EXPLORATION OF HOW UNIFIED THEORY OF ACCEPTANCE AND USE OF TECHNOLOGY ENHANCES TRUST IN COMMUNICATION

by

Samantha M. Ricciardi

Liberty University

A Dissertation Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy in Communication

School of Communication and the Arts

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ABSTRACT

The qualitative study aims to understand the central phenomenon of how trust enhances communication with online grocery shopping for participants who are 25 years and older and are active online grocery shoppers. Venkatesh, Morris, and Davis created a technology acceptance model called Unified created Theory of Acceptance and Use of Technology, which explains the acceptance and use of information systems and communication technology innovations with consumers (Kim et al., 2008; Phillippi et al., 2021). The Unified Theory of Acceptance and Use of Technology is an alternative theoretical model that ties into eight existing user acceptance models: (a) Technology Acceptance Model (Davis, 1989), (b) Diffusion of Innovation Theory (Rogers, 2003), (c) Theory of Reasoned Action (Fishbein & Ajzen, 1975), (d) Motivational Model (Davis et al., 1992), (e) Theory of Planned Behavior (Ajzen, 1985), (f) Decomposed Theory of Planned Behavior (Ajzen, 1985), (g) Personal Computer Usage Model (Triandis, 1979), (h) Social Cognitive Theory (Bandura, 1986). The study's design included a thematic analysis where 25 participants conducted an in-depth interview to explore the relationship between behavioral intentions, trust, and familiarity related to the Unified Theory of Acceptance and Use of Technology.

Keywords: Unified Theory of Acceptance and Use of Technology, Online Grocery Shopping, Communication, Trust, Behavioral Intentions, Familiarity

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Dedication

I dedicate this dissertation to my parents, friends, chairman, and God. My mom and dad taught me the importance of education, work, humility, and dedication. I thank my friends for listening to me when I doubted myself and being supportive during this journey.

My chairman recognized my full potential and did not let me settle for less while continuing to push me when I felt like giving up. Lastly, I thank God for paving my path through this journey, as his hands placed and guided the right people I needed to help during my educational journey.

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A dissertation comprises academic writing based on the researcher's original research. A dissertation resembles passion, knowledge, struggles, understanding, exhaustion, and a sense of accomplishment to a doctoral student. Isaiah 41:10 states, "Fear thou not; for I am with you thee: be not dismayed; for I am thy God: I will strengthen thee: yea, I will help thee: yea, I will uphold thee with the right hand of my righteousness." The Bible verse reminded me to trust in God and not to worry or feel distressed as he continued to provide strengthening. God walked me through my educational journey under His guidance.

I would not have completed my dissertation without the support of my parents, friends, and chairman. Thank you to Dr. Robert Mott for embarking on my educational journey. The purpose of a chairman is to lead the board and focus on the strategic matters that oversee the dissertation standards. However, you provided much more throughout this journey. You became a mentor, a friend, and a supporter. Words cannot express the gratitude I have for your wisdom and guidance. I am also thankful to my committee member, Dr. Carol Hepburn, for providing feedback and investing her time to review my study.

Thank you to my parents, who always encouraged me to dream big and never give up. Without the love, encouragement, and sacrifice you have given, I would not have made this journey a reality. I am thankful for my dyslexia teacher, Bonnie Brumagim, for teaching me the life skills to overcome my learning disability and showing me my full potential. A label does not define us.

During my dissertation journey, I experienced the hardship of losing my mother. I turned my difficulties into my focus, dedication, and persistence as I was finishing my doctorate in

honor of my mom and her passion for education. Thank you to everyone who helped me continue moving forward and making this accomplishment possible.

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CHAPTER ONE: INTRODUCTION

Overview

Humans have developed how messages are sent and received (Ong, 1982). Communication exchanges include words, sounds, signs, behaviors, ideas, thoughts, and feelings to express information (Battye, 2017). Communication involves a message between the sender and the receiver, including communication with technological channels. The evolution of communication continues to grow and change how the sender relays messages (Ong, 1982). Individuals live in a digital world influenced by fluency and literacy as modern technology has created interactive platforms for transactions and social information sharing (Jacobsen et al., 2021; Labrecque et al., 2013; Lewis, 2018; Verhoef et al., 2017). According to Ellul (1954), a digital world involves machines not interested in truth, beauty, or justice but focuses on a world where machines communicate efficiency. With the world being digital, communication styles adopt outside factors such as trust, familiarity, perception of usefulness, and behavioral intentions for technological acceptance and usage.

Individuals use technology for interactive communication daily, whether through mobile phone applications or computers (Jacobsen et al., 2021). The food sector is not excluded, as technology has created an intersection among individuals, grocery stores, and technology to fulfill food-related needs online. The research study investigates the unified theory of acceptance and use of technology with behavioral intentions, trust, and technology acceptance to understand how online grocery shopping usage impacts individuals' communication styles.

Chapter One introduces the history and communication progression of purchasing perishable food items, which includes an overview of the study by providing background information, the situation of self, statement of the problem, purpose statement, the significance

of the study, and research questions to specify the focal matter of the research study. The history of grocery shopping begins with the colonial goods store in the 1700s. I then explore general stores, division of labor, the first cash register, Piggly Wiggly's self-serving grocery store, King Kullen's first supermarket, the development of the internet, personal computers, Kmart and Walmart, self-checkout terminals, e-commerce with Amazon, and HomeGrocer. The history provides a holistic view of how the adaption of grocery shopping impacted and changed individuals' communication strategies to purchase grocery items. At the end of the chapter, I provide relevant definitions. The list of terms provides the reader with an understanding of concepts discussed throughout the study and how those concepts are used and interrupted in online grocery shopping.

Background

Individuals communicated through sharing, bartering, and selling (Recht, 1999). The evolution of grocery stores impacted individuals' buying and selling (Gauri et al., 2021) and individuals' attitudes and behavioral intentions. Before stores became popular across the United States, traveling salespeople would visit town after town to sell needed food items to people who lived far away from farms. In the early 1700s, colonial goods stores were established as retailers of foods and other goods imported from European colonies (Breen, 1986). Colonial goods stores grew as people expanded settlements across the United States (Breen, 1986). The expansion developed new towns, new communication strategies, and an acceptance of innovative ideas. The stores appealed to customers' personalization and human interaction (Recht, 1999).

The shift from colonial goods stores to general stores occurred after the revolution against England (Donnelly, 2021). By the early 1800s, the general store was established for small and rural communities that sold various goods (Davis, 2001; Skrapits, 2015; Cochoy,

2018). A general store is a non-departmental retail store that handles merchandise lines, including hardware, dry goods, groceries, drugs, and glassware (Stanton, 2018). General stores became a symbol of American civilization as they offered a place for people to find food and necessities that would be otherwise difficult to obtain (Davis, 2001; Skrapits, 2015; Cochoy, 2018). Shoppers would hand their grocery list (a written communication channel) to a clerk at the store counter and then wait for the clerk to collect and bag items (Davis, 2001; Skrapits, 2015; Cochoy, 2018). In 1860, general stores became a relatively large-scale economy that created a market degree in the division of labor (Stanton, 2018). Division of labor began a change as people adopted a communication style specializing in specific tasks and roles completed by individuals in a group (Jones, 1936).

In 1879, Ritty invented the first cash register (Bernstein, 1989). Ritty stumbled across the innovative idea while watching the mechanism used to tally the rotations of a ship's propeller (Bernstein, 1989). The machine involved simple mechanics in recording sales to inform the customer of the payment amount (Bernstein, 1989). The idea for store clerks to use the cash register was to convince merchants of the convenience and ease of the machine (Crowther, 1923; Hawes, 2021). Consumers communicated nonverbally as they placed the items they intended to purchase from the store. As the clerk decoded the message that the customer wanted to purchase the selected items, the clerk tallied the total reading off the price of the items. The cash registers mechanically communicated the consumers' total by providing the clerk (receiver) with an accurate message to communicate back to the customer. The communication process with the cash register, store employee, and the customer had created technology acceptance within the grocery shopping system that caused a behavioral intention to how money is calculated and collected.

The service innovation from the cash register drove the advances in the personalized grocery shopping experience (Cook et al., 2022). The nineteen-hundreds model of grocery shopping led to shopping carts, aisles, and checkout lines. In 1916, Piggly Wiggly opened in Memphis, Tennessee (Piggly Wiggly, 2011). Saunders, the founder of Piggly Wiggly, revolutionized the grocery industry with the first self-service grocery store (Piggly Wiggly, 2011). Upon entering the grocery store, consumers grabbed a shopping basket and walked down aisles to select items as the personal clerks were at the checkout area with the cash register for consumers' payment (Piggly Wiggly, 2011).

In 1930, King Kullen (2021) opened in Queens, New York, as the first supermarket on the east coast. Kullen compiled self-service, separate departments, discount pricing, volume dealing, and chain marketing (King Kullen, 2021). The grocery store expanded into different departments such as produce, meat, beer and wine, health and beauty, deli, and clothing (Zwiebach, 2005). By the 1930s, grocers adapted King Kullen's grocery model, where customers could stop at the butchers, bakers, produce shops, and dry-good grocers in one trip or have their purchases delivered to their home (Hunts Post, 2020).

The impact of the 4.0 Industrial Revolution on the production of goods and services distinguished the interpenetrating and technological revolution, as it was the development of technological development and technology was created to complete life's daily tasks (Rymarczyk, 2020). The internet started in the 1960s, but by the 1980s, computer networks began to have standard communication within the networks (Acs et al., 2021). In 1971, the invention of the microprocessor, a computer chipset, created a path for creating the personal computer, the internet, the smartphone, and cloud computing (Acs et al., 2021). The creation of the internet opened the door for e-commerce and digital technologies (Rymarczyk, 2020). By the

1980s, the credit card developed a magnetic stripe to read embedded computer chips to calculate payment costs (Steele, 2018). The invention of the internet created new economic activities, such as mobile banking, online shopping, and online grocery shopping.

In the 1990s, the grocery store model expanded into specialty stores such as Kmart and Walmart (Kmart, 2021; Walmart, 2021). The specialty stores were independently owned but gave the appearance of a supermarket (Zentner, 2008). The specialty stores began adding grocery departments to their business structure of clothing, pharmacy, health good, homewares, furniture, electronics, and appliances (Target, 2022). The purpose of the specialty stores was to combine general merchandise and a full-scale supermarket to provide a one-stop shopping experience for consumers (Zentner, 2008).

In 1992, the technological advancement of self-checkout terminals was invented for customers to checkout and pay for products with minimal assistance from the cashier (Litfin & Wolfram, 2010). The concept gave consumers the convenience of scanning their items, inputting coupons, and paying for a transaction without waiting in line. Self-checkout gave consumers the experience of online grocery shopping as the fundamental concept brings efficiency and convenience in a fast-paced environment (Sin & Tse, 2002).

Amazon was founded in 1994 as an e-commerce website that only sold books (Donici et al., 2012). However, the vision for Amazon changed as it became the world's largest e-commerce marketplace (Jindal et al., 2021). Amazon changed retail and changed the behavioral intentions, trust, and technology acceptance among individuals by advancing service-based relationships and interactive experience-driven relationships with customers (Payne & Frow, 2005). With each online purchase, consumers communicate a particular expectation of their e-commerce experience and their desired expectations for online shopping (Klaus, 2013). As

Amazon set the tone for e-commerce, other retailers have started mimicking the digital concept of purchasing items online, securing credit card sites for payment, fast delivery times, and easy returns (DaSilva et al., 2013).

In 1996, the internet and technological advancement relationship created the first grocery store, HomeGrocer.com, which adopted online grocery shopping (Mohan, 2021; Sappenfield, 1996). Online grocery shopping has been a slow adoption for consumers. In 2013, the U.S. grocery market had an $859 billion revenue, but the online grocery shopping business encompassed one% (Mohan, 2021). More online digital grocery stores, including Webvan, Kozmo, ShopLink, and Peapod, offered the same service, but rates increased by two% (Mohan, 2021).

In the past five years, online grocery shopping has experienced an increase in usage, and it is predicted to continue to grow exponentially in the upcoming years (Mortimer et al., 2016). The COVID-19 pandemic led many Americans to change their food shopping behavior to respond to policy, personal, and public health concerns (Jensen et al., 2021). The model of online grocery shopping includes the buyer visiting the website, searching for needed grocery items, selecting the grocery item, placing the order, making a payment, the store receiving the order and the payment, the personal shopper collecting the items, and the buyer receiving the items. As grocery stores have evolved and adapted to various times, several periods in history played a role in creating the online grocery shopping model. The timeline progression provided a narrative description of the current model for grocery shopping.

Grocery shopping is a basic human need for society, as it is a component of our day-to-day life for nutrition (Maslow, 1970). A grocery store stocks fresh produce, meats, dairy products, bakery goods, canned food, frozen food, and other needed items to fulfill consumers’

physiological needs, which vary among each person. Whether a customer needs milk, ice cream, hamburger meat, green beans, or bread, the store provides various options to be purchased. While there is a significant impact for demographic variables on consumer's behavior, personality traits or lifestyle is a predicator of consumer's behavior to buy or act on a consumption (Laroche et al., 2000; Luchs & Mooradian, 2012; Quach & Lee, 2021; Udo-Imed, 2015). Tsao and Chang (2010) explained how personality influences support purchases by encompassing critical motivators. Previous research shared how age-related differences impact information acquisition (Lorache et al., 2004; Quach & Lee, 2021), the status brand reflects product selection (Andrus et al., 1986; Quach & Lee, 2021), consumer ethnocentrism such as income, gender, or age portray the willingness to buy (Josiassen et al., 2011; Quach & Lee, 2021), and cultural differences play a role in consumer purchasing behavior (Gao et al., 2017; Quach & Lee, 2021).

During the pandemic, the supermarket channel experienced a 34% increase in online shoppers (Retail Feedback Group Study, 2020). In June 2020, supermarkets saw a rise in online grocery shopping across all generations: millennials encompassed 61%, baby busters were 52%, baby boomers were 37%, and the silent generation included 38% of online grocery orders (Retail Feedback Group Study, 2020).

Problem Statement

The problem with adapting to online grocery shopping is the alteration in the communication process. Before COVID-19, online grocery shopping experienced a 14% growth rate over the last five years (Anesbury et al., 2015). Due to the sudden spread of COVID-19, individuals experienced a fast adoption of online shopping through mobile internet technology to follow government guideline restrictions (Habib & Hamadneh, 2021). As the increase of online

grocery shoppers continued, the effects changed the way individuals communicate. Ong (1982) expressed how inventions change the way people think, behave, and communicate. With the adaption of online grocery shopping, individuals changed their communication skills. With technology-mediated communication, interpersonal communication is experiencing absence, which includes physical appearance, vocal tone, facial expressions, posture, eye contact, traditional haptics, space, and gestures. A lack of research exists on how individual communication is experienced through online grocery shopping.

A second problem for adapting to online grocery shopping is how individuals' motivations conform to technology-driven shopping. Motivational factors are commonly changed by environmental influences (Yuen et al., 2020). Individuals tend to undertake certain essential behaviors for acquiring physiological needs (Adolphs, 2013; Kolk & McFarlane, 1996). A lack of research exists on how and why technological advancements are incorporated in Maslow's Hierarchy of Needs as a critical action for motivating particular physiological needs and the other four tiers for individuals. The research explores how technology provides motivational factors to help individuals reach self-actualization through online grocery shopping.

A third problem for adapting to online grocery shopping is human behavior and attitudes. Postman (1992) shared that the emergence of new technology shapes the mindset while creating new worldviews. As individuals adapted to online grocery shopping, 52% of consumers indicated they would continue shopping for groceries online (Redman, 2020). Online grocery shopping is changing individuals' behavior and shopping practices from everyday life to mobility (Ruben et al., 2021). The drastic shift in purchasing groceries has altered traditional grocery shopping and how to complete grocery shopping. A lack of research considers how primacy and recency impact individuals' behavior and attitudes toward online grocery shopping.

Since behavioral intentions affect the decision-making process, the research explores previous technology experience and how it impacts user actions to future technological advancements.

Purpose Statement

The purpose of this qualitative narrative study is to investigate the unified theory of acceptance and use of technology for active online grocery shoppers who are 25 and older in the United States. At this stage in the research, I will explore and define communication changes with online grocery shopping through the concepts of behavioral intentions, trust, and technology acceptance. The theory guiding this study is the unified theory of acceptance and use of technology to understand online grocery shopping.

The research study explores how trust is communicated for people to continue using and adopting technological advancements such as online grocery shopping. Technology adoption is based on the consumers' perception of usefulness. Therefore, if trust and usefulness exist, the study explores if a person's behavior change.

Significance of the Study

Since the COVID-19 pandemic, previous research has explored online grocery shopping in the Czech Republic (Bartok et al., 2021), the Netherlands (Baarsma & Groenewegen, 2021), Quebec (Bezirgani & Lachapelle, 2021), and other countries. However, research is lacking on how online grocery shopping impacts communication styles in the United States. This study is valuable for investigating online grocery shopping among four generations and how individuals' views about technology play a role in their trust, adaption rate, and behavioral intentions. The study focuses on the unified theory of acceptance and use of technology to explain user intentions and usage behavior. It reflects how communication is changing through the digital process of grocery shopping. The study will investigate the unified theory of acceptance and use

of technology with behavioral intentions, trust, and technology acceptance to understand communication styles changing with online grocery shopping.

Research Questions

The study explores behavioral intentions, trust, and technology acceptance as it investigates the unified theory of acceptance and use of technology with online grocery shopping. The study investigates the following three questions:

RQ1: How does an individual communicate motivational needs in adapting to online grocery shopping?

RQ2: How is trust communicated in the utilization of online grocery shopping?

RQ3: How does familiarity with computer-mediated-communication contribute to behavioral intentions, perceived usefulness, and perceived ease of use with communication in online grocery shopping?

Definitions

1. *Cybernetics Tradition* - Cybernetics Tradition is a communication tradition that explains how physical, biological, social, and behavioral processes work (Krippendorff, 2009).
2. *Sociopsychological Tradition* - Sociopsychological Tradition derives from social psychology as it is concerned with studying how people present themselves as individuals who want to be perceived as favorable (Hooghiemstra, 2000).
3. *Unified Theory of Acceptance and Use of Technology* - Unified Theory of Acceptance and Use of Technology is a theory explains the acceptance and use of information system and information technology innovations (Venkatesh et al., 2003).
4. *Uses and Gratification Theory* - Uses and Gratification Theory explores traditional mass media usage and explains the digital media usage among individuals (Ma et al., 2019).

5. *Technology Acceptance Model (TAM)* - Technology Acceptance Model (TAM) is a model utilized for understanding human-computer interactions based on the perceived usefulness and perceived ease of use to determine behavioral intentions (Davis et al., 1989).
6. *Behavioral Intentions* - Behavioral Intentions refers to the motivational factors that influence an individual's behavior (Sharif & Naghavi, 2020).
7. *Trust* - Trust is viewed as a rational choice made by self-interested factors that undergo prevailing conditions of uncertainty and unfamiliarity (Balot, 2012).
8. *Communication is Transactional* - Communication is Transactional as the information technology is used to process and communicate information as the feedback loops between the person and the systems (Chaaban et al., 2020).
9. *Linear Communication* - Linear Communication is a one-way communication process where a sender transmits a message to the receiver (Rogers, 2003).
10. *Adoption* - Adoption refers to an individual who perceives or behaves differently than what they did previously (Rogers, 2003).
11. *Psychographics* - Psychographics is a blend of personality and motivation traits that influence consumers' habits based on an individual's lifestyle and preferences (Quach & Lee, 2021).
12. *Maslow's Hierarchy of Needs* - Maslow's Hierarchy of Needs expanded its model by producing an impact in the development of psychology, behavioral science, motivation, and sociology (Maslow, 1954).
13. *Familiarity* - Familiarity refers to a general feeling of a person encountering a person or object before, without conscious access to contextual details, which refers to the time or place of the encounter (Xie & Zhang, 2017).

Summary

The evolution of grocery shopping impacted how individuals communicated and completed life's daily tasks to purchase food items. The historical background demonstrated how goods were imported from Europe and later distributed in the United States. The evolution demonstrates how previous grocery shopping traditions are incorporated into online grocery shopping. The progression showed how grocery shopping went from a clerk selecting canned food items from the shelves to individuals selecting items from the shelves to personal shoppers selecting food items for the consumer. Grocery shopping experienced technology enhancements such as a cash register and self-checkout and expanded grocery stores into a department store for individuals to purchase other nonperishable food items.

Online grocery shopping transformed how individuals behave, adapt, and communicate with online shopping platforms. While the digital medium allows individuals to browse the virtual shopping aisles from the comfort of their home or work, it shows how another life's daily task is completed digitally. A consequence of adapting to online grocery shopping is the dependency on technology to finish grocery shopping for the household.

The qualitative narrative research study allows the researcher to investigate behavioral intentions, trust, and technology acceptance more in-depth to offer valuable insight into the adaption of online grocery shopping. Online grocery shopping has experienced little research in the United States, and a narrative research study will expand on the complex issue. Understanding the means of online grocery shopping is essential for determining the future of grocery shopping among consumers.

In this chapter, I provided an overview of the research study by explaining the background, situation of self, problem statement, purpose statement, the significance of the

study, research questions, and definition of terms. Chapter Two provides the foundation of the study through the literature review, which explores the communication, trust, familiarity, technology acceptance model, and Maslow's Hierarchy of Needs. The theoretical framework includes the unified theory of acceptance and use of technology, sociopsychological tradition, cybernetic tradition, and uses and gratification theory. Chapter Three is a detailed description of the methodology of the proposed study, which includes the setting, participants, sample producers, the researcher's role, data collection, methods for data analysis and synthesis, trustworthiness, and ethical considerations. In Chapter Four, I present the findings from the thematic survey and in-depth interviews by sharing emergent themes and relating to the research questions. Lastly, in Chapter 5 I summarize findings, discussion, implications, delimitations, and suggestions for future research.

CHAPTER TWO: LITERATURE REVIEW

Overview

In Chapter Two, I review the theoretical framework and literature pertinent to studying how the adoption of online grocery shopping in the United States for individuals who are 25 and older is creating a communication change through behavioral intentions, trust, and technology acceptance. The two communication traditions for the research study examines Cybernetic Tradition and Sociopsychological Tradition, with the theoretical framework of unified theory of acceptance and use of technology and uses and gratification. The related literature review will expand from the theoretical framework to bring an understanding on the selected context, which includes communication theory, communication channels, technology acceptance model, trust, familiarity, and Maslow's Hierarchy of Needs.

Theoretical Framework

The theoretical framework structures the support theories of the research study that explored how communication has changed with the use of online grocery shopping. The researcher examined two communication traditions: (a) Cybernetic Tradition and (b) Sociopsychological Tradition, along with two theoretical frameworks: (a) unified theory of acceptance and use of technology, and (b) uses and gratification theory. Within each theoretical framework, the researcher provides (a) the theorist, (b) the origin of the theory, and (c) the rationale for utilizing the theory.

Cybernetic Tradition

Society can be viewed as a social organism inspired by the early ideas of communication as a science (Merkl-Davies & Brennan, 2017; O'Carroll, 2014; Umpleby, 2010). Norbert Wiener, a mathematician and philosopher scholar, developed the cybernetic tradition, the science

of communication related to individuals and machines (O'Carroll, 2014). Cybernetic tradition studies information processing, feedback, and control of communication systems that explain how physical, biological, social, and behavioral processes work (Bahg, 1990). Griffin (2008) expanded on Bahg's (1990) definition by sharing how the information in the communication systems is the reduction of uncertainty. The cybernetic tradition encompasses a linear-communication model as the information processing and feedback is one-directional (Merkl-Davies & Brennan, 2017).

Smith (1723–1790) represented the first theoretical step through labor division in the eighteenth century as it formulated scientific terms (Mattelart & Mattelart, 1998). Babbage (1792–1871) created a division of mental labor that generated projects for mechanizing intellectual property actions (Mattelart & Mattelart, 1998). Mill (1806–1863) prefigured a cybernetic model that provided information feedback (Beniger, 1992). The division of labor increased between social organisms and digital enhancements.

In the mid-twentieth century, systems ideas emerged as a system science (Umpleby et al., 2019). The cybernetics tradition emerged in the 1940s with a series of ten conferences with the theme "Circular Causal and Feedback Mechanisms in Biological and Social Systems" presented in New York City (Umpleby et al., 2019). The conferenced demonstrated that System Theory and Cybernetics are highly differentiated, as the concepts are viewed as "systems thinking and cybernetics" (Cleland & King, 1968; Katz & Kahn, 1966; McCulloch, 1965; Parsons, 1951; von Foerster, 1981).

In 1948, Wiener published *Cybernetics, or Control and Communication in the Animal and the Machine,* referencing self-regulating mechanisms (Umpleby et al., 2019; Wiener, 1948). Wiener's *Cybernetics* included ten chapters on his early thoughts of future digital machines and

communication (Wiener, 1948). Wiener (1948) discussed digital auto as it examined the relationship between bandwidth, noise, and information capacity. The growth in factories and technological activities contributed to communication forming symbols and various channels (Mattelart & Mattelart, 1998; Umpleby et al., 2019). England had created a circulation revolution through machine tools that transformed manufacturing sectors during the industrial revolution (Mattelart & Mattelart, 1998). France implemented strategies to adopt and unify similar technological markets (Mattelart & Mattelart, 1998).

Wiener (1948) discussed the development of mathematical formulation as the complex systems among linear communication references the information processes in living organisms (Merkl-Davies, 2017). Computer machines and nervous systems share characteristics of calculating and data processing machines, as it parallels the brain and computer (Wiener, 1948). Quesnay (1964–1774) expanded a communication exchange among human beings and land (symbol) that connected individually (Mattelart & Mattelart, 1998). Wiener (1948) also discussed self-replicating machines as a mechanism of natural selection and the modification of human behavior in response to experiences with digital enhancements.

McCulloch (1965), a philosopher, explored cognition as a mental action to acquire knowledge and understanding through thought, experience, and the senses using experiments in neurophysiology. Chappe created the optical telegraph, the first communication system in 1792 intended for military purposes (Mattelart & Mattelart, 1998). Cybernetics challenged the boundaries between how individuals understand and how individual's act, between theory and practice (Sweeting, 2015). In 1974, von Foerster built on the empirical work to include the observer within science as the term "second-order cybernetics" to explore cognition (von Forester, 2003). Second-order cybernetics is an expansion of first-order cybernetics, as it

includes observing systems (von Forester, 2003; McCulloch, 19652). First, it caters to the second-order cybernetics, a theory that humans can construct (Sweeting, 2015). Second, cybernetics explains integrated actions into a circular relationship (Sweeting, 2015).

Wiener created the term cybernetics to refer to the control in communication (Schmidgen, 2020). Weick (1979) discusses how communication focuses on feedback as it explains technology acceptance and avoidance behaviors (Stich et al., 2019). Cybernetics explains how physical, biological, social, and behavioral processes work (Krippendorff, 2009). Wiener created the term cybernetics as the art and skill of communication systems as the structure, constraints, and possibilities are inhabited within animals (humans) and machines (Chaaban et al., 2020). Cybernetics is primarily a communication tradition that focuses on thinking, theorizing, or explaining and is directly related to how individuals act (Sweeting, 2015).

Cybernetic communication is an organized construct of information analyzed on knowledge and skill, followed by decisions guided by information and actions based on intended goals (Chaaban et al., 2020). The information is communicated quickly and accurately with the receiver and back to the source (Chaaban et al., 2020). The communication tradition explores how the interacting elements influence one another for processing information, feedback, and control (Griffin, 2008; O'Carroll, 2014). Feedback makes effective communication possible within a system (Maguire, 2006). Communication is transactional—the feedback loops between the person and the systems (Chaaban et al., 2020). Bale (1995) described feedback as a process where system behaviors are fed back through the users' sensory receptors as the input receives, is monitored, and allows the system to signal a given operation to pre-establish goals. The feedback

directly contributes to the decision-making process of adaption and the behaviors towards the goal-oriented system.

The idea of cybernetics is systems (Bahg, 1990). The concept of "system" takes information (input) and creates outputs. Systems are the variables that influence other variables as they influence shapes and control the overall system (Chaaban et al., 2020; Telmoudi et al., 2021). The adaption of a single system focused on two parts: (a) to act differently towards a specific external system in different contexts and (b) to change behavior towards a specific external system in a particular context in time (Nechansky, 2012). The receiver processes and internalizes information to form an understanding and commit to an intended interpreted message (Chaaban et al., 2020). Systems are permanently embedded in one another that one system is part of a more extensive system with increasing complexity levels (Koestler, 1967). A cyber-cultural environment of users and network computing gave rise to new imaginaries and practices of mediated communication that profoundly affect everyday life across the world (Castells, 1996, 2001; Turner, 2008).

When the user feels threatened by technological advancement, the threat generates an anti-goal as the user does not want to engage and avoid behavioral habitats by rejecting the idea (Stich et al., 2019). Cybernetics has three main components: (a) the goal or the message to convey, (b) the difference between the goal and what was conveyed, and (c) feedback indicates to the source what is happening at the receiver's end (Chaaban et al., 2020; Stich et al., 2019). Communication relies on participation as the goals and steps enable the person to take control and work towards achievable outcomes (Neuhauser & Kreps, 2011).

Shannon, Bell Telephone Company, explains how communicators are the information source (Griffin, 2008). Cybernetics is a communication tradition that explores information

processing, feedback, and control in communication systems (Griffin, 2008; O'Carroll, 2014). The information reduces uncertainty as the message is less predictable when more information is carried (Bahg, 1990; Griffin, 2008). Griffin described the channel capacity as an equation that involves information and noise (Griffin, 2008). The goal is gathering the most information with the least amount of interference to determine feedback in the communication between human and machine (Maguire, 2006). The communication message involves a source of coding theorem and its rejection of the channel coding theorem (Gappmair, 1999). Cybernetics involves acting, learning, and understanding, as there is a notion that acting is informed by understanding (Glanville, 2015).

Shannon (1963) identified three levels of communication problems as a practical utility. First, the technical issue explores how accurately communication symbols can be transmitted to the receiver (Shannon, 1963). Language describes the behavior and the different ways people think (Coblenz et al., 2021). Berne (1953) widened the message concept by including verbal and nonverbal communication that flowed the energy from the transmitter to the receiver in the linear communication process. Online communication transmits messages from humans to machines (Lieck & Rohrmeier, 2021). Visual (graphic) communication is an aesthetic appeal to please the user by creating a two-dimensional message that informs, compels, or fascinates (Krippendorff, 2006). The signal transmits linear messages between agents to connect visual images (Lieck & Rohrmeier, 2021).

The second is the semantic problem that explains how the transmitted symbol conveys the desired meaning (Shannon, 1963). Chains of signs build on the user's understanding to make a new composite sign, as the chains form meaning out of an individual relationship (Downs, 2007). The communicators build and direct new chains to gain attention to a particular graphic

communication (Downs, 2007). Symbol communication expresses different messages to the receiver, such as words and colors (Gibson et al., 2017).

Third, the effectiveness problem describes how effectively a received meaning is conducted in the desired way (Shannon, 1963). Graphic design is a medium, a mode of address, and a means of communication (Downs, 2007; Lieck & Rohrmeier, 2021). Technological advancements have expanded voices (messages) in the late twentieth century, transforming communication into a symbol of society in the third millennium (Mattelart & Mattelart, 1998).

Sociopsychological Tradition

The sociopsychological tradition originated from psychology, and sociology is directly related to the objective perspective (Hewes & Planalp, 1987). The tradition derives from social psychology as it is concerned with studying how people present themselves as individuals who want to be perceived as favorable (Hooghiemstra, 2000). The study of sociopsychological tradition is geared towards individuals' social being (Hewes & Planalp, 1987). The mind is the focal point for processing and understanding information (Hewes & Planalp, 1987). The psychological element in the communication tradition views an individual's characteristics, which causes them to act and think independently. The sociopsychological tradition in communication focuses on persuasion and attitude change through human development, process, and strategy messages that affect the messaging on individuals (Hewes & Planalp, 1987).

Sociopsychological tradition is an interpersonal communication interaction. A sociopsychological communication tradition is a behavioral approach that focuses on stimulation and reaction among individuals (Greene, 1989). Sociopsychological tradition is a cause-and-effect relationship in the communication process that involves expressions, interactions, and influences (Greene, 1989). The communication process is a conscious and unconscious attempt

that illustrates behavior and control images (Edgar et al., 2018; Goffman, 1959; Schlenker, 1980).

The sociopsychological tradition is divided into three branches: (a) behavioral, (b) cognitive, and (c) biological. The first branch is behavioral, concentrating on how people behave in communication situations (Greene, 1989). Behavior considers the relationship between communication behavior and variables, including an individuals' personality, situational differences, and learning (Greene, 1989; Krapfl, 2016). The behavioral intention relationship to the unified theory of acceptance and use of technology contributes to norms and attitudes among individuals (Tamilmani et al., 2021). The consumer usage behavior highlights how unified theory of acceptance and use of technology affects technology adoption and practice behavior (Venkatesh et al., 2003). Behavioral intentions tie into the Technology Acceptance Model and Planned Behavior Theory, as people will act on those intentions (Lim et al., 2019). Planned Behavior Theory is an extension of the Theory of Reasoned Action as it is based on the user's actions, intentions, and perceptions of control as the intentions are influenced by individual's attitudes towards behavior, subjective norms, and perceptions of behavioral control (Ajzen, 1991, 2001; Oteng-Peprah et al., 2020; Sharif & Naghavi, 2020; Tamilmani et al., 2021). Behavioral beliefs produce attitudes towards the behavior, normative beliefs result from social pressure and subjective norm, and control beliefs increase the Theory of Planned Behavior (Oteng-Peprah et al., 2020; Sharif & Naghavi, 2020). Favorable attitudes towards technology and digital platforms lead to adoption and new behavioral intentions (Sharif & Naghavi, 2020).

The second branch is cognitive, as it concentrates on how individuals think, acquire, store, and process information that leads to behavioral output (Greene, 1989). Cognition influences human behavior patterns. How users accept new technology emerges from the use of

technology through subjective factors such as psychological and information systems that affect planned human behavior (Achadinah et al., 2014; Shah & Zhongjun, 2021; Straub, 2009). The behavior intentions for motivational factors provide an understanding of humans' priority mechanisms to their needs and desires and how individuals are motivated to satisfy those needs (Dwivedi et al., 2019). The adaption of technology causes the brain to facilitate a new for adapting to new values as the acceptance of information systems and information technology as it influences perceived usefulness and perceived ease of use (Dwivedi et al., 2019; Ranellucci et al., 2020; Sharma et al., 2020).

