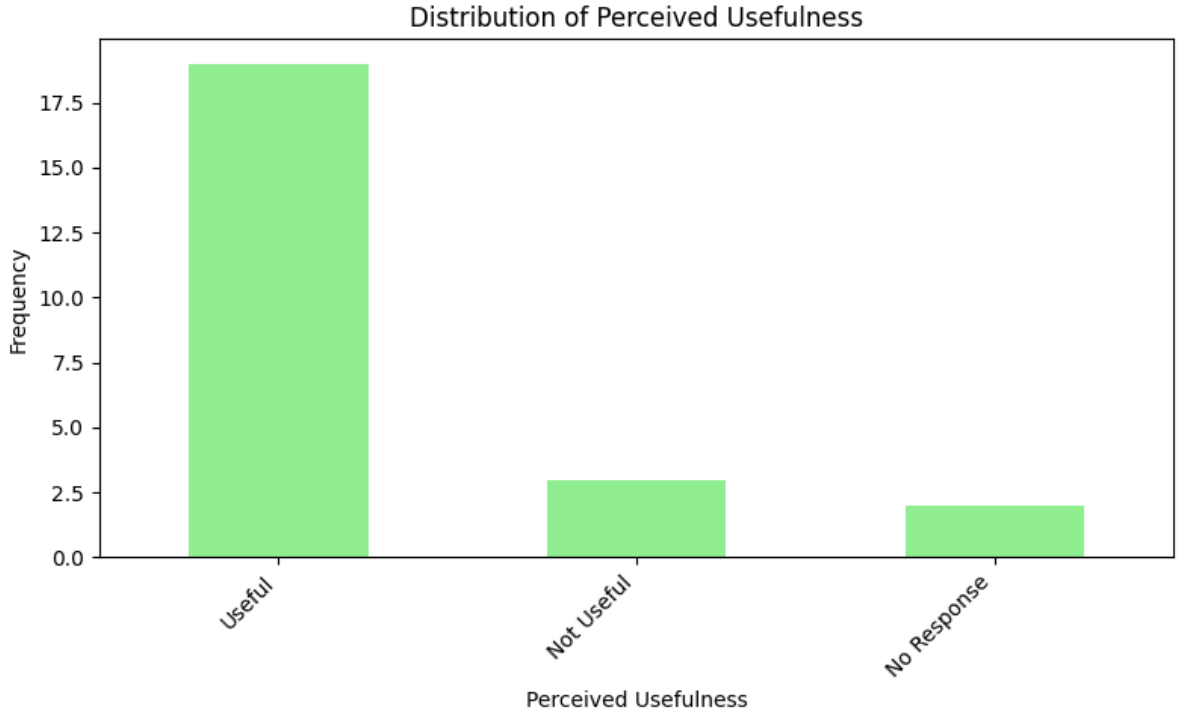


Figure 14: Perceived Usefulness—Landscape Assessment

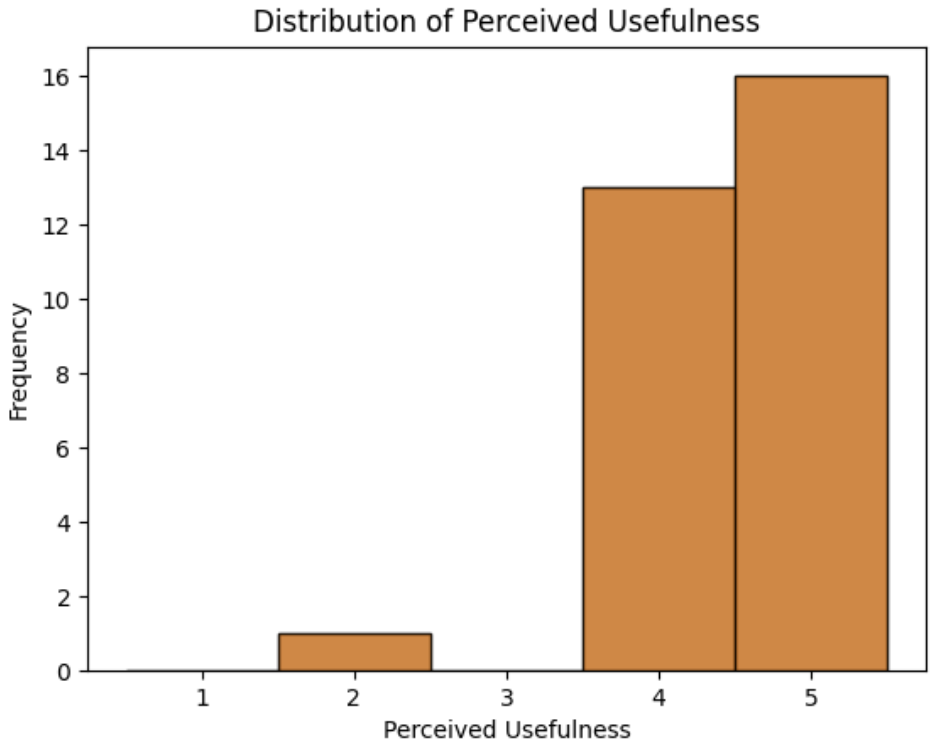


Table 4

Participant Name	Code	Quotations
Lee McFarland	PEU	"I think we're in an age now where technology is changing so fast that your idea of what you learned five years ago is obsolete now as far as your digital literacy."
Jimmy Washington	PEU	"It is a challenge to get the customization that we need to do our jobs. We don't know what to ask for, like we don't know the questions to ask to get the functionality that would make our lives easier."
	PU	"Certainly, useful. Certain newsletters have an incredibly high open rate, 60, 70%. And they can actually see when we pull the website analytics, they could see a significant number of traffic coming from email marketing."
Stephanie Martinez	PEU	"If it's not easy-to-use, it's not as productive, or