The third branch is biological, concentrating on genetics, psychology, and other behavioral interests in the effects of brain function (Greene, 1989). The impact of brain function includes structure, neurochemistry, and genetic factors that explain an individual's behavior (Greene, 1989). When a user considers a new information system technology practical, the individual develops a positive attitude towards the behavior (Sharif & Naghavi, 2020). Unified theory of acceptance and use of technology encompasses an existing user acceptance model, Social Cognitive Theory. The Social Cognitive Theory is derived from behavioral interests being impacted by self-efficacy, outcome expectation, subjective outcome expectation, performance, anxiety, and affect (Compeau & Higgins, 1995; Otaye-Ebede et al., 2020). The biological focus is on the motivational factors for adaption and use of technology within information systems and information technology (Davis et al., 1992; Igbaria et al., 199; Vallerand, 1997; Venkatesh & Brown, 2001; Venkatesh et al., 2003; Venkatesh & Speier, 1999). The brain is motivated by recollection of previous experiences (Deci et al., 1991).

Scholars identify two theories in the sociopsychological tradition. The first theory is uncertainty reduction theory, which explains information, as the information removes doubt,

restricts suspicion, and decreases variance (Nauta, 1972). Information is maximized when uncertainty is reduced (Artandi, 1973). Uncertainty is perceived as motivating for individuals to seek information (Driskill & Goldstein, 1986). The uncertainty reduction theory states that uncertainty exists in situations where a number of alterations are allowed, and uncertainty reduces the number of alternative numbers (Berger & Calabrese, 1974). The uncertainty reduction theory originated from Berger and Calabrese to explain the interpersonal communication process among two strangers meeting for the first time (Son et al., 2019). The principle for uncertainty reduction theory indicates that information is gained at each interaction as it reduces uncertainty, resulting in a positive outcome for attraction, liking, and reduced stress (Son et al., 2019). Uncertainty reduction theory expanded on the communication satisfaction with an effective response to the achievement of communication goals, as it relates to the uncertainty of a specific communication outcome variable (Neuliep & Grohskopf, 2000). Procopio and Procopio (2007) shared that internet communication users behave more actively and reduce uncertainty.

The second theory is expectancy-violation theory, the interaction adaption theory with expectations about another person's behavior based on social norms, along with their previous experience in the situation where the behavior occurred (Burgoon & Floyd, 2009). Burgoon and Jones (1976) first proposed the expectancy Violation Theory to explain individuals' perception and interpretation of violations of their personal space (Evans & Bang, 2018). Burgoon (1993) discussed that an expectation is a consistent pattern of predictable behavior as it deals with an individual, context, or relationship (Benvan et al., 2018). Normative expectations focus on the interactor characteristics, the nature of the interaction, and the features of the physical environment (Burgoon, 1993; Evans & Bang, 2018). The expectations can involve nonverbal

behavior such as eye contact, distance, and body angle (Patterson, 1983). Individuals characterize their interactions with others by perceiving the interaction, information process, and behavior. The expectations are violated when the individual deviates from anticipated behavior (Afifi & Metts, 1998). Expectancy Violation Theory expanded into computer-mediated communication to understand mood switching and response expectancy (Benvan et al., 2018). Ramirez and Wang (2008) found that sharing information between online and face-to-face interactions was an expectancy violation. Jin (2012) discovered that behavior is an expectancy violation with the association between self-disclosure and trust with digital advancement.

Unified Theory of Acceptance and Use of Technology

Venkatesh et al. (2003) created the theoretical framework unified theory of acceptance and use of technology to explain the acceptance and use of information systems and communication technology innovations by consumers (Kim et al., 2008; Phillippi et al., 2021). The unified theory of acceptance and use of technology is an alternative theoretical model that ties into eight existing user acceptance models: (a) Technology Acceptance Model (Davis, 1989), (b) Diffusion of Innovation Theory (Rogers, 2003), (c) Theory of Reasoned Action (Fishbein & Ajzen, 1975), (d) Motivational Model (Davis et al., 1992), (e) Theory of Planned Behavior (Ajzen, 1985), (f) Decomposed Theory of Planned Behavior (Ajzen, 1985), (g) Personal Computer Usage Model (Triandis, 1997), (h) Social Cognitive Theory (Bandura, 1986). The intention for unified theory of acceptance and use of technology is to use information technology as a predictor for usage through the four core determinants: (a) performance expectancy, (b) effort expectancy, (c) social influence, and (d) facilitating conditions (Phillippi et al., 2021; Venkatesh et al., 2003). The emerging disciplines include information systems, sociology, and psychology (Davis et al., 1989).

Unified theory of acceptance and use of technology was devised to explain the factors that affect the acceptance of technology and information communication technology (Escobar-Rodriguez & Carvajal-Trujillo, 2014; Phillippi et al., 2021; Williams et al., 2011). The extended unified theory of acceptance and use of technology explains consumers' acceptance and use of information communication technology (Phillippi et al., 2021; Venkatesh et al., 2012). The extension of the theory focuses on explaining acceptance of technology and information communication technology by the consumer (Escobar-Rodriguez & Carvajal-Trujillo, 2014; William et al., 2011). The theory explores adaption with consumer contexts among mobile banking (Zhou et al., 2010), mobile phone technologies (Park et al., 2007; Wang & Wang, 2010; Zhou, 2011), Internet banking (Abushanab & Pearson, 2007; Im et al., 2011; Riffai et al., 2012), and online purchase intentions (San Martin & Herrero, 2012). Researchers adapted three constructs to the unified theory of acceptance and use of technology theory. First, the comprehensive approach emphasizes the importance of extrinsic motivations as the construct has shown predictors of behavioral intentions (Venkatesh et al., 2012). Second, effort expectancy form views about the overall effort associated with the acceptance and use of technology (Venkatesh et al., 2012). Third, unified theory of acceptance and use of technology incorporates an underlying theoretical mechanism that drives human behavior and intentions (Venkatesh et al., 2012).

Unified theory of acceptance and use of technology explains future intentions to use technology from past and present use of technological adoptions (Escobar-Rodriguez & Carvajal-Trujillo, 2014). The synthesis of the eight theoretical models for unified theory of acceptance and use of technology utilizes sociological and psychological theories to explain human behavior, motivations, intentions, and trust (Venkatesh et al., 2003). The cumulative

theories offer different explanations of information systems and information technology as they provide technology attributes and contextual factors (Dwivedi et al., 2019). The constructs of the eight models are combined with the four constructs of the theory, which include performance expectancy, effort expectancy, facilitating conditions, and social influence (Chen & Chang, 2011).

The unified theory of acceptance and use of technology comprises four main determinants: (a) performance expectancy, (b) social influence, (c) effort expectancy, and (d) facilitating conditions (Lai, 2018; Phillippi et al., 2021). The unified theory of acceptance and use of technology includes individual variation variables, gender, age, experience, and voluntariness to predict the relationship between primary and behavioral intentions and user behavior (Lai, 2018; Venkatesh et al., 2003). The presenting factors explain user acceptance and usage behavior (Chen & Chan, 2014; Chen & Chang, 2011; Lai, 2018).

Performance expectancy is the degree to which using technology will provide specific benefits to the consumer when performing certain activities (Abd Aziz et al., 2022; Izuagbe, 2021; Venkatesh et al., 2012). Performance expectancy and effort expectancy are two essential factors, as the concepts represent an individual's cognitions about technology performance and the effort implemented when using technology (Rahi et al., 2019; Venkatesh et al., 2003). Indicators for performance expectancy rely on the accuracy and reliability of the service (Zhang et al., 2021). Customers use, trust, and accept new technology if they believe the digital platform provides advantages and value (Ghalandari, 2012; Gull et al., 2020; Miraz et al., 2022). Pleasurable experiences that create an adoption include aesthetics with visual appeal, playfulness with enjoyment, behavior with eWOM, repurchase, and intention to switch (Singh, 2019).

Effort expectancy is defined as the ease of use when using the technological system (Rahi et al., 2019; Venkatesh et al., 2003), which relates to the perceived ease of use with the Technology Acceptance Model (Chaouali et al., 2016; Davis, 1989). In the unified theory of acceptance and use of technology, effort expectancy determines behavior intention as positive relationships between ease of use and intention to adopt a service are linked together (Almaiah et al., 2016; Karjaluoto et al., 2010; Koo & Choi, 2010). Effort expectancy influences performance expectancy, influencing behavioral intention (Venkatesh & Zhang, 2010).

Social influence is defined as societal pressure, as individuals believe that they should use a particular system based on the opinions of others (Chaouali et al., 2016; Nilsah et al., 2020; Rahi et al., 2019; Venkatesh et al., 2003). The subjective norm and desired image of social groups influences social influence. (Lunney et al., 2016; Thompson et al., 1991). Social influence has been observed through previous technology adoption, including mobile banking and payment (Govender & Sihlali, 2014; Zhou et al., 2010), online banking channels (Karjaluoto et al., 2010), health care technology (Slade et al., 2013), and high technology innovations (Kulviwat et al., 2009). Peer influence shows to directly impact technology usage (Slade et al., 2013). Social influence is experienced through perception, internalization, and identification (Nilsah et al., 2020). It enhances the positive effects of behavioral intention and attitude as it influences the individuals' beliefs among the Technology Acceptance Model and unified theory of acceptance and use of technology (Lunney et al., 2016; Nilsah et al., 2020; Warshaw, 1980).

Facilitating conditions are the consumers' perceptions of the resource and support to perform a behavior (Kim & Ho, 2021; Rahi et al., 2019; Venkatesh et al., 2012). Facilitating conditions and subjective norms affect behavioral intentions to use technology, mediated by attitude toward usage, perceived usefulness, and perceived ease of use (Nilsah et al., 2020; Teo,

2010). The concept captures the environmental factors that affect the likelihood of using the system (Mathieson et al., 2001; Miraz et al., 2022; Thompson et al., 1991; Venkatesh et al., 2003). Facilitating conditions help build greater awareness, familiarity, and connections with behavioral intentions (Miraz et al., 2022; Onaolapo & Oyewole, 2018).

The first existing user acceptance model is Theory of Reasoned Action. The Theory of Reasoned Action ties into social psychology as it explores the human behavior for explaining technology adoption (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975; Song et al., 2021; Venkatesh et al., 2003;). The theoretical framework is intuitive, parsimonious, and insightful for explaining human behavior (Bagozzi, 1989). The theoretical framework involves the individual's ability to rationalize and consider the implications of their actions when deciding to perform a given behavior (Ajzen & Fishbein, 1980). Based on Fishbein and Ajzen (1975), the Theory of Reasoned Action has two primary factors that affect the behavioral intention and the actual behavior: (a) behavioral beliefs and evaluations directly affect attitude, and (b) normative beliefs and motivation to comply ties into subjective norms. The behavioral intention has two determinants: (a) a personal factor (attitude towards behavior) and (b) an individual's perception (subjective norm). Attitude is a person's behavior performance (Fishbein & Ajzen, 1975; Harb et al., 2021). Subjective norms are beliefs known as normative that refer to the individuals or groups approving or disapproving the behavioral performance (Ajzen & Madden, 1986).

The second existing user acceptance model is Theory of Planned Behavior. The Theory of Planned Behavior is an extension of the Theory of Reasoned Action as it is based on the user's actions, intentions, and perceptions of control as the intentions are influenced by individual's attitudes towards behavior, subjective norms, and perceptions of behavioral control (Ajzen, 1991, 2001; Oteng-Peprah et al., 2020). Three considerations guide the Theory of Planned

Behaviors: (a) behavioral beliefs involving the outcome of the behavior and the evaluation, (b) normative beliefs are the expectation of others and motivation to comply with those expectations, and (c) control beliefs refer to the resources and opportunities provided to the individual as it is geared towards the target behavior (Ajzen, 1991; Singh, 2019). Behavioral beliefs produce attitudes towards the behavior, normative beliefs result from social pressure and subjective norm, and control beliefs increase the Theory of Planned Behavior (Oteng-Peprah et al., 2020). The theoretical framework provides an understanding and develops a prediction in accepting innovations through an information system and information technology (Harrison, 1997; Mathieson, 1991; Taylor & Todd, 1995).

The third existing user acceptance model is the Technology Acceptance Model. The Technology Acceptance Model adapted the Theory of Reasoned Action as it explored individual's acceptance of technology by the intention to use the enhancement (Fishbein & Ajzen, 1975). The development of Technology Acceptance Model explains the acceptance of information systems and information technology as it influences perceived usefulness and perceived ease of use (Dwivedi et al., 2019; Ranellucci et al., 2020). The Technology Acceptance Model and the Theory of Reasoned Action strengthen the belief-attitude-intention-behavior relationship in predicting behavior (Ajzen & Fishbein, 1980). The experiential attributes include reliability, responsiveness, return, and refund (Singh, 2019).

The fourth existing user acceptance model is Decomposed Theory of Planned Behavior. The Decomposed Theory of Planned Behavior modifies the Theory of Reasoned Action, as the model shows behaviors based on controllable factors (Ajzen, 1985; Garay et al., 2018). The theoretical framework involves the individual's attitude that affects the behavioral intention and actual behavior. The Decomposed Theory of Planned Behavior is similar to the Theory of

Planned Behavior, as it predicts the intention to adapt to the innovation (Dwivedi et al., 2019). The difference between the two theories is that the Decomposed Theory of Planned Behavior "decomposes" the attitude, subjective norm, and behavioral control in technology adoption (Nyasulu & Chawinga, 2019; Venkatesh et al., 2003). Research shows that individual features include website, interaction, convenient use, information, reliability, and guarantee for behavioral intentions (Ducoffe, 1996; Eighmey & McCord, 1997). Logman (1997) believed behavioral intentions were strengthened by product availability, price, communication, distribution, and service. Combining the Technology Acceptance Model and Theory of Planned Behaviors are predictors of the Theory of Planned Behavior and perceived usefulness (Taylor & Todd, 1995).

The fifth existing user acceptance model is the Motivational Model. The unified theory of acceptance and use of technology explores psychology to understand the motivation of an individual's behavior (Dwivedi et al., 2019). Motivational forces include social, emotional, and cognitive, as it causes individuals to take action (Montag et al., 2020). Motivational Theory understands the adoption and use of new technology within information systems and information technology (Davis et al., 1992; Igbaria et al., 1997; Vallerand, 1997; Venkatesh & Brown, 2001; Venkatesh et al., 2003; Venkatesh & Speier, 1999). Human functioning that motivates behavior encompasses choice experience, having the choice, and making a choice (Deci et al., 1991). In Maslow's Hierarchy of Needs, individuals are motivated by fulfilling basic human needs as they desire to fulfill their potential (Allen et al., 2019; Bennis, 1966; Hall & Nougaim, 1968; Hagerty, 1999; Sharma et al., 2020). The motivations can produce extrinsic motivation and intrinsic motivation factors (Berdud et al., 2016). Extrinsic motivation is a reward-driven behavior as individuals are motivated to perform or engage in an activity with the external award (Berdud et

al., 2016). Intrinsic motivation is based on inheriting satisfaction when performing or engaging in an activity (Berdud et al., 2016).

The sixth existing user acceptance model is Personal Computer Usage Model. Triandis (1979) created the Personal Computer Usage Model as a theory of human behavior that presents context to the Theory of Reasoned Action and Theory of Planned Behavior. Triandis' model is a theoretical framework that describes how individual's behavior stimulates human behavior (Triandis, 1979). The framework is based on four factors: (a) behavior is determined by what people want to do (attitude), (b) what individuals feel they should do (social norms), (c) what individuals usually do (habits), and (d) the expected consequence of their behavior (Triandis, 1979). Other determinates for Triandis' model for behavioral intentions include facilitating conditions, subjective culture variables, and perception. Later, Triandis' model was refined for predicting user behavior rather than the intention to use (Thompson et al., 1991). Personal Computer Usage Model indicated that utilization behavior is generated from intrinsic motivations such as enjoyment or playfulness (Davis, 1992; Davis & Bagozzi, 1992; Venkatesh & Davis, 2000). Extrinsic motivations involve perceived usefulness, subjective norms, and perceived ease of use (Alkhwaldi & Kamala, 2017).

The seventh existing user acceptance model is Diffusion of Innovation. The Diffusion of Innovation is the root of sociology, as the study explores innovation and adaption to technology usage (Okour et al., 2021). Moore and Benbasat (1991) refined Roger's Theory by setting constructs for an individual's technology acceptance. Diffusion of Innovation focuses on the adoption patterns: (a) innovators, (b) early adopters, (c) early majority, (d) late majority, and (e) laggards (Ali et al., 2019; Elmghaamez et al., 2021). The perceived characteristics involve relative advantage, compatibility, complexity, observability, and trialability (Okour et al., 2021).

The Personal Computer Usage Model adopted the Diffusion of Innovation Theory (Alkhwaldi & Kamala, 2017). The improved set of variables related to the technology acceptance of individuals, including voluntariness of use, visibility, result demonstrability, image, and ease of use (Alkhwaldi & Kamala, 2017).

The eighth existing user acceptance model is Social Cognitive Theory. Social Cognitive Theory explains human behavior (Bandura, 1986; Otaye-Ebede et al., 2020). Compeau and Higgins (1995) extended the theory to computer utilization as it allowed the extension of acceptance and use of information systems and information technology (Venkatesh et al., 2003). Human behavior is derived from dynamic, triadic, and reciprocal interactions among environmental factors, personal factors, and behaviors (Bandura, 1986). Social cognitive Theory's main variables focus on self-efficacy, outcome expectation, subjective outcome expectation, performance, anxiety, and affect (Compeau & Higgins, 1995; Otaye-Ebede et al., 2020).

Uses and Gratification Theory

Elihu Katz, a sociologist and media scholar, first created uses and gratification theory in 1959 to indicate individuals' access to media as it explores different goals and selects the information resources as media is utilized to explain needs with various purposes (Liang et al., 2006; Smock et al., 2011). Use and Gratification Theory originated to explore traditional mass media usage but is currently applied to explain the digital media usage among individuals (Ma et al., 2019). Uses and gratification theory is a research study for the field of mass communication and was first created in radio communication research (Gan & Li, 2018). The theory identifies social and psychological motives for understanding individuals' use of a particular media

channel (Leung & Wei, 2000). The uses and gratification theory theoretical framework explored how people use media to satisfy their needs.

The research framework is applied without a redefined set of constructs as consumption by individuals are actively selecting what media to consume (Katz et al., 1973; Li et al., 2015; Ma et al., 2019). Media consumption habits are gratified by the needs and satisfaction of an individuals' fulfillment (Katz et al., 1973). The information quality focus on improving perceived content quality as it enhances customer satisfaction and increases usage time (Bae, 2018; Dunne et al., 2010; Gan & Li, 2018; Luo & Remus, 2014; Park et al., 2009). Content quality is the value of the information provided by the platform as it consists of richness, timeliness, and completeness (Alzahrami et al., 2017). Individuals actively choose media to meet their specific requirements (Gan & Li, 2018; Ma et al., 2019). The purpose of uses and gratification theory is to explore the potential gratifications that individuals seek from media as it provides insight into the reasoning for media usage and why individuals choose one media over others to gratify a variety of needs (Limayem & Cheung, 2011; Katz et al., 1973). Uses and gratification theory offers an understanding of media usage, predicting media usage, motivational factors, personal attitudes, and the potential of reoccurring use (Claffey & Brady, 2017; Dwyer et al., 2007; Foregger, 2008; Kaye & Johnson, 2002; Lee & Cho, 2020b).

Uses and gratification theory explored traditional media such as newspaper (Elliott & Rosenberg, 1987), cell phone (Leung & Wei, 2000), television (Barrow & Westley, 1959), email (Dimmick et al., 2000; Ku et al., 2013), instant messaging (Lo & Leung, 2009), and the Internet (Boudkouss & Djelassi, 2021). Personal computer adoption created a home motivation to explore uses and gratification (Gan & Li, 2018). Tim O'Reilly (2005) suggested the notion of Web 2.0. The theory examined user behavior in the context of social media with microblogging (Gan &

Wang, 2015), Facebook (Hsu et al., 2015), Twitter (Coursaris et al., 2013), and SNS (Chaouali et al., 2016). Application developers and businesses are considering Web 3.0 to be the latest age, as it is an online setting that integrates customers' created content through innovation (Tasner, 2010). Web 2.0 is viewed as a "users' participation," while Web 3.0 is considered a "users' cooperation" (Tasner, 2010). The theoretical grounding of uses and gratification theory is in the communication literature on social media usage and practices (Malik et al., 2016). The growth of SNS expanded uses and gratification theory to obtain motivational factors for studying gratification usage and the impact on individual behaviors and attitudes (Baek et al., 2020; Boudkouss & Djelassi, 2021; Bumgarner, 2007; Pai & Arnott, 2013; Quan-Hasse & Young, 2010; Raacke & Bonds-Raacke, 2008).

Within the past few decades, uses and gratification theory has been used to understand media uses, including radio, the Internet (Eighmey & McCord, 1998; Kamboj, 2019), and virtual or online communities (Dhoalkia et al., 2004; Kamboj, 2020). The theory is beneficial in the field of broadcast and interpersonal communications with online or virtual mediums (Lee & Ma, 2012). SNS are new media used in the studies related to media as it focuses on the why and for what for individuals (Boudkouss & Djelassi, 2021; McQuail, 1983). The function of the theory is understanding the applications of media (McQuail, 1996) while exploring the wants and demands that the media can meet for the user (Anderson & Meyer, 1975; Ma et al., 2019). Use and Gratification Theory principles apply to various mediums, including newspapers, interactive media, and the internet (Ma et al., 2019).

The theoretical approach focuses on individuals' use of media to fulfill needs, which encourages users to actively seek out media to satisfy the accomplished tasks (Anderson & Meyer, 1975; Blumler & Katz, 1974a; Boudkouss & Djelassi, 2021). The internet has enhanced

customers' experiences (Zhang et al., 2016). SNS gratifications have demonstrated a relationship with creation, maintenance, passing time, entertainment, sharing personal information, information seeking, acceptance, and social interactions (Cheng et al., 2014; Joinson, 2010; Leung, 2013; Papacharissi & Mendelson, 2010; Quan-Hasse & Young, 2010; Whiting & Williams, 2013). SNS investigated the reasons and motivations behind using specific activities among individuals (Malik et al., 2016). Individuals that use SNS are devoted, engaged, and motivated to spend effort and time on digital platforms to fulfill specific needs (Boyd & Heer, 2006; Foregger, 2008; Krause et al., 2014). Uses and gratification theory have explored and evaluated activities on music listening (Krause et al., 2014), sharing links (Baek et al., 2020), group participation (Karnik et al., 2013; Park et al., 2009), news sharing (Lee & Ma, 2012, and photo content (Malik et al., 2016).

Uses and gratification theory is a paradigm for mass communication research for consumer motivation for media usage and access (Orhan & Metin, 2016). The uses and gratification theory relates to the Sociopsychological Tradition in communication as the user (individual) explains how and why they choose specific media to communicate and express desires (Ha et al., 2015; Kamboj, 2020). Uses and gratification theory explains the psychological and social needs, but the theory expands on the individual's behaviors and attitudes towards specific content (Ruggiero, 2000). The psychological needs explore the motivational factors for using a particular medium to fulfill individual needs (Ko et al., 2005). Uses and gratification theory identifies individual needs, which offers an understanding of the psychological mechanism of individual behaviors and attitudes (Boudkouss & Djelassi, 2021; Huang & Zhou, 2018).

Mobile shopping has adopted web personalization to improve the individual's shopping experience and loyalty between businesses and digital platforms (Huang & Zhou, 2018; Zhang et al., 2011). Mobile devices and wireless communication technology channels have increased for consumers (Huang et al., 2017). Uses and gratification theory investigates Internet use and online shopping (Huang, 2008; Ko et al., 2005; Roy, 2009). Mobile shopping applications create specific goals and provide functional modules based on individual motivations (Huang & Zhou, 2018).

The motivations for online shopping include information, gratification, entertainment, price comparison, convenience seeking, social interaction, and task completion (Childers et al., 2001; Close & Kukar-Kinney, 2010; Ganesh et al., 2007; Huang, 2008; Lou, 2002; Pappas et al., 2017; Rohm & Swaminathan, 2004; Roy, 2009). Technology affects online consumers' purchase decision process with purchase intentions, integration of utilitarian, risk perspectives, advanced approaches, online consumer attitudes, perceived usefulness, perceived ease of use, perceived enjoyment, perceived ease of use influencing perceived enjoyment, perceived socialization influencing consumers' attitudes, perceived product risk influencing consumers' attitudes (Zhang et al., 2021). Uses and gratification theory developed a test about an attitudinal model for online grocery shoppers as it focuses on the Technology Acceptance Model to find motivation, behavior, and attitude factors towards online shopping (Boudkouss & Djelassi, 2021; Childers et al., 2001; Mukerjee, 2020; Wu & Chen, 2017). A higher level of e-user satisfaction contributes to a higher degree of system acceptance and continued use that alters individuals' behaviors and attitudes (Shee & Wang, 2008). Lou (2002) investigated informativeness, entertainment, and irritation about online behavior and attitude towards online shopping. Rohm and Swaminathan (2004) explored motivational factors including shopping convenience, information seeking,

immediate possession, online experience, communication structure, and fulfillment seeking. Huang (2008) examined the impact of online grocery shopping and the acceptance of digital platforms to discover expertise, perceived usefulness, ease of use, and entertainment related to an individual's intention to use. Roy (2009) measured online shopping features about convenience and personalized services with uses and gratification theory. Close and Kukar-Kinney (2010) studied purchase intentions, seeking promotions, obtaining more information about products, organizing tasks and entertainment using virtual carts. Pappas (2016) explored purchase behavior with the personalized shopping experience related to service quality, brand, innovation, and motives. Savastano et al. (2022) examined the advantages and threats of technology adoption and the value of customer service and performance expectancy with online retailers.

The gratifications are known as "gratifications-sought" and "gratifications-obtained" (Xu et al., 2012). Lo and Leung (2009) discussed that if users receive gratification in media use, they will develop a favorable attitude that affects their behavior to continue using the media (Ibanez-Sanchez et al., 2022). The gratification obtained involves customer social participation, including informational, attitudinal, and actionable participation (Kamboj, 2020). The response on social participation will lead to behavioral and attitude outcomes such as brand trust, commitment, adaption, and word-of-mouth (Al-Qeisi et al., 2014; Kamboj, 2020).

Individuals' behaviors and attitudes that motivate them to adapt are through television media usage, which includes four categories of need: (a) entertainment, (b) self-identity, (c) personal relationships, and (d) surveillance (McQuail et al., 1972). Media usage suggests motives for individuals adapting to certain behaviors and attitudes (Kamboj, 2020; Ma et al., 2019). Rubin (1983) discussed that two motives provide additional research in media usages, such as companionship and information (Ma et al., 2019).

Individuals' behaviors and attitudes that motivate them to adapt are through the internet as it allows information-seeking, interpersonal utility, entrainment, passing time, and convenience (Luo & Remus, 2014). User gratification is primarily related to collecting information, which motivates users to use social media (Papacharissi & Rubin, 2000). The rationale for using the internet comprises information-seeking and entertainment (Eighmey & McCord, 1998; Kamboj, 2020; Papacharissi & Rubin, 2000). Charney and Greenberg (2002) conducted a study that included communication with information-seeking and entertainment as a reason for using the internet, while Hicks et al. (2002) revealed information-seeking, entertainment, convenience, interpersonal utility, and passing the time for motivation for adapting and utilizing the internet for media usage.

Individuals' behaviors and attitudes that motivate them to adapt are through social media, which includes: (a) text messaging, (b) Facebook, (c) Snapchat, and (d) WeChat. The predictors of customer behavior for media usage are focused on the idea of social needs (Bae, 2018; Gan & Li, 2018), information needs (Bae, 2018), and entertainment needs (Bae, 2018; Gan & Li, 2018). In other literature, social media usage is motivated as information-seeking, socializing, or entertainment (Park et al., 2009). Social media use is related to information-seeking and enjoyment as also viewed as predicators of user satisfaction (Ibanez-Sanchez et al., 2022; Ma et al., 2019).

Social-related motivations are associated with user satisfaction (Bae, 2018; Gan & Li, 2018). Perceived social influence is defined as how people think others should perform a specific behavior (Shanab et al., 2003). A perceived social influence leads to a greater desire to participate in media usage (Dholakia et al., 2004). Perceived social influence affects user behavior and satisfaction (Ma et al., 2019).

Related Literature

The related literature provides a detailed review of existing literature related to the theoretical framework to support the research study on how communication has changed with online grocery shopping. The related literature for Cybernetic Tradition includes communication theories and communication channels. The unified theory of acceptance and use of technology is supported by the Technology Acceptance Model, trust, and familiarity. Uses and gratification theory and Sociopsychological Tradition connects into Maslow's Hierarchy of Needs.

Communication Theory

The cybernetic tradition expands on communication models as the information processing and feedback is one-directional that shares information in the communication systems (Griffin, 2008; Merkl-Davies & Brennan, 2017). The verbal and nonverbal communication between humans and machines transmits messages in a linear process (Berne, 1953; Lieck & Rohrmeier, 2021; Merkl-Davies & Brennan, 2017). Communication through technologies processes the transmission of information that leads to transformations in human activities (Borde et al., 2009; Vaidean & Achim, 2022).

Katz and Lazarsfeld (1955) wrote *Personal Influence: The Part Played by People in the Flow of Mass Communication* to indicate the two-step flow of communication (Lazarsfeld, 1948; Katz, 1957). Katz (1957) emphasized three strands in the communication study: (a) the impact of personal influence, (b) the flow of personal influence, and (c) the relationship between leaders and mass media. The communication model focuses on the role of people in communication as media is interpersonal communication as a medium channel of mass communication (O'Regan, 2021). The idea expands on people being another medium of mass communication, similar to digital platforms, as it impacts the effect, the way, and the content that the individual conveys in

the primary group of communication (Katz & Lazarfeld, 1964; O'Regan, 2021). The communication process involves the communicator, the message, the medium, the receiver, and the effect (Sundermann & Raabe, 2019).

Wiener and Shannon contributed the concepts of information and communication (Koopman, 2019; Rogers, 2003). Human communication establishes a commonness in two-way communication as messages are sent and received in a linear process (Shannon & Weaver, 1963). In 1948, Shannon and Weaver (1963) developed the communication model that identifies and interrupts the components that occur in the communication process by publishing *The Mathematical Theory of Communication*. The Shannon-Weaver communication model is a linear approach to communication as the process involves the sender, the encoder, decoder, and receiver (Shannon & Weaver, 1963). Wiener's cybernetic tradition contributes to the Shannon-Weaver communication model, with the information goal being message feedback (Koopman, 2019).

In 1960, Berlo proposed the Berlo SMCR communication model, similar to the Shannon-Weaver communication model (Rubino et al., 2022). Berlo's linear process describes the communication source, the encoding of the message, the message, the delivery method of the message (channel), the decoding of the message, and the receiving of the message (Stead, 2019). Berlo's communication model applies behavioral theories, including Maslow's Hierarchy of Needs, as lower-level needs are satisfied and motivational factors increase (Stead, 2019).

Language distinguishes the communication of humans from other forms of animals (Heath & Bryant, 2000). Human language encompasses speech and text processing capabilities (Liberman & Wayne, 2020). Digital technology has created additional means for human communication as individuals communicate more by decoding nonverbal skills through

messages, photos, videos, music, and apps (Ruben et al., 2021). Language through symbols helps create, manage, and share interpretations in the digital world with the physical world (Heath & Bryant, 2000). Seibold and Spitzberg (1982) shared that human communication involves the interpretations experienced to interact symbolically with the communicated visual. Encoding interprets actions and verbs within pictures or words (Konopka, 2019). Decoding is the act of receiving the message by listening or reading (Berlo, 1960; Shannon & Weaver, 1971). Decoding is based on psychological and sociological factors, as sociopsychological factors shape the interpretation of the message as it encompasses the receivers' values, education level, social role, culture, and personal experience (Rogala et al., 2020).

The source-receiver is a compound term in the communication process as each person or digital platform is involved in responding and interpreting (DeVito, 2018). The source consists of a person sending a message or signal for receiving but is not the exclusive source, as the delivered message is a function of the text that alternates between source and receiver (Berlo, 1960; DeVito, 2018; Hajdu, 2020; Shannon & Weaver, 1971). A receiver gets a message in the communication process that creates meaning through feedback (DeVito, 2018; Berlo, 1960; Hajdu, 2020). Berlo (1960) described the source-receiver as interchangeable as communication skills, attitudes, knowledge, social system, and culture affect the process in the same manner. Hajdu (2020) discussed the receiver being interchangeable as the communication occurs from source to receiver. Feedback, the receiver back to the source, generates a linear communication loop between humans and machines (Hajdu, 2020).

Advances in technology-based information and communication generate feedback services, such as using a smartphone application (Kwon et al., 2021). The feedback process informs the source that the receiver understood the intended message (DeVito, 2018; Shannon &

Weaver, 1971). Communication among individuals and technology involves the constant transfer of information (Muller et al., 2008).

Channel is the way a message is transmitted through the medium to reach the receiver (Berlo, 1960; DeVito, 2018; Lasswell, 1971; McLuhan, 1964; Shannon & Weaver, 1971). McLuhan (1964) described how the medium (channel) influenced how the message is perceived by the receiver as Shannon and Weaver (1971) focused on how communication channels send and receive a message for interpretation that the receiver decoded in the communication channel. According to Berlo (1960), the communication channels involve five senses in sending the message, including hearing, seeing, touching, smelling, and tasting. Communication channels use multiple channels simultaneously. Using online platforms creates the following channels: (a) typing, (b) reading words or symbols, and (c) audio or visual (DeVito, 2018).

Computer-mediated communication is a multimodal human-to-human social interaction mediated by information and communication technologies through six levels of analysis (Meier & Reinecke, 2020). The sender includes (a) presentation of self and impression management and (b) speaking turn through email, mobile texting, instant messaging, social networks sites (Meier & Reinecke, 2020). Computer-mediated communication analysis has six levels (Chan, 2015; Ellison & Boyd, 2013; Ledbetter, 2014; Meier & Schafer, 2018; Rafaeli, 1988; Smock et al., 2011). First, devices represent the physical device that enables person-to-technology communication, such as laptops, smartphones, and tablets (Chan, 2015). Second, devices allow computer-mediated communication access to applications with social interactions and user-generated content (Ellison & Boyd, 2013). Third, the branded application refers to several branded applications (Meier & Schafer, 2018). Fourth, computer-mediated communication channels include individual features that generate specific application building blocks that enable

user activity (Smock et al., 2011). Fifth, the channel-centered communication-centered approach specifies the how of communication in the interaction level (Rafaeli, 1988). Lastly, interactions have properties that can be considered for final analysis through modes of messages, including text, image, voice, video, or one-click reactions (Ledbetter, 2014).

Computer-mediated communication messages are shared with third parties without the message being distorted from the initial source medium (Hampton et al., 2017; McClure & Barr, 2017). Impression formation in face-to-face interactions is based on the receiver's verbal and nonverbal cues (Berlo, 1960; Katz & Lazarfeld, 1964; Shannon & Weaver, 1971). Impressions in computer-mediated communication focus on written messages, pictures, and videos to convey a message (Hampton et al., 2017; McClure & Barr, 2017). Content is (a) physical and (b) temporal (Meier & Reinecke, 2020). In face-to-face communication, physical context is essentially the same physical space (Berlo, 1960; Katz & Lazarfeld, 1964; Shannon & Weaver, 1971). Computer-mediated communication does not involve the receiver being in the same area when the message is perceived (Meier & Reinecke, 2020). The temporal context in face-to-face communication is synchronous, while computer-mediated communication presents synchronously or asynchronously (Shannon & Weaver, 1971; Berlo, 1960; Katz & Lazarfeld, 1964; Morris & Ogan, 1996). Computer-mediated communication focuses on visuals and sound to transmit a message (Meier & Reinecke, 2020). Lastly, the message involves (a) verbal and nonverbal and (b) permanence (Ledbetter, 2014). An in-person message is expressed with words, gestures, eye contact, accent, vocal cues, and more (DeVito, 2018). Computer-mediated communication is limited to words, pictures, videos, and sounds (Meier & Schafer, 2018).

Communication Channels

Cybernetic tradition studies information processing, feedback, and control of communication systems to communicate between humans and machines (Weiner, 1948). The verbal and nonverbal communication between humans and machines transmits messages in a linear process (Berne, 1953; Merkl-Davies, 2017; Lieck & Rohrmeier, 2021). Communication channels are defined as a medium composed of a source (transmitter) and a destination (receiver) separated by a transmission channel (Le et al., 2015; McLuhan, 1964). The communication channels involve two senses, such as touching and seeing (Berlo, 1960; Meier & Reinecke, 2020) in online grocery shopping. Online communication channels link information and decision-making quality (Flavian et al., 2009; Jacoby et al., 1978; Mandi et al., 2011).

In traditional grocery shopping, individuals experience the five senses, including touching, seeing, hearing, smelling, and tasting (Berlo, 1960). The first sense is touch, with the sensation that shapes their perceptions and behavior with the feel of the product in grocery shopping (Peck & Childers, 2003; Riedel & Mulcahy, 2019). The second sense is seeing, as the experience includes interacting with a visual image of the product (Krishna, 2012; Riedel & Mulcahy, 2019). The third and fourth senses of taste and smell are sensory or aural experiences to engage consumers with selecting items (Krishna, 2012; Krishna et al., 2017; Krishna & Schwarz, 2014; Martin, 2011; Riedel & Mulcahy, 2019; Shaouf et al., 2016; Tavassoli & Lee, 2003). The fifth sense is hearing, as consumers interact with others and employees in the grocery store (Riedel & Mulcahy, 2019).

The first communication sense is touching. The evolution of nonverbal communication has changed the way people understand and recognize visuals to express computer nonverbal communication (Gon et al., 2019). Nonverbal communication in digital communication channels

occurs by transmitting a message through the appearance and touch of a screen (Hadi & Valenzuela, 2020; Wang, 2021). Adopting the internet, mobile phones, and other technical devices increases computer-mediated communication (Hadi & Valenzuela, 2020; Perry & Werner-Wilson, 2011).

Communication technologies have transformed traditional communication media as messages are sent through digitized communication media (Cantoni & Danowski, 2015). The channel for the medium is used to communicate a message from the sender to the receiver as the channel serves as a passage of information (McLuhan, 1964). Social information processing theory explains that users of computer-mediated communication adapt to text-based channels, which provides the sender and receiver to communicate in a medium (Walther & Burgoon, 1992). Written communication within the medium involves sending messages in letters and numbers for the receiver to decode the intended message, including typing and reading (Bowen & Waes, 2020). The sender uses words to code to communicate a message, and the receiver decodes the words to generate an understanding and meaning to the message (Jiang et al., 2021). The written communication process involves the sender touch-typing the device to send a message to the digital platform for decoding (Ledbetter, 2014). Typing skills are essential for typewritten text output messages (Weerdenburg et al., 2018). Touch-typing requires the sender to memorize key locations to send a message (Weerdenburg et al., 2018).

Seeing is the second communication sense. Mobile communication tools like smartphones provide individuals with seamless and more convenient online interactions (Wen-Hsuan & Yu-Hsun, 2020). Technology has altered the way people decode information to communicate intentions (Ruben et al., 2021). The diffusion of image interactivity technology has changed how people interact with mediated communication (Hu & Wise, 2020). The symbolic

channel includes symbols and visuals that hold emotional content to decode (Venzin, 2017). As video, images, and voice are added to online interaction, the medium is enriched for accomplishing relational and social connections (Gamble & Gamble, 2016). Social information processing theory shares how symbols are functional and interchangeable as meaning is expressed through social characteristics, emotions, and interpersonal attitudes (Perry & Werner-Wilson, 2011).

Feedback from touching and seeing can influence consumers' reactions to the communication exchange and impact behavioral intentions to perform the task (Hadi & Valenzuela, 2020). Digital media usage satisfies individuals' motivational needs that create media gratification (Highfield & Leaver, 2016; Lev-On & Uziel, 2018). Interactive images and touch-screen interfaces influence consumers' responses to products in online shopping (Hu & Wise, 2020).

Technology Acceptance Model

The Technology Acceptance Model is the third existing user acceptance theory for unified theory of acceptance and use of technology. Davis (1989) provided an adaption of the Theory of Reasoned Action, with the Technology Acceptance Model. The Technology Acceptance Model explains the acceptance of information systems and information technology as it influences perceived usefulness and perceived ease of use (Dwivedi et al., 2019; Ranellucci et al., 2020). The Technology Acceptance Model explores how perceived ease of use and perceived usefulness impact an individual's behavioral intentions and adoption rate (Rafique et al., 2018; Teo et al., 2018; Yoon, 2016; Zha et al., 2015).

The Technology Acceptance Model adapted the Theory of Reasoned Action as it explored the person's acceptance of technology by the intention to use the enhancement as a

person's performance of a specific behavior is based on behavioral intention to perform the behavior (Fishbein & Ajzen, 1975; Hong et al., 2021; Manis & Choi, 2018). In 1986, Davis created the Technology Acceptance Model as computers were introduced in the workplace (Davis et al., 1989). The adaption of the Technology Acceptance Model addresses the user's acceptance of information systems (Lee et al., 2011; Min et al., 2019; Rafique et al., 2020).

The Technology Acceptance Model is a model utilized to understand human-computer interactions based on perceived usefulness and perceived ease of use to determine behavioral intentions (Davis et al., 1989; Min et al., 2019; Teo et al., 2018; Yoon, 2016; Zha et al., 2015). The Technology Acceptance Model measures the adoption rates of new technology based on an individual's attitude towards the enhancement (Al-Rahmi et al., 2019; Attire & Meyer-Waarden, 2022; Yuen et al., 2020). The Technology Acceptance Model includes (a) perceived usefulness, (b) perceived ease of use, (c) attitude, (d) behavioral intention, and (e) system usage (Davis et al., 1989; Manis & Choi, 2018). Rogers' Diffusion of Innovation Theory and Davis' Technology Acceptance Model share similar principles as adopters assess new ideas based on the perception of their characteristics (Al-Rahmi et al., 2019; Attire & Meyer-Waarden, 2022; Min et al., 2019). Diffusion of Innovation Theory explains how "innovations offer advantages, perceived compatibility with existing practices and beliefs, low complexity, potential trialability, and observability having a more widespread and rapid rate of diffusion" (Attire & Meyer-Waarden, 2022; Dillon & Morris, 1996). Innovation and adaption research helps understand the acceptance of technological advancements (Al-Rahmi et al., 2019; Horton et al., 2003; Igbaria et al., 1997; Venkatesh & Davis, 2000). The Technology Acceptance Model has four variables: (a) perceived usefulness, (b) perceived ease of use, (c) attitude, and (d) behavioral intentions (Davis, 1989; Uni & Uzun, 2020).

The first variable is perceived usefulness. Perceived usefulness is when an individual believes the idea will enhance the performance of the task (Davis et al., 1989; Liu & Chou, 2020). Perceived usefulness has a significant and positive effect on individuals' attitudes towards technological advancement (Davis, 1989; Mokha & Kumar, 2021; Venkatesh & Bala, 2008; Venkatesh & Davis, 2000). Perceived compatibility in Diffusion of Innovation affects the behavioral intention to use, perceived usefulness, and perceived ease of use (Al-Rahmi et al., 2019). Perceived compatibility describes the innovation as consistent with existing values, experience and generating potential needs for adopters. Compatibility with perceived usefulness is one of the key influences for adopting technology (Ahlan & Ahmad, 2014; Gagnon et al., 2012; Karahanna et al., 2006; Moores, 2012). An individual's social values, norms, experiences, and beliefs influence the adoption of new ideas (Karahanna et al., 2006). Individuals adapt to technology based on the psychological belief that it will enhance tasks (Liu & Chou, 2020; Shih, 2004). Improving the performance of tasks includes decreasing time, achieving more efficiency, and increasing accuracy (Phillips et al., 1994; Sreeram et al., 2017).

The second variable is perceived ease of use. Perceived ease of use is when an individual believes the idea would be free of effort (Davis et al., 1989; Unal & Uzun, 2020). Venkatesh and Davis (2000) found that perceived ease of use is affected by internal control (computer self-efficacy) and external control (facilitating condition). Facilitating conditions involve present environmental factors that influence a person's desire to perform a task (Thompson et al., 1991). Farquhar and Surry (1994) identified that facilitating conditions affect adoption rates for individuals. Relative advantages ties into Diffusion of Innovation, as the user views the innovation as an enhancement to perform a task than the traditional way (Al-Rahmi et al., 2019). Users find technological advancements helpful, but adaption is affected when an individual finds

the resource hard to use or that the effort's performance benefits are outweighed by the effort (Davis, 1989). Perceived ease of use explains the user's perception of the effort required for a particular technology to be effortlessly incorporated into the user's life (Davis et al., 1989; Lo Presti et al., 2021). Perceived usefulness directly impacts the user's attitude, and perceived ease of use indirectly influences the user's perceived usefulness (Hong et al., 2021; Sreeram et al., 2017; Valdehita et al., 2019). The relation between perceived usefulness and perceived ease of use mediates perceived ease of use on attitude (Moon & Kim, 2001; Rafique et al., 2020).

Attitude is the third variable. Attitude is the individual's way of thinking or feeling that directly reflects the person's behavior (Bagozzi, 1981; Davis, 1989). The perceived usefulness, computer confidence (Rovai & Childress, 2002), training (Tsitouridou & Vryzas, 2003), gender (Sadik, 2006), knowledge about digital enhancements (Yuen et al., 1999a; Mukti, 2000), and experience (Potosky & Bobko, 2001) affects an individual's attitude, which impacts the interaction. The Technology Acceptance Model highlights how perceived usefulness, perceived ease of use, and perceived enjoyment are direct determinants of a person's attitude towards using technological advancement (Davis, 1989). The attitude towards a new system will exhibit stronger intentions to adapt (Liu & Chou, 2020; Shih, 2004).

Behavioral intention is the fourth variable. Behavioral intention is when the user determines to continue using the innovation or reject the advancement (Ajzen, 1985; Hong et al., 2021; Venkatesh et al., 2012). In the Technology Acceptance Model, behavioral intention is influenced by the individual's attitude towards the digital platform as it is the impression of the technology (Presti et al., 2021). Behavioral intention is influenced by perceived usefulness and perceived ease of use (Legris et al., 2003; Liu & Chou, 2020). In Diffusion of Innovation, observability impacts perceived ease of use, behavioral intentions, and perceived usefulness

within trialability (Al-Rahmi et al., 2019). The complexity directly affects the intention to use the system in the Technology Acceptance Model (Al-Rahmi et al., 2019). Four constructs affected consumers' online behavior intention to use: product perception, shopping experience, customer service, and perceived risk (Jarvenpaa & Todd, 1997; Yuen et al., 2020).

System usage is the final stage of the Technology Acceptance Model as the individual utilizes the system to complete the specific task. The behavioral intention to use is a direct determinant for repeated system usage (Dholakia & Rego, 1998; Kim et al., 2016; Santos, 2003). The perception of trust and perceived usefulness are direct experiences from system usage (Dwivedi et al., 2019; Ranellucci et al., 2020). The Technology Acceptance Model and Diffusion of Innovation propose that system usage is determined by how complex the innovation is to understand the user (Davis et al., 1989; Rogers, 1995; Sonnenwald et al., 2001).

In 2000, Davis and Venkatesh extended the original model to explain the intention of use through social influence and cognitive instrumental processes. Cognitive instrumental processes include (a) subjective norms, (b) image, (c) job relevance, (d) output quality, and (e) result demonstration. Subjective norms are defined as a persons' perception that is most important to that person on whether the behavior should or should not be performed by that person (Fishbein & Ajzen, 1975). The subjective norm is the degree to which a person perceives the demands of an individual to complete a task or a technological resource. Marcinkiewicz and Regstad (1996) indicated that computer use demonstrated a most predictive subjective norm through self-competence, perceived relevance, and innovativeness. Subjective norms and attitudes are separate constructs and have established a positive relationship between the two concepts. The image is defined as the degree to which the use of an innovation is perceived to enhance one's status in one's social system (Moore & Benbasat, 1991). The output quality is the person's

perception of the system's ability to perform specific tasks (Venkatesh & Davis, 2000). Venkatesh and Davis (2000) described job relevance as the person's perspective to which the target system is suitable for the job. Lastly, result demonstration is the tangible result that directly influences the system's usefulness (Moore & Benbasat, 1991).

Trust

The synthesis of the eight theoretical models for unified theory of acceptance and use of technology utilizes sociological and psychological theories to explain human behavior, motivations, behavioral intentions, and trust (Venkatesh et al., 2003). Trust implies risk acceptance, exchange of information, acceptance of technology, acceptance of influence, and reduction of control (Ferreira et al., 2022). Customers will develop trust based on the performance acceptancy of the digital technology provides advantages and value in their daily lives (Ghalandari, 2012; Gull et al., 2020; Miraz et al., 2022).

Ancient Greece standardized ancient practices of bargaining and trading and developed personal systems of trust, which created an asymmetric information system between the seller and buyer (Balot, 2012; Malkin, 2011a). Interpersonal exchange is derived from trust and develops a degree of affection between buyer and seller, but Johnstone (2011) expanded on the idea by exploring that instant payment for goods required a form of trust measurement based on the buyers' behavioral intentions, motivations, perception, usefulness, and acceptance. Economic and social practices are skills practiced by the listener receiving the message and interrupting by the receiver (Johnstone, 2011; Konstan, 2013). The development of trust offered resources for rethinking the definition and meaning (Malkin, 2011b). Current ideas of trust derive from social science as it is viewed as a rational choice made by self-interested factors that undergo prevailing conditions of uncertainty and unfamiliarity (Balot, 2012).

With the growth of e-commerce in the 1990s, individuals increased their interest in trusting online transactions (Li et al., 2011). In online transactions, the senses of hearing, smell, and taste products before buying are absent (Josang et al., 2007; Rose et al., 2011). Multiple comprehensive reviews described the notion that trust is ambiguous and multifaceted (Caldwell et al., 2009; Ebert, 2009; Fehr, 2009; Gefen, 2003; McKnight & Chervany, 2002; Wang & Emurian, 2005). A standard subjective view of trust is that one party will behave with the interest of another party within a transaction (Dasgupta, 1988). Trust within digital platforms has transformed societal norms and individual behaviors (Teubner & Hawlitschek, 2018). While technology supports trust-building, it is limited, as trust cannot build if the individual shows reluctancy (Hawlitschek et al., 2018). The idea develops the notion that trust is associated with a relationship (Grandison & Sloman, 2004; Hawlitschek et al., 2018; Ferreira et al., 2022), even with technological advancements. Trust affects all social interactions and exchanges as it reduces the complexity of human conduct in situations of uncertainty (Luhmann, 1979; Zhang et al., 2021). Trust is viewed through diverse disciplinary categories: economic, social/institutional, behavioral/ psychological, managerial/organizational, and technological (Li et al., 2011). Trust is developed through social norms, habits, beliefs, and previous experiences (Abbasi et al., 2011; Gull et al., 2020; Miraz et al., 2022). Psychology suggests that individuals develop trust differently as there is a broad spectrum of situations experienced (Erikson, 1968; Lian & Li, 2021; Rotter, 1967, 1971, 1980). Trust is determined by how much the individual has a prior interaction with previous advancements and serves as an influential phase for adoption (Gefen, 2000; Mayer et al., 1995; Rotter, 1971; Zhang et al., 2016).

Performance goals influence the intention to use and adapt to technology (Guych et al., 2018b; Husin et al., 2019; Maruping et al., 2017; Mendoza-Tello et al., 2018). Performance

expectancy develops trust as the individual believes using the system would gain job performance (Miraz et al., 2022; Venkatesh et al., 2003). The individual builds trust as there is an assumption and belief that the digital market will create productivity and performance (Miraz et al., 2022). The performance expectancy ties into the individual's motivation to adapt to new technology to build trust between humans and machines (Kshetri, 2018; Miraz et al., 2022).

The influence of trust on perceptions and use of technology in e-commerce affects the intention of online usage (Jarvenpaa & Todd, 1997; Lian & Li, 2021; McKnight et al., 2002; Pavlou & Gefen, 2004). Information systems have indicated that trust helps users overcome perceptions of risk and uncertainty when accepting technological advancements (Gefen, 2003; Pavlou & Gefen, 2004; Zhang et al., 2016). Trust plays a role in adopting technological advancements as a transaction requires high risk among customers unless the consumer trusts the seller (Gefen, 2002). In an electronic trade, consumer risks are higher; consumers trust the transaction process for their purchasing behavior and technology acceptance (Grabosky, 2011; Kim et al., 2005b; Lian & Li, 2021). Trust fills the gap for online transactions as its attributes and context impact the understanding of social implications perceived in the transacting parties (Li et al., 2011). Trust technology reassures that task is completed the way it was claimed (Shapin & Schaffer, 1985). Williamson (1993a) described trust as someone placing oneself at risk to gain a positive experience, and the decision to accept such a risk implies trust with the situation. Trust is formed and maintained because of the differences between characteristics of online and offline environments (Li et al., 2011). The notion of trust and technology is mediated through the attitudes and beliefs of the individual towards technology. Trust towards technology is an object of trust between humans and computer agents (Bart et al., 2005; Corritore et al., 2003).

Technology adoption and innovation suggests a strong relationship between the users' pre-implementation expectations and post-implementation experience of the new system (Ginzberg, 1981; Staples et al., 2002). Technology adoption based on Rogers's (2003) Diffusion of Innovation Theory occurs when the perception of the technology characteristics influences the users' behavior and attitude about the innovation. In the early stages of innovation, social influence impacts the adoption and trust of adoption decisions (Gallivan, 2001; Miraz et al., 2022). Initial trust occurs when exploring an unfamiliar interaction, as trust has not been developed with direct experience or first-hand knowledge with the technology (McKnight et al., 1998, 2002). Trust is divided into three categories: (a) calculative trust (considering potential risks); (b) personal trust (repeated interactions); and (c) institutional trust (organizational context) (Williamson, 1993a). Calculative trust refers to the relationship of potential costs of retribution for temptation as the mechanism involves repetition, interest, or rewards (Shapiro et al., 1992). Personal trust is based on repeated interactions that continue to grow between parties in a trust relationship (Williamson, 1993a). Institutional trust refers to the sense of security from guarantees and impersonal structures inherent in a specific context (Gefen, 2003).

Six main properties are identified with trust: (a) subjective, (b) dynamic, (c) bi-directional, (d) asymmetric, (e) non-transitive, and (f) context dependence (Golbeck & Hendler, 2006; Kui et al., 2005). Trust subjectivity occurs when differing manners are established and maintained in other parties (Li et al., 2011). The dynamism of trust occurs when time influences the transient nature of trust between parties (Li et al., 2011). Bi-directionality of trust reflects between parties in a transaction for more than one specific action (Li et al., 2011). Asymmetry of trust indicates the risk of trusting the relationship (Li et al., 2011). Non-transitive trust describes how the trust will not extend past the domains connected with the relationship (Li et al., 2011).

Lastly, context-dependence of trust represents the specific actions or services performed to create a safeguard (Li et al., 2011).

Trust in online transactions is classified under five categories: (a) individual-level, (b) system-level trust (Grandinson & Sloman, 2004; Josang et al., 2007; Ramchurn et al., 2004). The aspects of online services are explored through (a) resource-access trust, (b) service-provision trust, (c) certification trust, (d) delegation trust, and (e) infrastructure trust (Grandison & Sloman, 2004).

Familiarity

In the Unified Theory of Acceptance and Use of Technology facilitating conditions build greater awareness, familiarity, and connections with behavioral intentions (Miraz et al., 2022; Onaolapo & Oyewole, 2018). Facilitating conditions is the perception of the resource and support to perform a behavior (Kim & Ho, 2021; Rahi et al., 2019; Venkatesh et al., 2012), as familiarity involves behavioral intentions and attitudes as it contributes to the encoding period of the source retrieval (Allan et al., 1998; Casino et al., 2002; Gruber et al., 2008; Rugg et al., 1998; Unsworth & Brewer, 2009; Wilding, 2000; Wilding & Rugg, 1996; Woroch & Gonsavles, 2010; Zimmer & Ecker, 2010). The lack of technology knowledge and familiarity in facilitating conditions affects user behavior to adapt (Ambarwati et al., 2020).

Familiarity is within a dual-process of recognition memory as it refers to a relatively automatic and context-free process (Ecker et al., 2007). Remembering people, places, and things encounter the basic questioning on previous experienced or specifics as needing to remember details from previous events (Mollison & Curran, 2012). Human memory studies the way of recognition memory tasks with understanding the prior occurrence of assessed stimuli (Ecker et al., 2007). Previous research uses two distinct processes, (a) familiarity and (b) recollection.

Familiarity refers to a feeling of a person encountering a person or object before, without conscious access to contextual details, which refers to the time or place of the encounter (Ecker et al., 2007; Xie & Zhang, 2017). Familiarity presents items of encoding as the findings support cognitive psychology as familiarity is instead an automatic process sufficient for mere item memory, where recollection is a controlled process for integration of source memory (Gardiner et al., 1996; Mayes et al., 2002; Srinivas & Verfaellie, 2000; Yonelinas, 2002; Xie & Zhang, 2017). Familiarity memory often remains intact (Baddeley et al., 2001; Mumby et al., 2002). The dual-process framework of recognition memory, familiarity, and recollection, involves remembering information (Parks & Yonelinas, 2007; Yonelinas, 2002).

Previous research explored first perspective viewpoints where familiarity expands on the second perspective by zooming in on the subjective analysis (Bohrn et al., 2013). Informative properties lead to positive and negative judgments as specific stimulus characteristics predict decisions based on the perception of attributes (Bromberger et al., 2011). Familiarity focuses on the prior experience, as people tend to like what they know (Cela-Conde et al., 2011; Reber et al., 1998, 2004) and a feeling of familiarity attributes to preferred items (Monin, 2003). People can make judgments on the perception that has never been seen before and can judge on the perception experienced many times (Bohrn et al., 2013).

Experiences consist of intricate details of encoded information based on perception and attention, and memory combines the two ideas into useful knowledge and judgment (Mollison & Curran, 2012). Familiarity involves fast and automatic recognition of a previous experience without the retrieval of data through the memory system (Curran et al., 2006; Eichenbaum et al., 2007; Parks & Yonelinas, 2007; Rugg & Curran, 2007; Skinner & Fernandes, 2007; Villberg & Ruggs, 2008; Yonelinas, 2002). Source information involves remembering contextual details

based on a familiar concept (Johnson et al., 1993; Mitchell & Johnson, 2009; Senkor & Van Petten, 1998). The source information in retrieving familiarity involves behavioral intentions and attitudes as it contributes to the encoding period of source retrieval (Allan et al., 1998; Ambarwati et al., 2020; Casino et al., 2002; Gruber et al., 2008; Rugg et al., 1998; Unsworth & Brewer, 2009; Wilding, 2000; Wilding & Rugg, 1996; Woroch & Gonsavles, 2010; Zimmer & Ecker, 2010;). Familiarity examines perceived ease of use, perceived usefulness, and satisfaction with new technology adaption (Choi Ju-Choel, 2020).

Technological progress and innovation revolutionized the process of familiarity (Basalla, 1998; Mokyr, 1990; Schumpter, 1934; Usher, 1954). Usher (1954) defined technological invention as the pre-existing elements into a new synthesis. Usher (1954) and Basalla (1998) acknowledged how technology is driven by pre-existing knowledge and technology. Nelson and Winter (1982) stated that the creation of technology combined conceptual and reality in previous existence. Varian (2003) determined that combinational innovation creates existing components of technology that generate familiarity.

Computational models encompass familiarity-based recognition shows capability in supporting source recognition (Elfman et al., 2008; Ratcliff et al., 1995). Familiarity effects behaviorally as the recollection generates source memory (Ambarwati et al., 2020; Diana et al., 2008; Duarte et al., 2004; Elfman et al., 2008; Hicks et al., 2002; Yonelinas et al., 1999). The “remember” and “know” responses are subjective of recollection and familiarity (Duarte et al., 2004; Duzel et al., 1997; Klimesch et al., 1993; Rugg et al., 1998; Smith, 1993; Tulving, 1985; Villberg et al., 2006). Familiarity contributes to source monitoring as one perceptual source information involves words that were either seen or heard and one with reality monitoring for where words are either seen or heard (Hicks et al., 2002). The source accuracy for “know”

responses equals the “remember” responses, indicating a sense of familiarity between person and machine (Duarte et al., 2006).

Maslow’s Hierarchy of Needs

In 1943, Maslow developed a model that explored how people are motivated to achieve certain needs and how some needs take precedence over others, based on the individual’s personality (Maslow, 1970; Montag et al., 2020). In 1954, Maslow’s Hierarchy of Needs expanded its model by producing an impact in the development of psychology, behavioral science, motivation, and sociology (Maslow, 1954). The disciplines that use Maslow’s Hierarchy of Needs uses the model to understand driving forces and why that is important to the individual’s based on their personality, desires, and needs (Benson & Dundis, 2003).

Maslow’s Hierarchy builds on the adaptations in the structure of needs for the individual as Maslow formulated a hierarchy of human needs that highlights that if basic needs are met, humans develop higher needs and desires (Kenrick et al., 2010). The theory provides an understanding on the priority mechanism that humans give to their needs and desires and how individuals are motivated to satisfy those needs (Allen et al., 2019). Lester et al. (1983) measured the level of need satisfaction to obtain each level of satisfaction. The premise of Maslow’s Hierarchy of Needs is unless the individual’s basic needs have been met, the higher levels in the pyramid provide no relevance, as survival is the basic human component (Benson & Dundis, 2003). The instrument determines how important a need is for an individual (need importance), how an individual is concerned with a particular need (need salience), and how others reflect on the general outlook on life (self-concept) (Williams & Page, 1989).

New technology created a driving force and direct influence on an individual’s level of needs and desires as the hierarchy ranges transformed to an abstract concept that generates self-

fulfillment (Sharma et al., 2020). Maslow's Hierarchy helped understand the motivations for adopters to respond to innovation rates, as technology has influenced the basic human needs in modern life (Rousse, 2004). Motivation is defined as the psychological behavior that describes the individuals choose for a particular behavior (Mclnerey, 2019). Maslow's theory of motivation experienced a social change as society's needs alter and develop. The new measures created for Maslow's theory of motivation assess the satisfaction of each need and expected correlations with each of the other needs, and four social and personality measures: (a) family support, (b) traditional values, (c) life satisfaction, and (d) the ability of the satisfaction level of each need to statistically predict the satisfaction level of the next level (Taormina & Gao, 2013).

Individuals are motivated to achieve needs, and Maslow's Hierarchy demonstrates that technological advancements fulfill human needs (Sharma et al., 2020). Technology adoption and diffusion of innovation is a social phenomenon that attributes to behavioral characteristics that is concerned about individuals needs and desires based on the perceived ease of use and perceived ease of usefulness (Abrahamson, 1991; Rogers, 1995). Technology has emerged as a basic need of life as technical systems helped individuals satisfy their needs to measure physiological functioning (Sharma et al., 2020). The further extension of Maslow's model investigates the innovation-related needs between individual behaviors and technology adoption as a primary need is the need to adopt to technology for basic survival (Singh & Holmstrom, 2015). The secondary needs are based on the perspective of technology adoption and diffusion of innovation exceeds survival level by corresponding to higher level needs in Maslow's hierarchy (Singh & Holmstrom, 2015). Technological advancements have contributed to promoting and improving the quality of life and enhancing life's daily tasks through (a) measuring physiological functioning, (b) monitoring lifestyle, (c) positive functioning, (d) maintaining safety, (e)

developing social connections, (f) understanding work progress, (g) highlighting the individual talent, and (h) increasing knowledge (Sharma et al., 2020). Technological enhancements have facilitated a new need by adapting to new responsibilities and values (Sharma et al., 2020).

Sharma et al. (2020) explored three categories, which include (1) Maslow's theory, (2) technology use, and (3) technology addiction. The first level of needs is motivated by basic human needs, such as food, water, air, and sleep (Maslow, 1970). Technology provided a behavioral change as resources became intangible. In modern society, technological advancements such as mobile, high-speed internet and Wi-Fi have become basic survival needs (Sharma et al., 2020). In response to the pandemic, consumers changed their grocery shopping habits as visiting a store in person implied a risk of becoming infected (Kolodinsky et al., 2020; Schmidt et al., 2020; Worstell, 2020). Basic human needs were disrupted by the pandemic. Food supply chains that provided individuals food and water experienced a shortage as supermarket shelves were emptied of crucial food and non-food items, including pasta, rice, canned goods, flour, frozen food, bottled water, hand sanitizers, hand soap, and toilet paper (National Post, 2020; News, 2020). Individuals experienced a loss of jobs that threatened their shelter. In the United States, more than 30 million people filed for unemployment, rivaling the social conditions of the Great Depression (Rugaber, 2020). Unemployment caused individuals additional stress as they continued to look for jobs (Song et al., 2009).

The second level of needs is safety, including security, protection, law, stability, resources, health, and property (Maslow, 1970). Technological advancements help meet security needs by devices such as security systems and mobile chargers communicate a feeling of safety and security for a living (Sharma et al., 2020). Technology developed a sense of a more secure shelter for living as individual's feel safer with availability of gadgets (Lee & Stapinsko, 2012).

During the COVID-19 lockdown, individuals left their house for urgent needs, such as medical concerns or grocery shopping (Shamin et al., 2021). The pandemic threatened consumers' sense of safety and generated a behavior change in grocery shopping and communicating the need for grocery items (Shamin et al., 2021). Shopping for groceries remained a necessity to where people became concerned about how to shop safely and while maintaining the second level of Maslow's Hierarchy.

The third level of needs is social needs, such as a sense of belonging, affection, love, care, friendship, and family (Maslow, 1970). Technology has provided individuals the opportunity to stay connected anytime, anywhere. Communication devices and online social networks have provided individuals with a sense of relatedness and independence (Sharma et al., 2019). Social needs encompass feeling connected due to online activities, such as establishing a network of people, texting, connecting with online friends, and developing social relationships (Sharma et al., 2020). Online communication has a positive impact on enhancing self-esteem and well-being (Gross et al., 2002).

The fourth level of needs deals with achievement, status, reputation, respect, recognition, and independence (Maslow, 1970). Online learning helps develop a sense of self-identity and determination (Sharma et al., 2020). Individuals can share their talents and create a sense of identity with the capability of receiving immediate feedback (Urwiler & Frolick, 2008).

The fifth level of needs is self-actualization, which includes self-fulfillment, the realization of one's potential, and peak experience (Maslow, 1970). Technology has become a platform for individuals to obtain knowledge while providing a resource for self-improvement and self-growth (Sharma et al., 2020). The cognitive need for an individual provides a resource for self-improvement and self-growth (Zhao et al., 2011). Self-determination theory is a sense of

autonomy, competency, and fulfilled by online activities explain individual internet behaviors (Wong et al., 2015).

Summary

Chapter Two expanded on communication theories, theoretical frameworks, and showed how related literature ties together to explain how the communication process is changing with the adoption of online grocery shopping through the technology acceptance model of Unified Theory of Acceptance and Use of Technology. I selected the Unified Theory of Acceptance and Use of Technology to explain the acceptance and use of information systems and communication technology innovations by consumers (Kim et al., 2008; Phillippi et al., 2021), as the theory encompasses eight existing user acceptance model (a) Technology Acceptance Model (Davis, 1989), (b) Diffusion of Innovation Theory (Rogers, 2003), (c) Theory of Reasoned Action (Fishbein & Ajzen, 1975), (d) Motivational Model (Davis et al., 1992), (e) Theory of Planned Behavior (Ajzen, 1985), (f) Decomposed Theory of Planned Behavior (Ajzen, 1985), (g) Personal Computer Usage Model (Triandis, 1997), (h) Social Cognitive Theory (Bandura, 1986) to explain behavioral intentions, trust, and familiarity.

CHAPTER 3: METHODS

Overview

The purpose of this qualitative study is to investigate human intentions, trust, and technology acceptance with the digital platform, online grocery shopping. I anticipate that through an interview-based study, the researcher can share the overall knowledge of how and why the three components investigate the Unified Theory of Acceptance and Use of Technology as a means to understanding online grocery shopping. Therefore, this study will expand the knowledge of communication process. The study explores the motivational reasoning for communication change with the adaption to online grocery shopping as individuals communicated desired needs and wants. Lastly, I will expand on the acceptance of technology with online grocery shopping as it shapes future social phenomena with technological advancements that alter the behavioral intentions and attitudes.

In the qualitative study, I used the theoretical models, Unified Theory of Acceptance and Use of Technology (UToAUoT) and Uses and Gratification Theory (UaGT). The UToAUoT examine behavioral habits and intentions to use technology as uses and gratifications theory explores why and how people seek specific advancements to satisfy needs. The study expands on the behavioral intention model of Technology Acceptance Model and. The Technology Acceptance Model expands the research study on how users come to accept and use technology. The theoretical models are connected to two communication traditions: (a) cybernetic tradition and (b) sociopsychological tradition. The cybernetic tradition helps explains how physical, biological, social, and behavioral processes tie into the theoretical models and key components. The sociopsychological tradition will explain the behavioral approach that focuses on the reaction of the individual as it the cause and effect of relationships id dependent on the

communication process. The study will encompass behavioral intentions, trust, and acceptance of technology. The thematical data will be used to collect primary information to determine the means to understanding online grocery shopping through UTAUT. The qualitative data will analyze human behavior intentions with online grocery shopping and communication change. Chapter Three will discuss the research design, research questions, setting, participants, procedures, researcher's role, data collection, data analysis, trustworthiness, and ethical considerations.