		maybe it lowers the productivity."
Daniel Lawrence	PEU	"If people look at it and say, this is gonna take me more time to understand than to enter the data, they're just gonna withdraw from the activity automatically."
John Hartman	PEU	"Because we, you know, like any place you have turnover, you want something that people feel free to utilize in a way that you don't have to go to school to be able to use CRM."
Terrence Young	PU	"I think it slowly got used less and less. Eventually, they couldn't justify the budget that was put towards it."
Samuel Reynolds	PU	"Our faculty see it just as one more step. They have to take one more hoop, they have to jump through to get their jobs done, to report their data."
Mara Lopez	PU	"It's not a matter of it being difficult to use the Notes feature. It's a matter of they don't either see the benefit of doing that or don't want to keep those kinds of notes or don't even have time to take those kinds of notes about individual clientele."
Andrea Simpson	PU	"So even just small things like, you know, cross-promoting our programs in each other's newsletters are part of the goals that we had for the software."

Additionally, this study noted the presence of employee resistance and the frequency of perceived usefulness and perceived ease of use in the responses by the interview participants. The top five reasons for employee resistance among all participants were change management (15%), digital literacy (15%), perceived usefulness (15%), perceived ease of use (11%), and costs and resources (7%). A statistical analysis of the data was conducted to see if there was a correlation between employee resistance and perceived ease of use. The correlation coefficient of −0.217 suggests a negative correlation. This means that as perceived ease of use increases, employee resistance has a tendency to decrease. However, this negative correlation is not

statistically significant at the significance level of 0.05. The data implies that perceived ease of use may not be a determining factor in employee resistance to CRM systems in the context of this study.

RQ4 Findings: Outreach, Engagement, and Communications

Interview participants reported several areas where CRM technologies could or do have a positive impact on outreach, engagement, and communications (see Figure 15). The findings suggest the most frequently reported areas where CRMs can make an impact include strategic marketing and communications, contact and database management, centralization of data, engagement and interaction tracking, client insights, data-driven decision-making, increased efficiency, personalization, and other. Other categories include improved user experience, multi-channel engagement, reporting and evaluation, automation, improved customer service, and no response. Among participants currently using CRM technologies, the most recurrent themes include strategic marketing and communications, engagement and interaction tracking, contact and database management, centralization of data, data-driven decision-making, client insights, increased efficiency, personalization, and other. Other categories included multi-channel engagement, reporting and evaluation, automation, and no response. See Table 5 for participant quotations regarding the implications for outreach, engagement, and communications.

Figure 15: Perceived Implications on Outreach, Engagement, and Communications—Interviews