Design

The study focused on a qualitative research method to explore behavioral intentions, trust, and acceptance of technology by investigating unified theory of acceptance and use of technology to understand online grocery shopping habits, behaviors, and communication style. A thematic analysis captured valuable information as the method is flexible in analyzing rich data for the researcher to organize and analyze responses to find common perspective among participants (Braun & Clarke, 2006; Creswell, 2012). I implemented a thematic analysis of open-ended survey questions to provide identifying data patterns to understand the research data (Check & Schutt, 2012). The thematic analysis consisted of 33 questions to gain background information to better analyze the collected data from the target population while serving as the foundation for selecting participants to partake in an in-depth interview. The survey encompassed close-ended questions, numerically rated items that generate a minimal quantitative data and open-ended questions for qualitative data (Ponto, 2015). The close-ended questionnaire included descriptive statistics variables such as age, gender, education, income, and grocery shopping behaviors. The open-ended questions provided participants the opportunity to express their perspective by using their language, terms, and expressions as it enables participants to

potentially share more personal and genuine information (Baillou, 2008). The responses from the participants demonstrated an understanding in decoding words and terminology used for responses.

After participants completed the thematic analysis, I randomly selected them to participate in the in-depth interview. The qualitative research design used a narrative research approach as I relied on the written and spoken words provided in the in-depth interviews (Allen, 2017). The narrative analysis focused on structure, content, and function of stories in written or oral communication (Demuth & Mey, 2015). Narrative research methods provided rich context to social research as it had the capacity to reveal the complexity of human experience and understood how people make sense of their lives about social, cultural, and historical context (Sharp et al., 2019). I focused the study on the narrative research approach to analyze the raw data results of the thematic responses and in-depth interviews to learn more lifestyle, trust, behavioral intentions, historical experience, and individual characteristics, as they focused on the individual's story and life experience. The in-depth interview questions explained human behavior, trust, and acceptance of technology with unified theory of acceptance and use of technology theory to understand online grocery shopping.

Research Questions

The purpose of the qualitative study was to investigate unified theory of acceptance and use of technology to understand online grocery shopping. The study examined the following three questions that are derived from the problem statement and theoretical framework of (a) the cybernetic tradition, (b) the sociopsychological tradition, (3) UTAUT, and (4) UGT. The research questions encompassed (a) behavioral intentions, (b) trust, and (c) acceptance of technology.

1. How does an individual communicate motivational needs in adapting to online grocery shopping?
2. How is trust communicated in the utilization of online grocery shopping?
3. How does familiarity with computer-mediated-communication contribute to behavioral intentions, perceived usefulness, and perceived ease of use with communication in online grocery shopping?

Setting

I distributed a thematic analysis survey on social media platforms to reach the intended population. I distributed the survey in two ways: (a) social media platforms for participants to share and (b) SurveyMonkey market research that allows researchers to build their audience panel for ideal respondents. The reason for using social media as a setting is to explore (a) behavioral intentions, (b) trust, and (c) acceptance of technology.

Participants

To fulfill the objectives of the qualitative research study and answer the three research questions, I focused the study's target population on online grocery shoppers 25 years and older. This provided various motives, reasons, and behavioral intentions, as the target population live in different geographic regions and have different income categories, ages, educational backgrounds, and shopping preferences. The qualitative research study focused on a thematic analysis and narrative analysis to explore the UTAUT to understand online grocery shopping. The thematic analysis includes 33 questions that the participants filled out to qualify for the interview. The method randomly selected 33 participants to conduct an in-depth interview. The purpose of conducting 33 interviews was to ensure the scope of the study and provide adequate data to avoid saturation. To avoid saturation, I determined if the participant's response to the

open-ended questions provide no additional data as the responses demonstrate similar instances through their responses.

The study used a one-on-one interview method to gain an in-depth understanding of communication change by exploring how unified theory of acceptance and use of technology impacted behavioral intentions, trust, and acceptance of technology with online grocery shoppers.

Procedures

The research study was comprised of the following steps.

1. I created a pre-screening to the thematic survey to gather qualifying data to analyze.
2. I conducted a pre-test that surveyed three participants who did not like online grocery shopping and three participants who preferred online grocery shopping. I decoded the interviews and focused the research study on personality. The first pre-test showed inconsistency. I adjusted the interview questions based on the first pre-test and resolved the issue.
3. I conducted one-hour virtual interviews with each participant who worked with their schedule and worked with each participant at their time and place.
4. The data from each participant interview is coded for analysis and synthesized to determine the findings and interpretation.
5. I presented the findings in written, typed format.

The Researcher's Role

The role of the researcher in the qualitative study was to gather participants' thoughts and feelings about their communication behavior with online grocery shopping. I incorporated a thematic survey to identify patterns with the data and was the mediator for conducting one-on-

one interviews with the randomly selected participants for a more in-depth understanding of communication change with online grocery shopping. I designed, interviewed, transcribed, analyzed, verified, and reported the data while maintaining ethical standards.

Data Collection

To ensure the study's depth and increase the quality of the findings, I conducted two different methods to collect data: thematic analysis and in-depth interviews. By implementing the two methods, I increased the effectiveness of the study, generated a robust set of data, and yielded accurate descriptions of the behavioral intentions, trust, and acceptance of technology with communication change with online grocery shopping. The theoretical framework in the study included (a) UTAUT and (2) UGT and involved the communication traditions of (a) the cybernetic tradition and (b) the sociopsychological tradition.

Phase #1: Thematic Analysis

The qualitative data gathered open-ended and closed-ended information of online grocery shoppers through SurveyMonkey and Mechanical Turk to select 25 participants for the in-depth interviews. The thematic analysis questionnaire consists of 33 questions. The first part of the questionnaire included descriptive statistics variables such as age, gender, education, income, and grocery shopping preference. The second half of the questionnaire discussed ease of usefulness, ease of use, and motives.

Phase #2: Individual In-Depth Interviews

I selected participants based on (a) signed consent forms, (b) identifying as 25 years and older and an online grocery shopper, and (c) completed the thematic analysis. Second, I scheduled the virtual interview using a conferencing platform to limit the spread of COVID-19. The research questions explored a deeper investigation of the direct impact of communication

change with online grocery shopping as it tied into behavioral intentions, trust, and acceptance of technology. The nine interview questions were based on UTAUT and UTTF.

Interviews

I focused the study on interviews for their referential function, as they refer to people, settings, events, and more for immediate context (Briggs, 1986). The referential discourse in interviews is a "sound source of witness information," as it generates factual information that cannot be observed or obtained effectively by other means (Hammersley & Gomm, 2008, p. 89). The qualitative interviews were my attempt to understand the lived experience of participants (Creswell & Poth, 2018).

Participants indicated at the end of the thematic survey if they wanted to participate in the interview by providing their email address. Based on the 337 responses that qualified for the study, 33 participants provided their email address to participate. Of the 33 participants, I scheduled 25 interviews, as the study reached saturation. All interviews were conducted via Zoom to limit the spread of COVID-19 and to limit travel. The semi-structured interviews provided a convenient and cost-effective way to gather data. To protect the identity of the 25 participants, I asked all participants to turn off their web camera. As part of the consent form, the interviews were recorded to be transcribed for analysis. The interviews ranged from 45 minutes to 1 ½ hours, with roughly 750 pages transcribed to analyze for thematic themes and answer research questions.

The interview that guided the semi-structured interviews for online grocery shoppers who are 25 and older is presented in Appendix 1.

Standardized Open-Ended Semi-Structured Interview Questions

1. Could you share with me memories of your childhood grocery shopping experience?

2. Can you tell me why you online grocery shop? Please explain.
3. How would you describe your most recent online grocery shopping experience?
4. Can you share a time when you didn't have a great experience with online grocery shopping?
5. Could you talk about a positive online grocery shopping experience?
6. What have you shared with others about your online grocery shopping experience?
7. Do you worry about not getting your selected grocery items? Why or why not?
8. Could you share your experience with direct deposit?
9. Could you share your experience with online shopping?

Interview questions one, seven, eight, and nine connected to research question one. The first question was designed to explore childhood experience with grocery shopping to determine if their sociopsychological factors contributes to the reasoning for adapting to online grocery shopping. Question seven connected an individual's worries and anxiousness to a behavior that either delayed or progressed the adaption to online grocery shopping. Questions eight and nine explored personality, behavior, and attitude with regard to previous technology.

Interview questions three, four, five, six, seven, eight, and nine explored research question two. Question three explored how trust continues to be built after previous experiences. Question four explored the impact bad experiences had on the next order and on the overall experience as it relates to trust. The fifth question used a similar approach as question four but explored the impact a positive experience has on building trust with online grocery shopping. Question six demonstrated how trust is communicated by sharing experiences with others.

Question seven explored individuals' hesitation and if hesitation is resolved through trust. Questions eight and nine explored if previous technology adoptions contribute to individual's building trust for the next technology adaption.

Interview questions two, three, seven, eight, and nine explored research question three on how familiarity with communication systems contribute to behavioral intentions, perceived usefulness, and perceived ease of use between human interaction and machines. Question two explored the behavioral intentions for starting online grocery shopping and why that interaction continued or changed. Question three examined perceived ease of use, along with how individuals place online orders. Question seven explored how unfamiliarity with online grocery shopping was communicated through anxious and worried behavior. Question eight and nine explored behavioral intentions, perceived usefulness, perceived ease of use, and familiarity with previous technology adoptions, along with comparing first and current impressions towards machines.

Surveys/Questionnaires

I distributed the thematic survey among Facebook and Mechanical Turk. The pre-screening survey asked participants to share if they were online grocery shoppers and were 25 years and older. After participants answered the screening questions, they signed an online consent form to ensure they understood the study objectives that they were volunteering to participate in. The survey explored participants' level of experience with online grocery shopping, allowing for the researcher to expand on trust, unified theory of acceptance and use of technology, and more. The survey received 359 responses and 337 of the responses qualified in the preliminary thematic survey. The online survey presented advantages for the researcher and the participants as it involved convenience, flexibility, speed, question diversity, ease of

administration, data analysis, and ease of administration (Evans & Mathur, 2005). The online survey was an appropriate tool to gather responses as the participants online grocery shop and familiar with online surveys.

Data Analysis

Open-ended questions among cybernetic tradition, psychological tradition, UTAUT, and UGT questions analyzed and explained the impact of communication change with online grocery shopping. The questions reflected the comprehensive review in the literature review in Chapter Two, which included communication theory, communication channels, Maslow's Hierarchy of Needs, the Technology Acceptance Model, trust, and familiarity. The open-ended questions expanded on the adaption to online grocery shopping to explore the alteration of communication.

I analyzed and synthesized the collected data from the participant's interviews in four steps. First, interviews were voice recorded to ensure the accuracy and integrity of the research study. I transcribed the recordings to find common themes and wording from the participants. I uploaded the data collected from the questionnaire, handwritten notes, and recorded transcripts to the Rev software system. Rev provides automatic speech recognition artificial intelligence and speech-to-text freelancers to transcribe interviews (Rev, 2022).

I developed preliminary codes from the data collection process to help categorize and organize the data for analyzing and synthesizing. Codes are known for assigning symbolic meanings to the descriptive information compiled for the study (Miles et al., 2014). The researcher implemented the coding process during the collection activities to create a conceptual framework from the data based on the research questions. The coding process improved the results of the in-depth interviews by focusing on three areas. First, the process coding process focused on the actions, time, and strategies (Miles et al., 2014). Second, the emotion coding

process focused on emotions and experience (Miles et al., 2014). Lastly, the values coding process focused on the beliefs, attitudes, behaviors, motivations, and values expressed during the interviews (Miles et al., 2014).

Third, I uploaded the data collected from the interviews to Rev for data coding. The process merged, eliminated, and relabeled the data collected from the interviews (Miles et al., 2014). Patton (2002) described the coding with two criteria: internal homogeneity and external heterogeneity. Internal homogeneity focuses on the integrity of the data within the coding (Patton, 2002). External heterogeneity strengthens the result categories (Patton, 2002). Lastly, I implemented the two criteria into the coding analysis, as it developed themes that emerged from the data. The patterns emerged from the data led to the process of understanding and explaining human behaviors, motivational factors, and acceptance of technology with communication change with online grocery shopping. The 25 interviews deepened the understanding and examined similarities and differences among individual's experiences and rationale.

Trustworthiness

The personal communication and diverse nature of qualitative research study provided possible issues for quality and credibility. The trustworthiness of a qualitative research study should incorporate measurements that deal with issues and investigate validity and reliability issues. The trustworthiness criteria investigated (a) credibility, (b) transferability, (c) dependability, and (d) confirmability.

Credibility

I established trustworthiness by implementing six measures in the study. As a first credibility measure, I outlined specific procedures, such as creating a thematic analysis questioning in the data collection and the data analysis section. The second credibility measure

was developing trust with the participants by using appropriate documents and preliminary visits. The third credibility measure was the random sampling of individuals to participate in the interviews to negate biased selection of participants. As a fourth credibility measure, I presented honesty with participants when contributing to data collection. Before the interview, participants could refuse to participate in the study. I ensured that the data collected involved participants willing to participate. As a fifth credibility measure, I conducted frequent debriefing sessions with committee members and supervisors to help recognize and limit my biases and preferences. As a sixth credibility measure, I selected different participants based on their descriptive responses in the thematic survey.

Dependability

The purpose of dependability in a qualitative research study is to demonstrate stability and consistency of the results as it supports the project's credibility. The dependability applies to the consistency of the research project, procedures, research design, data collection, analysis, and reporting. Dependability was based on three components: (a) the availability of the raw data for audit, (b) the review of the proposal and the final report, and (c) the review and approval of Liberty University's Institutional Review Board. Trustworthiness addresses credibility, dependability, transferability, and confirmability.

Transferability

Transferability focused on the results of the qualitative research by transferring contexts and settings with other respondents. I ensured transferability was established with five implications. The first transferability implication was the number of participants in the study and where they were located. The second transferability implication was recognizing the restrictions of participants who contributed to the data. The third transferability implication was ensuring the

data collection methods were reputable. The fourth transferability implication was the length of the data collection sessions. The fifth transferability implication was the period the data was collected. The study occurred within a two-month timeframe during the spring semester of 2021. This timeframe included the initial contacts with participants who are 25 years and older and active online grocery shoppers. The collection of data involved a thematic analysis and open-ended interviews.

Ethical Considerations

I ensured to protect the rights and dignity of the participants by using high ethical standards in the research study as it involved human subjects. A qualitative research study created a set of ethical challenges that the researcher had overcome to ensure the integrity of the study and ethical standards for the participants (Orb et al., 2000). To limit the ethical challenges of the qualitative research study, I took steps for the type of interactions and plan appropriate in the fieldwork, which included research and data collection, how the target population is being studied (Orb et al., 2000), preparing for how the interviews were prepared and conducted, and how the data was recorded, transcribed, and reported (Patton, 2002). To address concerns, I followed steps as described by Liberty University's Institutional Review Board (IRB) to ensure the study upholds high ethical standards to minimize the effects of individuals and the potential participants. IRB reviewed and approved my study. The IRB ensured that I adhered to ethical practices with the human participants in this study. IRB is responsible for regulating human subjects by the federal government through the Department of Health and Human Services' Office for Human Research Protections. It ensures the privacy, confidentiality, and safety of participants. The IRB is part of Liberty University's Research Ethics Office responsible for all

research conducted by Liberty University faculty, staff, and students are done according to federal regulations and university policy.

Second, I completed the computer-based training course on *Protecting of Human Research Subjects* and other modules certified by the National Institutes of Health (NIH) Office of Human Subject Research. The purpose of the course(s) is to ensure the researcher understood the rights and protects the rights of human subjects. The system provided the ethical framework for preparing for the fieldwork involved in the qualitative study. By completing the module(s), I upheld Liberty University's IRB standards.

I created permission request letter(s), recruitment materials, and consent materials while following confidentiality protocols. Liberty University provided supporting document templates to ensure consent forms and confidential protocol met IRB standards for ethical consideration.

I created appropriate consent forms and debriefing forms based on my study. The recruitment materials consisted of letters, announcements, social media posts, emails, flyers, verbal phone scripts, and follow-ups. I created a permission request letter. I ensured accurate reporting by avoiding manipulating the participant's responses or leading them into a particular response for the study. I ensured accurate reporting to establish trust in the findings.

Summary

The study explored how communication is changing among individuals who grocery shop online. The data collection for the research study used a thematic survey and in-depth interviews to gain insight related to the three research questions. Scholars will benefit from the results of the findings with behavioral intentions, trust, and technology acceptance to understand how communication styles are changing with online grocery shopping.

Chapter Three discussed the qualitative research approach with the narrative study design. In the chapter, I explained procedure, data collection, and data analysis. I provided detailed information on the role of the researcher, ethical considerations, and trustworthiness of the study. I present findings in Chapter Four.

CHAPTER 4: FINDINGS

Overview

Online grocery shopping has seen a drastic increase in usage over the past few years, and the adoption is more complex than the COVID-19 pandemic (Bartok et al., 2021; Bassrsma & Groenewegen, 2021; Berg & Alin, 2021; Brand et al., 2020; van Ewijk et al., 2020), yet existing research does not examine the root cause for individuals utilizing and communicating with the digital platform, along with how it is altering human behavior and the communication process for future technological advancements. This qualitative narrative research study aimed to investigate using a user acceptance of the information technology model, UTAUT, to understand how communication has changed with online grocery shopping and explore how trust is in technology. The study examined the following three research questions derived from the problem statement and theoretical framework of (a) the cybernetic tradition, (b) sociopsychological tradition, (c) UTAUT, and (4) UGT. The themes identified in the study shared a narrative perspective on the motivational factors, familiarity, and trust that led to the adaption of online grocery shopping. The themes in the cybernetic tradition explored the communication between humans and machines with first impression matters, recency, and mobile applications. The sociopsychological tradition examined the themes of mom figures, walking the aisles, boring, and acting out. UTAUT explored how user acceptance impacted communication through timesaving, efficiency, and planning meals. UGT examined the themes of emotional impact and how individuals communicated by using the terminology satisfied, happy, friendly, and customer service. The related literature explored mobile phone, grocery list, consistent messages, easy, convenience, product substitutions, freshness, employee selection produce, store brand experience, hesitation, positive experience, direct deposit, online shopping,

website navigation, basic needs, friend/partner influence, safety, feeling of accomplishment, and achieving full potential. The themes helped the researcher understand the correlation between how communication and trust began and evolved with the adaption of online grocery shopping. The research questions encompassed (a) behavioral intentions, (b) trust, and (c) technology acceptance.

1. How does an individual communicate motivational needs in adapting to online grocery shopping?
2. How is trust communicated in the utilization of online grocery shopping?
3. How does familiarity with computer-mediated-communication contribute to behavioral intentions, perceived usefulness, and perceived ease of use with communication in online grocery shopping?

In this chapter, I analyze the narrative's study principal findings conducted for the research study. The data collection encompassed a thematic survey and in-depth interviews of participants. I organized the chapter into three categories: (a) participants, (b) theme development, and (c) research question responses. In the participant section, I provide background information about the 337 participants who completed the thematic survey, along with a descriptive analysis that represents the 25 participants that completed the in-depth interviews. The thematic development encompasses the researcher identifying emerging themes from the participant's interview responses. Lastly, the research question response is derived from the conclusion made through the information findings from documentation analysis, the thematic survey, and the in-depth interviews. A discussion of the results is provided in Chapter Five.

Participants

The researcher outlined a descriptive analysis of the 25 interviewees to provide basic information in the dataset and highlight potential relationships between variables. The descriptive statistics explored location, education level, employment status, marital status, household number, and household income. The descriptive statistics maintain confidentiality and interviewees' identity.

Sarah

Sarah is a 41-year-old Caucasian female in Tennessee. She has a bachelor's degree and is self-employed with a household income of $25,000–$49,999. Sarah is married with 2–3 kids.

Tyger

Tyger is a 52-year-old Caucasian female in Texas. She has a master's degree and is employed full-time with a $100,000 and greater household income. Tyger is married with one child.

Sonja

Sonja is a 45-year-old Asian American in Texas. She has a master's degree and is employed full-time with a household income of $75,000–$99,999. Sonja is single with no kids.

Tiffany

Tiffany is a 28-year-old Texan Caucasian female. She has a high school diploma and is employed full-time with an income of $25,000–$49,999. Tiffany is single with 2–3 kids.

Egima

Egima is a 48-year-old African American female in Texas. She has a high school diploma and is employed full-time with an income of $25,000–$49,999. Egima is single with one child.

Kelly

Kelly is a 40-year-old Caucasian female in Georgia. She has a bachelor's degree and is unemployed with a household income of $100,000 and greater. Kelly is married with 2–3 kids.

Amanda

Amanda is a 39-year-old Caucasian female in Texas. She has a bachelor's degree and is unemployed with a household income of $75,000–$99,999. Amanda is married with one child.

Taylor

Taylor is a 30-year-old Caucasian female in Texas. She has a bachelor's degree and is employed full-time with a household income of $100,000 and greater. Taylor is single with no kids.

Jessica

Jessica is a 42-year-old Caucasian female in Texas. She has a bachelor's degree and is employed full-time with an income of $100,000 and greater. Jessica is married with 2–3 kids.

Holley

Holley is a 25-year-old Caucasian female in Texas. She went to a trade school and is employed full-time with an income of $25,000–$49,999. Holley is single with one child.

MariAnn

MariAnn is a 54-year-old Caucasian female in Texas. She has a high school diploma and is employed part-time with an income of $75,000–$99,999. MariAnn is married with no kids.

Kylie

Kylie is a 32-year-old Caucasian female in Texas. She went to a trade school and is employed full-time with a $100,000 and greater household income. She is married with 2–3 kids.

Catie

Catie is a 36-year-old Caucasian female in Texas. She has a bachelor's degree and is self-employed with a household income of $75,000–$99,999. Catie is single with no kids.

Yulonda

Yolunda is a 48-year-old African American female in Texas. She has a master's degree and is self-employed with an income of $100,000 and greater. Yolunda is married with one child.

Latisha

Latisha is a 42-year-old African American female in Texas. She has a master's degree and is self-employed with an income of $100,000 and greater. Latisha is married with 2–3 kids.

Cindy

Cindy is a 62-year-old Caucasian female in Texas. She has a high school diploma and is employed full-time with a household income of $50,000–$74,999. She is single with no kids.

Shanna

Shanna is a 50-year-old Caucasian female in Texas. She has a bachelor's degree and is unemployed with a household income of $25,000–$49,999. She is married with no kids.

Lauren

Lauren is a 28-year-old Caucasian female in Texas. She has a master's degree and is unemployed with a household income of $50,000–$74,999. She is married with 2–3 kids.

Rebekah

Rebekah is a 26-year-old Caucasian female in Texas. She has a bachelor's degree and is employed full-time with an income of $100,000 and greater. Rebekah is married with one child.

Linnea

Linnea is a 63-year-old Caucasian female in Tennessee. She has a high school diploma and cannot work. The household income is $10,000–$24,999. She is widowed with no kids.

Debra

Debra is a 67-year-old Caucasian female in Texas. She has a high school diploma and is retired with a household income of $25,000–$49,999. Debra is divorced and has one kid.

Laura

Laura is a 44-year-old Caucasian female in Texas. She has a high school diploma and cannot work. The household income is $75,000–$99,999. Laura is married with 2-3 kids.

Ally

Ally is a 29-year-old Hispanic female in Texas. She has a bachelor's degree and is employed full-time with a household income of $75,000–$99,999. She is single with no kids.

Tara

Tara is a 33-year-old Caucasian female in Texas. She has a master's degree and is employed full-time with an income of $75,000–$99,999. She is divorced with one child.

Bonnie

Bonnie is a 69-year-old Caucasian female in Texas. She has a master's degree and is retired with a household income of $100,000 and greater. Bonnie is married with no kids.

Results

The narrative study included active online grocery shoppers' participants 25 years and older in the United States. To provide a familiar experience among participants, I focused the narrative study on in-depth interviews with online grocery shoppers. I invited the sample through email or social media posts to complete the thematic survey before participating in the in-depth

interviews. The participants included 337 respondents that qualified for the thematic survey. I will present the survey responses to the 25 interviewees to compare data.

The first part of the thematic survey collected demographic statistics to measure the target population's characteristics. The demographic questions included gender, age, ethnicity, location, education level, employment status, marital status, household income, and children in the household.

Gender

From the survey, 160 participants identified as women (47%) from the survey, and 177 participants identified as men (53%). The results of the participant's gender were almost even, with 53% men and 47% women. The participants in the interview were all female. The results showed significance as 53% of males completed the survey, but only females participated in the interview. Gender offers an updated empirical knowledge about gender practices, sociopsychological traits, and norms. The significance of only females participating in the in-depth interviews reflected gender roles and how that impacted their mindset about grocery shopping.

Age

I asked participants to share their ages to determine their generational group. The purpose of the question was to determine populations that share similar life experiences that have shaped their worldview, values, and ideas. The participants encompassed four generations where 216 of the participants are Millennials (64%), 80 of the participants are Generation X (24%), 39 of the participants are Baby Boomers (12%), and one of the participants is a Silent Generations (less than 1%). The results showed that the highest number of users for online grocery shopping are millennials, the age group for young families and the career driven. The interviewees that

participated in the interview included 52% millennials, 31% Generation X, 17% Baby Boomers, and 0% Silent Generation. The results showed no significance in comparison to the overall data.

Ethnicity

I asked participants to select their ethnicity as it involves self-identification with social groups. Based on the 377 respondents, 261 participants identified as White or Caucasian (77%), 27 participants indicated as Asian or Asian American (8%), 27 participants indicated as Black or African American (8%), nine participants indicated as Hispanic or Latino (3%), one participant identified as Native Hawaiian or other Pacific Islander (less than 1%), and lastly 12 participants identified as other descents (4%). The results showed White and Caucasians encompassed 77% of online grocery shoppers. The interview participants included 80% White or Caucasian, 12% Black or African American, 4% Hispanic or Latino, and 4% Asian or Asian American. The results showed no significance in comparison to the overall data.

Location

Participants identified their location by state. The purpose is to determine if location plays a role in active online grocery shoppers. The respondents live within the United States. In the survey, the top three states for online grocery shopping were California with 45 participants (13%), Texas with 42 participants (12%), and Florida with 23 participants (7%). The remaining 227 participants indicated less than 4%, with 43 additional states. The participants' results showed that the top four states in size and top three states in population have the highest record in the survey for adapting online grocery shopping. The interviewees that participated in the interview included 88% in Texas, 8% in Tennessee, and 4% in Georgia. The results showed significance in comparison to the overall data.

Educational Level

I asked participants' educational levels to predict economic and social status. From the survey, three participants indicated they attained some high school (less than 1%), 94 participants indicated they earned a High School Diploma (28%), 171 participants indicated they attained a Bachelor's degree (51%), 52 participants indicated they attained a Master's degree (15%), four participants indicated they earned a Ph.D. (less than 1%), and 13 participants indicated they acquired a trade skill (4%). The results of the participants show that higher education utilized online grocery shopping. The interviewees that participated in the interview included 36% with a bachelor's degree, 28% with a master's degree, 28% high school diploma, and 8% with a trade school skill. The results showed no significance in comparison to the overall data.

Employment Status

I asked participants to share their employment status to see if employment status plays a role in online grocery shopping. Based on the participants' response, 224 participants identified as being employed full-time (40+ hours a week) (66%), 49 participants identified as being employed part-time (less than 40 hours a week) (15%), 29 participants identified as being self-employed (9%), 21 participants identified as being unemployed (6%), three participants identified as being unable to work (less than 1%), and 11 participants identified as being retired (3%). The results from the survey indicate that individuals who are working more than 40 hours or more are online grocery shopping. The interviewees that participated in the interview included 44% employed full-time (40+ hours a week), 20% self-employed, 16% unemployed, 8% unable to work, 8% retired, and 4% employed part-time (less than 40 hours a week). The results showed no significance in comparison to the overall data.

Marital Status

The marital status explored if the relationship factors play a role in online grocery shopping. From the survey, 156 participants indicated they are married (46%), 129 participants indicated they are single (38%), 28 participants indicated they are in a domestic partnership (8%), 19 participants indicated they are divorced (6%) and separated and widowed indicated less than one% of the population. The results of online grocery shoppers are fairly even among married and single individuals. The interviewees that participated in the interview included 56% married, 32% single, 8% divorced, and 4% widowed. The results showed no significance in comparison to the overall data.

Household

I asked participants to share the number of children in their households. The purpose is to see if the number of individuals living in a household impacts the reasoning for individuals adapting to online grocery shopping. Based on the respondents, 190 participants shared they have no children in the household (56%), 11 participants shared they had one child in the household (20%), 76 participants shared they have two-three children in the household (23%), and four participants shared they have four or more children in the household (less than 1%). The results from the participants indicate that families without children had a higher age of online grocery shopping. The interview interviewees included 36% who have no children, 28% have 2–3 children, and 1% have one child. The results showed no significance in comparison to the overall data.

Household Income

The last demographic question in the thematic survey explores participants' household income. Based on the results, 10 participants indicated their income was $9,999 or below (3%),

38 participants indicated their income was $10,000–$24,999 (11%), 98 participants indicated their income was $25,000–$49,999 (29%), 88 participants indicated their income was $50,000–$74,999 (26%), 55 participants indicated their income was $75,000–$99,999 (16%), and 48 participants indicated their income was $100,000 and greater (11%). The results show that participants between $25,000–$49,999 and $50,000–$74,999 were mostly even for online grocery shopping. The interviewees that participated in the interview included 36% $100,000 and greater, 28% $75,000–$99,999 income, 24% $25,000–$49,999 income, 8% $50,000–$74,999 income, and 4% $10, 000–$24,999 income. The results showed no significance in comparison to the overall data.

After participants completed the demographic section of the survey, I had participants answer a series of questions for the thematic section to explore adaption rates, motives, experience, trust, and communication through online grocery shopping. The responses from the thematic survey were analyzed and further examined in the in-depth interviews.

Hesitation

To gain individuals' communication perception of online grocery shopping, respondents shared if they were or were not hesitant to start online grocery. Based on the responses, 180 participants said they were not hesitant to online grocery shop (53%), and 157 participants said they were hesitant to online grocery shop. The results indicated that hesitation before shopping for groceries online is mostly even among participants. The interviewees that participated in the interview included 60% yes and 40% no. The results showed significance compared to the overall data as there was a 13% increase in hesitation and a 13% decrease in no hesitation.

If participants indicated they were hesitant, the next part of the question asked for participants to rank the provided reasons why. The explanations provided in the question

included product cost, product substitutions, convenience fee, employee selecting product items, and COVID-19. The results showed that participants ranked on their hesitation before online grocery shopping.

Table 1:

Thematic Analysis: Participant Hesitation Responses

Participants Ranking Order	1	2	3	4	5
Product Cost	41	45	54	19	21
Convenience Fee	36	38	41	53	10
Employee Selecting Product Items	45	45	36	44	11
Product Substitutions	45	38	34	46	14
COVID-19	11	11	15	18	123
N/A	8	6	4	4	7

The results showed that participants ranking on their hesitation before online grocery shopping.

Table 2

Thematic Analysis: Interview Hesitation Responses

Interviewee Hesitation Ranking	1	2	3	4	5
Product Cost	2	3	7	2	4
Convenience Fee	1	3	7	2	4
Employee Selecting Product Items	2	3	6	2	4
Product Substitutions	2	3	6	2	3
COVID-19	2	3	6	2	3
N/A	3	3	6	2	3

The results showed no significance in comparison to the overall data.

Timeframe

I explored the timeframe for when participants started online grocery shopping. The results showed that 116 participants started online grocery shopping within the past two years (34%), 86 participants began online grocery shopping more than two years ago (26%), 82

participants started online grocery shopping within the last year (24%), 31 participants started online grocery shopping within the past six months (9%), and 22 participants started online grocery shopping within the past nine months (7%). The results between 34% within the past two years and 26% for more than two years ago are mostly even among participants.

The results based on the interviews indicated that eight participants started online grocery shopping within the past two years (32%), 10 participants started online grocery shopping more than two years ago (40%), three participants started online grocery shopping within the past six months (12%), three participants started online grocery shopping within the last year (12%), and zero participants started online grocery shopping within the past nine months (0%).

Why Start Online Grocery Shopping?

I asked participants to share why they started online grocery shopping to explore the motivating factor. After participants shared why they started online grocery, I wanted to explore why they continued to online grocery shop. Based on the results, the feeling of accomplishment and achieving full potential increased as a reason for continuing. At the same time, friend/partner influence decreased as the reasoning for continuing to online grocery shop. I concluded that motivational factors were related to Maslow's Hierarchy of Needs.

The results based on the interviews participants indicated 14 participants selected basic needs (56%), nine participants selected safety (36%), eight participants selected friend/partner influence (32%), four participants selected feeling of accomplishment (16%), and six participants selected achieving full potential (24%).

The results show that friend/partner influence saw a drastic decrease in reasoning why participants continued to online grocery shop, while safety also demonstrated a slight decline. The remaining results increase participants' continued reason for online grocery shopping. The

results showed a significance compared to the overall data as basic needs and safety were higher results for all participants, along with friend/partner influence showing stronger reasoning for continuing to online grocery shop.

Reason for Online Grocery Shopping

I explored the main reasons why participants shop for groceries online. The reasons for selecting participants included buying food for single meals, doing weekly shopping, stocking up on my freezer/fridge, purchasing specific items, and for a party/gathering. The results showed that doing a weekly shop, buying specific items, and stocking up on my freezer/fridge were the main reasons for ordering online grocery shopping.

The results based on the interview participants indicated 17 participants selected basic needs (68%), eight participants selected safety (32%), one participant selected friend/partner influence (4%), five participants selected feeling of accomplishment (20%), and nine participants selected achieving full potential (36%). The results showed similar results to the overall data collection. The results showed no significance in comparison to the overall data.

Motivational Ranking

Participants were asked to rank the following list provided on what they feel were the most important factors to buying groceries online. The list provided included price, customer service, freshness, and convenience. The results show that majority of the responses selected convenience as 1, freshness as 2, price as 3, and customer service as 4. The results show that most of the responses selected convenience as 1, freshness as 2, price as 3, and customer service as 4 (1 being most important, 4 being least important). The results showed no significance in comparison to the overall data.

The results based on the interview participants selected convenience as 1 (56%), freshness as 2 (52%), price as 3 (48%), and customer service as 4 (14%). The results showed no significance in comparison to the overall data.

How Often

I explored how often participants online grocery shop. Based on the respondents, 129 participants indicated weekly (38%), 100 participants indicated bi-weekly (30%), 60 participants indicated monthly (18%), 32 participants stated few times a week (9%), 12 participants indicated not often (four times), and four participants indicated every day (less than 1%). The results showed that 38% weekly and 30% were biweekly were almost even for how often participants online grocery shop. The interviewees that participated in the interview included 40% bi-weekly, 32% weekly, 20% monthly, 4% few times a week, and 4% not often. The results showed no significance in comparison to the overall data.

The results based on the interview participants indicated 10 participants selected bi-weekly (40%), five participants selected monthly (20%), seven participants selected weekly (28%), one participant selected a few times a week (4%), and one participant selected not often (4%).

Participants Technology Type

I explored how participants place their online grocery shopping orders. Based on the respondents, 189 participants indicated using their computer (56%), 137 participants indicated using a mobile phone (41%), and 11 participants indicated using a tablet (3%). The results showed no significance in how participants typically place their online grocery shopping orders. The interviewees that participated in the interview included 40% bi-weekly, 32% weekly, 20%

monthly, 4% few times a week, and 4% not often. The results showed significance compared to the overall data as there was a 31% increase in mobile phones used in online grocery shopping.