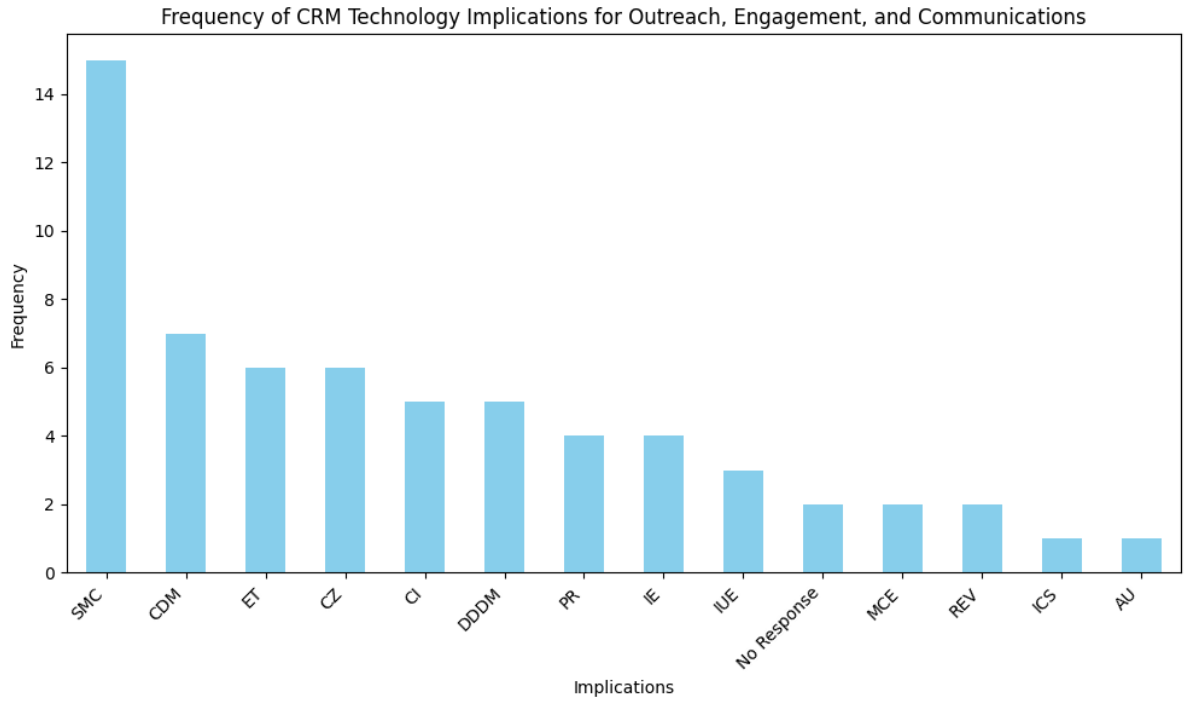


Table 5

Participant Name	Code	Quotations
Krystal Parks	CI	"It would be great to really be able to have a better idea of the people who attend all extension programs, all [university] Extension programs to really learn about our customers more."
Landon Frederick	CDM, SMC	"I guess the big picture for me on CRM is just that idea of really organizing our contact information in a way that is easily accessed and manipulated to benefit both us in terms of communication and outreach but also that the data is current and accurate and secure for the people in the system."
Jonathan Traylor	CZ, EF	"I think about agent turnover and some of our counties just to know when a new agent comes in if we had a truly established CRM or we've tracked that relationship and know what issues that they've had in the past and how we've helped them."

Andrea Simpson	EIT	"You can look in the analytics and see exactly what topics people are clicking on, how many people are opening your emails, how many times they're opening your emails"
Caroline Sanders	SMC, PR	"It has given me the opportunity to engage those contacts in a more personal manner."

Summary of Findings

This study explores the adoption and evaluation of CRM technologies by CES professionals, the majority of whom play significant leadership roles within their respective institutions. The study delves into the perspectives of CES professionals through a thorough review of data from recent surveys and semi-structured interviews. The key findings have potentially significant implications for the CES. RQ1 explores the perceived benefits of CRM technologies; participants identified various benefits associated with CRM systems, including contact and data management, strategic marketing and communications, and reporting and evaluation, emerging as the most frequently reported. The perception of these benefits highlights a high level of value that CES professionals observe in the use, or potential use, of CRM systems, and increases the presence of perceived usefulness throughout other question responses. However, CES professionals encounter or perceive multiple barriers to adopting CRM systems. The primary barriers include cost and resource considerations, training and support requirements, and concerns about perceived usefulness and employee resistance. Data security and data privacy were also significant concerns, reinforcing the notion that CRM technologies require multifaceted considerations to be successfully implemented and achieve appropriate adoption.

The TAM was selected as the theoretical framework for this research to analyze the extent and influence of perceived ease of use and perceived usefulness on the adoption of CRM technologies. The statistical analysis revealed a moderate positive correlation between perceived ease of use and reported success, emphasizing the importance of user-friendly interfaces in

fostering successful CRM adoption. In general, participants overwhelmingly perceived CRM systems as useful. From the interviews, existing CRM implementations are viewed as being able to, or having the potential to, positively contribute to outreach, engagement, and communications efforts within the CES. Strategic marketing and communications, contact and database management, and data-driven decision-making were identified as key areas where CRM systems play a critical role. An in-depth statistical analysis investigated the potential correlation between employee resistance and perceived ease of use. The correlation coefficient of −0.217 suggests a negative correlation, meaning that an increase in perceived ease of use tends to be associated with a decrease in employee resistance. However, perceived ease of use may not serve as a decisive factor in influencing employee resistance to CRM systems within the context of this research.

Chapter 5: Discussion

Overview

The final chapter of this research study considers all data available in the research background and literature review. This analysis consists of the researcher's findings as it pertains to the qualitative phenomenological study of the TAM on the adoption of CRM technologies within the CES. This chapter provides readers with answers and clarifications regarding the research questions to better understand the perceived benefits, barriers, and the extent of TAM influence on the adoption of CRM technologies in this CES. It includes principles such as perceived ease of use and usefulness. This research also has implications not only for the theoretical framework but also for the methodology deployed throughout the research. Equally important, there are several practical implications for the CES. There are also several delimitations and limitations to this research that are discussed along with recommendations for future research.

Summary of Findings

The findings of this research highlight various aspects of CRM adoption and implementation within the CES. First, the majority of participants who participated in the research interviews included individuals from various roles, including CES directors and administrators, communication practitioners, and IT professionals. This is similar to the participation found in the Extension Foundation's landscape assessment of CRM technologies in Extension. Interview participants were distributed across the various regions, with the northeastern region being the most prevalent. Although a more even distribution would have been more desirable, data from the landscape assessment assisted in filling in some representation gaps. Second, it was very clear from the research that the Salesforce CRM was the

most frequently used and most frequently considered CRM system by Cooperative Extension professionals, with other systems such as ActiveCampaign, Momentous, AirTable, and QuickBase making infrequent appearances.

Familiarity with CRM technologies was fairly high among both current users and potential users, but perceived adoption success varied and could be best described as moderate. However, it was noted that the adoption success of Salesforce systems was reported by participants to be lower than that of participants utilizing other technologies. Additionally, the presence of a local champion varied across organizations, with a little less than half of participants reporting the existence of a local champion. Interestingly, these findings uncovered that employee resistance was a factor in the success of adoption for various reasons, including change management, digital literacy, perceived ease of use, and perceived usefulness. The levels of employee resistance among all participants could best be described as moderately high.

Many institutions have undertaken or are considering several different pre-adoption approaches, including strategic organizational planning, communications across the organization, evaluations within the organization, and training and support. Several critical success factors were identified for the successful implementation and adoption of CRM technologies, including training and support, strong leadership commitment, user buy-in, and strategic organizational planning. However, several risks were also noted, such as data security, data privacy, and adoption or implementation failures, which were ranked as the most prominent concerns. Participant definitions of CRM had a strong alignment with responses toward the perceived benefits of CRM technologies within their organization. This included participants reporting that contact and data management, strategic marketing and communications, client insights, reporting, evaluation, and efficiency were largely the top benefits of CRM technologies. The

principles of the TAM were prevalent throughout this research, where both perceived ease of use and perceived usefulness were identified as critical success factors, reasons for employee resistance, and potential risks. However, overall, participants reported that CRM technologies were perceived as difficult or moderately to use in their states, and a statistical analysis showed a slight positive correlation between the perceived ease of use and reported adoption success. On the other hand, perceived usefulness was overwhelmingly positive, which indicates a high perceived value of what CRM technologies can do for Extension organizations. The critical finding here is that perceived ease of use on its own may have less impact on perceived usefulness than anticipated but can still significantly influence adoption success.

Participants reported several items regarding the perceived implications for outreach, engagement, and communications. In most cases, participants saw a CRM's ability to enhance strategic marketing and communications for the organization. Additionally, good contact and data management through CRM technologies could unlock a lot of potential to better enhance engagement with Extension audiences. One important finding was that participants shared that centralization of data could have positive impacts on outreach, engagement, and communications across their states, but it was also a reason for employee resistance. Lastly, participants reported that CRM technologies could better enable data-driven decision-making for how they interact, engage, and communicate with their audiences and also better inform their program planning and delivery.

Discussion

Several themes emerged from this research. The use of CRM technologies across the CES appears to be similar now as it was during Judd's (2019) landscape assessment. However, the uses of CRM features within the CES appear to be very limited. In most cases, participants

reported the deployment of a very limited number of features, particularly around event management, email marketing, and basic contact and data management. This may have some positive impacts on both the perceived ease of use and perceived usefulness of CRM technologies. However, the implementation of CRM technologies across the CES, even in institutions that have been using them for several years, appears to be a fairly slow rollout of features and possibilities. While participants reported some benefits regarding client satisfaction, streamlined communications, and better tracking of interactions and engagement, it was clear throughout the research that this information is still unfolding at most universities that are currently using CRM technologies. Nearly half of the participants were still evaluating the use of CRM technologies or had no plans to use them at all. One participant shared, “In Extension, I feel like we’re a little slower when it comes to getting the latest and greatest technology.”

Technology Acceptance Model

Hasanein and El-Kafy (2022) found that in order to improve the effectiveness of CRM technologies and encourage wider adoption across the organization, organizations should focus on employee satisfaction and applying simple technological systems to both customers and employees. This research uncovered a widespread adoption or evaluation of the Salesforce CRM system by CES organizations while simultaneously reporting that the system is difficult to use. Furthermore, this research demonstrated a positive correlation between the perceived ease of use of CRM technologies and reported adoption success rates of CES organizations. Interestingly, as Hasanein and El-Kafy (2022) suggested, simple technological systems appear to have greater success in the CES context. Participants who reported using non-Salesforce solutions generally experienced higher rates of adoption success, perceived ease of use, and lower employee

resistance. With these findings, it does appear that the TAM principle of perceived ease of use has implications for the adoption of CRM technologies in the CES.

In the study by Ngangi and Santoso (2019), they found that perceived ease of use had significant effects on perceived usefulness and intention to use CRM technologies. However, this research did not draw comparisons to those conclusions. Overwhelmingly, CES professionals reported seeing high levels of perceived usefulness of CRM technologies within their organizations, and that seemed to have little impact on the moderately difficult perceptions of ease of use. However, there are several factors as to why that may be. First, CES organizations do not appear to have a traditional use of CRM technologies, as one might find in other professional sectors. The CES use of CRM technologies is also very different from other areas of universities themselves, such as admissions or development. In general, CES professionals reported the benefits of CRM technologies to be more about contact and data management, as well as strategic marketing and communications. Throughout the interviews, participants often shared that their implementation of CRM technologies was focused on a limited set of features, including things like email marketing and event management.

Employee Resistance

Regarding employee resistance, Wang and Lien (2018) found that training employees in statistics or database management is helpful for improving CRM operational skills among beginning users. Wang and Lien (2018) also highlighted that both perceived ease of use and perceived usefulness are good predictors of CRM adoption, and other constructs such as system complexity, compatibility, and trialability serve as mediators in forecasting user intentions. Overwhelmingly, participants reported training and support as critical barrier to CRM implementation in their states. They also identified training and support as major factors for

contributing to employee resistance in their states. In one participant use-case in the north central region, the organization is piloting Salesforce across a limited number of users. This particular participant focused tremendous efforts on training and support, ensuring that the Salesforce interface was customized appropriately for the pilot program. As a result, her organization appears to be overcoming hurdles of complexity, compatibility, and trialability while simultaneously creating a perception of the system that it is both easy to use and demonstrating value to Extension users that increased the perceived usefulness. On the other end of the spectrum in the northeastern region with a participant use-case of Salesforce that has a limited set of users, training and support appears to be elusive and creating the appropriate interfaces aligned with the organizational needs is a significant source of frustration. That participant reported that the system is difficult to use and although they believe in the potential usefulness, they simply are not seeing their return on investment.