The results based on the interview participants indicated 18 participants selected a mobile phone (72%), four participants selected a computer (16%), and three participants selected a tablet (12%). The results based on the interview participants indicated 18 participants selected mobile phone (72%), four participants selected computer (16%), and three participants selected tablet (12%).

Participants Normally Grocery Shop

Participants shared how they usually grocery shop. The responses indicated that 139 participants shop online (41%), 133 participants shop a mix between online and in-person (39%), 59 participants shop in-store (18%), and six participants shop local markets (2%). The results show that 41% online and 39% a mix between online and in-person are almost even and showed significance in the study. The interviewees that participated in the interview included 56% online, 28% a mix between online and in-person, and 16% in-store.

The results based on the interview participants indicated 14 participants selected online (56%), four participants selected in-store (16%), six% selected a mix between online and in-store (24%), and zero participants shop at local markets (0%). The results showed no significance in comparison to the overall data.

Spent on Groceries Per Month

The research question explored the average amount participants spent per month on groceries. Based on the respondents, 114 participants indicated $300 and up per month (34%), 104 participants indicated $200–$299 per month (31%), 88 participants indicated $100–$299 per

month (26%), 28 indicated $50–$99 per month (8%), and three participants indicated $0–$49 per month (1%). The results showed no significance.

Based on the interview respondents, 15 participants indicated $300 and up per month (60%), six participants indicated $200–$299 per month (24%), four participants indicated $100–$299 per month (16%), 0 indicated $50–$99 per month (0%), and zero participants indicated $0-$49 per month (0%).

Experience Ranking

I presented participants a Likert Scale to rate their experience among online grocery shopping, direct deposit, and online shopping. The purpose was to explore uses and gratification theory and from previous online digital platforms to online grocery shopping. The results showed that satisfied and very satisfied received 87% of participants with their first online grocery shopping experience, 81% of participants with direct deposit, 82% of participants with shopping for non-grocery items, 89% of participants with their overall online grocery shopping experience. The rankings indicated that previous technology adaptions received a high rating and online grocery shopping.

The results based on the interview participants showed that satisfied and very satisfied received 92% of participants with their first online grocery shopping experience, 92% of participants with direct deposit, 88% of participants with shopping for non-grocery items, 92% of participants with their overall online grocery shopping experience.

How Likely

I presented participants a Likert Scale to rate how likely they are to receive the items on their grocery list, plan their meal schedule, continue online grocery shopping, recommend online grocery shopping, and follow a website description. The results showed the responses for very

likely and likely for receiving the items on their grocery list (89%), continuing online grocery shopping (91%), planning their meal schedule (43%), recommending online grocery shopping (80%), and following a website suggestion (44%). The results based on the interview participants showed the responses for very likely and likely of receiving the items on their grocery list (96%), continuing online grocery shopping (96%), planning their meal schedule (64%), recommending online grocery shopping (92%), and following a website suggestion (40%).

Ease of Use

I presented participants with a Likert Scale to rate the listed items below on ease of use. The list consisted of finding cereal, online scheduling order, access account information, and check out. The purpose of the question was to explore the Technology Acceptance Model and UTAUT. The results showed participants ranking for very easy and easy for finding cereal (90%), online scheduling order (86%), quick add an item to cart (88%), and accessing account information (85%).

The results showed participants ranking for very easy and easy for finding cereal (96%), online scheduling order (100%), quick add an item to cart (92%), and accessing account information (100%).

Maslow Hierarchy of Needs

I presented participants with a Likert Scale to rate motivations for online grocery shopping. The list consisted of more convenient, timesaving, fun, safe, and fulfilling. The purpose of the question was to explore Maslow's Hierarchy of Needs related to online grocery shopping. The results showed participants ranking strongly agree and agree for more convenient (89%), timesaving (89%), safe (82%), and fulfilling (59%). The results showed participants

ranked strongly agree and agree for more convenient (96%), timesaving (96%), safe (92%), and fulfilling (64%).

Descriptive Themes

The descriptive themes provided evidence from theoretical and related literature's main idea or underlying meaning on how the adoption of online grocery shopping is changing the communication process. I divided the literature sections with supporting responses from the interviews.

Cybernetic Tradition

The cybernetic tradition explained the biological, psychical, social, and behavioral processes in which interacting elements influence one another (Krippendorff, 2009). The interaction is based on systems, a set of interacting components that takes in inputs from the environment as it processes and creates outputs back into the environment (Gen-Bahg, 1990). The communication focuses on information processing with the goal of information being received with the least amount of interference as feedback is the key concept for effective communication within a system. A cybernetic approach helps explain technology acceptance and avoidance behaviors (Stich et al., 2019).

First Impression Matters

In the interview, participants explained the impact of first impressions when adapting to new ideas and technology. Many reported that first impression matters when continuing online grocery shopping. The first theme identified with cybernetic tradition and how the communication between individuals and machine is "first impression matters."

MariAnn, a 54-year-old female from Texas, said, "If it worked meaning if the way the system was supposed to work." She later expressed, "If it actually worked as far as, did I get the

right groceries that I ordered?" (MariAnn, personal interview, January 7, 2022). Taylor, a 30-year-old female from Texas, said, "I think that the first experience, like I said, was all about learning, learning how to use the tool" (Taylor, personal interview, January 6, 2022). Linnea, a 63-year-old female from Tennessee, said, "First experience being a good experience, it, it encouraged me to [say], 'Okay, well, that was good, so the next time's gonna be okay also,'" (Linnea, personal interview, January 6, 2022). Shanna, a 41-year-old female from Texas, said, "Um, well, if I had a bad experience, I probably wouldn't do the online, or I would do it at that store" (Shanna, personal interview, January 17, 2022).

Cybernetic tradition involves multiple factors such as interaction, information processing, and feedback to reach the individual's goal. The participants shared the relief it was for the system to work, the learning curve, and expectations for next time. Online grocery shopping is processing the information being transmitted back-and-forth to reach the overall goal of purchasing grocery items without going into the store. Due to the first impression, the cybernetic tradition was achieved as the participants did not show avoidance behavior after completing their online grocery shopping experience, which demonstrated a positive communication process through technology.

Recency

After participants discussed their first impressions and experience with online grocery shopping, the researcher explored their previous online orders. Participants communicated how they continue to have positive experiences. Even if the participant's experience reflected discrepancies, it did not detour their overall impression of online grocery shopping based on previous occasions. A second theme determined for cybernetic tradition involved recency.

Holley, a 25-year-old female from Texas, said, “I ordered a cleaning supply, and I ordered the one that did not contain bleach. However, they gave me one that contained bleach. The cleaning supply did not make sure that the cap was screwed on tight. And when I got my groceries, they were covered in the bleach cleaning supply because I guess it spilled on the way to my house, and the back of my car, the interior was bleached.” She later shared, “It didn’t really affect, um, the next time I grocery shopped. I just made sure to add a note to make sure that the items don’t have, don’t contain bleach” (Holley, personal interview, January 7, 2020). Linnea, a 63-year-old female from Tennessee, said, “It was. It was good. I ordered what I needed, and then I went to the, uh, I picked it up at the store.” She later explained, “it was a good experience” (Linnea, personal interview, January 6, 2020). Yolanda, a 48-year-old female from Texas, said, “The grocery shopping part online was, was fairly easy. Um, it’s the frustrations of when, um, excuse me, if something that’s offered online, but then it may not necessarily be in the store, so then you are offered a substitute” (Yolanda, personal interview, January 10, 2020).

The cybernetic tradition expands first impressions by involving multiple encounters to determine behavioral processes with interacting elements being influenced. The participant’s previous experience with online grocery shopping demonstrated that the communication discrepancy with system errors in receiving product substitutions was not an issue. Trust within the information systems was established with individuals’ previous experience receiving product substitutions. The communication between individuals and machines continued to have a positive experience where participants did not demonstrate hesitation for their next online purchase as it was an uncommon experience.

Mobile Applications

Interviewed participants shared the different mobile applications they communicated with on their phones to place their online grocery shopping orders. Mobile applications are a system that many participants use to communicate their needs to reach their goals. The third theme identified in the cybernetic tradition was mobile applications.

Ally, a 29-year-old female from Texas, said, “So it’s just easy to just grab it and then open the app and then order from there” (Ally, personal interview, January 6, 2022). Rebekah, a 26-year-old female from Texas, said, “I just quickly add things to a cart or on an app” (Rebekah, personal interview, January 5, 2022). Latisha, a 42-year-old female from Texas, said, “Um, H-E-B, um, I have Walmart app, um, Amazon. Um, what else? Um, and a lot of food” (Latisha, personal interview, January 17, 2022).

Participants discussed using various mobile applications to communicate their grocery item requests. The mobile applications process the information to produce the individual’s goal and provide feedback about substitution updates, order completion, and more. The mobile application is the machine communicating to the individual through notifications. As notifications appear, the individual processes the information, and the processes create outputs back into the environment. The goal is to generate effective communication to complete the consumer’s online grocery order requests.

Table 3

Thematic Analysis: Cybernetics Tradition Themes

Cybernetics Tradition Themes	Personal Interview Count for Themes
First Impression Matters	25
Recency	25
Mobile Applications	20

Sociopsychological Tradition

The sociopsychological tradition derives from social psychology as it is concerned with studying how people present themselves as individuals who want to be perceived as favorable (Hooghiemstra, 2000). The study of sociopsychological tradition is geared towards the individuals' social being as the mind is the focal point for processing and understanding information (Hewes & Planalp, 1987). The behavioral intention relationship to the unified theory of acceptance and use of technology contributes to norms and attitudes among individuals (Shah & Zhongjun, 2021). Behavioral beliefs produce attitudes towards the behavior, normative beliefs result from social pressure and subjective norm, and control beliefs increase the Theory of Planned Behavior (Oteng-Peprah et al., 2020; Sharif & Naghavi, 2020).

Mom Figure

All participants in the research interviews indicated that growing up, they went grocery shopping with their mom or mother-figure in their life. Participants communicated some of their earliest memories and experiences on what it was like going to a brick-and-mortar store. At the same time, mom would purchase the necessary grocery items for the family. The participant's childhood grocery shopping experience identified the first sociopsychological tradition theme was "mom."

Kylie, a 32-year-old female from Texas, recalled her experience by saying, "we always went with my mom, was always the one that usually did all the grocery shopping." She later added, "Um, and she would always get us an icy when we first got there to keep quiet during our shopping trip" (Kylie, personal interview, January 17, 2022). Kelly, a 40-year-old female in Georgia, shared, "you know, we always went to the store with my mom." Kelly followed her comment with, "Uh, there was no online grocery shopping then, there wasn't even online then.

So, um, I just remember it felt like it took forever every time" (Kelly, personal interview, January 11, 2022). Another participant, Tiffany, a 29-year-old female in Texas, expressed that "I would go with my mom to the grocery store, and she would just go down every single aisle that she thought of" (Tiffany, personal interview, January 19, 2022).

As a child, in-person grocery shopping was communicated by meeting the needs of individuals. The communication reflected how society helped attain the mom's goals by purchasing grocery items for their family. The process of in-person grocery shopping showed identity rules of mom going to the store and taking the child(ren). The gender roles have not shifted as 15 participants expressed that they grocery shop for the family with their child(ren). Their childhood experiences shaped their adult perception and behavior of being "mom" and maintaining the traditional mindset of "mom" grocery shopping.

Walking the Aisles

Participants in the research interview expanded on their childhood grocery shopping experience and discussed walking the aisles. With the grocery list in hand, a participant shared the common theme of "walking the aisles" to collect the grocery items from their list. Participants communicated the traditional perception to the grocery shop. The second sociopsychological tradition theme identified in the participant's childhood grocery shopping experience was "walking the aisles."

Rebekah, a 26-year-old female from Texas, shared, "stressful as far as like trying to get from one place to another and that was not something that I wanted to spend my time doing, like walking around aisles in a store" (Rebekah, personal interview, January 5, 2022). Ally, a 29-year-old female from Texas, expressed, "being there for two hours sometimes, going through it, 'cause she would go through every single aisle" (Ally, personal interview, January). Sarah, a 41-

year-old female from Tennessee, shared, “And sometimes we would get to pick something in the aisle” (Sarah, personal interview, January 14, 2022).

As a child, participants walked the aisles to select grocery items communicated time for participants. The aisle is a narrow gap that individuals walk between the shelves while selecting grocery items. The purpose of walking down the aisles shaped their perception and views for grocery shopping as it communicated the process of choosing groceries at the store.

Boring

During the personal interviews, participants shared how childhood grocery shopping experience was viewed as a child. As participants went through the store, they communicated how the grocery shopping process was boring and a task they did not connect with doing. Although the participants enjoyed the meaning of spending time with their mom figure, a third sociopsychological tradition theme identified was the concept of “boring.”

Rebekah, a 26-year-old female from Texas, shared, “Um, so I think we were just ready for, for her to be done. being, as being like more of a chore. It wasn’t fun” (Rebekah, personal interview, January 5, 2022). “It was a rough experience,” said Cindy, a 62-year-old female from Texas. She later shared, “Everything was done manually, you know, having to walk to the store, having to get the groceries, and having to haul the groceries back. You know, that’s two miles every time we went grocery shopping, so it was kind of a difficult experience” (Cindy, personal interview, January 5, 2022). Jessica expressed, “Because I, it felt like a task. Like, it, to me it was boring as a teenager” (Jessica, personal interview, January 11, 2022).

Boring is a form of communication that describes the concept of an idea or task as dull or lacking in interest. Participants shared that they enjoyed going with their mom figure, but the process was boring and a challenging experience as a child. Grocery shopping was viewed as a

boring communication identity that shaped their adult perception of being another adult task to meet basic survival needs.

Act Out

Participants expressed their sociopsychological impression of grocery shopping as going to the grocery store with their mom figure, walking down the aisle to hand-select the items, the time-consuming process of being boring, which led to their behavior and attitudes inside the store. With participants bored in the store, there were behaviors discussed on how siblings would act out at the store and misbehave to bring entertainment into the grocery shopping process. The theme identified in childhood grocery shopping was “act out.”

Rebekah, a 26-year-old female from Texas, shared, “I enjoyed like playing!” She later shared, “Going to the grocery store was like a big outing for us since we were always at home and so I went with my siblings, and my memories are playing hide and seek in the grocery store” (Rebekah, personal interview, January 5, 2022). Tyger, a 52-year-old female from Texas, shared, “I also remember my brother and I got really in a lot of trouble, ‘cause we were arguing over who was gonna push the cart, and we pushed it into a display of salad tongs, and we knocked ‘em all over, and then my brother and I had to walk home.”

Participants expressed different ways they acted in grocery stores as a child to make it more enjoyable to meet their needs. The process of in-store grocery shopping showed behavior traits on how kids respond to grocery shopping as they try to make the experience more enjoyable. Their childhood experiences shaped their adult perception as being a mom, taking their child(ren) to the grocery store, and experiencing similar habits.

Table 4

Thematic Analysis: Sociopsychological Tradition Themes

Sociopsychological Tradition Themes	Personal Interview Count for Themes
Mom Figure	25
Walking Aisles	20
Boring	14
Act Out	7

Unified Theory of Acceptance and Use of Technology

UTAUT explained consumers' acceptance and use of information systems and communication technology innovations (Kim et al., 2008). The theory determines the effects of performance expectancy, effort expectancy, social influence, and facilitating conditions. UTAUT is a conceptual framework that combines eight models to explain the individual acceptance of information technology and personal intentions to adapt to new ideas (Venkatesh et al., 2003). The synthesis of the eight theoretical models for UTAUT utilized sociological and psychological theories to explain human behavior, motivations, intentions, and trust (Venkatesh et al., 2003).

Timesaving

Through their online grocery shopping ordering, many participants expressed how the process of shopping for groceries became quicker and more timesaving in completing the task. The researcher found the theme of "timesaving" as a factor for participants adapting to online grocery shopping through the performance expectancy of unified theory of acceptance and use of technology. The first theme identified in the unified theory of acceptance and use of technology was "timesaving."

Latisha, a 42-year-old female from Texas, shared, "I don't have to walk around this store, um, and go down aisles and forget what I wanted and go back and forth." She later expressed, "I can just have it, um, ordered, you know, I use that when I go pick up sometimes, most times with

big things, but if I forget one or two items, I order it, and they get and have it delivered to my home" (Latisha, personal interview, January 17, 2022). Shanna, a 50-year-old female from Texas, said, "Time-saving, and they had it already and everything" (Shanna, personal interview, January 11, 2022). Yolanda, a 48-year-old female from Texas, said, "In my busy world, it saves me time." She later explained, "The only time that I spend is enough time to go online, click what I need, which takes me, oh, no more than maybe 30 minutes, because they save your previous order" (Yolanda, personal interview, January 10, 2022).

Timesaving for online grocery shopping demonstrated a performance expectancy for individuals. It explains the degree to which the user perceives the system in helping them attain a job performance. The results showed the degree to which the participants perceived that using the online grocery shopping platform would enable them to improve grocery shopping performance. The direct relevance for performance expectancy is how the participants communicated the benefits of "timesaving" to express adequate information to a machine (device) to fulfilling their grocery needs.

Efficient

Many participants expressed online grocery shopping ordering as an efficient process that does not waste effort to collect the necessary grocery items. Participants discussed wanting an efficient tool, not wasting time, and being strategic with time. The researcher saw how timesaving and efficiency complement each other through the adaption process of online grocery shopping. The second theme discovered for the unified theory of acceptance and use of technology is "efficient."

Jessica, a 42-year-old female from Texas, said, "I end up loving it, and I'm like, "Why did I wait this long?" She later expressed, "I always enjoy learning things that make me more

efficient" (Jessica, personal interview, January 11, 2022). Tara, a 33-year-old female from Texas, shared, "I don't feel like I'm wasting time." She later expressed, "Like, it's just quick and efficient" (Tara, personal interview, January 33, 2022). Catie, a 36-year-old female from Texas, "It, it probably goes back to like efficiency and shopping, you know, getting all the right things and, and then having, like, a plan" (Catie, personal interview, January 20, 2022).

Effort expectancy in UTAUT is the measuring level of ease of use as it is associated with the help of information technology. Effort expectancy involves the relationship between effort and the performance achieved. In the interviews, efficiency was described as the quality of being efficient, achieving a goal, how the process was conducted, completing the task correctly, and minimum effort. The effort expectancy of online grocery shopping is linked to how users communicate their needs through the online platform to reach the achieved goal. The efficiency of the online grocery shopping process is influenced by how easy or complex it is for the user to retrieve relevant information through the digital platform within the shortest time possible.

Planning

As participants expressed the process of online grocery shopping as time-saving and efficient, they expanded on the infrastructure perceived by the system. Many participants communicated how the process of online grocery shopping alters behavioral intentions by becoming more of a planner with their meals. The third theme identified in the unified theory of acceptance and use of technology for facilitating conditions is "planning."

Rebekah, a 26-year-old female from Texas, said, "Online shopping makes me feel, um accomplished, um, orderly, timely, um, like a planner" (Rebekah, personal interview, January 5, 2022). Taylor, a 30-year-old female from Texas, said, "I really plan out what I'm going to eat." She later expressed, "I plan out my recipes and my meals," (Taylor, personal interview, January

6, 2022). MariAnn, a 54-year-old female from Texas, said, “So, overall, it’s helping me save money. And it helps me plan better” (MariAnn, personal interview, January 7, 2022).

Facilitating conditions involve the environment’s factors that make the use of the online grocery shopping platform possible for users to find it efficient and timesaving. As participants expressed the terminology of “planning” as a key element of online grocery shopping, it was communicated as a perceived behavioral change. The researcher correlated that the communication infrastructure of online grocery shopping required users to shift in behaviors by becoming a “planner” to optimize performance usage of the digital platform.

Table 5

Thematic Analysis: Unified Theory of Acceptance and Use of Technology Themes

Unified Theory of Acceptance and Use of Technology Themes	Personal Interview Count for Themes
Timesaving	15
Efficient	6
Planning	11

Uses and Gratification Theory

Katz first noted Uses and Gratification Theory (UGT) in 1959 to indicate an individual’s access to media as it explored different goals and selects the information resources as media is utilized to explain needs with various purposes (Liang et al., 2006; Smock et al., 2011). UGT originated to explore traditional mass media usage but is currently applied to explain the digital media usage among individuals (Ma et al., 2019). Individuals actively choose media to meet their specific requirements (Gan & Li, 2018). The purpose of UGT is to explore the potential gratifications that individuals seek from media as it provides insight into the reasoning for media usage and why individuals choose one media over others to gratify a variety of needs (Katz et al., 1973; Limayem & Cheung, 2011).

Satisfied

Participants ranked their feelings about how online grocery shopping made them feel. The majority of participants shared how online grocery shopping was satisfying or very satisfying by using terminology such as shocked, exceeding expectations, impressive, and other positive cogitation words to express satisfying emotions to online grocery shopping. The theme identified in uses and gratification theory is “satisfied.”

Ally, a 29-year-old female from Texas, said, “I was just more so shocked and happy about how easy it was. Um, and then very satisfied for me definitely means, like, I wanna do it again” (Ally, personal interview, January 6, 2022). MariAnn, a 54-year-old female from Texas, said, “The fact that they follow what I was asking for, I got the groceries that I was asking for, everything was fresh, um, that type of thing” (MariAnn, personal interview, January 7, 2022). Jessica, a 42-year-old female from Texas, said, “Well, I just, it, it was one of those that I knew, I knew they were gonna put them in my trunk.” She later expressed, “But the fact that, like, it was a reality. They were friendly. They put it in my trunk. And I was in and out in, like, minutes. That part was impressive. They were very nice” (Jessica, personal interview, January 11, 2022).

The digital platform for online grocery shopping has created a positive attachment for users due to mobility, constant access, immediate access, psychological reassurance, and instrumentality. Individuals actively chose online grocery shopping to communicate their needs and desires for fulfilling their overall goal. The participants expressed that online grocery shopping was a selection of their preferred content they want to consume and communicate with to grocery shop.

Happy

The participants at various segments of the interviews expressed gratification from using online grocery shopping when describing their recent experience, a positive experience, and the reason for continuing to use the digital platform. The second theme identified in UGT was "happy."

Rebekah, a 26-year-old female from Texas, said, "Yeah, it just, um, I felt happy." She later expressed, "I felt like at peace, um, less stressed, um, more organized. Um, I just felt like it was a good use of like m- my time management," (Rebekah, personal interview, January 5, 2022). Taylor, a 30-year-old female from Texas, shared, "I think it's like happy, relieved that it's over, yes, checking it off the list" (Taylor, personal interview, January 6, 2022). Amanda, a 39-year-old female from Texas, said, "I don't know if I'd say shocked because . . . I mean, I know myself, and I know that sometimes I can have my own personal bias about things." She later expressed, "I was pleasantly surprised. Um, yeah. So I was . . . I was happy that it, um, worked out so well," (Amanda, personal interview, January 9, 2022).

The participants expressed a nonverbal communication aspect of being "happy" with the tool as they continue to use the platform to order groceries. The meaning of feeling "happy" is a gratification of joy, contentment, and fulfillment. Although "happy" explores different emotions, it is described as a positive emotion and life satisfaction. UGT was a motivational factor for gratification usage as users received their items in good quality, on time, and an individual view of efficiency. The gratification from media usage impacts the individual's behavior and attitudes to continue using the online grocery shopping platform.

Friendly

Participants expanded on their gratification from using online grocery shopping that has exceeded past the digital aspect. Participants communicated in the interviews that friendly customer service also impacted the uses and gratification process for their online grocery shopping experience. The third identified theme for uses and gratification theory was "friendly."

Cindy, a 62-year-old female from Texas, said, "And I've had very good experiences. They're very friendly. They're very helpful. They're very kind versus me going into a grocery store" (Cindy, personal interview, January 5, 2022). Bonnie, a 69-year-old female from Texas, said, "They're always very friendly, very polite, very helpful, making sure you got everything you wanted" (Cindy, personal interview, January 5, 2022).

The theme "friendly" provides a uses and gratification theory principle as it compels the users to gratify their needs, wants, and desires. The principle driving this force involves meeting basic needs by exceeding expectations through digital and in-person communication. Friendliness is a direct link to completing the online grocery shopping process by communicating that the personal shopper provided the desired wants and needs. The gratification communicated from the media expands into being helpful through the grocery process, as it is expressed as a task or chore to complete.

Customer Service

Participants shared how gratification is more than the communication transmitted with the machine throughout the interviews. I identified the third theme in uses and gratification theory as "customer service," as they expressed the importance of feeling like a valued customer.

Rebekah, a 26-year-old female from Texas, said, "Even if it was convenient but I was being treated disrespectfully, I wouldn't come back." She later expressed, "That wouldn't be

worth it, to be treated in a way that was disrespectful" (Rebekah, personal interview, January 5, 2022). Taylor, a 30-year-old female from Texas, said, "The customer service was bad, um, maybe I would look into other forms of grocery shopping" (Taylor, personal interview, January 6, 2022). Linnea, a 63-year-old female from Texas said, "The store that I usually shop at, the, the people that come out to deliver the ca- the groceries to your car or the people that bring them to your house, they're always really, really super." She also expressed, "Um, they're, they're fast. And they're . . . I, I don't think I've ever had a bad dealing with one of their helpers being rude or inconsiderate" (Linnea, personal interview, January 6, 2022).

Participants in the interview discussed the gratification from using the online grocery shopping platform and continued to expand on the gratification that occurs when picking up the grocery items. Online grocery shopping is a digital process that involves gratification through media and personal communication with the individual shopper. The gratification includes that personal touch as participants communicate through the digital platform and the personal shopper provides the feedback of understanding the desired need of the grocery item.

Table 6

Thematic Analysis: Uses and Gratification Theory Themes

Uses and Gratification Theory Themes	Personal Interview Count for Themes
Satisfied	25
Happy	16
Friendly	9
Customer Service	25

Communication Theory

Human communication is a method to establish a commonness in two-way communication as a message is sent and received (Shannon & Weaver, 1963). The communication process is where individuals create and share information with another (Rogers,

2003). The research study focused on linear communication theories as it involved verbal and nonverbal communication between humans and machines transmits messages in a linear process (Berne, 1953; Lieck & Rohrmeier, 2021; Merkl-Davies, 2017). Communication through technologies processes the transmission of information that leads to transformations in human activities (Borde et al., 2009; Vaidean & Achim, 2022).

Mobile Phone

All participants shared that they have a mobile phone that they are actively using for various reasons throughout the day. Many participants communicated in the interview that they use their phones to communicate tasks being completed. An identified theme in the communication theory is the ‘mobile phone.’

Tiffany, a 28-year-old female from Texas, said, “Just because I always have it [mobile phone] on hand” (Tiffany, personal interview, January 19, 2022). Tara, a 33-year-old female from Texas, said, “Uh, usually my phone. I would say 90% of the time, on my phone” (Tara, personal interview, January 11, 2022). Lauren, a 28-year-old female from Texas, said, “Um cause I have it on hand usually it is in the morning when I am sitting with the girls eating breakfast, um, or I am out and about and need to make an order um I have my phone right there, and I just do it through that” (Lauren, personal interview, January 8, 2022).

Participants expressed how their mobile phone is handy and available whenever and wherever needed. When using their mobile phone, communication occurs between individuals and machines as users send messages for their online grocery order, and the device processes the request. While using their mobile phone, participants were experiencing digital communication to express wants and desires.

Table 7

Thematic Analysis: Communication Theory Themes

Communication Channels Themes	Personal Interview Count for Themes
Mobile Phone	25

Communication Channels

The communication channel is the medium used to communicate a message from the sender to the receiver: a passage of information (McLuhan, 1964). The use of the internet, mobile phones, and other technical devices increase interpersonal communication as it utilizes computer-mediated communication (Perry & Werner-Wilson, 2011). The new communication technologies have transformed traditional communication media as messages are sent through digitized communication media (Cantoni & Danowski, 2015). Communication channels are categorized into three distinctive channels: (a) verbal, (b) written, and (c) non-verbal, as it involves the senses of touch and visual.

Grocery List

As participants went with their mom figure to the grocery store, a theme for communication channels emerged. When asked to explain their childhood grocery shopping experience, participants discussed how their mom figure would have a list of their needed grocery items.

"And then mom would pick up all of her groceries that she needed; she had a list with her," said Cindy, a 62-year-old female from Texas (Cindy, personal interview, January 5, 2022). Lauren, a 28-year-old female from Texas, shared, "She would kind of went with her list. I would get to like, um, mark off the list" (Lauren, personal interview, January 8, 2022). Tara, a 33-year-old female from Texas, expressed, "she [mom], we went in with a list, and if they didn't have,

like, the specific item on her list that she wanted, then we just didn't get it" (Tara, personal interview, January 11, 2022).

Participants communicated how a list was a tool to communicate needed grocery items. As a child, participants experienced in-person grocery shopping with a list that expressed verbal and nonverbal communication channels between the mother figure and child. The verbal communication from the grocery list was spoken on what grocery items needed to be selected. The nonverbal communication describes the mom figure as a planner, as a list is consciously determining in advance what is needed for purchase. A list can also communicate budgeting tactics as families stick to their list. With online grocery shopping, the grocery list is still implemented but digitally, as participants input their needed grocery items into the app or website. Subconsciously, participants are communicating budgeting as they select items.

Messaging

The majority of the participants indicated that computer-mediated communication occurred between interaction and information. The participants expressed how they received constant messaging through their online grocery shopping experience with updates and notifications. The second theme for Communication Channels I identified was "messaging."

Tara, a 33-year-old female from Texas, said, "Just nice to pull up, send in my text message and someone brings all of my usually absurd number of groceries out to the car, and I didn't have to do anything but send a text message" (Tara, personal interview, January 11, 2022). Lauren, a 28-year-old female from Texas, said, "I even get like texts saying couple of things are being substituted" (Lauren, personal interview, January 8, 2020). Sonja, a 45-year-old female from Texas, said, "And then when they do the substitutes, I like that they send you a text before

you go pick it up to see if these substitutes are what you would like or not." She later expressed, "So, I feel like it gives you the flexibility also" (Sonja, personal interview, January 18, 2020).

The communication channel involved the participant sending an order that outlines the projection of the submitted grocery order for the personal shopper. As the communication occurs throughout the process, the machine sends communication updates through the app or text messages, informing the receiver, which gets decoded. The online grocery shopping experience provided different communication interactivity and experience as users decided to approve substitutions from the store before they arrived to pick up their items or were if groceries were delivered to their place.

Table 8

Thematic Analysis: Communication Channels Themes

Communication Channels Themes	Personal Interview Count for Themes
Grocery List	23
Messaging	16

Technology Acceptance Model

The Technology Acceptance Model (TAM) is a model utilized for understanding human-computer interactions based on the perceived usefulness and perceived ease of use to determine behavioral intentions (Davis et al., 1989). Researchers have conducted empirical studies with TAM, and the results demonstrated consistency with the acceptance behavior of users and new enhancements (Horton et al., 2003; Igbaria et al., 1997; Venkatesh & Davis, 2000;). Perceived usefulness is when an individual believes the idea will enhance the performance of the task (Davis et al., 1989). Research has shown that perceived usefulness has a significant and positive effect on individuals' attitudes towards technological advancement (Davis, 1989; Venkatesh & Bala, 2008; Venkatesh & Davis, 2000). Perceived ease of use is when an individual believes the

idea would be free of effort (Davis et al., 1989). Venkatesh (2000) found that perceived ease of use is affected by internal control (computer self-efficacy) and external control (facilitating condition).

Easy

The majority of the participants indicated that online grocery shopping brought a sense of ease for purchasing groceries. Participants communicated different areas of ease through the process and how it made an impact. TAM determines adaption with the perceived ease of use, and I identified the theme as "easy."

Catie, a 36-year-old female from Texas, shared, "So, like, it was a really easy option to go, like, yes, you know, and add those things to my cart." She later explained, "So, it's really easy for me to go, like, you know, like I said, like milk, eggs, cheese" (Catie, personal interview, January 20, 2022). Tiffany, a 28-year-old female from Texas, said, "And then I went from there and just bought my groceries and it, it was just easy" (Tiffany, personal interview, January 19, 2022). "At this point, it's easy because now since I do it every week, then it, most of my basic grocery things that I order every single week are already sitting there, so now instead of, you know, it literally takes five minutes to order groceries," said Sonja, a 45-year-old female from Texas (Sonja, personal interview, January 18, 2022).

Participants in the interviews communicated that online grocery shopping was an "easy" task, adding items to a cart to complete their online grocery order. In-person shopping required the participant to go down the aisle to hand-select grocery items, while online grocery shopping was an easy process that added items to their cart immediately. The perceived ease of use is determined by skipping the process of grocery shopping and immediately checking out. The perceived ease of use is an internal control with the computer and external control with

facilitating conditions. The participants described online grocery shopping as being “easy” and explained the user’s perception of its effort to incorporate the communication channel into the user’s life.

Convenient

Participants shared that online grocery shopping brought a sense of convenience for purchasing groceries online. All participants expressed how convenience is needed to adapt to technological advancement. TAM determines adaption with the perceived usefulness, and I identified the second theme as “convenient.”

Laura, a 44-year-old female from Texas, said, “It was just more convenient, you know, just from a time factor to pick her up from one activity, run to the grocery store, sit there for five minutes, and let them load my groceries and take them home. Egima, a 48-year-old female from Texas, said, “It’s very, very convenient.” She later expressed, “I’ve come to, you know, appreciate a lot more, especially the convenience of it” (Egima, personal interview, January 18, 2022). Latisha, a 42-year-old female in Texas, shared, “So it’s very, very convenient, and I don’t have to go anywhere” (Latisha, personal interview, January 17, 2022).

Perceived usefulness in TAM involves the psychological belief that it will enhance the task for the user. Participants expressed how online grocery shopping is convenient but expressed convenience in different ways. Participants said convenience is timesaving, effort-saving, fast, and overall usefulness of online grocery shopping. The communication through the experience impacts the behavioral intentions of the user.

Table 9

Thematic Analysis: Technology Acceptance Model Themes

Technology Acceptance Model Themes	Personal Interview Count for Themes
Easy	24
Convenient	25

Trust

With the development of the Internet and the growth of e-commerce in the 1990s, individuals increased their interest in trusting online transactions (Li et al., 2011). In online transactions, the ability to see and try products before buying is absent (Josang et al., 2007; Rose et al., 2011). The idea develops that trust is associated with a relationship (Grandison & Sloman, 2004), even with technological advancements. Trust affects all social interactions and exchanges as it reduces the complexity of human conduct in situations of uncertainty (Luhmann, 1979).

Product Substitutions

The majority of the participants in the research interviews indicated that product substitutions were not an issue and that it was a second thought in the process. Participants communicated their first thoughts and uncertainty with product substitutions but later expressed their current opinions and feelings. The first theme I identified in trust involved "product substitutions."