Critical Success Factors

Findings from the Farhan et al. (2018) study demonstrated that the top critical success factors for CRM implementation were top management support and commitment, IT systems management and integration, a clearly defined CRM strategy, knowledge management capabilities, and an organizational culture of change. Anaam et al. (2022) found that top management support, training, and perceived usefulness were the most significant critical success factors for CRM implementation. This research on the CES found that participants reported very similar findings, although sometimes spread across more than one category and contextualized for the CES. This includes identifying training and support, perceived usefulness, user buy-in, strategic organizational planning, integrations strategy, and leadership commitment as the top critical factors. With that said, participant perceptions toward successful CRM

implementation are aligned with existing research across other professional sectors, and the CES is not considerably unique. However, there is one area that CES participants discussed frequently throughout the research that may have influence on several critical success factors. Many CES professionals shared significant challenges in employee resistance due to data centralization. There appear to be concerns from CES professionals about sharing their contacts within a centralized system. As mentioned in Chapter 1, the CES prides itself on the trust it can develop with communities. CES professionals foster relationships with community members through their programming, and it is possible that CES professionals may view the centralization of contact data as a violation of that trust.

Organizational Performance

This study did not gain much ground on insights regarding the impact of CRM technologies on organizational performance. Al-Weshah et al. (2018) highlighted four primary dimensions of CRM on organizational performance, including system quality, information quality, system usage, and user satisfaction. Al-Weshah et al. (2018) also found that individuals had fairly different responses to defining what a CRM system is or does. Similarly, this research did not find a unified definition for CRM, and responses varied mostly around CRM functions. However, very few participants provided a holistic view regarding how CRM improves areas such as system and information quality or system usage and user satisfaction. In the context of the CES, CRM technologies are used for various reasons, including contact management, event management, and email marketing. While there are success stories of CRM technologies improving these specific areas of Extension efforts, these incidents appeared to be isolated based on participant responses. One reason for this is that the implementation of CRM systems from participant perspectives is relatively new, currently unfolding, or simply has not occurred yet.

Adoption Barriers

Tazkarji and Stafford (2020) highlighted several adoption barriers for CRM technologies. This includes managerial commitment, employee resistance, user motivations, development issues, training issues, organizational fit, and organizational context. CES participants reported some similar barriers, including costs and resources, training and support, perceived usefulness, employee resistance, and integration strategy. Interestingly, Tazkarji and Stafford (2020) emphasized that these adoption barriers can fit inside three main components of CRM technologies: people, process, and technology. Their study concludes that challenges around people and technology are heavily influenced by the process, and that organizations can better manage the process through proper planning and anticipation. CES participants reported several pre-adoption approaches aligned with this idea of focusing on processes that include strategic organizational planning, communications across the organization, evaluations, training and support, vendor selection, and pilot efforts. While all of these approaches are aligned with managing the process of CRM implementation and can have an impact on both people and technology, not all CES participants currently using CRM were able to fully invest in their individual implementations in these areas.

Marketing Automation and Knowledge Creation

Several CES participants reported using specific CRM functions to better understand and communicate with their clients. Client insights were regarded by CES professionals as a top benefit of CRM technologies, along with engagement and interaction tracking, enabling them to best deliver relevant, personalized communications to appropriate audiences. These audiences would be segmented out in CRM systems into different contact lists based on contact behaviors. Additionally, the CRM's ability for personalization was noted by CES professionals as a

perceived benefit. In a study by Mero and Taimenen (2016), the findings suggest that the use of marketing automation has a high impact on generating quality leads through both behavioral targeting and content personalization. Mero and Taimenen (2016) also suggested that behavioral tracking through marketing automation can increase transparency between different segments within the organization and foster closer cooperation. In the context of the CES, this research suggests some possibilities toward this with institutions that are more open regarding shared use of contacts. However, as previously mentioned, centralization of data is a significant point of concern for many CES professionals.

Customer Satisfaction, Loyalty, Engagement.

In the study by Susantara et al. (2023), their findings demonstrate how the implementation of CRM systems impact customer loyalty, first by creating targeted communications through the database available within the system, and sharing relevant information through customer interactions on social media. The study also found that CRM can increase sales volume with customers based on client insights stored within the system. Within the context of the CES, sales have a fairly different function. Many CES programs are available to the public at no cost, while others may have a fee associated with specific events. Participants in this study reported use of Modern Campus Destiny One CRM as a source of revenue generation. One participant from the southern region shared how this CRM system has greatly increased revenue generation for county offices in the CES and that factor has had a significant influence on the perceived usefulness of the technology, furthering the adoption of that technology throughout the counties. The ease of collecting client data through a CRM, gathering revenue, and maintaining a record of client engagements with the CES for remarketing efforts

not only has the potential to increase the return on investment of CRM technologies for the CES but also creates opportunities for enhancing customer loyalty.