Lauren, a 28-year-old female from Texas, said, "Um honestly no. Sometimes I even get like texts saying couple of things are being substituted, and I never even check that. I usual just like, okay, I trust them to get whatever is, like, most like whatever I needed within the same price point," (Lauren, personal interview, January 8, 2022). Tyger, a 52-year-old female from Texas, said, "What I know now about substitutions is I always get a choice. I don't always pay attention to the choices." She later expressed, "Like, they say, "Hey, you know, like, I've ordered a gallon

of this milk, but we don't have a gallon of the milk, so . . . But we'll give you two half gallons." So, um, I think worrying about," (Tyger, personal interview, January 18, 2022). Latisha, a 42-year-old female from Texas, said, "They do let me know, um, if they don't have the item available, um, they come up with a, um, substitution that may be comparable to it and I get to decide if I want it or not." She later expressed, "They don't just throw it in my basket, and I have to accept it" (Latisha, personal interview, January 17, 2022).

The interaction and exchange of the machine reduced the complexity of the participants feeling uncertain about product substitutions. The terms used to express trust were "never even checking," "I get a choice," and "comparable." The previous experiences with product substitutions developed trust among individuals that built a relationship with the online grocery shopping platform. An important element of trust being established is the feeling that shoppers have a choice to accept or reject the selected replacement item.

Freshness

The majority of participants ranked and shared that freshness was a top priority for their online grocery shopping experience. Participants communicated that selecting freshness is a key important factor for online grocery shopping. The second theme I identified in trust is "freshness."

Taylor, a 30-year-old female from Texas, said, "I've never had a problem as far as not having fresh items." She later explained, "But I, I do know, you know, I probably would not be happy if I were getting things that, that like meats and, and bread and stuff that, that were not fresh" (Taylor, personal interview, January 6, 2022). MariAnn, a 54-year-female from Texas, shared, "And so that right there is a big deal for me that they're picking out fresh produce." Holley, a 25-year-old female from Texas, said, "Freshness what ranked last because in the grand

scheme of things, it's my least concern because normally the freshness is really good, um, not with fruits or veggies, but with other items, they're really good" (Holley, personal interview, January 7, 2022).

Trust is ambiguous as described and expressed in more than one interpretation. Participants shared how selecting less than satisfactory for produce items would make the user more hesitant to let the personal shopper select items considered standards such as box food and canned food items. Trust is built as the personal shopper selects quality produce items that the user would choose for themselves.

Store Brand Experience

The majority of the participants shared that they shop and prefer particular stores to conduct their online grocery shopping orders. Participants build trust with the specific store based on their previous experiences. The third theme I identified in trust was "store brand experience."

Amanda, a 39-year-old female from Texas, said, "The online experience is I, I think pretty well-curated, so I haven't had a lot of customer service issues, so, uh, I think about it less" (Amanda, personal interview, January 9, 2022). Catie, a 36-year-old female from Texas, shared, "Like everything that came was great. The food was wonderful." She later expressed, "So all of that was like, it just kept being like, this is great, this is good." (Catie, personal interview, January 20, 2020. MariAnn, a 54-year-female from Texas, said, "And the store has even gotten it down to a science with things like avocados." She later explained, "They will, they have a scale on there where you can go on and choose, and they'll say, "Do you want avocados that are gonna ripen in one to two days? Do you want ones that are ripe right now?" And you can tell them exactly what you want, and they try to do that" (MariAnn, personal interview, January 7, 2022).

Trust is mediated through the attitudes and beliefs towards the store brand experience**.** Participants shared how they have positive experiences with the store they chose and how they fulfill their desired needs. When individuals continued to have a positive experience with their particular store, they built trust with their behavioral intentions to continue going to that grocery store to purchase their items.

Hesitation

Participants in the research interview shared the reason for adapting to online grocery shopping and why they started to utilize the digital platform. The communication that led to their adaption played a significant role in determining the key concept for what adaption group the participants belonged in for online grocery shopping. The fourth theme identified in trust was "limiting hesitation," which correlated to being a late majority.

Tyger, a 52-year-old female from Texas, shared, "So I think my hesitation was, um, just that initial getting started" (Tyger, personal interview, January 18, 2022). "There was just a little bit of a hesitation, kind of, in . . . I hope I'll get X item in the way that I want it," said Amanda, a 39-year-old female from Texas. Sarah, a 41-year-old female from Tennessee, said, "I was hesitant." She later expressed, "Wondering, "Are they really gonna . . . Is it really gonna work?" (Sarah, personal interview, January 14, 2022).

Participants expressed hesitation as a form of uncertainty as they were unfamiliar with the process. The communication channel that attracted the participants to adapt to online grocery shopping was word-of-mouth, as it helped minimize the uncertainty of the process. Based on the participant's sociopsychological traits on how grocery shopping was conducted as a child, the hesitation created a fear of the unknown as comments for hesitation included being unsure and

confused on how the process worked based on their previous known experienced of in-store grocery shopping.

Positive Experience

All participants in the research interviews indicated that online grocery shopping involved a positive experience that led to the adaption of the digital platform. Participants communicated that their experience needed to be positive to adapt to the new idea. The fifth theme identified in trust was "positive."

Latisha, a 42-year-old female from Texas, said, "Um, I would like to think it's pretty positive, um, and just want to make sure I'm fully aware of how to use it properly and, and, and do my best," (Latisha, personal interview, January 17, 2022). Egima, a 48-year-old female from Texas, said, "It, it's positive sides, um, with being convenient" (Egima, personal interview, January 18, 2022). Tara, a 33-year-old female from Texas, said, "I would say that it's positive when the programs are responding the way they're supposed to respond" (Tara, personal interview, January 11, 2022).

The positive experience of online grocery shopping reduces the feeling of uncertainty for users to adapt. A positive experience links to building trust with online grocery shopping as individuals implied trust within the technology information system. The positive experience of an individual's online grocery shopping communicated perceived usefulness to the traditional method of in-store grocery shopping. Participants expressed the impact of perceived ease of use and positive past experiences for continuing to online grocery shop. The positive experience expanded on the user's familiarity as individuals understood the online grocery shopping system as similar to shopping online. Positive experience communicates how the process was effortless when using the system, which relates to familiarity as it builds trust with the information

system. Based on the positive experience of online grocery shopping, the participants in the interview expressed how the beliefs formed by the first encounter impacted users' decision to adapt and trust the digital platform.

Table 10

Thematic Analysis: *Trust Themes*

Trust Themes	Personal Interview Count for Themes
Product Substitutions	14
Freshness	25
Store Brand Experience	25
Limiting Hesitation	15
Positive Experience	25

Familiarity

Familiarity is the degree to which the user is competent and can use a range of existing digital tools and web-based platforms to perform various computer-based activities (Kennedy et al., 2008). As individuals continue to use different media, individuals become digitally literate when they acquire a degree of knowledge, attitudes, and skills. The concept of familiarity with technology involves digital competence, digital proficiency, technology confidence, digital ability, and digital literacy as it is measured by the individual's knowledge of new technologies (Calvani et al., 2009; Ferrari et al., 2012; Littlejohn et al., 2012; Martin & Madigan, 2006; Sefton-Green et al., 2009). The overall considerations are related to values, knowledge, and skill to determine an individuals' experience or proficiency in technology.

Direct Deposit

All participants in the research interview indicated that they actively use direct deposit. Participants communicated how they would feel having to go into the bank, shared the process, and how their views changed since they first adapted to direct deposit. The first theme I identified in familiarity was "direct deposit."

Catie, a 36-year-old female from Texas said, “Like, I love that we can do like digital, um, transfers and like direct bank transfers.” She later expressed, “So that’s a place where, like I’ve totally embrace, and I’m an advocate for it” (Catie, personal interview, January 20, 2022). Taylor, a 30-year-old female from Texas, shared, “I’ve never had any issues with direct deposit.” She later shared, “All aspect. Like, um, use, you know, taking a picture of a check, sending it in, money being deposited into your account” (Taylor, personal interview, January 6, 2022). Amanda, a 39-year-old female from Texas, said, “It’s flawless, and I don’t even have to think about it” (Amanda, personal interview, January 9, 2022). Lauren, a 28-year-old female from Texas, shared, “Um that is how I have always been paid um, and so that is just kind of, um, how it happens, and we just expect it on a certain day, and it’s there, and it is very convenient and, um, yeah, it’s just something that we basically rely on now,” (Lauren, personal interview, January 8, 2022).

Participants shared how they have positive encounters with direct deposit, which demonstrated a desire to adapt to future enhancements. Using direct deposit, participants established familiarity with the digital tool related to the individual’s experience and proficiency. Participants shared the different aspects of direct deposit, which showed familiarity.

Online Shopping

The majority of the participants in the research interview indicated that they actively shopped online. Participants communicated where they last shopped online to explain the process from start to finish, how online shopping makes them feel, and how their views changed the first time they started. The second theme I identified in familiarity was “online shopping.”

Yolanda, a 48-year-old female from Texas, shared, “And I kinda got used to that being in the military and not necessarily being near places to get the things that I wanted or that my

family needed." She later shared, "To shop, even school shopping for my kids and, and different things, depending on where I was, we would have to do that online" (Yolanda, personal interview, January 10, 2022). Cindy, a 62-year-old female in Texas, shared, "They're all pretty much the same. It's the same setup. You go in, you look what you want, you fill up your cart, you go to check out." She later explained, "You pay with your credit card or your debit card or whatever, and then they usually let you know about when it's going to arrive, and then it usually ar . . . And then it arrives" (Cindy, personal interview, January 5, 2022).

Participants shared how their last online shopping order went from start to finish, demonstrating an understanding of the process and expectations. As participants online shopped, familiarity was established through the related considerations of values, knowledge, and skills to use the digital platform. Participants shared the different aspects of online shopping, which showed familiarity.

Website Navigation

The majority of the participants in the research interview indicated that they felt comfortable navigating a website. Participants explained the process from start to finish, including website layouts, if they found websites easy or hard to navigate, and how comfortable they are to shop on a new online website. The third theme I identified in familiarity was "website navigation."

Tiffany, a 28-year-old female in Texas, shared, "The website made it easy, 'cause it's very easy to, to access, and it's easy to scroll through and, uh, navigate" (Tiffany, personal interview, January 19, 2022). Sarah, a 41-year-old female from Texas, shared, "Yeah, I think I would be pretty, I think I'd be pretty good at navigating it [new website]" (Sarah, personal interview, January 14, 2022).

Participants shared how most websites are similar to navigating. Navigating a new web page showed that familiarity was established through digital competence, proficiency, and technology confidence. Participants shared the aspects of navigating a website, which showed a strong familiarity in the process and a comfort level for future advancements.

Table 11

Thematic Analysis: Familiarity Themes

Familiarity Themes	Personal Interview Count for Themes
Direct Deposit	25
Online Shopping	23
Website Navigation	23

Maslow's Hierarchy of Needs

In 1943, Maslow developed a model that explored how people are motivated to achieve specific needs and how some needs take precedence over others, based on the individual's personality (Maslow, 1943; Montag et al., 2020). The disciplines that use Maslow's Hierarchy of Needs use the model to understand driving forces and why that is important to the individuals based on their personality, desires, and needs (Benson & Dundis, 2003). The theory explains the priority mechanism humans give to their needs and wants and how individuals are motivated to satisfy those needs (Allen et al., 2019). In recent years, new technology created a driving force and direct influence on an individual's level of needs and desires as the hierarchy ranges transformed into an abstract concept that generates self-fulfillment (Sharma et al., 2020).

Basic Needs

The majority of participants in the research interviews indicated that a motivational factor for starting online grocery shopping was to fulfill their basic survival needs of grocery food items. Participants explained how fulfilling their basic needs was a continued reason for online

grocery shopping. The first theme I identified in Maslow's Hierarchy of Needs was "basic needs."

Bonnie, a 69-year-old female from Texas, said, "Because at the, uh, just our basic grocery needs to be able to easily and conveniently do that online. Tara, a 33-year-old female from Texas, shared, "I mean with food or toilet paper or something along those lines. It's, um, just the necessities." She later shared, "And sometimes peace of mind is a basic need, and going to the grocery store, um, as I've gotten older, I've gotten more anxious" (Tara, personal interview, January 11, 2022).

Maslow's Hierarchy of Needs for grocery food items refers to the physiological aspect of fulfilling consumers' basic needs. Participants shared how online grocery shopping is a digital tool used to feel their basic needs. Technology has become an intricate motivational element in fulfilling an individual's physical needs to survive.

Safety

The majority of participants in the research interviews indicated that a motivational factor for starting online grocery shopping was for safety reasons when grocery shopping. Participants explained how safety was a continued reason for online grocery shopping. The second theme I identified in Maslow's Hierarchy of Needs was "safety."

Tyger, a 52-year-old female from Texas, shared, "It really was just the whole COVID thing." She later expressed, "I didn't wanna have to go out and expose myself to . . . to not knowing what was going on" (Tyger, personal interview, January 18, 2022). Laura, a 44-year-old female from Texas, said," Well, for me, the safety is directly result, a direct result of COVID." She later shared, "Um, I still have a compromised immune system" (Laura, personal interview,

January 6, 2022). Egima, a 48-year-old female from Texas, said, “Uh, well safety is the COVID” (Egima, personal interview, January 18, 2022).

I explored the second level of Maslow’s Hierarchy of Needs, safety. Participants shared that they turned to online grocery shopping as a digital tool to communicate their need for protection during the pandemic. Participants did not want to expose themselves in a time of uncertainty. However, the participant’s need for continuing to online grocery shop as a safety tool decreased in reasoning.

Friend/Partner Influenced

Participants in the research interview shared the reason for adapting to online grocery shopping and why they started to utilize the digital platform. The communication that led to their adaption played a significant role in determining what adaption group the participants belonged in for online grocery shopping. A third theme I identified in Maslow’s Hierarchy of Needs was “friend/partner influence.”

Kylie, a 32-year-old female from Texas, shared, “I always typically wait for someone I personally know to either use it or download it or whatever the case is before I jump and do it myself” (Kylie, personal interview, January 17, 2022). She later expressed, “So, somebody at my office, our marketing director, actually, was the one that told me about it and said that he was using it” (Kylie, personal interview, January 17, 2022). Bonnie, a 69-year-old female from Texas, shared, “Well, I did have some friends that were using it. I guess that was their influence that they liked it and they had told me about it. Um, and so I decided to go ahead and try it” (Bonnie, personal interview, January 5, 2022). Jessica, a 42-year-old female from Texas, said, “And friends had talked about, friends and colleagues and coworkers, how once they started

online grocery shopping, they never looked back" (Jessica, personal interview, January 11, 2022).

I explored the third level of Maslow's Hierarchy of Needs, friend/partner influence. Participants shared that they became less hesitant to online grocery shop after a friend or partner shared their experience. The communication encounter persuaded participants to adapt to online grocery shopping. However, almost every interview participant shared that friend or partner influence was no longer a factor for continuing to online grocery shop. Participants expressed that the influence was no longer there as they had experienced it themselves.

Feeling of Accomplishment

Participants in the research interview shared the motivational reasons for adapting to online grocery shopping. The researcher explored why the participant started and why the participant continued to online grocery shop. Some participants shared how it was fulfilling to complete grocery shopping in a time-saving manner. A fourth theme identified in Maslow's Hierarchy of Needs was "feeling of accomplishment."

Bonnie, a 69-year-old female from Texas, said, "And it was just a feeling of accomplishment . . . And a time-saver, yes. Ab- ab- it was a time-saver" (Bonnie, personal interview, January 5, 2022). Rebekah, a 26-year-old female from Texas, shared, "Yes, I mean, I felt like I just quickly add things to a cart or on an app and went and picked it up, and that was . . . like that saved me at least an hour and a half." She later explained, "I feel like, um, that would've been spent away from my house or my family, so that was pretty, pretty good trade-off, I thought" (Rebekah, personal interview, January 5, 2022). Taylor, a 30-year-old female from Texas, shared, "Yeah, feeling satisfied a sense of accomplishment" (Taylor, personal interview, January 6, 2022).

I explored the fourth level of Maslow's Hierarchy of Needs, feeling of accomplishment. Online grocery shopping communicated the feeling of accomplishment as participants shared how they were able to fill the time they would've spent at the grocery store with other fulfilling tasks or checking off their to-do lists. Online grocery shopping communicated a sense of determination and achievement to their day.

Achieving Full Potential

Participants in the research interview continued to share the motivational reasons for adapting to online grocery shopping. I explored why some of the participants selected self-actualization as the reason for starting and continuing to online grocery shop. A fifth theme I identified in Maslow's Hierarchy of Needs was "self-actualization."

Rebekah, a 26-year-old female from Texas, shared, "I think when I get when I place the order, and I get everything that I selected, and it's good quality, um, items." Then she expressed, "Then I feel like that was a hundred, like a 10 out of 10, if that makes sense. Like they're, they're, that was perfect. It went perfect." Holley, a 25-year-old female from Texas, shared, "So, when I grocery shop, my main goal is to be able to meal prep for me and my son and get healthy things." She later expressed, "And so when I said that, it was because, um, I feel accomplished that I can get everything done in a timely manner, and I'm not having to worry about missing things because I have a full two weeks to create my list," (Holley, personal interview, January 7, 2022). Debra, a 67-year-old female from Texas, shared, "Well, it means that I can buy groceries still, and I can still live in my house and not in an assisted living room" (Debra, personal interview, January 12, 2022).

I explored the fifth level of Maslow's Hierarchy of Needs, self-actualization. Online grocery shopping communicated self-actualization as participants expressed how it involved self-

fulfillment, realizing one's potential, and peak experience. The digital tool is a resource for self-improvement, as it portrays a perfect experience, fulfilling accomplishment, and preventing assistant living.

Table 12

Thematic Analysis: Maslow's Hierarchy of Needs Themes

Maslow's Hierarchy of Needs Themes	Personal Interview Count for Themes
Basic Needs	25
Safety	15
Friend/Partner Influence	9
Feeling of Accomplishment	9
Achieving Full Potential	12

Research Question Responses

RQ1: How does an individual communicate motivational needs in adapting to online grocery shopping?

Motivational factors involve goals, interests, values, satisfaction, and more as the mediators drive the process of digital change. Motivation is viewed as a set of forces that causes an individual to engage in a particular behavior intention (Moorhead & Griffin, 1999). Motivation is a psychological process with an internal drive to satisfy a desire and need in hopes it will be achieved (Bedeian, 1993; Higgins, 1994). The driving force for motivation is for the individual to accomplish a personal goal.

Sociopsychological Tradition is an interpersonal communication interaction and influence. The communication process is a conscious and unconscious attempt that illustrates behavior and control images (Edgar et al., 2018; Goffman, 1959; Schlenker, 1980). In the sociopsychological Tradition, the focus is on the individual cognition and behavioral characteristics in the communication process. Maslow's Hierarchy of Needs explores how people are motivated to achieve specific needs and how some needs take precedence over others, based

on the individual's personality (Maslow, 1943; Montag et al., 2020). Individuals are motivated to satisfy those intended needs and alter their behavior intentions to obtain each level of satisfaction. Maslow's Hierarchy of Needs builds on the adaptations in the structure of needs for the individual as Maslow formulated a hierarchy of human needs that highlights that if basic needs are met, humans develop higher needs and desires (Kenrick et al., 2010). The study examined basic needs, safety, friend/partner influence, the feeling of accomplishment, and achieving full potential for online grocery shopping.

Basic needs were the first motivational need explored for online grocery shopping. Maslow's Hierarchy of Needs defined basic human needs, such as food, water, air, and sleep (Maslow, 1943). All the participants in the in-depth interviews shared similar viewpoints and ideas for defining basic needs in online grocery shopping. Kelly, a 40-year-old female from Georgia, shared, "You know, like when we need milk and eggs." In the thematic survey, 214 participants selected the motivational reasoning for starting online grocery shopping was to fulfill basic needs. Later in the thematic survey, 216 participants selected basic needs as the motivation for continuing online grocery shopping. Kylie, a 32-year-old female from Texas, shared, "You're always gonna need those necessities per se. And so I know that I have to go to the grocery store or get those groceries or those items, um, every week no matter what. So my reasoning for having to go to the grocery store or do the online shopping is because those are basic needs that I have to have in my household to continue going."

Safety was the second motivational need explored for online grocery shopping. Maslow's Hierarchy of Needs defined safety, security, protection, law, stability, resources, health, and property (Maslow, 1943). In the thematic survey, 167 participants indicated that the motivation for online grocery shopping was for safety. Laura, a 44-year-old female from Texas, said, "Well,

for me, the safety is directly result, a direct result of COVID. I don't have to be around people. Um, I can still get everything that I need. Um, you know, I can still provide for my family." However, the survey responses based on the interviewees showed safety as a decreased reason for continuing to online grocery shop. Yolanda, a 48-year-old female from Texas, said, "Um, so although my, my initial reason, and my initial, um, definition of basic need was out of, you know, the safety and related to the pandemic, now it's not so much related to the ban- pandemic. I've just gotten used to it, and it saves me, um, it saves me a good little amount of time because before I could go in the grocery store and probably spend about an hour-and-a-half when I'm doing a grocery store shop, um, now, like I said, I can just go online, click, click some buttons, and then I just go to pick it up at my, my time. So now, even though yes, it's out of, um, basic needs to feed my family, now it's more outta convenience."

Friend and partner influence was the third motivational need explored for online grocery shopping. Maslow's Hierarchy of Needs defined friend or partner influence as a sense of belonging (Maslow, 1943). In the thematic survey, 70 participants indicated friend or partner influence as the reason for starting online grocery shopping. Jessica, a 42-year-old female from Texas, shared, "And friends had talked about, friends and colleagues and coworkers, how once they started online grocery shopping, they never looked back. And I put that first order in and had such a fantastic experience." The gratification in participants' experience in online grocery shopping led the participants to share with others. Egima, a 48-year-old woman from Texas, shared, "I shared it with my aunt, my dad, my friends, my sisters. Um, just the, the ease of shopping online, um, with my aunt since she's older, you know, even though she likes to just go ahead and get out and about. Just the ease of having that, you know, her understanding that that,

um, that, that option is there, and she can go ahead and do that. The same with my dad, um, and not having to get out and about, um, especially if seeing is not well."

The interview participants shared the motivational reason for sharing their experience and encouraging others to adapt to online grocery shopping to help them with the obstacles in their lives. In the thematic survey, 45 participants indicated that they continued online grocery shopping from the motivational factors of friend or partner influence. The interviews determined that friend or partner influence was not a continued motivational factor for online grocery shopping. Lauren, a 28-year-old female from Texas, said, "Because when I noticed for myself that I liked it, so I didn't have to like not that it has to, but I do like hearing that my friend, um, really liked it and was really convenient for her and her busy schedule with her toddler that made me want to start it, but then once I knew, like, it was convenient for myself then my own experience, I didn't need that influence anymore because I know for myself."

Feeling of accomplishment was the fourth motivational need explored for online grocery shopping. Maslow's Hierarchy of Needs defined feeling of accomplishment as an achievement, whether of status, reputation, respect, recognition, or independence (Maslow, 1943). In the thematic survey, 34 participants indicated that they started online grocery for the feeling of accomplishment. Holley, a 25-year-old female from Texas, shared, "I actually ended up saving a lot of money because I'm not, you know, tempted by everything that I see, 'cause like I said, I like food. I don't have the extras, and I end up saving a lot of money, and that's in itself a feeling accomplishment because I'm a single mom on a single income." However, later in the thematic survey, there was an increase as 61 participants indicated that the motivational reason for continuing to online grocery shop was for a feeling of accomplishment. Rebekah, a 26-year-old female from Texas, shared, "I mean, I felt like I just quickly add things to a cart or on an app and

went and picked it up, and that was . . . like that saved me at least an hour and a half, I feel like, um, that would've been spent away from my house or my family, so that was pretty, pretty good tradeoff, I thought."

Achieving full potential was the fifth motivational need explored for online grocery shopping. Maslow's Hierarchy of Needs defined achieving full potential as the realization of one's potential and peak experience (Maslow, 1943). In the thematic survey, 41 participants indicated that they started online grocery shopping to achieve their full potential. MariAnn, a 54-year-old female from Texas, described achieving full potential: "I try to do everything I need to do or feel I need to do in life without it being over, overwhelming. Slowing down enough to enjoy it and thrive on life rather than just getting through it. Later in the thematic survey, 66 participants indicated that they continued online grocery shopping to achieve their full potential. Tara, a 33-year-old female from Texas, shared, "I don't feel like I'm wasting time. I go in, I pull up, they [store employee] bring my groceries to me, and I'm out, and I'm not, um, I'm not wasting any time, and I am able to be my best self in that situation. I go home, I don't dread unloading them. I don't dread, uh, putting them away. Like it's just quick and efficient. And I feel like, at that point that I can move on to the next task because I have, I do have 8,000 things going on at once that I have to accomplish, that just helps me be one step closer to accomplishing everything."

Although not every participant selected each of Maslow's Hierarchy of Needs for online grocery shopping, communication between humans and machine is a motivational factor for online grocery shopping. The motivational factor involved digital technology for human communication (Ruben et al., 2021) to fulfill the individual's desires and needs for grocery shopping. The motivational factors for the adaption of online grocery shopping extended from

Maslow's Hierarchy of Needs. Participant's responses in the in-depth interviews for Maslow's Hierarchy of Needs highlighted similar driving forces for online grocery shopping, which involved time-saving, efficiency, ease of use, and convenience. Technology adoption and diffusion of innovation is a social phenomenon that attributes to behavioral characteristics concerned with individuals needs and desires based on the perceived ease of use and perceived ease of usefulness (Abrahamson, 1991; Rogers, 1995). The commonalities from the motivational factors impacted the participants' attitudes and behaviors to adapt to online grocery shopping.

Timesaving was the common theme identified in unified theory of acceptance and use of technology. For participants, timesaving demonstrated performance expectancy. Performance expectancy is defined as how using technology provides benefits to the consumer when performing certain activities (Venkatesh et al., 2012). Shanna, a 50-year-old female from Texas, said, "Time-saving, and they had it already and everything." Yolanda, a 48-year-old female from Texas, said, "In my busy world, it saves me time." The online grocery shopping communication channel showed how the machine limits the performance of the individual, which generates a motivational factor for users to continue using the digital platform.

Efficiency was the second common theme identified in unified theory of acceptance and use of technology. Participants expressed that efficiency ties into effort expectancy. Effort expectancy is the ease of use of a technological system (Venkatesh et al., 2003). Jessica, a 42-year-old female from Texas, said, "I end up loving it, and I'm like, "Why did I wait this long?" She expressed, "I always enjoy learning things that make me more efficient." Effort expectancy is showing how a determinant motivational factor impacts the behavior intention. Catie, a 36-year-old female from Texas shared, "It, it probably goes back to like efficiency and shopping, you know, getting all the right things and, and then having like a plan." The efficient attitude and

behavior from online grocery shopping influenced the continued usage of online grocery shopping.

Ease of use was the third common theme identified in unified theory of acceptance and use of technology. Perceived ease of use relates to effort expectancy (Davis, 1989) of navigating mechanical systems, which is tied to the user's efficiency and familiarity with the technology. The majority of the participants indicated that online grocery shopping brought a sense of ease for purchasing groceries. Tiffany, a 28-year-old female from Texas, said, "And then I went from there and just bought my groceries, and it, it was just easy." Online grocery shopping introduced a simplified version of grocery shopping for individuals. "At this point, it's easy because now since I do it every week, then it, most of my basic grocery things that I order every single week are already sitting there, so now instead of, you know, it literally takes five minutes to order groceries," said Sonja, a 45-year-old female from Texas.

Convenience was the fourth common theme identified in unified theory of acceptance and use of technology. Perceived usefulness is understanding human-computer interactions as it correlates to behavioral intentions (Davis et al., 1989). All participants expressed how convenience is needed to adapt to technological advancement. The measure of adoption rates for online grocery shopping was based on the individual's attitude (Al-Rahmi et al., 2019; Attire & Meyer-Waarden, 2022; Yuen et al., 2020). Latisha, a 42-year-old female in Texas, shared, "So it's very, very convenient, and I don't have to go anywhere." Perceived usefulness is when an individual believes the idea will enhance the performance of the task (Davis et al., 1989; Liu & Chou, 2020). Perceived usefulness changed the attitude of online grocery shopping as it involved the psychological belief of enhancing grocery shopping for the user. Enhancing the performance

of the task include decreasing time, achieving more efficiency, and increasing accuracy (Phillips et al., 1994; Sreeram et al., 2017).

Technology has emerged as a basic need of life as technical systems helped individuals satisfy their needs to measure physiological functioning (Sharma et al., 2020). The research determined that Maslow's Hierarchy of Needs model explored the everyday motivational needs as it impacted human behaviors and attitudes towards online grocery shopping. The research question explored Maslow's Hierarchy of Needs, Sociopsychological, Technology Acceptance Model, and UTAUT.

RQ2: How is trust communicated in the utilization of online grocery shopping?

Technology continues to accelerate and can change people's demands, attitudes, and behavior. Trust is a complex matter of diverse factors, including feelings, resistance to change, fear of uncertainty, fear of digital technology, and feeling loss of power. Trust is an ambiguous term measured by the individual's view and willingness to let feelings of uncertainty not control their attitudes or behavioral intentions.

Before trust can begin, people must be open to trying a new idea. The innovation of an idea involves adopting, implementing, and incorporating new practices (Osayawe-Ehigie & McAndrew, 2005). Participants shared what made them anxious about trying online grocery shopping in the survey. Kelly shared, "Not getting the quality of produce I would pick out myself in-store." Holley shared, "The fruit and veggies not being fresh, substitutions, missing items." Casey said, "The order items not being available and not being able to choose my own substitute like I would in-store." Trust affects all social interactions and exchanges as it reduces the complexity of human conduct in situations of uncertainty (Luhmann, 1979). Uncertainty is a lack

of predictability, information, and structure. Rogers and Kincaid (1981) viewed information as a matter-energy that affects uncertainty with a set of alternatives.

After individuals surpass the uncertainty of online grocery shopping, they start evaluating the benefits of incorporating online grocery shopping into their life. A person's behavioral intentions are determined by attitude and subjective norms. The Technology Acceptance Model is used to understand human-computer interactions based on perceived usefulness and ease of use to determine behavioral intentions (Davis et al., 1989). Perceived usefulness is when an individual believes an idea will enhance the performance of the task (Davis et al., 1989). Online grocery shopping had to show a sense of ease that in-person grocery shopping did not fulfill for the participant. The perceived ease of use is determined by skipping the process of grocery shopping and immediately checking out. Catie, a 36-year-old female from Texas, shared, "Add those things to my cart." She later explained, "So, it's really easy for me to it go like, you know, like I said, like milk, eggs, cheese." Tiffany, a 28-year-old female from Texas, said, "And then I went from there and just bought my groceries and it, it was just easy." Perceived usefulness needs to be established once perceived ease of use is determined. Perceived usefulness is when an individual believes the idea will enhance the performance of the task (Davis et al., 1989). Laura, a 44-year-old female from Texas, said, "It was just more convenient, you know, just from a time factor to pick her up from one activity, run to the grocery store, sit there for five minutes, and let them load my groceries and take them home. After an individual's determined online grocery shopping could provide a sense of ease and usefulness, the trust begins.

Trust towards technology is an object of trust between humans and computer agents (Bart et al., 2005; Corritire et al., 2003). Individuals are willing to trust technology with a store brand that has already established a trust for them. All interview participants named particular grocery

stores they prefer to shop at, and some said that they would travel for their online grocery order. Ally, a 29-year-old female from Texas, said, “So, I use H-E-B grocery pickup now. So, I definitely love that versus Walmart because there’s a lot more variety of good foods and a lot more items that I prefer at H-E-B.” Debra, a 67-year-old female from Texas, said, “Well, the first one that I ever did was with Sam’s, and it was just tremendous because my trips to Sam’s, well, I, I never would go to Sam’s if I didn’t spend $150 or $200.” Sarah, a 41-year-old female from Tennessee, said, “Most of the time, it’s Walmart.” People build a relationship with their preferred grocery store.

With technological advancements, the communication process with technology is speeding up the exchange rate. Communication is the foundation for how trust is established between machines and humans. With online grocery shopping, communication channels involve typing, reading, images, and audio. McLuhan (1964) described how the medium (channel) influenced how the message is perceived by the receiver as Shannon and Weaver (1971) focused on the media analysis of what communication channels were used to send the message.

In verbal communication, the sender uses words to code to communicate a message, and the receiver decodes the words to generate an understanding and meaning to the message (Jiang et al., 2021). Written communication involves sending messages in letters and numbers for the receiver to decode the intended message, including typing and reading (Bowen & Waes, 2020). The symbolic channel includes symbols and visuals that hold emotional content (Venzin, 2017). The process of communication channels occurs when the sender (the user) shares their desires and needs with the receiver (the machine). Trust develops based on feedback. Feedback is how the receiver responds to the information provided by the sender (DeVito, 2018; Shannon & Weaver, 1971). Lauren, a 28-year-old female from Texas, said, “Um, honestly no. Sometimes I

even get like texts saying couple of things are being substituted and I never even check that. I usual just like, okay, I trust them to get whatever is, like, most like whatever I needed within the same price point" (Lauren, personal interview, January 8, 2022).

Communication plays a role in the development of trust, as each part of the process is a building block to establishing a relationship with online grocery shopping. In online transactions, the ability to see and try products before buying is absent (Josang et al., 2007; Rose et al., 2011). Without the physical touch, trust is obtained differently with technology as it relies on the cybernetic tradition. A cybernetic approach helps explain technology acceptance and avoidance behaviors (Stich et al., 2019). Participants must have three levels when communicating with online grocery shopping. First, the technical issue explores how accurately symbols of communication can be transmitted to the receiver. MariAnn, a 54-year-female from Texas, said, "And the store has even gotten it down to a science with things like avocados." The second is the semantic problem that explains how precisely the transmitted symbol conveys the desired meaning (Downs, 2007). MariAnn later explained, "They will, they have a scale on there where you can go on and choose …" The effectiveness problem describes how effectively a received meaning is conducted in the desired way (Downs, 2007). MariAnn shared, "And they'll say, 'Do you want avocados that are gonna ripen in one to two days? Do you want ones that are ripe right now?' And you can tell them exactly what you want, and they try to do that" (MariAnn, personal interview, January 7, 2022).

A system of interacting components takes inputs from the environment as it processes and creates outputs back into the environment (Gen-Bahg, 1990). Participants shared how they received constant communication through text messages or mobile application notifications during the online grocery shopping process. Five participants shared how product substitutions

made them anxious. During the interview, participants shared how they viewed product substitutions after the experience. Ally, a 29-year-old female from Texas, said, “They’ll [store] have me approve the substitutions, so I can go in there and be like, yes, this is fine to substitute, this is not fine to substitute” (Ally, personal interview, January 6, 2020). Latisha, a 42-year-old female from Texas, said, “They don’t just throw it in my basket, and I have to accept it” (Latisha, personal interview, January 17, 2022).

Another trust barrier was employees selecting produce items. The researcher explored freshness. The results of participants in the thematic survey ranking freshness showed 122 responses for being the second most available aspect of online grocery shopping. Within the 122 responses, 16 of the interview participants shared how that is what they were anxious about before trying online grocery shopping. Participants expanded on their experience. Taylor, a 30-year-old female from Texas, said, “I’ve never had a problem as far as not having fresh items.” Bonnie, a 69-year-old female from Texas, shared, “I’ve never had a problem as far as not having fresh items. So, um, I guess I’ve never seen that as a problem. But I, I do know, you know, I probably would not be happy if I were getting things that, that like meats and, and bread and stuff that, that were not fresh. But I’ve never had that problem” (Bonnie, personal interview, January 5, 2022).

As the communication between machines and humans occurred throughout the process of online grocery shopping, trust grew. In the thematic survey, 292 participants shared that their opinion of their first online grocery shopping experience was very satisfied or satisfied. Participants in the interview expressed the impact of first impressions when adapting online grocery shopping. Linnea, a 63-year-old female from Tennessee, said, “First experience being a good experience, it, it encouraged me to, ‘Okay, well, that was good, so the next time’s gonna be

okay also' (Linnea, personal interview, January 6, 2022). MariAnn, a 54-year-old female from Texas, said, "If it worked, meaning if the way the system was supposed to work." She later expressed, "If it actually worked as far as did I get the right groceries that I ordered." Trust was established based on the goals of the individual.

Trust did not stop building after the first impression of online grocery shopping. In the thematic survey, 299 participants rated their overall online grocery shopping experience as very satisfied and satisfied. Linnea, a 63-year-old female from Tennessee, said, "It was, it was good. I ordered what I needed, and then I went to the, uh, I picked it up at the store." She later explained, "It was a good experience." Lauren shared, "Um, it just made it easy cause I had family out, um, so, we had visitors, and I really didn't want to take time away from them to go grocery shopping. So, I was able to get everything I wanted to make for dinner that night easily, and it took maybe like 20 minutes to get it."

Trust and adaption correlate. After participants established trust with online grocery shopping by continuing to use the platform, satisfaction had to be maintained. Satisfaction and trust were determined as an essential context to maintain relationships with consumers. Ally, a 29-year-old female from Texas, said, "I was just more so shocked and happy about how easy it was. Um, and then very satisfied for me definitely means, like, I wanna do it again."

I explored "what leads to trust with online grocery shopping users in the United States." I determined that effective communication builds trust based on the literature review, thematic survey, and in-depth interviews. The research question explored communication, communication channels, TAM, and UGT related to themes established in the previous section.

RQ3: How does familiarity with computer-mediated-communication contribute to behavioral intentions, perceived usefulness, and perceived ease of use with communication in online grocery shopping?

Behavioral intentions mediate the relationship between individuals and technology acceptance. Behavioral intention is defined as the strength of an individual's desire to perform a behavior (Davis et al., 1989; Fishbein & Ajzen, 1975; Venkatesh & Bala, 2008; Venkatesh et al., 2003), which is intended for individuals to accept a particular process (Davis, 1989; Davis et al., 1989; Dwivedi et al., 2011; Venkatesh, 2000; Venkatesh & Bala, 2008; Venkatesh & Davis, 1996, 2000; Venkatesh et al., 2003). The Theory of Reasoned Action ties into social psychology as it explores the human behavior for explaining technology adoption (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975; Venkatesh et al., 2003). The current research showed that personal behavior habits contributed to familiarity with online grocery shopping.

Trust is developed as potential users decide to adopt or reject an innovation based on beliefs formed by the invention (Agarwal et al., 2000). The beliefs stem from the individuals' ideas on viewing technology and willingness to adapt to online grocery shopping. Tara, a 33-year-old female from Texas, said, "I'm confident in it [technology]. I have all of the . . . I don't know a time in my life when I didn't have technology." She later shared, "Like we've always used computers. We've always . . . um, I had the first iPhone when that came out. I've had laptops and iPads and tablets and all of the, all of those things." There are four main interacting elements for behavioral intentions to change, which include (a) innovation, (b) communication with specific channels, (c) social system, and (d) time. Innovation involves technological advancements creating or improving a product or service that can symbolically represent a change in the meaning of the product or service (Varadarajan, 2018). The link between

innovation and adoption depends on the psychological and environmental variables of an individual's needs. Second, communication with specific channels is how the message is shared to an individual to bring awareness to the innovative idea by effectively providing information (Rogers, 2003). The social system includes individuals, groups, organizations, or subsystems. Last, time is dispersed in two ways: (a) the innovation-decision process and (b) the innovation rate of adoption in the system. The innovation-decision-making process is when an individual moves from knowledge of the new idea and forms an attitude towards the innovation. The innovation rate of adoption is the speed of a social system adopting a new idea.

UTAUT directly links how, when, or if an individual will adapt to technology. The psychological factors involve personal effects, personalities, traits, perception, and cognition, motivation (Greene, 1989). Kylie, a 32-year-old female from Texas, said, "I've used it [technology] every day, whether at work or at home." She later shared, "I personally like it. I think it's a positive thing. I think it's how our world goes around. Um, those with technology get things done quicker, I think, than those without it. And so I happen to, to really like technology." The sociopsychological tradition in communication focuses on persuasion and attitude change through human development, process, and strategy messages that affect the messaging on individuals (Hewes & Planalp, 1987). Laura, a 44-year-old female from Texas, expressed her first impression of online grocery shopping by saying, "So, this is gonna sound really mean, but I thought it [online grocery shopping] was a total waste of time. Um, I thought that it was just some bougie little thing for people who wanted somebody else to do their work for them. Um, I really didn't see the point in it, you know. I didn't have a need at that time." Now Laura shared how her attitude and viewpoint of online grocery shopping changed after adapting by saying, "I think it's an incredibly valuable tool."

UTAUT is an alternative theoretical model that ties into the Technology Acceptance Model and Diffusion of Innovation Theory (Escobar-Rodriguez & Carvajal-Trujillo, 2014). The theory explores adaption with consumer contexts among mobile banking (Zhou et al., 2010), mobile phone technologies (Lu et al., 2005; Park et al., 2007; Wang & Wang, 2010; Zhou, 2011), Internet banking (Abushanab & Pearson, 2007; Im et al., 2011; Riffai et al., 2012), and online purchase intentions (San Martin & Herrero, 2012). I explored how previous experiences with direct deposit, online shopping, and website navigation brought a subconscious mindset with familiarity related to their behavioral intentions and sociopsychological traits. First, the comprehensive approach emphasizes the importance of extrinsic motivations as the construct has shown predictors of behavioral intentions (Venkatesh et al., 2012). Individuals have different reasons and motivational factors contributing to why they started online grocery shopping. Rebekah, a 26-year-old female from Texas, shared, “I started online grocery shopping when he [son] was born, and that was a game-changer for me.” Second, effort expectancy form views about the overall effort associated with the acceptance and use of technology (Venkatesh et al., 2012). Effort expectancy involves the relationship between effort and the performance achieved. Catie, a 36-year-old female from Texas, “It, it probably goes back to, like, efficiency and shopping, you know, getting all the right things and, and then having, like, a plan.” The idea that online grocery shopping brings efficiency into an individual’s life is a measurement level of ease of use. Third, UTAUT incorporates an underlying theoretical mechanism that drives human behavior and intentions (Venkatesh et al., 2012). Tyger, a 52-year-old female from Texas, shared, “I think I adapt. I don’t think I move backward. I think I keep going forward.” She later expressed, “So once I’ve learned a new way or an easier way or something, I will continue to use that rather than fall back on something that had been comfortable before.”

UTAUT explains future intentions to use technology from past and present use of technological adoptions (Escobar-Rodriguez & Carvajal-Trujillo, 2014). An individual's opinion towards technology reflects how accepting and adaptable they are to new ideas. However, previous experience with technology has an impact on behavioral intentions. The researcher recognized how the cybernetic tradition, trust, and the Uses and Gratification Theory establishes familiarity with past technologies.

The first past technology that I explored was direct deposit. All interviewees indicated that they use direct deposit for money transactions. In the thematic survey, 272 participants indicated that they were very satisfied or satisfied with direct deposits. Lauren, a 28-year-old female from Texas, shared, "That [direct deposit] is how I have always been paid um, and so that is just kind of, um, how it happens, and we just expect it on a certain day and it's there and it is very convenient." Lauren showed how she adapted to direct deposit as it brought a sense of usefulness by being convenient in her life. Lauren also shared, "If I know that it is coming on a Tuesday like we almost always get them on a Tuesday I don't check like on Tuesday mornings to see if it is there, um, but at some point, I will look but I don't worry that it is not going to be there." The money deposited into the account is a written communication that informs the individual that money was deposited into the account. The computer-mediated communication adapts to text-based channels, allowing the sender and receiver to communicate in a medium (Walther & Burgoon, 1992). Lauren explained why she checks her bank account by saying, "The check varies from, uh, month to month or like every two weeks it just kind of depends on husbands' overtime and stuff like that, so it usually just to kind of see like how much it is." Lauren indicated that trust was established between machine and individual as the focus for checking the bank account depends on knowing her husband's check amount for the month and

seeing if money was deposited into the account. Trust is developed through social norms, habits, beliefs, and previous experience (Abbasi et al., 2011). Lauren expressed that she doesn't remember when she had an issue with her money deposited into her account. Lauren shared how her overall experience was satisfying by saying, "I mean that is really helpful." Uses and Gratification Theory offers an understanding of media usage, predicting media usage, and the potential of reoccurring use (Dwyer et al., 2007; Foregger, 2008; Kaye & Johnson, 2002). In Lauren's experience, the reoccurring use stems back to when she was a teenager at her first job, and now, she cannot envision having to go back into the bank and finds it inconvenient.

The second past technology that the researcher explored was online shopping. All the interview participants indicated that they actively use online shopping resources to make purchases, whether through a website or mobile application. In the thematic survey, 278 participants indicated that they were very satisfied or satisfied with online shopping. Tyger, a 52-year-old female from Texas, shared, "I do a lot of online shopping, so I . . . Like, I'll order f-like, for stuff from Amazon or other different places, and I do a lot of grocery shopping now, um, online, just because it's easy…" She later expressed, "Because I can sit at my house and be awake at 11:00 and go. So, it's a useful tool." Tyger described the convenience and how it cost more for convenience but didn't impact her behavioral intentions adapting to online shopping. In the unified theory of acceptance and use of technology, the theoretical framework involves the individual's ability to rationalize and consider the implications of their actions when deciding to perform a given behavior (Ajzen & Fishbein, 1980). Tyger, a 52-year-old female from Texas, expressed,

> I wasn't worried about the convenience as much, because if I'm gonna commit to online shopping, I know that I'm gonna have to pay fees. That's like if I buy

> tickets for the movies online, I'm paying extra fees too. Um, so that, I was like, "I don't . . . I'm not a . . . That's not a big concern for me, because I already know that I . . . Someone's job is now to shop for me, and someone's job is to deliver 'em for me, and if I'm paying a fee for that to happen, I'm not as . . . That's not that big a deal. It wasn't going to be the reason why I didn't do it. (personal interview, January 18, 2022)

With online shopping, the communication is written and visual as the typed words pop up an image for the individual to see before purchasing. The evolution of nonverbal communication has changed the way people understand and recognize visuals to express computer nonverbal communication (Gon et al., 2019). Tyger shared,

> "I was sitting here at my kitchen table. I was like, 'Hm, you know, the kids I'm working with are really struggling with multiplication, so let's see what Amazon has, because I know I can go to the dollar store and spend a dollar apiece on the multiplication flashcards if I can find them.' The last time I looked, couldn't find 'em. But I knew Amazon would, so I went onto Amazon. I'm like, 'What do they have for multiplication cards? Oh, that's what I want. Throw a bunch of those into my, my cart. All right, what about dice games? I wonder what kind of dice games they have for multiplication.' Look that up, check out, you know, 'Oh, do people like this? How hard is this game gonna be to learn? Because I don't want something that's gonna take me 45 minutes to explain to the kids, 'cause we only have an hour. Um, all right, that one looks really good. Throw that one into my cart.'"

Trust technology reassures that task is completed the way it was claimed (Shapin & Schaffer, 1985). Tyger shared, “So, I threw that in my cart. And then I look, and it’s all gonna be delivered, some tomorrow, some on Thursday. S- So easy, because now the stuff’s gonna come to my house again.” Tyger shows a sense of with technology as she expresses the packages arriving to her house “again,” which indicates familiarity with online shopping. Uses and gratification theory obtains motivational factors for studying gratification usage and the impact on individual behaviors and attitudes (Bumgarner, 2007; Pai & Arnott 2013; Quan-Hasse & Young, 2010; Raacke & Bonds-Raacke, 2008). Tyger shared, “So, I absolutely love online shopping.” Tyger’s familiarity with online shopping shows a behavioral intention to continue using the digital platform.

The last previous technology that I explored was website navigation. All the interviewees expressed a sense of ease when using website navigation. UGT shows a relation between perceived usefulness and perceived ease of use as it mediates perceived ease of use on attitude (Moon & Kim, 2001). Ally, a 29-year-old female from Texas, shared, “They’ve [websites] always, for the most part, been easy for me.” Navigating a website develops trust with the individual. Ally shared, “I’m pretty comfortable. I don’t really have a problem, like, entering my card information. Of course, if it’s a sketchy website, then I won’t, but kind of the most part, I’ll just look through and make sure that it’s a valid website and then, yeah. I have no problem shopping online.” The perceived ease of use, feeling comfortable navigating a website, and trust correlate to an individual’s behavioral intention and familiarity with using the digital platform. Behavioral intention is perceived as the individual’s way of thinking or feeling that directly reflects the person’s behavior. Ally shared, “I would say it’s pretty- pretty similar across the

board." The behavioral intention shows that previous website navigation influenced the participant to continue the behavior.

As previous adaptions to direct deposit, online shopping, and website navigation, I determined that behavioral intentions of digital technology contribute to familiarity in online grocery shopping systems. Cindy, a 62-year-old female from Texas, expressed how her attitudes and personality towards technology has changed by saying,

> **"**My attitude now is really good. Um, I think technology has really helped a lot by simplifying things for people, especially the elderly who don't, you know, have vehicles, um, they can get groceries online, they can have groceries delivered to them, they can have medication delivered to them. None of this was a possibility 20, 30 years ago." (Cindy, personal interview, January 5, 2022)

Cindy indicated that she uses direct deposit, online shopping, and navigates websites. The personality traits of being open to new ideas led to her adaption of online grocery shopping. A common trait for adapting to the technology involved TAM in the UTAUT as individuals strive for perceived ease of use and perceived usefulness. Cindy affirmed this conclusion when she stated,

> "Grocery shopping online, for me, is very convenient. I can do all my orders, have everything ready. All I have to do after work is pick up my groceries, so it makes it very convenient. I'm not wasting a lot of time. Everything is picked up for me, so I don't have to go into the store where there are a lot of people. Especially now with COVID, we don't wanna get out too much, so it's very

time, uh . . . I save a lot of time when, when I, when I shop online. And it's convenient. I get everything."

As website navigation is familiar to individuals, the same concept brings familiarity when online grocery shopping. Cindy shared, "It went very easily. I needed to get vanilla wafers by Nabisco vanilla wafers, but apparently, they didn't have that brand, so I just looked up vanilla, Nilla wafers and they had, like, two or three other ones. I read up on them and then I picked one of those." Similar behavior intentions were demonstrated in the previous technologies when shopping online and understanding how to navigate a website by searching for an item to purchase. Familiarity shows a level of comfort and trust for individuals, as it refers to the degree of experience and ability to use the online grocery shopping tool. Cindy explained, "I think feeling comfortable with what I'm doing. Now that I'm shopping online more, I get more and more comfortable with it all the time, and then I start to adventure, you know? And I think a lot of that is because I'm comfortable now at doing it, I'm not afraid to do it." The individual is communicating familiarity with online grocery shopping. However, there is also familiarity in online grocery shopping experience through participants' childhood memories. Tara, a 33-year-old female from Texas, said, "She [mom], we went in with a list and if they didn't have like the specific item on her list that she wanted, then we just didn't get it." Creating a list is the connection between in-person grocery shopping that brings familiarity to online grocery shopping. Tara later expressed, "Um, the online grocery, I can make my list. I stick to my list. Online grocery shopping allows me to get everything that I need on my list and not to be distracted or to just bail on it altogether." Tara experienced a behavior when her mom would create a grocery list. The familiarity of knowing a grocery list was used generated a behavioral intention when Tara adapted to online grocery shopping.

Familiarity brings knowledge or mastery that contributes to behavioral intentions. I determined that sociopsychological tradition, cybernetic tradition, UTAUT, trust, and Uses and Gratification Theory impacts familiarity. The current research findings from the literature review, thematic survey, and in-depth interviews showed how similar logistics with previous technology brought a sense of familiarity as behavioral intentions adjusted to the communication change with online grocery shopping.

Summary

The research supported the findings of the three research questions based on the literature review, thematic survey, and in-depth interviews. The literature review identified additional research between the relationship of previous research and the contribution to the current topic of communication alteration with online grocery shopping. Participants in the thematic survey provided insight for me to find commonalities. The participants in the in-depth interview articulated how communication is demonstrated and changed through online grocery shopping. I determined how communication channels expressed trust, motivational factors, and acceptance of technology with online grocery shopping.

Online grocery shopping was discussed as the source of communication alteration among active users who are 25 and older. In the demographic section of the thematic survey, I determined significance by generational usage, employment status, ethnicity, marital status, and household number. The second part of the thematic survey showed significance on motivational reasons, prior media experience, grocery ranking, and device usage.

The in-depth interviews helped explore the logistical reasoning for human behavior and intentions towards technology. The participants indicated practical advantages to adapting to online grocery shopping, such as convenience, timesaving, and ease. Trust was determined by

how participants expressed previous experiences and communicated with the digital platform with product substitutions, fresh food selection, mishaps, and future orders. Lastly, participants shared a linkage between childhood shopping and online grocery shopping, along with the familiarity of adapting to previous technologies as they demonstrate similar processes but different communication skills to complete the tasks. I further explore a discussion of these findings in Chapter Five.

CHAPTER 5: CONCLUSION

Overview

The purpose of the qualitative study was to investigate UTAUT with behavioral intentions, trust, and technology acceptance to understand communication styles changing with online grocery shopping. The research explored how online grocery shopping changes individuals' communication styles. The use of online grocery shopping increased during the COVID-19 pandemic. It abruptly shifted individuals' trust, behavioral intentions, and technology acceptance. The research examined UTAUT, cybernetic tradition, sociopsychological tradition, TAM, Maslow's Hierarchy of Needs, trust, familiarity, and more. The findings discussed in Chapter Four will create future research in the field of communication and digital technology for academic scholars.

Chapter Five summarizes the study's findings based on the participant's responses in the in-depth interviews. The purpose of Chapter Five involves the concepts of conclusions, interpretations, and recommendations as it provides a basis in the study, along with credibility from prior literature. This chapter consists of five sections: (a) a summary of the findings, (b) a discussion of the findings and the implications in light of the relevant literature and theory, (c) an implications section (methodological and practical), (d) an outline of the study delimitations and limitations, and (e) recommendations for future research.

Summary of Findings

I implemented a qualitative study methodology to explore three research questions in the United States. The research design included a thematic survey that encompassed demographic information and conducted in-depth interviews. I coded the data collected from the thematic

survey and interviews on the concepts from the literature review and viewed them with a communication in philosophy theoretical lens.

Research Questions

This research study was guided by exploring behavioral intentions, trust, and technology acceptance as it investigates communication changes using UTAUT with online grocery shopping. The study examined the following three questions:

1. How does an individual communicate motivational needs in adapting to online grocery shopping?
2. How is trust communicated in the utilization of online grocery shopping?
3. How does familiarity with computer-mediated-communication contribute to behavioral intentions, perceived usefulness, and perceived ease of use with communication in online grocery shopping?

Discussion

The first part of the study examined the thematic survey that demographic statistics to measure the target population's characteristics. The significance found from the demographic survey involved gender.

Demographic Survey

I analyzed the demographic section of the thematic survey to explore age, gender, ethnicity, household income, income, location, and more for online grocery shoppers. The demographic survey helped determine a correlation between individual demographics and thematic analysis.

Gender

From the survey, 160 participants identified as women (47%), and 177 participants identified as men (53%). Of the interviewees, all were female. The results showed significance as the gender offered an updated empirical knowledge about gender practices, sociopsychological traits, and norms for a female perspective for online grocery shopping. The significance of only females participating in the in-depth interviews reflected gender roles and how that impacted their mindset about grocery shopping.

Thematic Survey

I analyzed the thematic survey section to explore adaption rates, motives, experience, trust, and communication through online grocery shopping. The in-depth survey expanded on the responses from the thematic survey section.

Hesitation

Based on the responses, 180 participants said they were not hesitant to online grocery shop (53%), and 157 participants said they were hesitant to online grocery shop. Participants that indicated hesitation ranked the provided reasons on why there was hesitation with online grocery shopping.

Table 13

Thematic Analysis: Participants Hesitation Responses

Participants Ranking Order	1	2	3	4	5
Product Cost	41	45	54	19	21
Convenience Fee	36	38	41	53	10
Employee Selecting Product Items	45	45	36	44	11
Product Substitutions	45	38	34	46	14
COVID-19	11	11	15	18	123
N/A	8	6	4	4	7

The interviewees that participated in the interview included 60% yes and 40% no.

Table 14

Thematic Analysis: Interview Hesitation Responses

Interviewee Hesitation Ranking	1	2	3	4	5
Product Cost	2	3	7	2	4
Convenience Fee	1	3	7	2	4
Employee Selecting Product Items	2	3	6	2	4
Product Substitutions	2	3	6	2	3
COVID-19	2	3	6	2	3
N/A	3	3	6	2	3

Timeframe

The results showed that 116 participants started online grocery shopping within the past two years (34%), 86 participants began online grocery shopping more than two years ago (26%), 82 participants started online grocery shopping within the last year (24%), 31 participants started online grocery shopping within the past six months (9%), and 22 participants started online grocery shopping within the past nine months (7%).

The results based on the interviews indicated that eight participants started online grocery shopping within the past two years (32%), 10 participants started online grocery shopping more than two years ago (40%), three participants started online grocery shopping within the past six months (12%), three participants started online grocery shopping within the last year (12%), and zero participants started online grocery shopping within the past nine months (0%).

*Why Start Online Grocery Shopping***?**

Based on the survey results, 214 participants selected basic needs (63%), 167 participants selected safety (49%), 70 participants selected friend/partner influence (21%), 34 participants selected feeling of accomplishment (10%), and 41 participants selected achieving full potential (12%). The results based on the interviews participants indicated 14 participants selected basic needs (56%), nine participants selected safety (36%), eight participants selected friend/partner

influence (32%), four participants selected feeling of accomplishment (16%), and six participants selected achieving full potential (24%).

Reason for Continuing Online Grocery Shopping

Based on the results, 216 participants indicated basic needs (64%), 171 participants indicated safety (50%), 45 participants indicated friend/partner influence (11%), 61 participants indicated feeling of accomplishment (18%), and 66 participants indicated achieving full potential (19%). The results based on the interview participants indicated 17 participants selected basic needs (68%), eight participants selected safety (32%), one participant selected friend/partner influence (4%), five participants selected feeling of accomplishment (20%), and nine participants selected achieving full potential (36%).

Motivational Ranking

The results show that a majority of the respondents selected convenience as 1 (43%), price as 2 (52%), freshness as 3 (26%), and customer service as 4 (six%). The results based on the interview participants selected convenience as 1 (56%), freshness as 2 (52%), price as 3 (48%), and customer service as 4 (14%).

How Often

Based on the respondents, 129 participants indicated weekly (38%), 100 participants indicated bi-weekly (30%), 60 participants indicated monthly (18%), 32 participants stated a few times a week (nine%), 12 participants indicated not often (four times), and four participants indicated every day (less than 1%).

The results based on the interview participants indicated 10 participants selected bi-weekly (40%), five participants selected monthly (20%), seven participants selected weekly

(28%), one participant selected a few times a week (4%), and one participant selected not often (4%).

Participants Technology Type

Based on the respondents, 189 participants indicated using their computer (56%), 137 participants indicated using a mobile phone (41%), and 11 participants indicated using a tablet (3%). The results based on the interview participants indicated 18 participants selected a mobile phone (72%), four participants selected a computer (16%), and three participants selected a tablet (12%).

Participants Normally Grocery Shop

The responses indicated that 139 participants shop online (41%), 133 participants shop a mix between online and in-person (39%), 59 participants shop in-store (18%), and six participants shop in local markets (2%). The results based on the interview participants indicated 14 participants selected online (56%), four participants selected in-store (16%), 6% selected a mix between online and in-store (24%), and zero participants shop at local markets (0%).

Spent on Groceries Per Month

Based on the interview respondents, 114 participants indicated $300 and up per month (34%), 104 participants indicated $200–$299 per month (31%), 88 participants indicated $100–$299 per month (26%), 28 indicated $50–$99 per month (eight%), and three participants indicated $0–$49 per month (1%).

Based on the interview respondents, 15 participants indicated $300 and up per month (60%), six participants indicated $200–$299 per month (24%), four participants indicated $100–$299 per month (16%), 0 indicated $50–$99 per month (0%), and zero participants indicated $0–$49 per month (zero%).

Experience Ranking

The results showed that participants were satisfied and very satisfied 87% of the time first online grocery shopping experience, 81% of participants with direct deposit, 82% of participants with shopping for non-grocery items, and 89% of participants with their overall online grocery shopping experience. The results based on the interview participants showed that satisfied and very satisfied received 92% of participants with their first online grocery shopping experience, 92% of participants with direct deposit, 88% of participants with shopping for non-grocery items, 92% of participants with their overall online grocery shopping experience.

How Likely

The results showed the responses for very likely and likely for receiving the items on their grocery list (89%), continuing online grocery shopping (91%), planning their meal schedule (43%), recommending online grocery shopping (80%), and following a website suggestion (44%). The results based on the interview participants showed the responses for very likely and likely of receiving the items on their grocery list (96%), continuing online grocery shopping (96%), planning their meal schedule (64%), recommending online grocery shopping (92%), and following a website suggestion (40%).

Ease of Use

The results showed participants ranking for very easy and easy for finding cereal (90%), online scheduling order (86%), quick add an item to cart (88%), and accessing account information (85%). The results showed participants ranking for very easy and easy for finding cereal (96%), online scheduling order (100%), quick add an item to cart (92%), and accessing account information (100%).

Maslow's Hierarchy of Needs

The results showed participants ranked strongly agree and agree for more convenient (89%), timesaving (89%), safe (82%), and fulfilling (59%). The results showed participants ranked strongly agree and agree for more convenient (96%), timesaving (96%), safe (92%), and fulfilling (64%).

Sources of Cybernetic Tradition and Communication Challenges

First Impression Matters

Participants in the interview explained the importance of first impressions and how it directly impacts their behavioral intentions. Many participants reported that first impressions mattered for continuing online grocery shopping. A first theme identified with cybernetic tradition is "first impression matters."

A cybernetic approach helps explain technology acceptance and avoidance behaviors (Stich et al., 2019). For participants in the study, a satisfying first experience communicated a behavioral intention and attitude to try online grocery shopping again. MariAnn, a 54-year-old female from Texas, said, "If it worked meaning if the way the system was supposed to work. If it actually worked as far as did, I get the right groceries that I ordered" (MariAnn, personal interview, January 7, 2022). Linnea, a 63-year-old female from Tennessee, said, "First experience being a good experience, it, it encouraged me to, 'Okay, well, that was good, so the next time's gonna be okay also,'" (Linnea, personal interview, January 6, 2022). The communication between machines and humans played a role in the experience as it projected the consumers' grocery needs.

The findings suggested that the cybernetic tradition involves multiple factors such as interaction, information processing, and feedback to reach the individual's goal. Due to the first

impression, the cybernetic tradition was achieved as the participants did not show avoidance behavior or a negative attitude after completing their online grocery shopping experience. Participants shared how the experience with verbal and nonverbal communication interactions with searching items, checking out, consistent updates, available time slots, receiving requested items that were fresh, and ease of pickup led to their adoption of online grocery shopping. The communication between humans and online grocery shopping changed the way individuals communicated purchasing produce items.

Recency

After participants discussed their first impressions and experience with online grocery shopping, I explored their previous online grocery orders. Participants communicated how they continue to have similar experiences as their first impression. Some participants' experiences reflected discrepancies in the interviews, but they did not detour their overall impression of online grocery shopping. A second theme determined for cybernetic tradition involved "recency."

The circularity relationship is understood as technological advancements affecting the informed action, while the human continues to act according to the informed action (Sweeting, 2015). The practice leads to new ways of acting that alter cultural identity and acceptance. Holley, a 25-year-old female from Texas, said, "I ordered a cleaning supply. And when I got my groceries, they [groceries] were covered in the bleach cleaning supply. It didn't really affect, um, the next time I grocery shopped . . ." (Holley, personal interview, January 7, 2020).

The findings suggested that the cybernetic tradition expands past first impressions. The communication between online grocery shopping and the consumer required consistency to determine continued behavioral intentions, trust, familiarity, and attitude. The majority of the

participants expressed how their previous experience was consistent with their first experience. However, a few participants shared how their previous online grocery shopping experienced discrepancies such as forgetting an item, taking a long time to pick up items, substitutions, or other issues. Although the participants experienced discrepancies, they did not deter individuals from continuing to online grocery shop. Participants did not experience hesitation after discrepancies and did not impact participants' behavioral intentions and attitudes. With the consistent pattern of positive experiences and effective communication between the online platform and the individual, trust was developed that the next experience would reflect their prior positive experiences.

Mobile Applications

Participants in the interview shared how they communicate with different mobile applications on their phones to place online grocery shopping orders. Mobile applications are a system that many participants use to communicate their needs to reach their goals. The third theme identified in the cybernetic tradition was "mobile applications."

Wiener (1948) explored the concept of communication with technology as he discussed the digital auto as it examined the relationship between bandwidth, noise, and information capacity. The growth in factories and technological activities contributed to communication forming symbols and various channels. Ally, a 29-year-old female from Texas, said, "So it's just easy to just grab it and then open the app and then order from there" (Ally, personal interview, January 6, 2022).

The findings showed that participants use grocery store mobile applications to communicate their grocery items. The mobile application demonstrated a sense of familiarity as participants who had the grocery application also had mobile banking and other shopping

applications like Amazon. The linear communication with mobile applications helped shoppers process information, such as selecting grocery items, providing feedback about substitution updates, order completion, etc. The system allows the app to communicate through notifications or text messages to the individual. As notifications appear, the individual processes the information, and the process creates outputs back into the environment. When participants received notifications that their order was ready, they prepared to head to the store for pick up.

Sources of Sociopsychological Tradition and Communication Changes

Mom Figure

In the interview, all participants indicated that they went grocery shopping with their mom or mother-figure. Participants shared their early childhood memories and experiences on grocery shopping at a brick-and-mortar where mom purchased the necessary grocery items for the family. The participant's childhood grocery shopping experience identified the first theme was "mom."

The study of sociopsychological tradition is geared towards the individuals' social being (Hewes & Planalp, 1987). The social aspect indicated a correlation with the mom-figure going grocery shopping. Kylie, a 32-year-old female from Texas, recalled her experience by saying, "We always went with my mom, was always the one that usually did all the grocery shopping." The childhood communication showed how the child(ren) would attend the chore of grocery shopping with "mom."

The findings indicated that in-person grocery shopping communicated by meeting the needs of individuals for survival. The communication process for grocery shopping reflected identity rules of mom-figures going to the store and taking the child(ren). The child(ren) that are now adults are projecting similar gender roles as the 25 participants expressed that they grocery

shop for the family with their child(ren). Their childhood experiences shaped their adult perception and mindset of being “mom” and grocery shopping.

Walking the Aisles

Participants expressed their childhood grocery shopping experience in the research and shared how they walked down the aisles. The mom-figures would have their list in hand while walking the aisles to collect grocery items. The second theme identified in sociopsychological tradition is “walking the aisles.”

The mind is the focal point for processing and understanding information (Hewes & Planalp, 1987). Participants indicated the process of grocery shopping as walking down the aisles to select items from the grocery list. Ally, a 29-year-old female from Texas said she was “there for two hours sometimes, going through it, ‘cause she would go through every single aisle” (Ally, personal interview, January).

Participants shared that they would walk down the aisles to select grocery items with their mom figures as a child. The aisle communicated how grocery shopping consisted of walking down a narrow section to hand-select grocery items. The purpose of walking the aisles shaped their perception and views for grocery shopping as it communicated the way groceries were selected for purchasing. Online grocery shopping demonstrated familiarity in the process of traditional grocery shopping as a personal shopper would walk down the aisles to select the individuals to produce items. Digital shoppers “walked the aisle” by typing their item in the search bar or quick add, actions that altered their attitude and behavior from their traditional mindset of grocery shopping.

Boring

Participants shared how their childhood grocery shopping experience was boring. The interviewees expressed how the grocery shopping process of going up and down the store was boring and a task they did not connect with doing. Although participants enjoyed the meaning of spending time with their mom figure, a third theme identified with sociopsychological tradition was "boring."

Rebekah, a 26-year-old female from Texas, shared, "Um, so I think we were just ready for, for her to be done. being, as being like more of a chore. It wasn't fun" (Rebekah, personal interview, January 5, 2022).

The findings showed that participants viewed grocery shopping as "boring," as the concept of the idea or task was dull or lacking in interest. Participants described the process as boring and challenging as a child. Grocery shopping was identified as a boring communication identity that shaped their adult perception of being another task to complete to meet basic survival needs. Online grocery shopping altered their traditional beliefs as the participants trusted the digital platform to communicate their desired needs and wants to the personal shopper.

Act Out

Participants expressed going to the grocery store with their mom figure, walking down the aisle to gather grocery items, and the time-consuming and boring process, which led to their behavior inside the store. With participants bored in the store, they share how their behaviors would change with their siblings as they acted out at the store for entertainment. The fourth theme identified in sociopsychological tradition was "act out."

Tyger, a 52-year-old female from Texas, shared, "I also remember my brother and I got really in a lot of trouble, 'cause we were arguing over who was gonna push the cart, and we

pushed it into a display of salad tongs, and we knocked ‘em all over, and then my brother and I had to walk home.”

In the findings, participants shared how they found ways to entertain themselves in the store as a child by acting out to make it more enjoyable to meet their needs. Their childhood experiences shaped their adult perception as being a mom, taking their child(ren) to the grocery store, and experiencing similar habits. Participants find taking their child(ren) to the store stressful and labor intensive. Online grocery shopping changed their behavior intentions and attitudes as the participants parked their vehicle and a personal shopper placed their grocery items into the car.

Sources of Unified Theory of Acceptance and Use of Technology and Communication Changes

Timesaving

Participants shared that their online grocery shopping ordering became quicker. I found the first theme for unified theory of acceptance and use of technology as “timesaving.” Time-saving was determined as the performance expectancy in UTAUT.