Implications

Theoretical Framework

The adoption and implementation of CRM technologies within the CES were investigated through the lens of the TAM. The TAM was selected because it is rooted in the idea that perceived ease of use and perceived usefulness offer significant influence on users' acceptance of technology and provide a sound framework for better understanding CRM adoption in the context of the CES. The findings of this study demonstrate an alignment with TAM principles, which is most obvious in the positive correlation between perceived ease of use and reported success of current CRM implementations in the CES. This reinforces the notion that user-friendly interfaces must be carefully considered in the planning and implementation stages in order to contribute to the successful adoption of CRM technology. An interesting insight is that while many participants reported moderate or difficult perceptions regarding the ease of use, most participants reported a useful perception of CRM technologies. However, one implication of this research on the TAM is that the principle of perceived usefulness may not have a significant influence over perceived ease of use, nor does perceived ease of use appear to have a significant influence over perceived usefulness. There are likely additional variables impacting those principles.

Participants also emphasized various challenges related to customization and understanding CRM functionalities, making it clear that the ease with which users can navigate and utilize CRM technologies plays a critical role in successful adoption. TAM also underscores the significance of user acceptance or user buy-in during the adoption process. This study's

identification of employee resistance as a significant barrier aligns with TAM's acknowledgment that individuals may resist adopting new technologies. The negative correlation between perceived ease of use and employee resistance, while not statistically significant, suggests there is a potential role of user-friendliness of interface design in some CRM implementations across the CES.

Methodology

The combination of semi-structured interviews, triangulated against landscape assessment data, allowed for a comprehensive data collection process. The semi-structured interviews provided nuanced perspectives, while the survey from the landscape assessment allowed for a broader quantitative overview. However, there were significant challenges in generating useful data from the post-interview survey that may have been rooted in a design flaw. The post-interview survey contained many open-ended questions that ended up not being relevant to many research participants. Fortunately, the post-interview survey shared nearly identical questions with the landscape assessment, and the proximity of time between data collection for the interviews and the landscape assessment was insignificant. Regardless, a dual approach of utilizing existing landscape assessment data and interview data appears effective. The distribution of participants across different regions of the CES better enabled research validity, and the findings are more likely to be generalizable to the broader CES.

In several cases, qualitative data responses were binary or had limited options, which offered the opportunity to quantify the data for statistical analysis. The combination of statistical trends with qualitative insights added greater depth and context to the research, strengthening the credibility and reliability. The choice to investigate employee resistance alongside TAM principles provided valuable insights into the interplay between technology and human factors

within the CES. Lastly, participant feedback has been crucial for the trustworthiness of the data and, ultimately, the findings of this study. Interview narratives were provided to participants for feedback, insights, clarifications, and changes. This collaboration reinforced the strength of the data and the current sentiments of CES professionals regarding CRM technologies.

Practical

The findings of this study hold several practical implications for the CES and similar organizations that are considering CRM technology implementation. First, CES professionals need to engage in an informed decision-making process regarding the selection of CRM technologies. According to the findings of this research, the vast majority of CES organizations have already adopted or are considering Salesforce as a software solution. Participants largely reported that the use of Salesforce stems from its use in other areas of the university, allowing for the benefit of existing infrastructure and support. However, the findings of this study highlight a lower level of perceived ease of use with Salesforce, with a positive correlation toward low reported adoption success. On the other hand, universities using non-Salesforce systems do appear to report higher levels of perceived ease of use alongside higher levels of reported adoption success.

This research also highlights that employee resistance can pose a significant challenge to CRM adoption within the CES. With this understanding, CES leaders should consider change management strategies and a strong leadership commitment toward developing appropriate policies and procedures that encourage use. The centralization of data in the CES raises concerns for CES professionals who have developed trusted relationships with community members; efforts to ensure data privacy and limit visibility of shared contacts where appropriate could address these concerns. Additionally, for successful adoption and quality data management,

organizations would benefit from investing in comprehensive training programs to address digital literacy concerns that may help mitigate resistance and foster more positivity among CES users.

Strategic organizational planning was identified as a significant critical success factor that impacts CRM adoption. CES organizations need to develop clear strategies that align with organizational goals and know how to communicate those goals within the broader organization to ensure that they reduce negative perceptions toward CRM usefulness. Additionally, the planning process should also consider appropriate customizations and interface designs that meet the needs of various CES programs, with consideration given to user-friendliness, along with constant feedback and evaluation to better optimize CRM functionalities. Data security and data privacy were also significant concerns among participants regarding the adoption of CRM technologies. CES organizations need to prioritize significant data security measures when implementing CRM systems, and this includes collaborating with IT staff and vendors that prioritize data protection, encryption technologies, and clear policies and procedures for data access and usage. Lastly, the perceived difficulty of CRM systems overall by participants reinforces the need for more comprehensive training and support. The practical implications of this include investments in training programs that may be tailored to different user roles or to different Extension programs, user-friendly documentation, and a responsive helpdesk that fosters greater collaboration with employees to reduce resistance and increases confidence with CRM technologies.