Behavioral intention is influenced by performance expectancy and effort expectancy, whether it encompasses age, gender, or experience (Venkatesh et al., 2003). Timesaving affected participants’ experience with online grocery shopping. Yolanda, a 48-year-old female from Texas, said, “In my busy world, it saves me time. The only time that I spend is enough time to go online, click what I need, which takes me, oh, no more than maybe 30 minutes, because they save your previous order” (Yolanda, personal interview, January 10, 2022).

Timesaving for online grocery shopping demonstrated a performance expectancy for individuals. The digital process explained how the user perceived the system in helping them

attain a job performance for grocery shopping. The findings from the study showed relevance for performance expectancy as participants communicated that timesaving was a personal benefit to their adoption as it provided perceived usefulness.

Efficient

Many participants discussed wanting an efficient tool, not wasting time, and being strategic with time. The researcher determined that participants correlated timesaving and efficiency to online grocery shopping. The second theme discovered for UTAUT is "efficient."

Effort expectancy is the ease of using a technological system (Venkatesh et al., 2003), which relates to the perceived ease of use with TAM (Davis, 1989). Participants expressed how the ease of use influenced their behavioral intentions. Jessica, a 42-year-old female from Texas, said, "I end up loving it, and I'm like, 'Why did I wait this long?'" She later expressed, "I always enjoy learning things that make me more efficient" (Jessica, personal interview, January 11, 2022). Participants seek tools that provide efficiency in their daily lives.

In the findings, effort expectancy involved the relationship between the effort and the performance achieved through online grocery shopping. Participants were more likely to adapt to online grocery shopping based on how easy it is for the user to retrieve relevant information through the digital platform within the shortest time possible. Participants shared how effortless it was to place their order as it impacted the performance expectancy of timesaving.

Planning

Participants expressed the process of online grocery shopping as being time-saving and efficient. The participants also expanded on the infrastructure of their perception of the system. Many participants communicated how online grocery shopping changed their behavioral intentions, as the process requires planning groceries in advance for meals. The third theme

identified in the unified theory of acceptance and use of technology for facilitating conditions is "planning."

Facilitating conditions and subjective norms affect behavioral intentions to use technology as it is mediated by attitude toward usage, perceived usefulness, and perceived ease of use (Teo, 2010). Participant's behavioral intentions altered as online grocery shopping requires a degree of meal planning. Taylor, a 30-year-old female from Texas, said, "I really plan out what I'm going to eat." She later expressed, "I plan out my recipes and my meals" (Taylor, personal interview, January 6, 2022).

The participants used the terminology "planning" as a critical element of online grocery shopping, as it communicated a perceived behavioral change. I correlated that the communication infrastructure of online grocery shopping required users to shift in behaviors by becoming a "planner" to optimize performance usage of the digital platform. Online grocery shopping demonstrated familiarity as participants shared their mom figure had a written grocery list. The attitudes and perception of a grocery list became a digital communication channel to perform a similar task they witnessed as a child.

Sources of Uses and Gratification Theory

Satisfied

The majority of the participants ranked their online grocery shopping experience as satisfying or very satisfying, using terminology such as shocked, exceeding expectations, impressive, and other positive words to express satisfying emotions. The first theme I identified in uses and gratification theory is "satisfied."

The theoretical approach focuses on individuals' use of media to fulfill needs, which encourages users to actively seek out media to satisfy the accomplished tasks (Anderson &

Meyer, 1975; Blumler & Katz, 1974b). Online grocery shopping fulfills individual's needs by facilitating the completion of a weekly task. Ally, a 29-year-old female from Texas, said, "I was just more so shocked and happy about how easy it was. Um, and then very satisfied for me definitely means, like, I wanna do it again" (Ally, personal interview, January 6, 2022).

The findings showed a positive attachment for users due to the nature of mobility, constant access, immediate access, psychological reassurance, and instrumentality. Participants chose online grocery shopping to satisfy their needs and desires. Participants shared how online grocery shopping met their motivational needs through Maslow's Hierarchy. Satisfaction was achieved through performance and effort expectancy, which generated a facilitated condition.

Happy

The participants described gratification in online grocery shopping when discussing their recent experience, a positive experience, and the reason for continuous usage. The second theme identified in uses and gratification theory was "happy."

Rebekah, a 26-year-old female from Texas, said, "Yeah, it just, um, I felt happy." She later expressed, "I felt like at peace, um, less stressed, um, more organized, um, I just felt like it was a good use of like m- my time management" (Rebekah, personal interview, January 5, 2022). Taylor, a 30-year-old female from Texas, shared, "I think it's, like, happy, relieved that it's over, yes, checking it off the list" (Taylor, personal interview, January 6, 2022). Amanda, a 39-year-old female from Texas, said, "I don't know if I'd say shocked because . . . I mean, I know myself, and I know that sometimes I can have my own personal bias about things." She later expressed, "I was pleasantly surprised. Um, yeah. So I was . . . I was happy that it, um, worked out so well" (Amanda, personal interview, January 9, 2022).

The findings in the study expressed a nonverbal communication aspect of being “happy” with online grocery shopping. The feeling happiness is a mixture of joy, contentment, and fulfillment. UGT was a motivational factor for gratification usage as users received their items in good quality, on time, and with a feeling of efficiency.

Friendly

Participants discussed gratification with friendly customer service. The third theme I identified for uses and gratification theory was “friendly.”

Lo and Leung (2009) discussed that if users receive gratification in media use, they will develop a favorable attitude that affects their behavior to continue using the media. Online grocery shopping disposed individuals to a favorable attitude. Cindy, a 62-year-old female from Texas, said, “And I’ve had very good experiences. They’re very friendly, they’re very helpful, they’re very kind versus me going into a grocery store” (Cindy, personal interview, January 5, 2022).

The findings showed “friendly” as a practical use and gratification component as the user’s needs, wants, and desires. Friendliness is a direct link to completing the online grocery shopping process by communicating that the personal shopper provided the desired wants and needs.

Customer Service

Participants still want positive customer service in the interview, even when digitally chatting. I identified the fourth theme in uses and gratification theory as “customer service,” as they expressed the importance of feeling like a valued customer.

Uses and gratification theory offers an understanding of media usage, predicting media usage, and the potential of reoccurring use (Dwyer et al., 2007; Foregger, 2008; Kaye &

Johnson, 2002). Online grocery shopping serves consumers, but customer service must be included in digital adaption. Rebekah, a 26-year-old female from Texas, said, “Even if it was convenient but I was being treated disrespectfully, I wouldn’t come back.” She later expressed, “That wouldn’t be worth it, to be treated in a way that was disrespectful” (Rebekah, personal interview, January 5, 2022).

In the findings, participants discussed gratification as personal communication with the personal shopper, along with the cybernetic tradition of communication through the app, emails, texts, and chatbox. Gratification included personal contact as participants communicated through the digital platform, and the personal shopper provided feedback of understanding the desired need of the grocery item. Customer service through the digital platform and in-person contact led to the extrinsic motivations in UTAUT. Customer service involved perceived usefulness and perceived ease of use with satisfying results.

Sources of Communication Theory and Communication Change

Mobile Phone

All participants indicated using and communicating on their mobile phones throughout the day. Many participants communicate using their smartphones to place their online grocery shopping orders. An identified theme in the communication theory is the “mobile phone.”

The source-receiver is a compound term in the communication process, as each person or digital platform is involved in responding and interpreting (DeVito, 2018). The mobile phone serves as a source-receiver in the communication theory as it processes the information sent from the user to complete the grocery order. Lauren, a 28-year-old female from Texas, said, “Um, ‘cause I have it on hand usually it is in the morning when I am sitting with the girls eating

breakfast, um, or I am out and about and need to make an order. Um, I have my phone right there, and I just do it through that" (Lauren, personal interview, January 8, 2022).

Participants expressed their mobile phones being handy and readily available when needed. As participants use their mobile phones, communication occurs between individuals and machines. The user sends messages for their online grocery order, and the device processes the request.

Sources of Communication Channels and Communication Change

Grocery List

In the narrative interview, participants shared that when they went with their mom figure to the grocery store, they communicated a grocery list present in the grocery shopping process. The first theme identified in communication channels is "grocery list."

The written communication process involves the sender touch-typing the device to send a message to the digital platform for decoding (Ledbetter, 2014). Participant's communication style of having a hard grocery list was formerly on a piece of paper where items were marked off with a writing tool. Lauren, a 28-year-old female from Texas, shared, "She would kind of went with her list. I would get to like, um, mark off the list" (Lauren, personal interview, January 8, 2022). The concept of having a grocery list transformed to a digital list as the participants would type in their written order.

All participants indicated that their grocery list functioned as a communication channel of an app or website. As children, participants communicated with verbal and nonverbal communication channels between their mom-figure and child. The verbal communication involved reading off the list to pick out needed grocery items. The nonverbal communication described in the interview was the mom figure crossing off the item from the grocery list when

placed in the basket. With online grocery shopping, the grocery list is still communicated but in a digital aspect as participants input their needed grocery items into the app or website.

Messaging

A majority of the participants expressed a form of computer-mediated communication between interaction and information. Participants expressed how they received constant communication messages from their online grocery shopping experience with updates and notifications. The second theme for communication channels identified was “messaging.”

The new communication technologies have transformed traditional communication media as messages are sent through digitized communication media (Cantoni & Danowski, 2015). During the online grocery shopping process, participants receive digital messages to update their order or indicate when they have arrived to pick up their order. Sonja, a 45-year-old female from Texas, said, “And then when they do the substitutes, I like that they send you a text before you go pick it up to see if these substitutes are what you would like or not” (Sonja, personal interview, January 18, 2020).

In the findings, communication occurs throughout the process the machine sends communication updates through the app or text messages, informing the receiver, which the message then gets decoded. Participants still have a sense of control in the online grocery shopping experience as participants decide to approve substitutions and messaging the store when they have arrived to pick-up their items or being notified that groceries were delivered.

Sources of Technology Acceptance Model and Communication Change

Easy

The majority of the participants indicated that online grocery shopping brought a sense of ease for purchasing groceries. The first theme identified in the Technology Acceptance Model was "easy."

Perceived ease of use explains the user's perception of the amount of effort for a particular technology to effortlessly incorporate into the user's life (Davis et al., 1989). Catie, a 36-year-old female from Texas, shared, "So, like it was a really easy option to go, like, yes, you know, and add those things to my cart." She later explained, "So, it's really easy for me to it go like, you know, like I said, like milk, eggs, cheese" (Catie, personal interview, January 20, 2022).

Participants communicated that online grocery shopping was an "easy" task, as they would add items to their cart and click check out. The terminology "easy" communicated performance expectancy, effort expectancy, and facilitating conditions as it led to the adoption of online grocery shopping. The perceived ease of use is determined by skipping the process of grocery shopping and receiving the benefit of completing the task on time. The perception of online grocery shopping being easy explains the user's amount of effort it takes to communicate needs and wants as it changed their behavioral intentions and attitudes. Participants shared how they will not completely shift their behavior to in-store shopping as the ease of the digital platform provides their motivational needs that changed their perception and communication style.

Convenient

Interview participants expressed how online grocery shopping created a sense of convenience in their life. All participants mentioned convenience, and the concept determined

their adaption to online grocery shopping. The second theme in the Technology Acceptance Model correlates to perceived usefulness with "convenient."

Enhancing the performance of the task includes decreasing time, achieving more efficiency, and increasing accuracy (Phillips et al., 1994). Participants adapted to the psychological belief that online grocery shopping reduced time while maintaining efficiency from the traditional process. Laura, a 44-year-old female from Texas, said, "It was just more convenient, you know, just from a time factor to pick her up from one activity, run to the grocery store, sit there for five minutes, and let them load my groceries and take them home.

In the findings, participants expressed how online grocery shopping is a convenient tool in their life that generates a positive mindset and behavioral intention. Participants had various definitions of what convenience meant to their personal life, including timesaving, effort-saving, fast, and overall usefulness of online grocery shopping. The linear communication with the digital platform created a gratification need for adaption.

Source of Trust and Communication Change

Product Substitutions

The majority of the participants communicated their thoughts and viewpoints on product substitutions not being an issue. Participants communicated how they were first unsure about the personal shopper selecting a substitution. Based on the interview discussion, the first theme in trust was "product substitutions." A standard view of trust is subjective that one party will behave with the interest of another party within a transaction (Dasgupta, 1988; Gambette, 1988). Trust was not established before their first product substitution. However, participants received communication about substituted items, which caused a positive behavioral intention to trust the personal shopper's selection. Lauren, a 28-year-old female from Texas, said, "Um, honestly, no.

Sometimes I even get like texts saying couple of things are being substituted and I never even check that. I usual just, like, okay I trust them to get whatever is, like, most like whatever I needed within the same price point" (Lauren, personal interview, January 8, 2022).

Freshness

Most participants ranked freshness as a second top priority for their online grocery shopping experience. The second theme in trust was identified as "freshness."

Aristotle's idea with trust stated that exchange is derived from trust and develops a degree of affection between buyer and seller (Johnstone, 2011). Participants developed trust among how the seller selected the freshness of their groceries for their buyer. Taylor, a 30-year-old female from Texas, said, "I've never had a problem as far as not having fresh items." She later explained, "But I, I do know, you know, I probably would not be happy if I were getting things that, that like meats and, and bread and stuff that, that were not fresh" (Taylor, personal interview, January 6, 2022). If the store selected a grocery item that was not considered fresh for the customer, the exchange would lose a certain level of trust.

Trust is an ambiguous term in the findings, as it is described and expressed in more than one interpretation. The personal shopper's selection builds trust by thinking like the customer when selecting produce items. Participants expressed how choosing less than satisfactory produce items would make the user more hesitant to let the personal shopper select items other than box food and canned food items. However, participants shared that they would not shift their behavior to in-person shopping. Instead, they would hand-select produce items in-store and let the personal shopper collect the other grocery items as the process still provided perceived ease of use and perceived usefulness.

Store Brand Experience

The majority of the participants shared that they have a preferred grocery store and will travel to that location to grocery shop. Participants build trust with a grocery store based on previous experiences. The third theme identified in trust was "store brand experience."

Trust is associated with a relationship (Grandison & Sloman, 2004), even with technological advancements. Participants selected the store they wished to try online grocery shopping, as there was a rapport established from their in-person experience. MariAnn, a 54-year-female from Texas, said, "And the store has even gotten it down to a science with things like avocados." She explained, "They have a scale on there where you can go on and choose, and they'll say, 'Do you want avocados that are gonna ripen in one to two days? Do you want ones that are ripe right now?' And you can tell them exactly what you want, and they try to do that" (MariAnn, personal interview, January 7, 2022).

Trust is built on individuals' attitudes, mindsets, behavioral intentions, and beliefs towards the store brand experience. As participants continued to have a positive experience with their store, they built trust with their behavioral intentions to continue going to that grocery store to purchase their items. The store provides a previous gratification for individuals to actively adopt their digital media to meet their specific requirements.

Limiting Hesitation

Participants shared their thoughts before trusting online grocery shopping. The communication on being influenced to their adaption played a significant role in determining that participants were influenced by a friend or partner, which led to limiting hesitation to online grocery shopping. A fourth theme identified was "hesitation."

Hesitation is described as having a questioning attitude to innovations and adapting to new ideas compared to the average person (Lokken et al., 2003). Participants questioned their attitude to online grocery shopping, as there was uncertainty and lack of trust in the process. “There was just a little bit of hesitation, kind of, in . . . I hope I’ll get X item in the way that I want it,” said Amanda, a 39-year-old female from Texas.

Participants expressed hesitation as a form of uncertainty, as they were unfamiliar with the process. The communication channel that attracted the participants to adapt to online grocery shopping was word-of-mouth, as it helped minimize the uncertainty of the process. Based on the participant’s sociopsychological traits on how grocery shopping was conducted as a child, the hesitation created a fear of the unknown as comments for hesitation included being unsure and confused on how the process worked based on their previous known experienced of in-store grocery shopping.

Positive Experience

All participants in the interviews indicated a positive experience with online grocery shopping that led to building trust. Participants communicated the importance of a positive experience to adapt to online grocery shopping. The fifth theme I identified in trust was “positive experience.”

Innovation involves technological advancements creating or improving a product or service that can symbolically represent a change in the meaning of the product or service (Varadarajan, 2018). The positive experience from the innovation increased the chances for individuals to develop trust as they discovered a new opportunity to perform a daily task. Tara, a 33-year-old female from Texas, said, “I would say that it’s positive when the programs respond the way they’re supposed to respond” (Tara, personal interview, January 11, 2022).

The positive experience of online grocery shopping reduces the feeling of uncertainty for users to adapt. A positive experience links to building trust with online grocery shopping as individuals continued use implied trust within the technology information system. The positive experience of an individual's online grocery shopping communicated perceived usefulness to the traditional method of in-store grocery shopping. Participants expressed the impact of perceived ease of use and positive past experiences for continuing to online grocery shop. The positive experience expanded on the user's familiarity, as individuals understood the online grocery shopping system as similar to shopping online. Positive experience communicates how the process was effortless when using the system, which relates to familiarity, as it builds trust with the information system. Based on the positive experience of online grocery shopping, participants in the interview expressed how the beliefs formed by the first encounter impacted users' decision to adapt and trust the digital platform.

Source of Familiarity and Communication Changes

Direct Deposit

All participants shared that they actively use direct deposit. Participants expressed their adoption, first impression, and thoughts to a previous technology to gain insight into their behavioral intentions and attitudes. The first identified theme in familiarity was "direct deposit."

Familiarity effects behavior as the recollection generates source memory (Diana et al., 2008; Duarte et al., 2004; Elfman et al., 2008; Hicks et al., 2002; Yonelinas et al., 1999). Participants expressed how they are familiar with the recollection of direct deposit, as it involves the source monitoring of seeing money deposited into the participant's bank account. Amanda, a 39-year-old female from Texas, said, "It's flawless, and I don't even have to think about it" (Amanda, personal interview, January 9, 2022).

In the findings, participants experienced positive encounters with direct deposit, which demonstrated a sense of familiarity with how future technology will work. Participants shared the different aspects of direct deposit, which showed familiarity and trust. The same concept correlates to online grocery shopping, as participants developed familiarity when communicating with the platform on multiple occasions. Participants shared how they do not check their direct deposits and showed similar habits when they expressed not checking their product substitutions. They became familiar with the process, which directly links to building trust.

Online Shopping

The majority of the participants actively shop online. Participants communicated their previous online shopping experience by explaining the process from start to finish, how online shopping makes them feel, and how their views changed the first time they started. The second theme I identified in familiarity was "online shopping."

Familiarity focuses on the prior experience as people tend to like what they know (Cela-Conde et al., 2011; Reber et al., 1998, 2004) and a feeling of familiarity attributes to preferred items (Monin, 2003). People tend to judge where and what they will purchase online when they have seen it before or how the item correlates to a previous experience of purchasing a similar item. Yolanda, a 48-year-old female from Texas, shared, "And I kinda got used to that being in the military and not necessarily being near places to get the things that I wanted or that my family needed." She later shared, "To shop, even school shopping for my kids and, and different things, depending on where I was, we would have to do that online" (Yolanda, personal interview, January 10, 2022).

In the findings, participants demonstrated familiarity through the related considerations of values, knowledge, and skills by sharing their order from start to finish. Participants showed

familiarity from previous experiences from retrieving data through the memory system of online shopping. Online shopping demonstrated a similar pattern to online grocery shopping with the linear communication process through the website or mobile application. Participants typed their needs and wants in the search engine and ordered items.

Website Navigation

The majority of the participants felt comfortable navigating a familiar or unfamiliar website. Participants explained the website navigating process from start to finish, described website layouts, if they found websites easy or hard to navigate, and how comfortable they are to shop on a new e-store. The third identified theme in familiarity was "website navigation."

Usher (1954) and Basalla (1998) acknowledged how technology is driven by pre-existing knowledge and technology. Participants demonstrated a pre-existing conceptual reality to placing an online order through website navigation. Tiffany, a 28-year-old female in Texas, shared, "The website made it easy, 'cause it's very easy to, to access and it's easy to scroll through and, uh, navigate" (Tiffany, personal interview, January 19, 2022).

Participants are familiar with navigating websites as they discussed the search bar engine and the checkout process in the findings. As participants navigated a new web page, familiarity was established through digital competence, proficiency, and technology confidence. Participants showed a strong familiarity with the process and trust for future website usage.

Source of Maslow's Hierarchy of Needs and Communication Change

Basic Needs

The majority of the participants listed basic needs as a motivational factor for starting online grocery shopping. Participants also indicated basic needs as a continued reason for online

grocery shopping. The first theme I identified in Maslow's Hierarchy of Needs was "basic needs."

Technological advancements, such as mobile, high-speed internet, and Wi-Fi, have become basic survival needs (Sharma et al., 2020). Mobile phones are serving as a tool to shop for groceries online. Bonnie, a 69-year-old female from Texas, said, "Because at the, uh, just our basic grocery needs to be able to easily, easily and conveniently do that online."

In the findings, online grocery shopping showed a correlation to Maslow's Hierarchy of Needs, as it is a physiological aspect for fulfilling the consumer's basic needs. Online grocery shopping changed individuals' behavioral intentions and attitudes to fulfilling basic needs through digital technology.

Safety

Most participants listed safety as a motivational factor for starting online grocery shopping. Participants explained how safety was a continued reason for online grocery shopping. The second theme I identified in Maslow's Hierarchy of Needs was "safety."

Technology developed a sense of a more secure shelter for living, as individuals feel safer with the availability of gadgets (Lee & Stapinsko, 2012). Participants expressed how online grocery shopping provided safety by limiting the exposure and spread of COVID-19. Tyger, a 52-year-old female from Texas, shared, "It really was just the whole COVID thing." She later expressed, "I didn't wanna have to go out and expose myself to . . . to not knowing what was going on" (Tyger, personal interview, January 18, 2022).

The findings indicated that participants turned to online grocery shopping as a digital tool to communicate their need for safety from the pandemic. Participants were cautious about exposing themselves and others in a time of uncertainty. However, participants' behavioral

intentions and attitudes shifted when the need to continue online grocery shop as a safety tool decreased.

Friend/Partner Influenced

Participants in the research interview listed friend/partner influence for starting to online grocery shop. The communication of others led to their adaption to online grocery shopping. A third theme I identified showed late majority adaptors as "friend/partner influence."

Communication devices and online social networks have provided individuals with a sense of relatedness and independence (Sharma et al., 2020). Participants were influenced by social needs, such as a sense of belonging, affection, love, care, friendship, and family. Kylie, a 32-year-old female from Texas, shared, "I always typically wait for someone I personally know to either use it or download it or whatever the case is before I jump and do it myself" (Kylie, personal interview, January 17, 2022). She later expressed, "So somebody at my office, our marketing director actually was the one that told me about it and said that he was using it" (Kylie, personal interview, January 17, 2022).

The findings determined that participants became less hesitant to shop for groceries online after a trusted friend or partner shared their shopping experience. However, the majority of the interview participants shared that friend or partner influence was no longer a factor for continuing to online grocery shop. Participants expressed that the influence was no longer there after they had experienced it themselves.

Feeling of Accomplishment

Some participants in the research interview listed feelings of accomplishment. A fourth theme I identified in Maslow's Hierarchy of Needs was "feeling of accomplishment."

Online learning helps develop a sense of self-identity and determination (Sharma et al., 2020). Online grocery shopping provided the opportunity for individuals to create a sense of identity while feeling accomplished in completing life's daily tasks. Bonnie, a 69-year-old female from Texas, said, "And it was just a feeling of accomplishment . . . And a time-saver, yes. Ab- ab- it was a time-saver" (Bonnie, personal interview, January 5, 2022).

The findings showed a feeling of accomplishment brought a sense of pride to the participants. Online grocery shopping communicated a sense of determination and achievement to their day, involving achievement, recognition, and independence. Participants listed feelings of accomplishment as a continued reason for online grocery shopping.

Achieving Full Potential

Participants in the research interview listed self-actualization as a reason for starting to online grocery shop. A fifth theme identified in Maslow's Hierarchy of Needs was "self-actualization."

Technology has become a platform for individuals to obtain knowledge while providing self-improvement and self-growth resources (Sharma et al., 2020). Online grocery shopping provided a sense of self-actualization as it developed full potential and fulfillment for participants. Debra, a 67-year-old female from Texas, shared, "Well, it means that I can buy groceries still, and I can still live in my house and not in an assisted living room" (Debra, personal interview, January 12, 2022).

The findings indicated that self-actualization is determined subjectively for each participant as it is a personal peak experience that ties into their beliefs. Online grocery shopping was a resource tool for self-improvement as it explained individual internet behaviors. Participants indicated that self-actualization was a continued reason for online grocery shopping.

Implications

The purpose of the narrative study was to investigate the Unified Theory of Acceptance and Use of Technology (UTAUT) with behavioral intentions, trust, and technology acceptance to understand how communication is changing through online grocery shopping. The study's findings provide insight for academic scholars in the field of communication as they explore communication adaptions with technology. Based on the analysis of the current research, the results help extend a proposed communication model through digital technology. The study provides practical and theoretical implications to consider for future research.

In online grocery shopping, individuals interacted in a digital system where the communication was received by inputting the message through the online platform. Then the personal shopper processes the information. The two-way communication focused on a linear communication model that involved verbal and nonverbal communication (Shannon & Weaver, 1963) between the individual and the digital platform through a mobile phone, computer, or tablet. In online transactions, trust is developed and associated with a relationship (Grandison & Sloman, 2004). The exchange of messages helps reduce the hesitation and fear of uncertainty when interacting with systems.

The first implication identified in the findings was trust in the technology. Trust within the technology was demonstrated through their emotional feeling of being satisfied with their experiences, which included perceived ease of use, perceived usefulness, mobility, consistent messages, immediate access, psychological reassurance, and instrumentality. Participants shared their experience with direct deposit. They trusted that money would be deposited into their account and only viewed their banking account to determine bill payments. Participants shared how they are active online shoppers that consistently order items and do not worry about them

not being delivered to their address. Trust is developed with easy returns. Online grocery shopping demonstrated trust in an unknown, familiar sector of food items. Participants in the interviews expressed how they felt a sense of relief in the system working after their first encounter with communicating their order. After the first impression, participants developed trust with online grocery shopping and expressed that a level of expectation was created. I determined that discrepancies did not impact the individuals' trust in online grocery shopping, as they explained how that experience was not common. Individuals trusted that the following experience would be positive like previous ones.

Current ideas of trust derive from social science, as it is viewed as a rational choice made by self-interested factors that undergo prevailing conditions of uncertainty and unfamiliarity (Balot, 2012). The exchanges are derived from trust and develop a degree of fondness between the buyer and seller. Trust is a measurement of behavioral intentions, motivations, perception, usefulness, and acceptance. Psychology suggests that individuals develop trust differently due to a broad spectrum of situations experienced (Erikson, 1968; Lian & Li, 2021; Rotter, 1967, 1971, 1980). The individuals' prior interactions determine trust. Trust is developed through three categories: (a) calculative trust, (b) personal trust, and (c) institutional trust.

The second implication identified in the findings is once trust is established, the business can communicate more to the individual. Institutional trust refers to the sense of security from guarantees and impersonal structures inherent in a specific context (Gefen et al., 2003). Participants shared how positive experiences with a particular store brand name and location played a significant role in building trust while adapting to online grocery shopping. The communication demonstrated for trusting the store was their behavioral intentions to shop at a specific location that was not close to their residence or only online shopping at a particular store

name that they believed would meet their needs. Personal trust is based on repeated interactions that continue to grow between parties in a trust relationship (Williamson, 1993). Participants shared their positive experiences with online grocery shopping through product substitutions and the freshness of produce items. Calculative trust refers to the relationship of potential costs of retribution for temptation as the mechanism involves repetition, interest, or rewards (Shapiro et al., 1992). Participants expressed how coupons are made available at the checkout, no additional personal shopper fee is added, and the minimum upcharge to products was worth the cost, as they trusted the store to communicate updates. The communications built in the development of trust have allowed grocery stores to communicate more with their customers, creating brand loyalty.

Delimitations and Limitations

I conducted the narrative study through two online platforms, Mechanical Turk and Facebook. The study was restricted by a screening question in the thematic survey that asked participants if they were online grocery shoppers and were 25 years or older during the fall of 2021 and spring of 2022. I collected data in December 2021 and conducted interviews in January 2022. The narrative study site for Mechanical Turk was selected to reach a broader audience. My Facebook page provided an opportunity to select interview participants as Mechanical Turk does not allow the researcher to contact survey participants to interview.

The major limitation of the narrative study is the limitation in scope for only having female participants for the interviews. I shared the survey on two platforms, but males did not express an interest in participating. For the thematic survey, the sample population was a small sample size as it encompassed over 300 respondents in the United States. The narrative study approach ensures that the limitation does not negatively affect the findings. The focus of the

research study was to conduct interviews for a deep understanding to explore communication adoptions with online grocery shopping. As the narrative study involved 25 female participants for the interviews, the findings may not translate to male perspectives. Gender characteristics influence perception and experiences, as male participants may provide different reasoning and experience on communication adoption to online grocery shopping.

A second limitation of the narrative study is the limitation of not having representation from the Silent Generation. I used digital platforms, including SurveyMonkey and Mechanical Turk. The selected platforms did not reach the Silent Generation and thus did not represent the communication change and development of trust for the selected generation.

Recommendations for Future Research

The study is participatory research. The findings imply future research to gain additional insights about communication with technology through online grocery shopping. Based on the research's findings and limitations, expanding the research in qualitative and quantitative perspectives will help investigate the study's findings and address additional research questions that came from the data collected and observed. The current research explores communication adaption to online grocery shopping.

The current study targeted male and female participants in the United States who are online grocery shoppers and are 25 or older. The results reflected that all the participants in the interviews were female. It would be valuable to conduct similar research among male adults in the United States who are online grocery shoppers and are 25 or older. A research study that focuses on the male perspective could allow an understanding of communication adaption with online grocery shopping.

The current study focuses on communication adaption to online grocery shopping. A future research study could explore digital trust to understand the degree of confidence an individual feels towards technology, an information system, reliability, and credibility. A research study that examines communication and mindset could determine the impact trust has on individuals adapting to technology.

The pandemic accelerated technological advancements and the adaption of technology. Future research may explore insight into other food delivery services and investigate the willingness and communication adaption with other food delivery services.

Summary

The qualitative study provided insight into how online grocery shopping altered an individual's communication process for grocery shopping. Participants shared intimate and noteworthy results from the thematic survey and in-depth interviews about behavioral intentions, trust, and technology acceptance. Chapter Five summarized the study's findings based on the participants' responses in the in-depth interviews.

One of the key takeaways from the study was how motivational factors shifted Maslow's Hierarchy of Needs to reach self-actualization. Motivation is a set of forces that causes an individual to engage in a particular behavior intention (Moorhead & Griffin, 1999). Each level of Maslow's pyramid incorporates technology communicating and fulfilling motivational needs and desires. The research explored how common motivational factors impacted behavioral intentions and attitudes through the acceptance of online grocery shopping.

The second key takeaway from the study was how trust is an ambiguous term but was measured through participants' ranking of convenience, freshness, product substitutions, and customer service. Participants communicated that they were hesitant about trying online grocery

shopping before starting online grocery shopping due to product substitutions. However, participants later shared in the interviews that they felt comfortable, didn't check, and knew they would select an item similar to what they requested in their order. Participants expressed a trust barrier on freshness as they were hesitant on if personal shoppers would hand-select items that they would choose in the store. The first impression impacted trust, and recency continues to build trust between individuals, machines, and personal shoppers.

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APPENDICES

APPENDIX A

Alignment of Research Questions to Interview Questions

Research Questions	Online Grocery Shopping Interview Questions
RQ1: How does an individual communicate motivational needs in adapting to online grocery shopping?	1, 7, 8, 9
RQ2: How is trust communicated in the utilization of online grocery shopping?	3, 4, 5, 6, 7, 8, 9
RQ3: How does familiarity with computer-mediated-communication contribute to behavioral intentions, perceived usefulness, and perceived ease of use with communication in online grocery shopping?	2, 3, 4, 7, 8, 9

APPENDIX B

Thematic Questionnaire

1. Do you online grocery shop, and are you over 25 years old?
2. Consent Form: I have read and understood the above information. I consent to participate in the study.
3. What is your gender?
4. What is your age?
5. What is your race and/or ethnicity?
6. Where are you located
7. What is your education level?
8. What is your employment status?
9. What is your marital status?
10. Household: How many children live with you?
11. What is your household income?
12. Were you hesitant to online grocery shop?
13. If you answered YES to question 11, please rank the following reasons why were hesitant to online grocery shop? (1 being the highest; 5 being the lowest)
14. What timeframe did you start online grocery shopping?
15. Why did you begin to online grocery shop?
16. Why do you continue to shop for groceries online? (Click all that apply)
17. What is the main reason you shop for groceries online? (Click all that apply)
18. Which of the following factors are most important to you when buying groceries online? (1 being most important; 5 being least important)

19. How often do you online grocery shop?

20. How do you normally place your online grocery order?

21. How do you normally grocery shop?

22. On average, how much do you spend per month on groceries?

23. What is your favorite spaghetti sauce?

24. What is your favorite ice cream?

25. What is your favorite brand of bread?

26. What is your favorite cereal?

27. What is your favorite toothpaste?

28. Tell me what makes you anxious about online grocery shopping?

29. Please rate your experience for the following questions listed below.

30. Please rate the following questions listed below for how likely you are to.

31. Describe how you would search for a product on the website.

32. Please rate the following questions listed below for ease of use.

33. Please rate the following questions listed below about online grocery shopping.

APPENDIX C

LIBERTY UNIVERSITY.
INSTITUTIONAL REVIEW BOARD

November 17, 2021

Samantha Ricciardi
Robert Mott

Re: IRB Exemption - IRB-FY21-22-281 Communication with Online Grocery Shopping

Dear Samantha Ricciardi, Robert Mott,

The Liberty University Institutional Review Board (IRB) has reviewed your application in accordance with the Office for Human Research Protections (OHRP) and Food and Drug Administration (FDA) regulations and finds your study to be exempt from further IRB review. This means you may begin your research with the data safeguarding methods mentioned in your approved application, and no further IRB oversight is required.

Your study falls under the following exemption category, which identifies specific situations in which human participants research is exempt from the policy set forth in 45 CFR 46:104(d):

Category 2.(iii). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met:
The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by §46.111(a)(7).

Your stamped consent form(s) and final versions of your study documents can be found under the Attachments tab within the Submission Details section of your study on Cayuse IRB. Your stamped consent form(s) should be copied and used to gain the consent of your research participants. If you plan to provide your consent information electronically, the contents of the attached consent document(s) should be made available without alteration.

Please note that this exemption only applies to your current research application, and any modifications to your protocol must be reported to the Liberty University IRB for verification of continued exemption status. You may report these changes by completing a modification submission through your Cayuse IRB account.

If you have any questions about this exemption or need assistance in determining whether possible modifications to your protocol would change your exemption status, please email us at irb@liberty.edu.

Sincerely,
G. Michele Baker, MA, CIP
Administrative Chair of Institutional Research
Research Ethics Office