Delimitations and Limitations

One key delimitation of this research was the geographic focus on CES professionals from the six regions of the CES. This broad representation helps to better contextualize the

applicability of TAM principles on CRM adoption within the CES, but it may not fully capture the nuances that are specific to individual states or regions. For example, smaller or less-resourced states may face entirely different factors for CRM adoption compared to larger, more well-resourced states. Additionally, participants of this study include a range of roles but primarily focus on CES directors, administrators, communication practitioners, and IT professionals. However, this study does not examine the potential variations in CRM adoption based on specific job functions but rather CRM adoption more holistically across state Extension services. Lastly, participants reported a fairly limited number of CRM technologies that were being used or evaluated for use in their states. The limited focus on these technologies may not consider various other CRM technologies possibly being utilized by Extension professionals located in county offices spread across the United States. In at least one instance, a state Extension director reported no use of CRM technologies in their state, while a separate participant reported a very limited use of CRM technologies in their county within the same state.

There are several limitations to this research that readers need to be aware of. While the sample size provided a considerable amount of useful qualitative data, it may limit the generalizability of findings to the entire CES network. Additionally, interview participants were significantly represented from the northeastern region of the CES, which could introduce biases in the interpretation of CRM adoption patterns. However, consistency between interview participant responses and responses from the Extension Foundation's landscape assessment demonstrated data consistency. Additionally, this study relies on self-reported data obtained through interviews and assessment, which highlight the possibility of response bias if participants had motivations to seek socially desirable responses or overemphasize positive

aspects of CRM implementations or underemphasize the negative aspects of those implementations.

There are also some limitations concerning the temporal context. Throughout the course of this research, significant advancements have been made in the nature of the technology, particularly through the inclusion of artificial intelligence capabilities that are being added to CRM technologies at a rapid rate. This could lead to potential new challenges or opportunities for CRM adoption that could impact the relevance of these findings in the future. The qualitative nature of the data also places limits on the ability to quantify relationships or establish greater causation between variables. When binary or other limited choices were available, this research explored those possibilities. However, a multi-method design that also examines quantitative measures could offer a more complete understanding of CRM use cases, adoption patterns, and TAM principles.

Future Research

Given the delimitations and limitations, there are significant opportunities for future research. First, a longitudinal study to better examine changes in CRM adoption patterns could potentially capture more accurately the evolving challenges faced by the CES. This is particularly true given the prevalence of artificial intelligence technologies being added to modern CRM systems. Additionally, future research could focus on comparative studies on a state-by-state basis to better contextualize the adoption of CRM in individual states aligned with strategic organizational needs. Throughout this research, participants identified various perceived purposes of adopting CRM technologies within those states, which may have made it challenging to understand CRM in a broader system-wide context. Future research could also consider an

increased inclusion of quantitative measures to better validate findings and establish additional statistical relationships.

Additional research specific to employee resistance and the various factors influencing employee resistance to CRM technologies could better enhance the understanding of this critical adoption barrier that many participants reported. Lastly, this study notes that the mere existence of CRM technologies does not necessarily translate to CES organizations meeting their desired goals. Alternative solutions to CRM exist, usually in the form of various ad hoc systems, and an exploration of these alternative solutions could offer some better insights into how the CES can reach organizational goals without the use of CRM technologies.

Summary

This chapter examines the research findings and addresses the research questions related to CRM technology adoption in the CES. The research utilized a qualitative phenomenological approach to examine aspects of TAM principles, including perceived ease of use and perceived usefulness, on CRM adoption. The chapter also examines the perceived benefits, barriers, and implications for the theoretical framework, methodology, and practical applications in the context of the CES. Additionally, delimitations, limitations, and suggestions for future research opportunities were addressed.

The study itself captures perspectives from a number of CES professionals across the various regions of the CES, including CES Directors and Administrators, Communication Practitioners, and IT professionals. One finding of this research shows how Salesforce is the dominant CRM system with moderate success reported. CRM adoption faces significant challenges in the CES, including employee resistance, training and support, and concerns about data security, data privacy, and the centralization of data overall. Participants reported several

critical success factors, including leadership commitment, strategic organizational planning, and user buy-in. Many perceived benefits of CRM technologies were also identified, including contact and data management, strategic marketing and communications, client insights, and reporting and evaluation. The findings also reveal that the TAM principles of perceived ease of use and perceived usefulness play pivotal roles and have a positive correlation with adoption success. The research did reveal a slow rollout of CRM features in the CES, which generally limits the functionalities of CRM systems. Additionally, comparison of the CES with other professional sectors from the literature review reveals that there are unique challenges facing the CES regarding CRM adoption. However, the TAM principle of perceived ease of use did demonstrate a positive correlation with reported adoption success, emphasizing the need for comprehensive training and a focus on developing user-friendly interfaces.

Several key implications were identified. First, there are implications for the theoretical framework as the TAM proves to be relevant. However, further exploration of additional variables influencing perceived ease of use and perceived usefulness would provide a more comprehensive understanding of the extent of those principles. There were implications for the methodological approach that highlight the need to consider more quantitative data for future research. Additionally, challenges in the post-interview survey design are acknowledged, which emphasizes the need to better refine survey instruments for future studies. Importantly, the practical implications for the CES underscore the need for informed CRM selection and making plans to tackle likely employee resistance toward CRM adoption, which includes the development of change management strategies. Training and support programs, strategic organizational planning, data security, and data privacy measures are all critical for successful CRM implementation in the CES.

Several limitations and delimitations were uncovered. First, the focus on CES as a whole provides context for CRM adoption but does not necessarily capture the nuances of specific state needs. Additionally, the roles of the study participants may limit insights into variations of CRM usage based on specific job functions. The use of self-reported qualitative data may also introduce the potential for response bias, and the temporal context of this study, consideration a rapidly changing digital landscape, suggests a need for a potential longitudinal approach to capture evolving challenges and opportunities. Lastly, future research that includes a longitudinal approach or comparative state-by-state analyses alongside quantitative measures could better enhance the qualitative insights. Factors such as employee resistance and exploring alternative solutions to CRM technologies may offer additional opportunities for a deeper understanding.

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Appendix A: Survey Questions

1. What is your institution?
2. What is your job title/role?
3. What is the current usage of CRM within your organization?
    a. Currently using
    b. Evaluating use
    c. Discontinued use
    d. No plans to use
4. Why did you discontinue use of your CRM system?
5. Why are there no plans to use a CRM?
6. Which CRM system are you using?
7. Which CRM system are you evaluating?
8. What were/are the primary institutional barriers to using or adopting a CRM system?
9. What were/are the primary organizational barriers to using or adopting a CRM system?
10. What benefits do you perceive can be gained from using a CRM system?
11. Please describe your biggest "win" from using a CRM system.
12. What other technology solutions have you linked or do you plan to link to your CRM to support the work of your organization?
13. In thinking about your CRM implementation, what do you wish you knew when you started?
14. Please rate your perceived ease of use of CRM systems.
    a. Very easy to use
    b. Somewhat easy to use
    c. Average ease of use
    d. Somewhat difficult to use
    e. Very difficult to use
15. Please rate your perceived usefulness of CRM systems in accomplishing your organizational goals.
    a. Very useful
    b. Somewhat useful
    c. Average usefulness
    d. Not very useful
    e. Not useful at all
16. First name/last name
17. Email address

Appendix B: Semi-structured Interview Questions

1. How do you define CRM?
2. How familiar are you with CRM technology and its potential applications?
3. Can you share experiences or observations regarding the use of CRM systems in enhancing your internal and external communications?
4. In your opinion, what are the benefits of implementing a CRM system?
5. What challenges or barriers do you foresee in adopting and integrating CRM technology?
6. Can you provide examples of how CRM technologies may improve client engagement and outreach efforts?
7. What factors contribute to the diffusion of CRM technologies within your organization?
8. Can you share any use cases or success stories of CRM implementation that you have come across?
9. What are the key considerations that you think should be taken into account when selecting and implementing a CRM system?
10. How do you envision the future of CRM technology in the CES?
11. Why did you discontinue use of a CRM system?
12. How did your employees handle acceptance of CRM adoption?
13. What challenges did your employees face in adopting CRM?
14. What were the critical success factors of adopting or implementing a CRM system?
15. What pre-adoption approaches are you engaging in/considering for eventual CRM implementation?
16. Can you elaborate on any specific concerns or challenges that you perceive in implementing a CRM system?
17. How do you currently manage internal and external communications, client engagement, and outreach efforts without the use of CRM technologies?
18. What alternative approaches to CRM have you considered?
19. What would need to change for you to consider adopting CRM technology?
20. What are the potential risks associated with CRM implementation?
21. Have you had experiences or observations from other organizations that have deterred CRM implementation, and if so, what are they?
22. What criteria do you use to evaluate whether a certain technology is worth adopting?

Appendix C: Coding Glossary

Code	Term
AC	Accountability
AIF	Adoption or Implementation Failure
AU	Automation
CDM	Contact and Database Management
CE	Client Engagement
CI	Client Insights
CM	Change Management
CN	Consultants
COM	Communications across the Organization
CP	Champion Presence
CR	Capacity and Resources
CS	Customer Service
CSF	Customer Satisfaction
CZ	Centralization
DDDM	Data-Driven Decision-Making
DL	Digital Literacy
DP	Data Privacy
DS	Data Security
EA	Early Adopters
EF	Efficiency

EIT	Engagement and Interaction Tracking
EML	Email Marketing
EO	Employee Onboarding
ER	Employee Resistance
EIT	Engagement and Interaction Tracking
EVM	Event Management
HA	High Acceptance
ICS	Improved Customer Service
IE	Increased Efficiency
IG	Integrations
IS	Integrations and Interface Strategy
IUE	Improved User Experience
KA	Knowledge and Awareness
LA	Low Acceptance
LC	Leadership Commitment
LCM	Lifecycle Contact Management
MCE	Multi-Channel Engagement
PDM	Poor Data Management
PEU	Perceived Ease of Use
PI	Pilot Efforts
PP	Policies and Procedures
PR	Personalization(s)
PTM	Project and Task Management

PU	Perceived Usefulness
REV	Reporting and Evaluation
RG	Revenue Generation
SC	Scalability
SMC	Strategic Marketing and Communications
SOP	Strategic Organizational Planning
TF	Training Failure
TIF	Technology Integration Failure
TS	Training and Support
U	Unknown
UB	User Buy-In
VA	Varied Acceptance
VS	Vendor Selection